

COUNTY OF SIMCOE

TRANSPORTATION MASTER PLAN

Phase III: Strategies and Policies to Support the Recommended Network

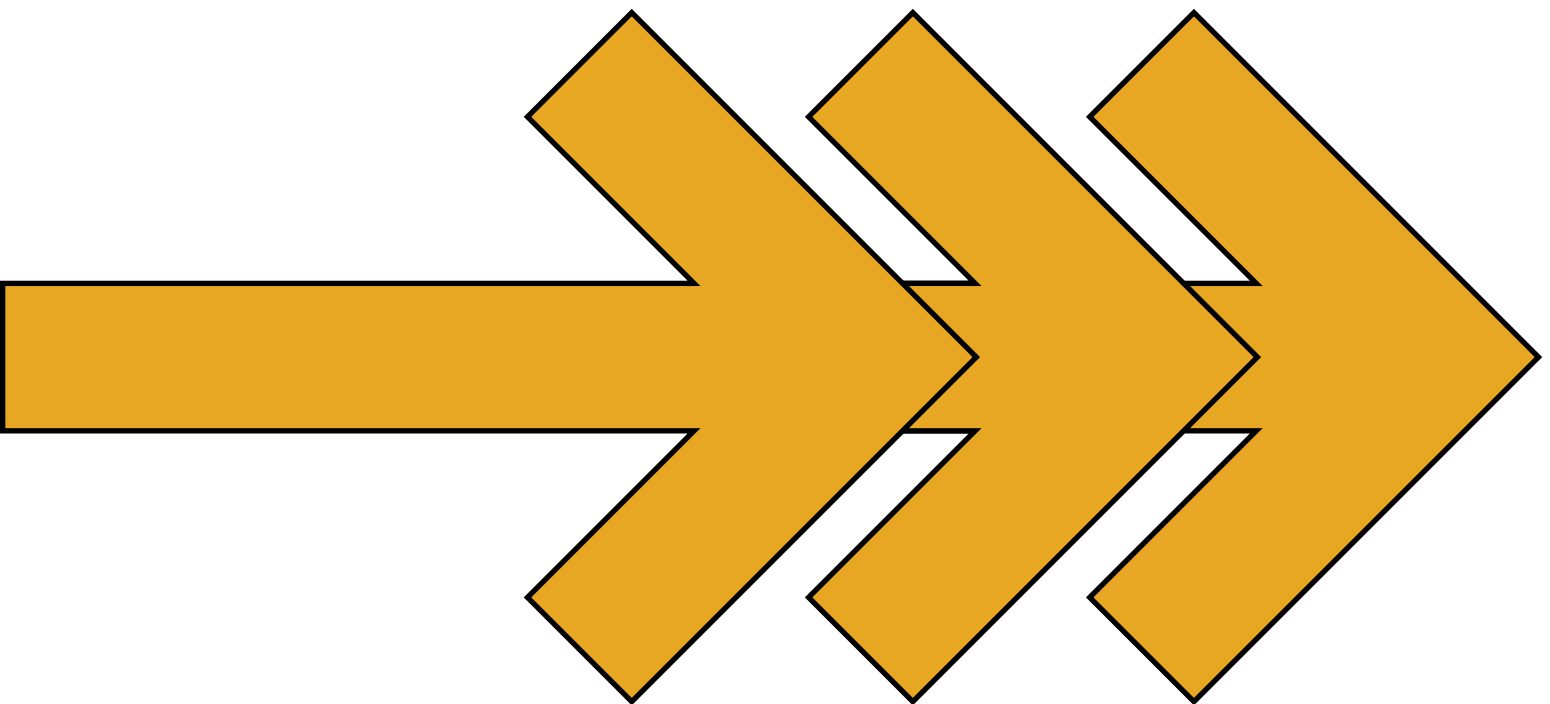


Table of Contents

1	Introduction	1
1.1	Report Purpose and Outline	1
1.2	Study Overview	2
2	Road Classification and Design.....	4
2.1	Functional Road Classification	4
2.2	Context-Sensitive Road Design.....	8
2.3	Roadway Cross-Sections.....	16
2.4	Road Rationalization.....	29
3	Transit.....	31
4	Goods Movement.....	37
4.1	Commercial Vehicles	37
4.2	Freight Rail.....	43
5	Air Travel	46
6	Active Transportation and Trails	49
7	Road Safety	59
8	Emerging Technologies.....	64
9	Transportation Demand Management.....	71
10	Carpool Lots.....	78
11	Costing and Implementation.....	84

Table of Contents (continued)

11.1	Roads.....	84
11.2	Active Transportation.....	91

1 Introduction

The County of Simcoe is updating its Transportation Master Plan (TMP), a long-range strategy that outlines transportation policy directions and identifies the transportation network and related improvements to support growth through 2051.

This TMP Update is an important opportunity to realign transportation policy and investment directions to meet the varied transportation needs of residents, businesses and visitors in the County of Simcoe, considering all modes of travel — walking, cycling, transit, goods movement and driving.

This report documents Phase III of a four-phase study process and presents a collection of strategies to support the recommended networks, as detailed in Phase II of the study.

1.1 Report Purpose and Outline

The purpose of this report is to summarize Phase III of the TMP Update, outlining strategies and actions to help attain the Transportation Vision and Goals of the TMP study, and to assist in the implementation of the road, transit and active transportation networks developed in Phase II. The strategies and actions are intended to help optimize the return on investment and benefits in infrastructure. In summary, this report directs transportation policy and investment in the County of Simcoe into the future.

This report builds on the previous two reports developed for the TMP Update study: *Phase I: Multi-Modal Needs and Opportunities* and *Phase II: Transportation Network Development*.

Following this introductory section, which also provides a study overview, the report provides recommended strategies and actions for the following:

- Section 2: the County's road classification system and related road design guidelines, roadway cross-sections, as well as the County's road rationalization framework (applied in Phase II of the TMP Update);
- Section 3: the County's Transit Strategy, as developed in Phase II of the TMP Update;
- Section 4: commercial vehicle and freight rail, reinforcing the County's role in supporting goods movement;

- Section 5: helping to realize the opportunities provided by the Lake Simcoe Regional Airport;
- Section 6: active transportation and trails (supporting the proposed network developed in Phase II);
- Section 7: road safety;
- Section 8: emerging technologies, such as connected, automated and electric vehicles;
- Section 9: Travel Demand Management measures; and
- Section 10: carpool lots in the County.

Section 11 provides a mode-by-mode implementation plan for the recommended projects identified in Phase II of the TMP study, including estimated costs.

1.2 Study Overview

The TMP Update study process includes the following four phases:

- Phase I: Multi-Modal Needs and Opportunities
- Phase II: Transportation Network Development
- Phase III: Strategies and Policies to Support the Recommended Network
- Phase IV: TMP Update Report

Public and stakeholder consultation and communication activities are also conducted throughout these phases, with activities and inputs documented separately.

1.2.1 Planning Horizon Years

A planning horizon is the future point in time for which a strategic document plans. The following are the planning horizon years for the County of Simcoe TMP Update:

- **Short-Term – 2031:** Considers strategies, initiatives or plans that could contribute to the transportation network over the next decade;
- **Medium-Term – 2041:** Medium-range projects or programs that are forecasted over the next 20 years;
- **Long-Term – 2051:** Long-range projects or programs that are forecasted over the next 30 years; and

- **Beyond 2051:** Projects identified in the long-term but not required before 2051.

1.2.2 Municipal Class Environmental Assessment Process Alignment

The TMP Update follows the Municipal Class Environmental Assessment planning process for master plans under the Environmental Assessment (EA) Act. The process provides a transparent approach to planning and building municipal infrastructure.

The TMP follows the Master Planning Process Approach #1 for master plans and involves the completion of the first two phases of the EA planning process:

- **MCEA Phase 1:** Identify the problem or opportunity (corresponding to Phase I of the County of Simcoe TMP Update study process); and
- **MCEA Phase 2:** Identify and evaluate alternative solutions to address the problem and establish a preferred solution (corresponding to Phases II and III of the County of Simcoe TMP Update study process).

At the conclusion of MCEA Phase 2, a TMP document can be prepared where the level of investigation, consultation and documentation can be used in support of future analysis for specific Schedule B and C projects identified within it. This corresponds to Phase IV of the County of Simcoe TMP Update study.

2 Road Classification and Design

The road network in the County of Simcoe is foundational to its transportation system and to the movement of personal cars, goods and public transit, as well as pedestrians and cyclists (on or alongside the roadway). Within the County are roads under Provincial, County (upper-tier municipal) and local (lower-tier municipal) jurisdiction.

This section outlines strategies and actions relating to the following County road network aspects:

- Functional road classification;
- Context-sensitive road design considerations, specifically consideration for a Complete Streets approach;
- Roadway cross-section design guidelines, focusing on the widths of various roadway elements, and including consideration for communications and utilities; and
- Road rationalization – the process of determining the extent to which a road serves County (vs. local) interest, undertaken as part of Phase II of the TMP Update.

2.1 Functional Road Classification

Background and Considerations

A functional road classification framework establishes a hierarchy of roads based on each road segment's context and the degree to which the segment prioritizes traffic movement vs. land access needs. In line with the Transportation Association of Canada's (TAC's) *Geometric Design Guide for Canadian Roads (2017)*, a road's service function can range from freeways and major arterials that give a high priority to traffic movement and therefore a lower priority on local property access (driveways); to collector roads, local roads and public lanes that have a decreasing focus on traffic movement and an increasing priority on local property access.

As all County roads put a high priority on the traffic movement function, an arterial road class is appropriate. Currently, the Simcoe County road network is classified using a hierarchy of three arterial road classes: Primary Arterial-Controlled Access, Primary Arterial and Secondary Arterial, as outlined in Exhibit 2.1. These three

functional road categories were characterized based on the results of applying the road rationalization criteria developed as part of the 2008 TMP, and carried forward to the 2014 TMP Update. The existing classifications align with the traffic movement needs of the road network.

Exhibit 2.1: County of Simcoe Functional Road Classification – Traffic Movement Function

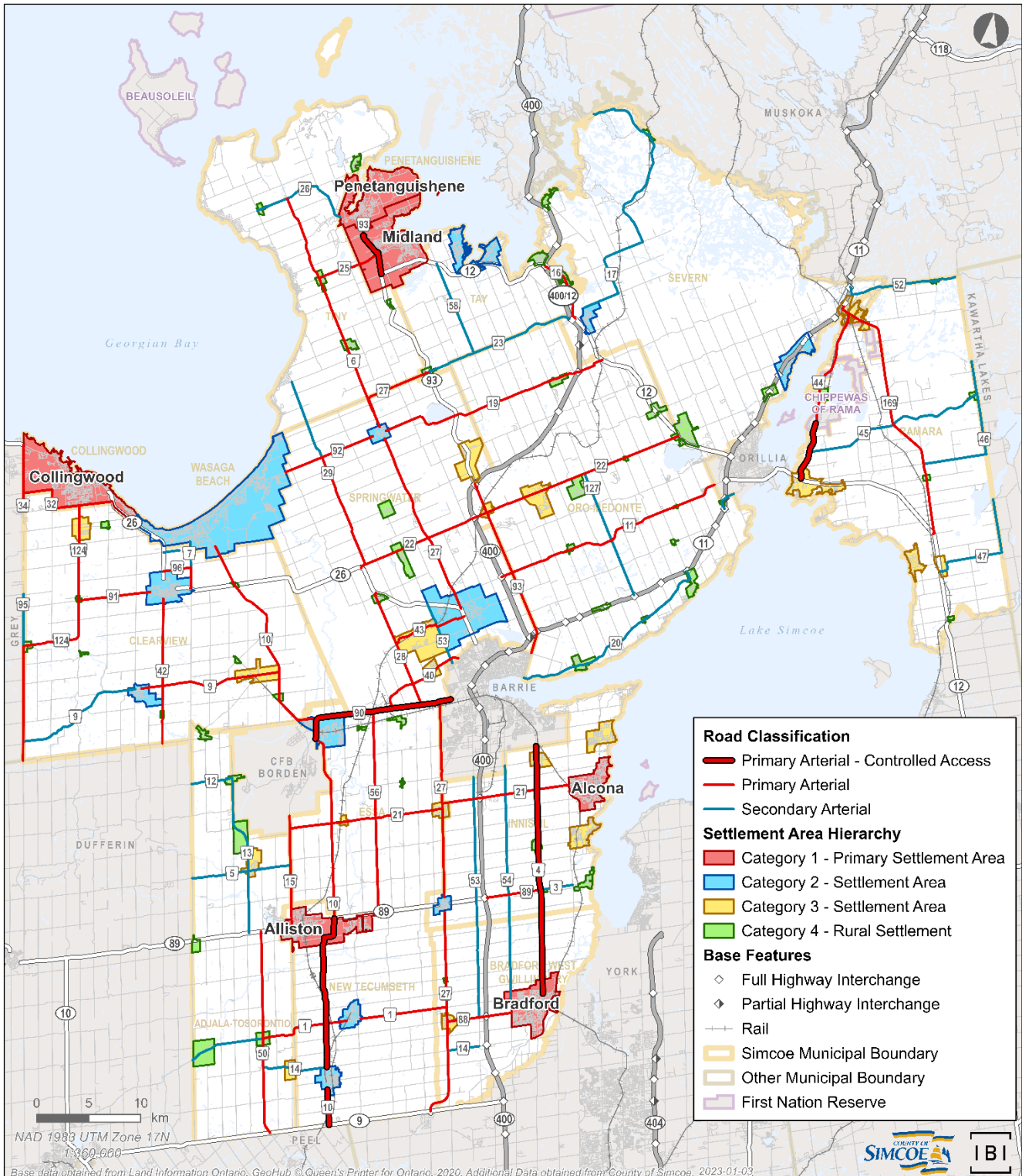
Classification	Traffic Volume	Access Function	Movement Function	Road Rationalization Score¹
Primary Arterial – Controlled Access	Large	Strictly regulated	Connect major internal and external centres; provide for long distance people and goods movement	20+
Primary Arterial	Large	Moderate	Connect major internal and external centres; provide for long distance people and goods movement	10 to under 20
Secondary Arterial	Moderate	Local properties, intersecting municipal roads and local streets	Connect internal settlements or activity centres, primary arterial roads, or settlements or activity centres with primary arterial road	6 to less than 10

Source: Based on County of Simcoe 2014 TMP Update, Table 2.4.1-2

A map of the functional road classification applied to County roads is shown in Exhibit 2.2, along with four categories of settlement areas as identified by the County of Simcoe Official Plan Amendment No. 7 (as per the Municipal Comprehensive Review in 2022). The settlement area context is important for context-sensitive road design, discussed in Section 2.2.

¹ Road rationalization scoring is discussed further in Section 2.4.

Exhibit 2.2: County of Simcoe Functional Road Classification and Settlement Areas



Note: Settlement Area Hierarchy as per County of Simcoe Official Plan Amendment #7.

2014 TMP Update Recommendations

The 2014 TMP Update recommended six typologies for County roads: Rural, Rural Settlement, Urban – Commercial, Urban – Village Core, Urban – Main Street, and Urban – Industrial. The 2014 TMP’s recommended typologies would put the basis of classification entirely on the context/land access function of the County road, but would disregard the degree of traffic movement function served. The 2014 TMP did not apply these recommended typologies comprehensively to the County road network.

Commercial Vehicle Network Considerations

To support the movement of heavy vehicles carrying goods and supporting a range of service provision, while managing the negative impacts of heavy vehicles, the County of Simcoe serves an important role in providing a connected network of arterial roads, designed to accommodate the physical requirements of larger and heavier vehicles together with other traffic on those routes. To encourage use of the arterial road network by heavy vehicles, it must connect goods-generating activity centres with each other and to the Provincial highway network, as well as the arterial road network in adjacent municipalities to allow for efficient travel in all directions.

Recommendation

The current County of Simcoe functional road classification framework appropriately reflects the County traffic movement of individual roadways. It is recommended that the County carry forward this framework, while also incorporating the road context (rural vs. urban) in its design guidelines in Sections 2.2 and 2.3, consistent with Transportation Association of Canada’s *Geometric Design Guide for Canadian Roads* (2017) and best practices.

When a road is transferred to County jurisdiction, it should be assigned a functional road classification based on its road rationalization scoring or its traffic movement function attributes.

Actions

- Carry forward the three-level arterial road classification system for describing the traffic movement function of County roads.
- Consider roadway context in road design guidelines for each functional road class, for consistency with TAC guidelines and best practices.
- Assign a road classification to roads that are transferred to County jurisdiction based on their road rationalization scoring or their attributes.

2.2 Context-Sensitive Road Design

This section provides guidance for developing context-sensitive road design for County road corridors, given both the roadway’s traffic movement function and its local context, and applying Complete Streets approach that recognizes a range of road user types who use the roadway.

Background and Considerations

Complete Streets

“Complete Streets” are roads that are built with the needs of all road users in mind – people who walk, use mobility aids, cycle, take transit, use a personal automobile, and carry commercial goods or support essential services.

Complete Streets improve public health and promote liveability by improving the safety, comfort and accessibility of all road users. All travel modes are integrated into a seamless multi-modal transportation system, providing people with feasible and attractive travel choices. Complete Streets can also support place-making opportunities and enhance public space, contributing to overall vibrancy and economic prosperity.

Phase I of the TMP Update identified the need to consider a Complete Streets approach as a means of improving multi-modal capacity throughout the County. This would reflect County initiatives as well as the County supporting the Complete Streets efforts undertaken by local municipalities for elements under their local jurisdiction, such as sidewalks alongside County roads (per the Province’s *Municipal Act, 2001*).

The concept of Complete Streets has become increasingly important as communities shift to a more multi-modal approach to transportation. Simply put, a Complete Streets approach means that every road project must be planned, designed and built with explicit consideration for the needs of all road users and functions – pedestrians, cyclists, transit riders, and motorized vehicles, including emergency and service vehicles as well as trucks carrying goods.

While a Complete Streets approach means providing well-designed roadways, a contextual lens is required. Not all roads will consist of the same roadway elements, and not all road users will be equally accommodated along each roadway. Each corridor must be evaluated both based on its local function and context as well as its role in the broader transportation system. By embedding a Complete Streets lens in developing the TMP Update, the County of Simcoe can take a system-wide approach to better accommodate all modes of transportation.

2014 TMP Update Approach to Complete Streets

The 2014 TMP Update developed a Complete Streets approach to regional cross-section design. It identified the following 5-step process for assessing individual roadways:

1. Determine the roadway context (both the arterial road class and the development context);
2. Identify community needs and objectives;
3. Determine roadway typology (Rural, Rural Settlement, Urban – Commercial, Urban – Village Core, Urban – Main Street, and Urban – Industrial);
4. Identify road and boulevard elements and the acceptable ranges of widths (enhance and iterate as needed, e.g. some elements may be removed where it is not feasible to include them); and
5. Develop detailed cross-section.

The 2014 TMP Update applied this process to sections of County Roads 10, 27, 43, 90 and 93 as examples. The 2014 TMP Update also included additional detailed recommendations toward addressing urban design and community requirements, working together with local municipalities and ensuring plans are developed with the local community input.

Complete Streets Approach

The current TMP Update builds on the 2014 TMP Update Complete Streets approach, continuing to recommend that the planning, design, construction and maintenance of County transportation infrastructure should consider all modes of transportation and users. The current TMP Update also sets out Complete Streets **principles**, below, and broader guidance in **multi-modal planning/prioritization decisions** in implementing a Complete Streets approach.

Complete Streets Principles

The following principles are integral to the County of Simcoe successfully adopting and implementing a Complete Streets strategy, working together with local municipalities.

Complete Streets in the County should have the following characteristics:

- **Safe and accessible:** Consider the equitable, comfortable and safe movement of all road users to ensure access of all ages and abilities. Ensure a complete and comprehensive active transportation network that provides connected and quick connections.
- **Context-sensitive:** Address different land use and local needs by adopting a context-based approach to implementation that meets the needs of all road users to the degree of priority appropriate to the road's context and strategic objectives, along both urban roadways and rural roadways (in particular, rural roads that traverse rural settlements).
- **Balanced:** Consider the mobility needs of all road users relative to the function of the roadway when implementing road projects from the onset of the planning process – this includes road resurfacing, rehabilitation, reconstruction and new construction projects. Not all road users will be accommodated along all roadways, but considerations for all users should be considered from the onset, where appropriate. Also, the incremental cost of considering all modes upfront in the design process is less than the cost of retrofitting or upgrading roadways to add infrastructure for specific modes at a later time.
- **Designed for place-making:** Consider place-making opportunities of the public realm, and consider supporting local municipalities in efforts in creating an attractive, vibrant, inviting and inclusive public realm while meeting the mobility and functional needs of the street. Opportunities

for street furniture, public art and wayfinding should be considered in urban areas, where appropriate.

- **Measurable:** Apply a multi-modal lens to measuring level of service to ensure the implementation of Complete Streets aligns with the transportation Vision for the County of Simcoe. Quantitative measures, such as mode-specific measures (e.g. linear-kilometres of cycling facilities added to the cycling network), as well as mode share changes should also be used in the evaluation process.
- **Appropriately maintained for all seasons:** Coordinate with local municipalities in collaboration with school boards to ensure that maintenance standards enable year-round mobility for all road users along selected corridors, where possible. This could include developing a priority winter maintenance network for pedestrians and cyclists that align with, or exceed, the requirements set out in the Municipal Act, or identifying selected routes for alternate use (i.e. snowmobile routes).
- **Integrated throughout County Departments:** Identify County staff to represent relevant departments (e.g. Operations, Planning and Development) to help in adopting the Complete Streets approach in their policies and procedures.
- **Justifiable and traceable:** Identify a procedure for documenting and addressing exceptions to the Complete Streets Policy to ensure a transparent and traceable process in outlining when some multi-modal elements are excluded from a project.

Prioritizing Travel Modes

Understanding both the adjacent roadway context and the mobility function of each County road segment is essential in applying a Complete Streets approach to the roadway's design. Each travel mode should be supported on County road segments to the extent feasible as part of a connected and robust transportation network, keeping in mind the broader network priorities by mode for each road segment. As it is not expected that all corridors provide the highest level-of-service for all modes, practitioners and decision-makers should be able to justify why certain modes are not supported and identify alternate accommodations.

In determining the degree of priority given to different road users for a given road, consideration must be given to the following:

- **Land Use Context:** The predominant land use pattern adjacent to the road must be considered for local context elements, e.g. being adjacent to sensitive land uses or land uses that generate high volumes of pedestrian traffic. The intended uses of the road as part of the public realm is also an important component, such as streets that serve as the central or focal area of a community.
- **Functional Road Classification and Strategic Network Function:** The functional road class determines certain features of the roadway, as discussed in Section 2.1. The road's role as part of a strategic transportation network function in the overall transportation system must also be considered to ensure continuity of these strategic networks, in particular the **County's Priority Cycling Network** and the **Provincial Strategic Goods Movement Network**.

When significant heavy vehicle volumes are integral to a roadway's traffic function, as is the case for most County roads, making the design sufficiently safe for other road users brings additional challenges. For example, efficient vehicle movement should be prioritized along goods movement corridors, while facilitating other road users along alternate or parallel corridors where feasible. County roads traversing settlement areas require additional design considerations such as increased separation for vulnerable road users (e.g. separated multi-use pathways or sidewalks separated from the roadway with boulevards), reduced vehicle speeds, adequate space for large-vehicle turns while providing pedestrian and cyclist-friendly crossing opportunities, etc.²

Recommendation

The following are recommended in regards to a Complete Streets approach to multi-modal network planning, as well as road design guidance.

Road Design Guidance

To assist the County with standardization of road design, a table of road characteristics by roadway classification is included as Exhibit 2.3. The road types

² The New York State Energy Research and Development Authority's *Complete Streets Considerations for Freight and Emergency Vehicle Operations* (2019) is a valuable reference for incorporating heavy vehicles into Complete Streets design.

reflect the functional road classes as mapped in Exhibit 2.2, with context determined by the settlement area context. Key principles underpinning this reference table are outlined below.

Design Roads for Target Speeds: Conventional road design approaches encouraged design speeds that were 10 to 20 km/h over posted speeds as a way to create a more forgiving road environment for driving. More recently, a Vision Zero approach to road safety has encouraged road design that sets posted speed equal to design speed. This encourages people driving to travel the intended posted speed (target speed) and helps improve safety for vulnerable road users.

Relate Roadway Design to Surrounding Context: As urban communities have increased turning maneuvers, cyclists, pedestrians and roadside parking, different design approaches are needed within these urban areas compared to rural roads. These standards also help to provide a sense of identity within the community as opposed to being a thoroughfare.

Provide Attractive Active Transportation Facilities: To encourage the use of pedestrian, cycling and transit links, the roadway should provide enhanced safety measures such as physical separation, buffer zones or heightened visibility for pedestrian and cycling infrastructure, where possible. It should be noted that the provision of active transportation infrastructure may impact overall cross-sectional elements, and the increased cost may not be feasible due to limited right-of-way or project funding. The County should seek guidance from the Priority and Ultimate Cycling Networks (as shown in Section 6) when prioritizing active transportation infrastructure.

Exhibit 2.3: Road Design Reference Guidelines – Recommended Characteristics of County Roads by Road Typology

Road Classification	Primary Arterial – Controlled Access	Primary Arterial	Secondary Arterial	Primary / Secondary Arterials	Primary / Secondary Arterials
Context	Urban or Rural	Rural	Rural	Category 2 to 4 Settlement Areas	Category 1 – Primary Settlement Area
Service function	Traffic movement primary consideration*	Traffic movement primary consideration*	Traffic movement and land access of equal importance*	Traffic movement and land access of equal importance	Traffic movement and land access of equal importance
Land service / access	Low consideration for land service/access	Land access secondary consideration*	Traffic movement and land access of equal importance*	Some access control*	Rigid access control*
Traffic volume vehicles per day (typical)	8,000 – 25,000	4,000 – 20,000	2,000 – 10,000	Less than 20,000 preferred	Less than 20,000 preferred
Traffic Flow characteristics	Uninterrupted flow except at signals*	Uninterrupted flow except at signals*	Uninterrupted flow except at signals*	Uninterrupted flow except at signals and crosswalks*	Uninterrupted flow except at signals and crosswalks*
Design speed (=Posted speed)	60-80 km/h	60-80 km/h	60-80 km/h	40-60 km/h	40-50 km/h
Average running speed - off-peak	60-80 km/h	60-80 km/h	60-80 km/h	40-60 km/h	40-50 km/h
Vehicle type	All types, up to 20% trucks*	All types, up to 20% trucks*	All types, up to 20% trucks*	All types, up to 20% trucks*	All types, up to 20% trucks*

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Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

Road Classification	Primary Arterial – Controlled Access	Primary Arterial	Secondary Arterial	Primary / Secondary Arterials	Primary / Secondary Arterials
Context	Urban or Rural	Rural	Rural	Category 2 to 4 Settlement Areas	Category 1 – Primary Settlement Area
Transit service	Permitted	Permitted	Permitted	Permitted	Permitted
Transit service Stops	None	None	None	Regional buses permitted	Express, regional and local buses permitted*
Accommodation of cyclists (when part of Priority and Ultimate Cycling Networks, or as feasible)	Separated multi-use path only	Separate multi-use path or buffered paved shoulders, per OTM Book 18 guidance	Paved shoulders (buffered as needed), or separated facilities, per OTM Book 18 guidance	Designated or separated cycling facilities dependent on vehicle volumes, per OTM Book 18 guidance for urban context	Designated or separated cycling facilities dependent on vehicle volumes, per OTM Book 18 guidance for urban context
Accommodation of pedestrians	Separated multi-use path where feasible	Separated facilities or buffered paved shoulders where feasible	Paved shoulders (buffered as needed) as feasible	A separated sidewalk provided on at least one side (local municipal jurisdiction)	A separated sidewalk provided on at least one side (local municipal jurisdiction)
Parking	Restricted*	Restricted*	Restricted*	Parallel parking to encourage speed reduction	Prohibited or peak-hour restrictions*
Minimum intersection spacing	300 m	300 m	250 m (with exception to mid-block local roads)	250 m (with exception to mid-block local roads)	250 m (with exception to mid-block local roads)
Right-of-way width	36-45 m	30.5-45 m	30.5-36 m	36-45 m	30.5-36 m

* Transportation Association of Canada (2017), *Geometric Design Guide for Canadian Roads*, Section 4.3.2.4

Actions

- Adopt the eight principles of Complete Streets for road corridor upgrades and new roads, as well as the considerations for prioritizing different modes of travel as outlined above.
- Include elements such as paved shoulders, separated trails within the right-of-way, pedestrian/cyclist-level lighting, transit considerations (e.g. stops, laybys, queue jump lanes), as well as inclusion of communications and utilities elements. Review and revise these guidelines as needed.

2.3 Roadway Cross-Sections

Roadways in Simcoe County must be designed to provide an adequate level of service and safety for all users on the roadway, which may include pedestrians and cyclists in addition to motorized vehicles, where feasible and appropriate.

Standardized roadway cross-sections are an important tool to help ensure existing and future roads in Simcoe County continue to support the safe movement of people and goods. Having consistency in roadway design elements such as lane widths, pavement slopes and locations of roadside amenities reduces how much information road users need to actively process as they navigate the roadway, allowing drivers, cyclists and pedestrians to have more mental “bandwidth” to process information about other road users and other potential atypical conditions that are more likely to reflect safety risks.

Background and Considerations

At a strategic planning level, it is most critical to determine the width of a roadway’s right-of-way (ROW) and of the elements in it; therefore, these widths are the focus of this section.

The ROW width determines the available space to accommodate travel paths for all users, as well as utilities and drainage elements. County roads, having an arterial road classification, generally have wider right-of-way widths than local municipal roads. If additional right-of-way width needs to be obtained through land purchase to accommodate additional roadway elements such as an additional travel lane or turn lane, this has a direct impact on costs.

The width of travelled lanes has an important influence on perceived safety and resulting speeds. While a road must be wide enough to accommodate the vehicles

using it at posted speeds, a road that is too wide can encourage drivers to operate at faster speeds. Meanwhile, a cycling facility that does not provide enough width or separation from motorized vehicles given the roadway's speed, volume and other characteristics will result in an underused facility and potentially increased vehicle-cyclist conflicts.

Two reference documents are key to informing cross-section design:

- Transportation Association of Canada's *Geometric Design Guide for Canadian Roads* (2017); and
- *Ontario Traffic Manual Book 18 – Cycling Facilities* (June 2021), produced by the Ministry of Transportation of Ontario.

These are referred to as TAC 2017 and OTM Book 18, respectively, in this section.

A context-sensitive approach to road design seeks to ensure that roadways are tailored to fit the environments for which they are built, considering the various mobility needs of various roadway users. The guidance below gives consideration to the rural vs. urban context of the roadway, per TAC 2017 and current transportation planning best practices.

Summary of Guidance for Widths of Roadway Elements

The recommended dimensions of roadway elements based on current guidelines and best practices are summarized in the following tables:

- Exhibit 2.4 for primary arterials – controlled access roads;
- Exhibit 2.5 for primary and secondary arterials – rural roads;
- Exhibit 2.6 for primary and secondary arterials – settlement area roads; and
- Exhibit 2.7 for selected cycling facilities that would most likely be selected for use alongside County road facilities, when included within the roadway right-of-way.

Note that while these exhibits summarize general guidelines for roadway element design, considerations such as roadway context, topography and other constraints may necessitate or allow for some variation from these guidelines in some situations. The guidelines should be applied through more thorough review of the reference documents and through professional engineering judgement. In many retrofit situations, cost-effectiveness must be considered and weighed against the benefits of bringing an existing road in line with current standards, together with judgement and consideration of potential alternative designs and solutions.

Exhibit 2.4: Primary Arterial – Controlled Access

Element	Recommendation	Reference
Right-of-way width	30-45 m	TAC – Table 2.6.5
Through lane width	3.5 m	TAC – Table 4.2.2 (rural roadways): 3.5-3.7 m TAC – Table 4.2.3 (urban roadways): 3.0-3.7 m for design speed 60 km/h and less 3.3-3.7 m for design speed 70-100 km/h Minimum 3.3 m for buses and larger trucks
Right-turn and left-turn lane width	3.25 to 3.5 m 3.5 m for multiple left-turn lanes	TAC – Section 4.2.2 and 4.2.3: same as adjacent lane, or can be reduced by 0.2-0.25 m, but not less than 3.25 m TAC – Section 4.2.3 - multiple left-turn lanes
Parking lanes	None	TAC - Section 4.3.2.4
Shoulder width*	Right shoulder: 2.5-3 m, depending on design speed and design-hour directional volume Left shoulder for 4-lane divided roadways: 1.5 m	TAC – Table 4.4.1 for arterial roads and Section 4.4.2.1
Median width	Flush median: 3.6 m, can be 2.6 m for design speed up to 70 km/h Raised median: 2.0-2.5 m**	TAC – Section 4.5.3
Gutter width (urban)	0.5 m	TAC – Section 4.7.2.1
Boulevard between road and sidewalk	1.5 m minimum for grassed boulevard	TAC – Figure 4.6.1
Sidewalk width (where provided by local municipality)	1.8 m, or per local municipal standards	TAC 2017 – Section 6.2, Figure 6.2.3: 1.8 m allows two wheelchair users to pass each other

Notes:

*TAC – Section 4.4.1: “Shoulders are normally provided on rural roads. In urban areas, they are desirable on freeways, expressways, and certain high speed arterials with design speeds in excess of 80 km/h”.

** TAC – Section 4.5.3: “A width of 2.0 m is normally adequate ... To accommodate left-turn auxiliary lanes or a protected structural pier, the desirable overall median width is 6.0 m which includes the gutter or offset widths. ... Where left-turn auxiliary lanes, structural piers or median barriers are not a consideration, and a median is desired for safety or access control purposes, a 2.0 m to 2.5 m width is common. In retrofit situations, widths of 1.5 to 2.0 m may be considered.

Exhibit 2.5: Primary or Secondary Arterial Road Elements – Rural

Element	Recommendation	Reference
Right-of-way width	30-45 m	TAC 2017 – Table 2.6.5
Through lane width	3.5-3.7 m	TAC 2017 – Table 4.2.1 (rural roadways design hour volume ≤450): 3.5-3.7 m for 70 km/h+ TAC 2017 – Table 4.2.2 (other rural roadways): 3.5-3.7 m
Right-turn and left-turn lane width	Same as adjacent lane, or can be reduced by 0.2-0.25 m, but not less than 3.25 m; 3.5 m for multiple left-turn lanes	TAC 2017– Section 4.2.2 and 4.2.3 TAC 2017– Section 4.2.3: 3.5 m for multiple left-turn lanes
Parking lanes	None	TAC 2017 - Section 4.3.2.4
Median width (where provided)*	1-4 m	TAC 2017 – Section 4.5.3
Shoulder – not an identified cycling route**	1-3 m, depending on design speed and AADT	TAC 2017– Table 4.4.1
Outer separation - with drainage	Rounding area beside shoulder: 0.5 m Variable drainage widths: Side slope at 4:1 slope; Drainage channel; Back slope at 3:1 slope OR fill slope up to 2:1 slope with barrier or 4:1 slope without barrier	TAC 2017 – Figure 4.13.2

Notes:

* TAC 2017 – Section 4.5.3: “A flush median without barrier may be appropriate for rural highways with low to medium volumes and operating speeds. ... Wider flush medians with barriers normally apply to high speed rural arterial roads.”

** Note that shoulder material can vary (e.g. gravel and/or paved), but a paved width of 0.5 m provides a stable surface to absorb minor deviations from travelled lanes (TAC 2017 – Section 4.4.3.2). This will also reduce maintenance due to reduced cracking of the paved travelled surfaces

Exhibit 2.6: Primary or Secondary Arterial Road Elements – Settlement Areas

Element	Recommendation	Reference
Right-of-way width	20-45 m (ROW of 20 m applicable to retrofit condition only)	TAC 2017 – Table 2.6.5
Through lane width	3.5 m (or 3.3 to 3.7 m)	TAC 2017 – Table 4.2.3 (urban roadways): 3.0-3.7 m for design speed 60 km/h and less 3.3-3.7 m for design speed 70-100 km/h Minimum 3.3 m for buses and larger trucks
Right-turn and left-turn lane width	Same as adjacent lane, or can be reduced by 0.2-0.25 m, but not less than 3.25 m; 3.5 m for multiple left-turn lanes	TAC 2017 – Section 4.2.2 and 4.2.3 TAC 2017 – Section 4.2.3: 3.5 m for multiple left-turn lanes
Parking lane width	2.4 m when provided	TAC 2017 – Section 4.3.2.4
Sidewalk width (where provided by local municipality)	1.8 m, or per local municipal standards	TAC 2017 – Section 6.2, Figure 6.2.3: 1.8 m allows two wheelchair users to pass each other
Curb	Curb face width varies by type and design, e.g. Barrier curb: approx. 0.2 m (lower speeds only) Semi-mountable curb: approx. 0.3 m	TAC 2017 – Section 4.7.2
Gutter width	0.5 m	TAC 2017 – Section 4.7.2.1
Median/turn lane	4.0 m - for design speeds greater than 60 km/h	TAC 2017 – Section 8.6
Furnishing zone width (furnishings, planting and utilities)*	0.5 to 3 m**	TAC 2017 – Section 6.3.1.3

Note

* TAC 2017, Section 6.3.1.3: “Furnishing zones should be provided wherever practical; they are recommended on commercial streets, or where adjacent traffic speeds are 50 km/h or higher.

** TAC 2017, Section 6.3.1.3: “The lower limit provides basic functionality while the upper allows for a more pedestrian-oriented space.” Note that snow storage is one function of the furnishing zone.

Exhibit 2.7: Element Widths for Selected Cycling Facilities

Element	Recommendation	Reference
Paved shoulders (rural)	Desired: 1.5-2.0 m width (paved shoulder of 2.0 m or more must be marked with a buffer) Minimum: 1.2 m width	OTM Book 18– Table 4.11
Buffered paved shoulders (rural)	Desired: 1.5-2.0 m width and 0.5-1.0 m buffer Minimum: 1.5 m width and 0.5 m buffer	OTM Book 18– Table 4.11
One-way physically separated bike lane (urban)	Desired: 1.8 m lane and 1.0 m buffer – up to 2.5 m for volumes over 1,500 daily cyclists Minimum: 1.5 m lane and 0.3 m buffer – if 1.8 m cannot be provided, consider providing gaps in the separation treatment to allow overtaking; 0.6 m minimum buffer if parking lane is adjacent to separated bike lane	OTM Book 18 – Table 4.3
Two-way physically separated bike lane (urban)	Desired: 3.5 m lane and 1.0 m buffer Minimum: 2.7 m lane and 0.3 m buffer; 0.6 m minimum buffer if parking lane is adjacent to separated bike lane	OTM Book 18 – Table 4.3
One-way cycle track (urban)	Desired: 2.0-2.5 m lane Minimum: 1.5 m; width may be reduced to 1.2 m for short distances to avoid obstacles, etc. Buffer width varies by posted speed from 0.6-1.0 m (0.3 m minimum) for 50 km/h and under to outside clear zone for 70 km/h+.	OTM Book 18 – Table 4.4 OTM Book 18 – Table 4.6 for buffer widths
Two-way cycle track (urban)	Desired: 3.5-4.0 m lane Minimum: 3.0 m; width may be as low as 2.4 m for short distances to avoid obstacles, etc. Buffer width varies by posted speed from 1.5-2.5 m (0.6 m minimum) for 50 km/h and under to outside clear zone for 70 km/h+.	OTM Book 18 – Table 4.4 OTM Book 18 – Table 4.6 for buffer widths
In-boulevard multi-use path	Desired: 3.5 m width (less than 100 users/hour) to >=4.0 m (over 100 users per hour) Minimum: 3.0 m width Buffer widths as for cycle tracks.	OTM Book 18- Table 4.5 OTM Book 18 – Table 4.6 for buffer widths
Bicycle lane, conventional (urban)	Desired: 1.8 m lane with 1.0 m buffer if needed Minimum: 1.5 m lane with 0.3 m buffer if needed	OTM Book 18- Table 4.7 and Table 4.8

Sample Roadway Cross-Sections

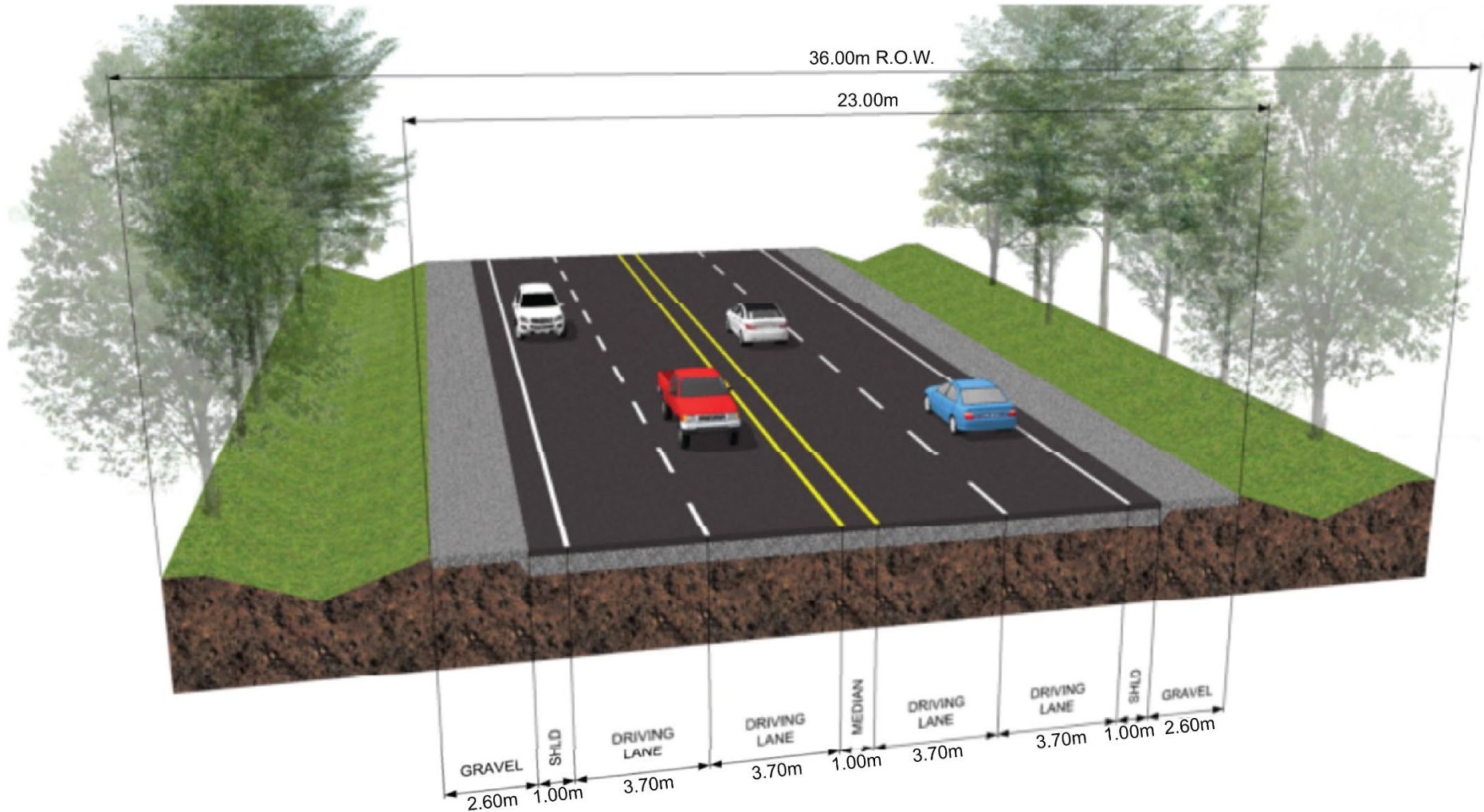
Simcoe County roadways can vary considerably based on traffic and speed characteristics, whether and how cycling and/or pedestrian facilities can be included, roadway context, available right-of-way widths, topography, constraints, and other considerations, even as they incorporate consistently the various road elements above.

Conceptual cross-section illustrations can help visualize the allocation of the roadway right-of-way to various road elements such as lane and shoulder widths, cycling facilities, sidewalks, and roadside boulevards. Five sample cross-section illustrations are included below, focusing on the width of roadway elements. These cross-sections are carried forward from the 2014 TMP Update (though in some cases with revisions to stated dimensions to reflect current guidelines).

Exhibit 2.8 and Exhibit 2.9 indicate two potential cross-sections for a rural primary or secondary arterial. Exhibit 2.8 does not include separate cycling facilities, while Exhibit 2.9 incorporates buffered paved shoulders by extending the paved area along the road bed. (In cases where sufficient road bed width to widen the paved area is not available, the cost and effort to add paved shoulders wide enough to meet cycling standards will be much higher.)

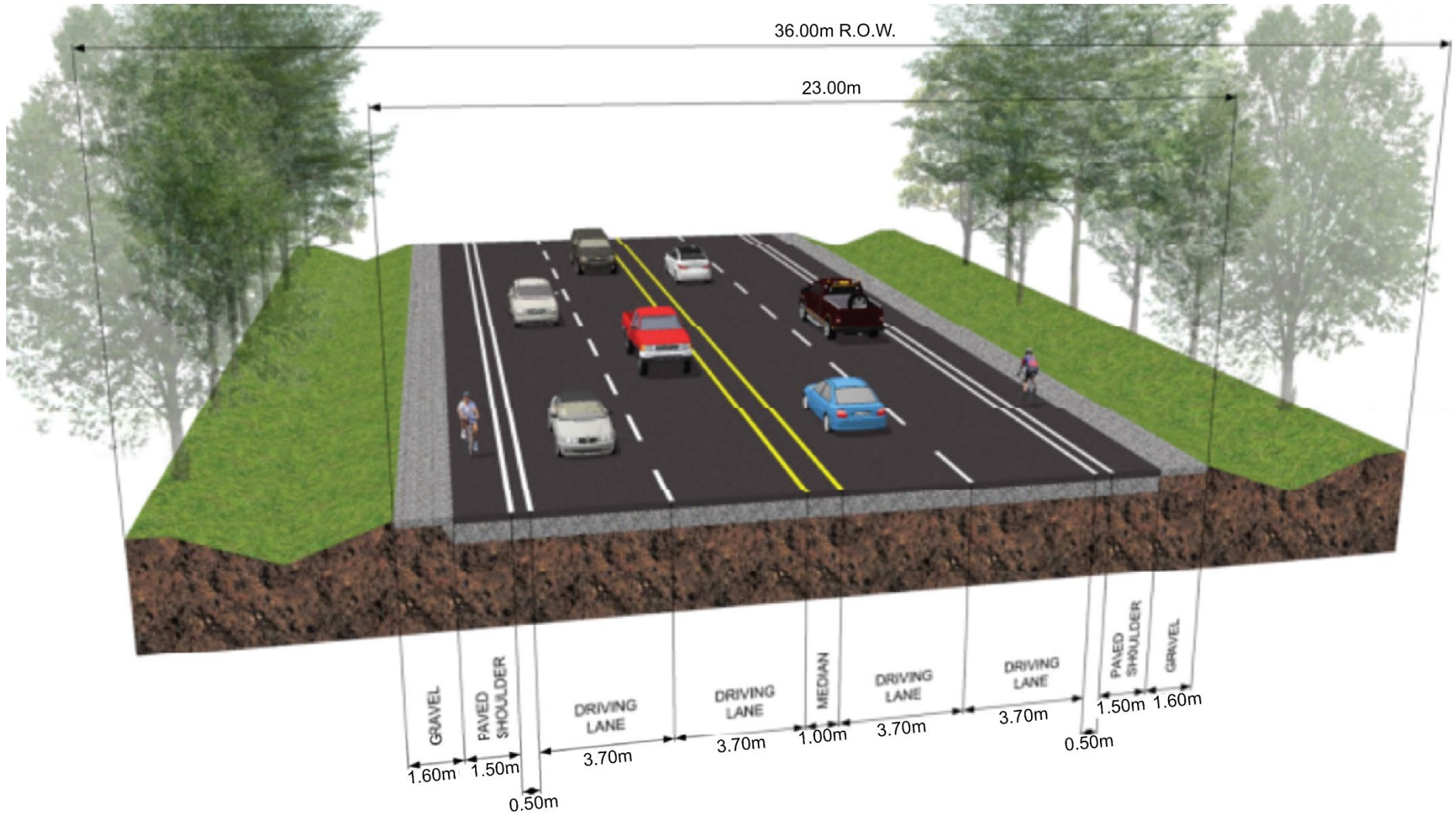
Exhibit 2.10, Exhibit 2.11 and Exhibit 2.12 indicate three potential cross-sections for an urban secondary or primary arterial with a median/turn lane. Exhibit 2.10 provides infrastructure for vehicle transport only within the road right-of-way. Exhibit 2.11 is a similar roadway but with the inclusion of a buffered bicycle lane within a slightly wider pavement width, as well as sidewalks. (Sidewalks are the local municipality's jurisdiction and would be installed by the local municipality.) Exhibit 2.12 shows the same roadway as in Exhibit 2.11 but with additional pavement width to allow for added space for cyclists via a 1.0 m buffer and 1.5 m bicycle lane.

Exhibit 2.8: Cross-Section of Rural Primary or Secondary Arterial – No Separated Cycling Facilities



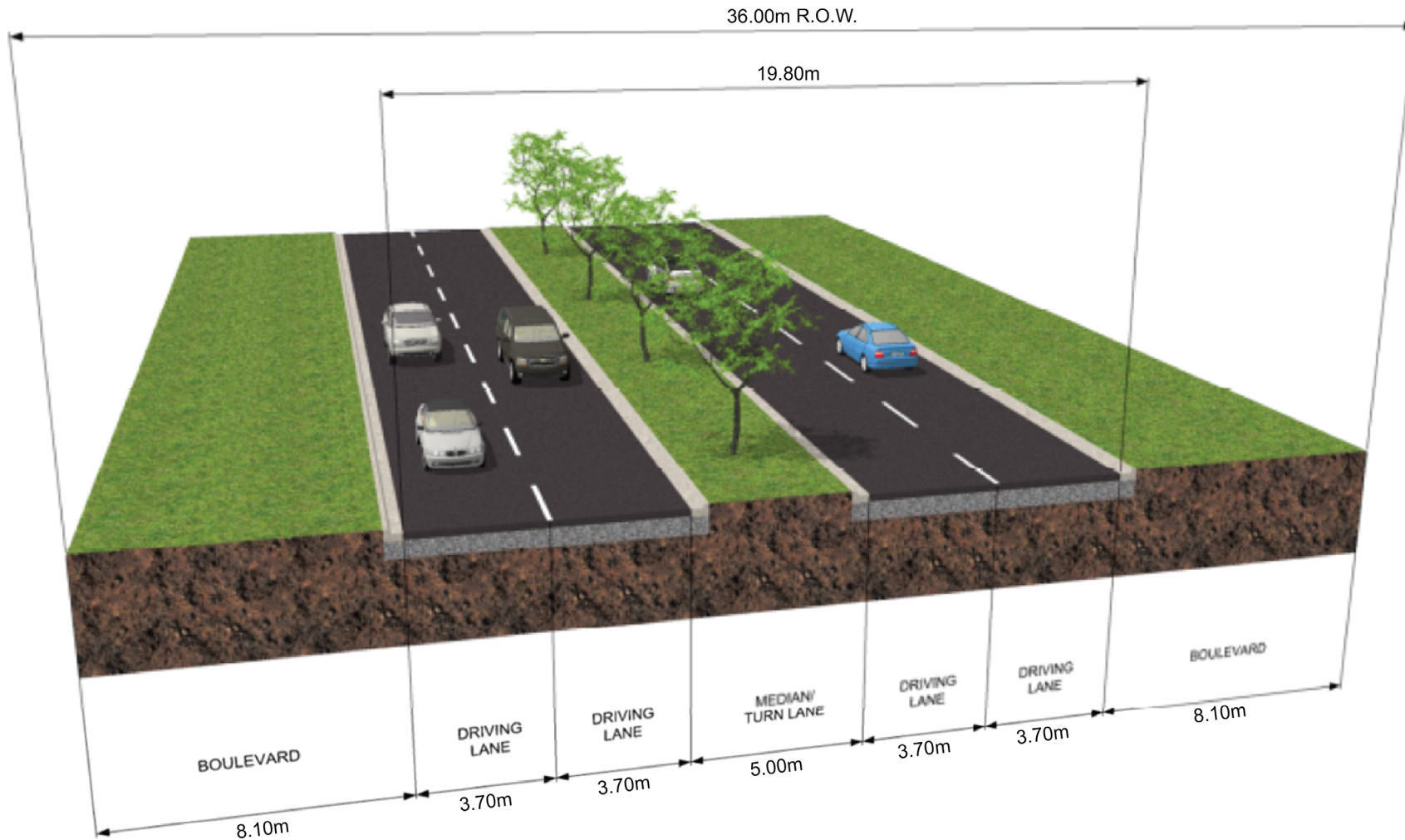
Source: *2014 Simcoe TMP Update*, Figure 6.5.5-1 Existing Rural Cross-Section (image resolution as in source document, selected dimensions have been modified and diagram may not be to scale). Cross-section is conceptual, and landscaping treatments are not indicative.

Exhibit 2.9: Cross-Section of Rural Primary or Secondary Arterial with Buffered Paved Shoulders for Cyclists



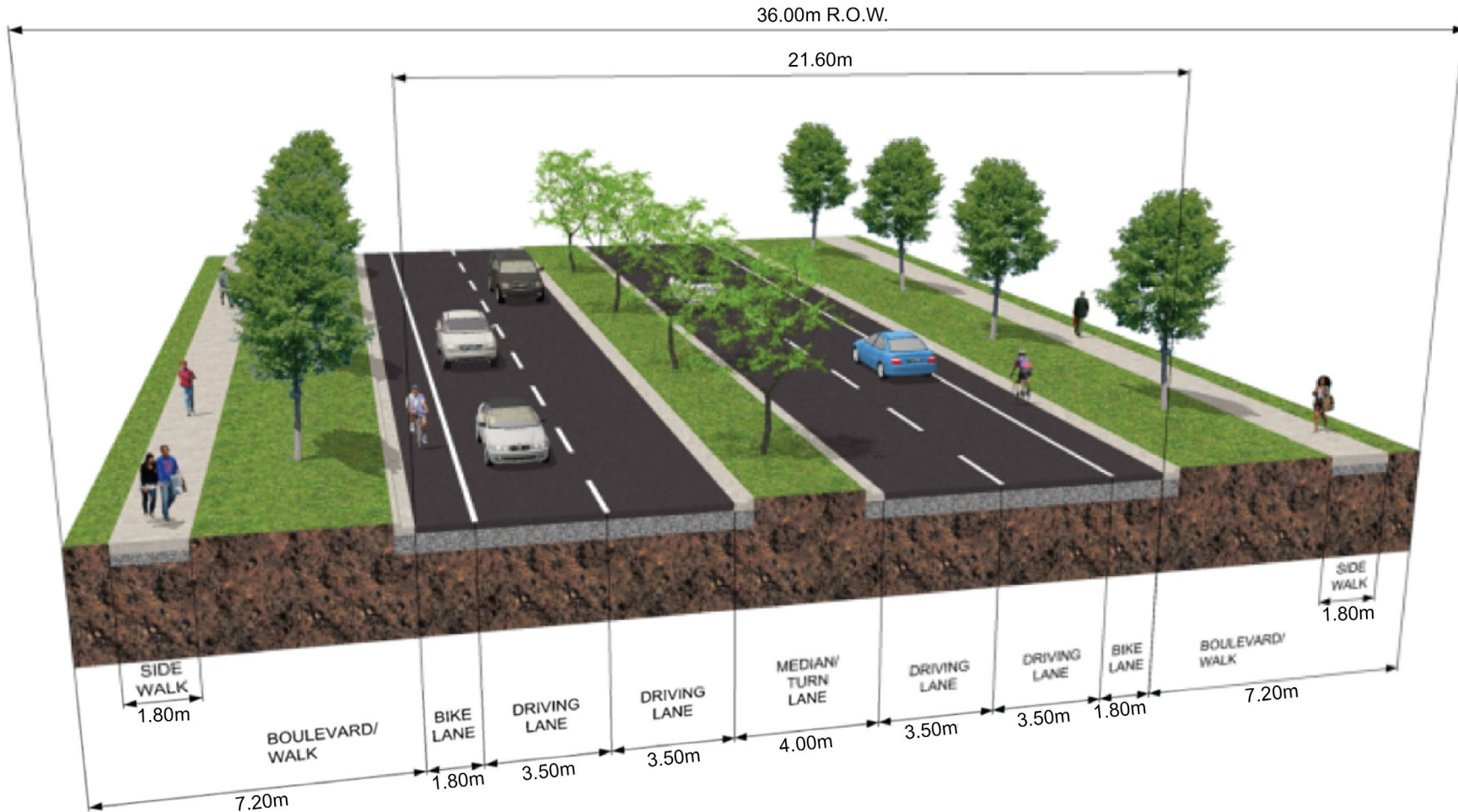
Source: 2014 Simcoe TMP, Figure 6.5.5-2 Potential Rural Cross-Section (image resolution as in source document, selected dimensions have been modified and diagram may not be to scale). Cross-section is conceptual, and landscaping treatments are not indicative.

Exhibit 2.10: Cross-Section of Primary or Secondary Arterial Road – Settlement Area – No Separate Pedestrian or Cycling Provision



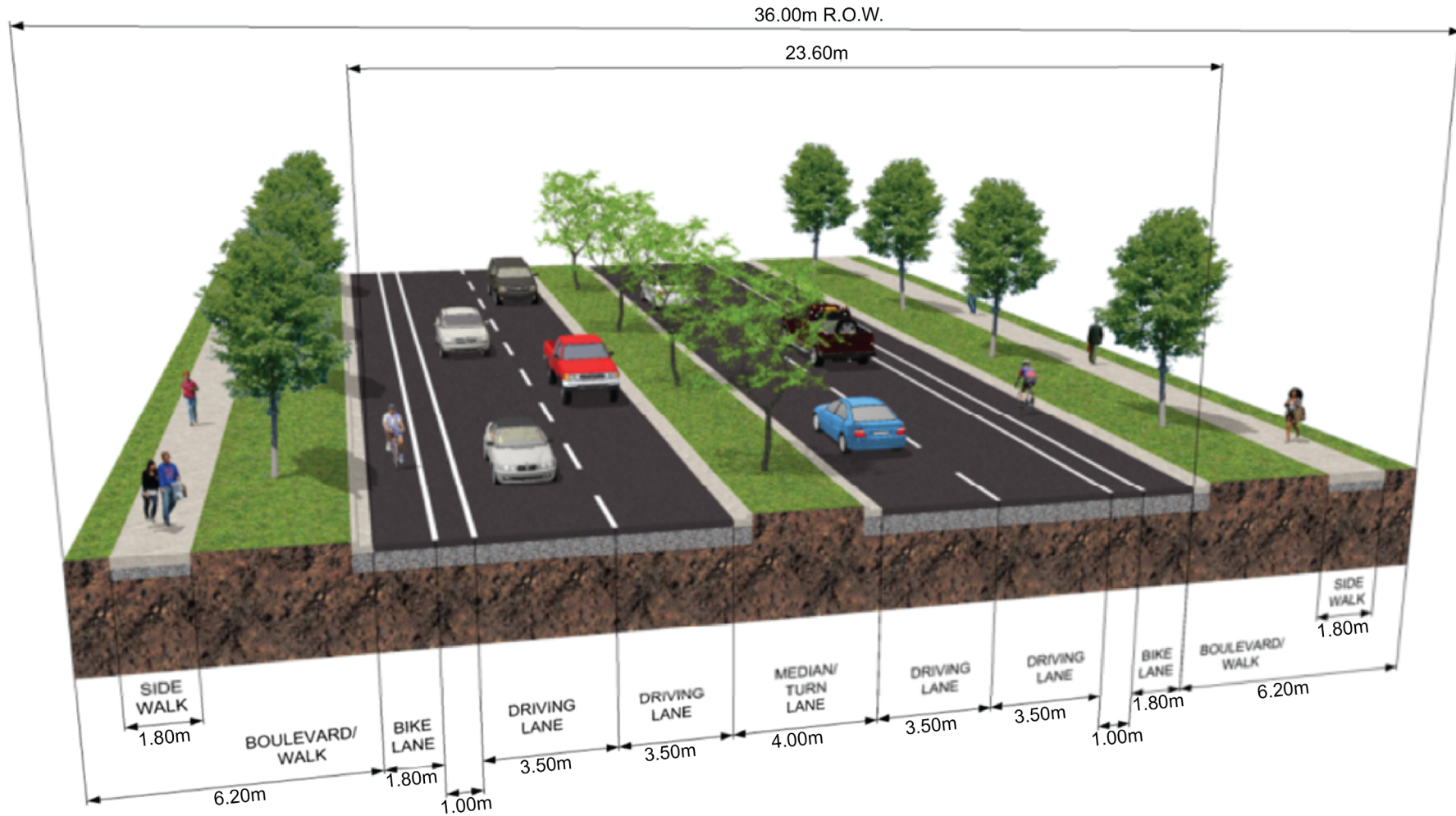
Source: 2014 Simcoe TMP, Figure 6.5.5-3: Existing Urban Cross-Section (image resolution as in source document, selected dimensions have been modified and diagram may not be to scale). Cross-section is conceptual, and landscaping treatments are not indicative.

Exhibit 2.11: Cross-Section of Primary or Secondary Arterial Road – Settlement Area – with Sidewalk (Local Municipality) and Non-Buffered Cycle Lane



Source: 2014 Simcoe TMP, Figure 6.5.5-4: Potential Future Urban Cross-Section Retrofit (image resolution as in source document, selected dimensions have been modified and diagram may not be to scale). Cross-section is conceptual, and landscaping treatments are not indicative.

Exhibit 2.12: : Cross-Section of Primary or Secondary Arterial Road – Settlement Area – with Sidewalk (Local Municipality) and Buffered Cycle Lane



Source: 2014 Simcoe TMP, Figure 6.5.5-5: Potential Future Urban Cross-Section – New Roads (image resolution as in source document, selected dimensions have been modified and diagram may not be to scale). Cross-section is conceptual, and landscaping treatments are not indicative.

Communications and Utilities

It will be important for the County of Simcoe to continue to ensure that road rights-of way safely support current and future utility needs. Surface utilities can include electrical transmission lines, telephone lines, street lighting poles, traffic signal poles, among others, while buried facilities include storm and sanitary sewers, water lines, communications cables, gas lines, etc.

The Transportation Association of Canada's *Geometric Design Guide for Canadian Roads* (TAC, 2017, Section 4.11) provides standards for utility placement among other cross-section elements and should be referenced to ensure best practices are followed.

To the extent possible for rural roads and higher-speed urban roads, surface utilities should be located outside of the "clear zone", a designated space free of obstacles designed as clearance for drivers that may run off the road. For arterial roads, the clear zone ranges from 3.0 to 3.5 m for relatively flat roadsides and road design speeds of 70 to 80 km/h to 11.0 to 13.5 m for roadsides with larger slopes and road design speeds of 100 km/h (TAC 2017, Section 7.3).

In urban environments, the goal of providing lateral clearance to obstructions is more to improve operations than shielding obstacles (TAC 2017, Section 7.7.1). For urban roads, the boulevard³ serves as a separation between the curb and the sidewalk and can accommodate surface and underground utilities, among other street features. TAC recommends locating utility poles, lamp posts and other objects potentially hazardous to errant vehicles as far as possible from the travelled roadway, for example at the back of the sidewalk (TAC 2017, Section 4.6.1). It is recognised that this may not be possible or desired along constrained urban roads. In some cases roadside barriers may be warranted, especially to protect pedestrians and cyclists (TAC 2017, Section 7.7.3).

Recommendation

This section summarized current guidance on cross-section elements for Simcoe County's arterial roadways, which has been updated since the 2014 TMP and in some cases includes some revisions to recommended roadway elements. For example, OTM Book 18 now recommends a higher standard for cycling provision,

³ TAC 2017, Section 4.6.1 defines the boulevard as the area between the curb and sidewalk, and can also be referred to as the furnishing zone especially in urban environments. The boulevard may or may not be an extension of the sidewalk.

such as a wider urban bicycle lane width of 1.8 m. It is recommended that the cross-section guidance outlined in this section be used for reference for strategic planning purposes and in consideration of serving a range of road users as appropriate and feasible.

Actions

- Adopt the dimensions of roadway elements indicated in Exhibit 2.4 through Exhibit 2.7 as general standards for the County of Simcoe.
- In consideration of Section 2.2 Context-Sensitive Road Design, incorporate elements that support walking and cycling into roadway design, where feasible to ensure cost-effective solutions and other criteria.

2.4 Road Rationalization

Road rationalization is the process of applying a logical framework to determine which roads serve County mobility objectives to a sufficient degree to remain in or be added to the County road network.

Background and Considerations

The County of Simcoe Road Rationalization framework was developed as part of the 2008 TMP, and was also applied to the County road network plus selected local municipal roads at that time. The process identified a number of recommended road jurisdiction transfers along with transfer timing; these recommendations were carried forward to the 2014 TMP Update.

The 2008 TMP road rationalization framework has subsequently also been carried forward to the current TMP Update study for evaluating new municipal road segments put forward by local municipalities for consideration for transfer to the County. The framework is supported by a scoring system used to identify the degree to which a road serves a County vs. a local travel movement purpose. Road segments that have a score greater than a minimum threshold may be recommended to remain as County roads or to be transferred to the County, while those with lower scoring may be recommended for ownership by local municipalities. The road rationalization framework, process and results are described in detail in the *Phase II: Transportation Network Development* report.

Recommendation

Applying the road rationalization framework to new segments put forward for consideration for transfer in Phase II identified new links for the County road network that will have a positive impact on County road network connectivity.

It can be noted that the County's current road rationalization framework deviates to a greater extent from the Ontario Good Roads Association (OGRA) 1998 framework on which it is based; most other Ontario counties have developed and applied frameworks more closely aligned with OGRA's in recent years. While the County's current road rationalization framework remains valid, the County may consider a review of the framework to ensure that it adequately represents County interests and priorities into the future, and to ensure it aligns with future changes in transportation planning.

For example, the County could consider re-incorporating OGRA criteria for boundary service, road right-of-way width and road surface type, and reviewing Average Annual Daily Traffic (AADT) criteria scoring (which currently gives each road segment at least a minimum score of 1 regardless of AADT value). This road rationalization framework review could also provide more detailed guidance for applying each criterion to ensure that the framework is applied consistently, e.g. more clearly defining the end points for routes identified as urban centre connectors, with potential to help clarify County interest of arterial roads within urban settlement areas. Changes to the current road rationalization framework to align more closely with the OGRA framework may result in additional road transfers not currently identified, and would require additional consultation with local municipalities.

Based on any updates in the scoring of the road segments under consideration after review of the framework, the timing of road transfers could also be confirmed or revised.

Actions

- Initiate upload of roads identified for transfer to County under the identified phasing (see Phase II report).
- Consider conducting a comprehensive review of the road rationalization framework as part of the next TMP Update or as a separate exercise, with input from local municipalities considered.

3 Transit

Transit connectivity is an increasingly important component of the transportation system as residents and visitors seek and depend on improved alternate mobility solutions. The County of Simcoe operates a growing network of public transit routes via LINX Transit, providing connections to communities throughout the County, including connections to seven local transit systems operated by local municipalities, the City of Barrie and the City of Orillia.

Transit needs and opportunities were identified as part of Phase I of the study. The Transit Strategy, including key directions and actions, was developed as part of Phase II. It is repeated in this report as the TMP Update takes a strategy-based approach to transit.

Background and Considerations

Numerous public transit services operate throughout the County of Simcoe, providing a sustainable mobility alternative for people who are unable or choose not to drive. These services can be categorized by operator type and geographic range and includes regional transit services (e.g. GO Transit), County transit (i.e. LINX Transit) and local transit services (i.e. services that are operated by and typically within the County's local municipalities).

A map of the existing transit services and connections available throughout the County of Simcoe, and select neighbouring jurisdictions, is shown in Exhibit 3.1.

The way in which a community plans its land use may be the most important input into how people choose to get around. Strategic land use planning—that is, planning for intensification and minimum density targets around transit—can support transit services and associated infrastructure investments through directing growth to areas around transit stations and stops. To support the Transit Strategy and the future uptake of transit across the County of Simcoe, the County may consider Major Transit Station Areas (MTSAs) as tools to direct growth to areas in the vicinity of transit services. As per the Growth Plan for the Greater Golden Horseshoe (2020), a MTSA is the area around an existing or planned higher order transit station or stop, and are generally defined as the area within a 500 to 800 metre radius of a transit station.

Exhibit 3.1: Transit Services and Connections in the County of Simcoe



Note: Routing current as of August 2021.

Five key themes were identified to direct the development of the Transit Strategy (and are discussed in greater detail in the Phase II report), and are provided for reference as follows:

1. **Connectivity and Coordination:** Improved coordination between LINX Transit and the local municipal systems (as well as Barrie Transit and Orillia Transit), better connections by co-locating terminals, and improving scheduling and connections between LINX and GO Transit;
2. **Accessibility:** Improved accessibility, such as accessible bus stops for traditional fixed-route transit and expanded specialized transit;
3. **Fare Integration:** Integration or simplification of fare structures, e.g. using common fare media across the various systems across the County;
4. **Governance, Funding and Operating Models:** Stable funding with revenues and demand fluctuating during the pandemic and the reliance on governmental transfers (e.g. the gas tax); and
5. **Sustainable Infrastructure and Vehicles:** Fleet renewal with more efficient and/or electric vehicles.

These key themes lay the foundation to begin to work towards a more seamless and regionally integrated transit system County-wide. County-wide transit amalgamation is the process of integrating local transit systems into a single organization that operates public transit across a region. This has been successfully undertaken in mixed urban-rural municipalities including York Region, Durham Region and Waterloo Region. A consolidated transit system across Simcoe County would involve many benefits for transit riders, including improved transit service and seamless County-wide connectivity.

Recommendation

Stemming from the key themes, short-term and long-term directions to support public transit are recommended, as outlined in Exhibit 3.2.

To reduce barriers and provide efficient transit across Simcoe County, moving toward County-wide transit amalgamation is also recommended. Leveraging knowledge and context from local municipalities will be important, and amalgamation should also involve coordination with key external transit operators, including GO Transit and Barrie Transit. Integration with these operators will ensure

alignment with the GGH Transportation Plan which aims to achieve a robust interconnected regional bus network.

Next steps, separate to this TMP Update study, include the Simcoe Area Transit Plan based on a robust analysis of local transit needs, concerns and impacts, as well as an analysis of costs and benefits of County-wide transit amalgamation.

Exhibit 3.2: Recommended Short- and Long-Term Transit Directions

Theme	Short-Term Directions	Long-Term Directions
Connectivity and Coordination	<ul style="list-style-type: none"> • Complete a review of transit terminal facilities, bus transfer locations and future transit hubs (e.g. proposed Innisfil GO Station) to allow for better connections in urban areas • Expand transit service periods with late-evening and weekend service trials, focusing on post-secondary and shift-work demand in evenings, as well as users with diverse travel patterns • Study the feasibility of amalgamating transit services in Simcoe County into a single County-wide system to improve the customer experience and service connectivity 	<ul style="list-style-type: none"> • Identify and prioritize infrastructure improvements at key transit connection points in conjunction with service coordination, and improve or add new service to under-served communities • Review and leverage opportunities for County-wide transit service coordination on key corridors • Work with the Province to expand and connect to travel options outside of the County, including 15-minute train service to Bradford, Innisfil and Barrie, and potential future GO service expansion to Bolton and Alliston
Accessibility	<ul style="list-style-type: none"> • Engage transit users to determine most-needed improvements for accessibility and specialized transit • Create a design standards framework for transit stops to standardize amenities and responsibilities with other municipalities 	<ul style="list-style-type: none"> • Implement design standards framework for bus stops • Continue investing in customer waiting amenities at transit stops throughout the County • Ensure that transit services in Simcoe County comply with or exceed AODA standards

Theme	Short-Term Directions	Long-Term Directions
	<ul style="list-style-type: none"> • Commit to investing in customer amenities over time to improve comfort at transit stops • Create standards for transfer points between specialized transit and conventional transit services 	
Fare Integration	<ul style="list-style-type: none"> • Initiate review of County-wide transit fare policy and develop County-wide fare zone system • Explore technologies and products that would accommodate inter-agency fares • Establish a framework for discounted fares for customers transferring between different transit operators, including LINX, as well as students, seniors and people living with a low income. 	<ul style="list-style-type: none"> • Implement regional fare and zone strategy recommendations developed from short-term directions • Monitor best practices at peer agencies for continuous improvement • Work with the Province to enhance fare integration between County and regional/provincial transportation services, such as GO and Ontario Northland
Governance, Funding and Operating Models	<ul style="list-style-type: none"> • Begin studying a County-wide transit service model as part of future Transit Strategy Update, in-line with the GGH Transportation Plan which aims to achieve a robust interconnected regional bus network – apply a 10-Year Transit Vision and a 5-Year Implementation Strategy • Review service delivery needs and opportunities, including investigating use of on-demand and micro-transit (ODMT), as well as leveraging the local knowledge and successes of local municipal partners 	<ul style="list-style-type: none"> • Implement County-wide transit service model, following Transit Strategy Update • Continue to refine and improve regionally integrated transit service, including connections to expanded GO Transit and intercity services • Create and implement a five-year transit plan and long-term transit vision in alignment with the GGH Transportation Plan (and associated transit actions) to support the development of a broader regional system that provides seamless connections

Theme	Short-Term Directions	Long-Term Directions
	<ul style="list-style-type: none"> • Improve coordination of transit vision, planning and strategy in the County of Simcoe • Monitor all potential future funding opportunities for transit and sustainable transportation from higher levels of government 	<p>across the County and the broader region</p>
Sustainable Infrastructure and Vehicles	<ul style="list-style-type: none"> • Investigate funding opportunities to purchase, operate and maintain zero-emissions buses • Conduct review of other transit agencies' sustainable zero-emissions infrastructure in areas such as bus stops, bus terminals and transit garages 	<ul style="list-style-type: none"> • Transition to a zero-emissions bus fleet with garage and/or terminal infrastructure as technology advances to support longer ranges, and to support new and emerging technologies • Support the efforts of other regional transit agencies to green their operations

Actions

- Update the Transit Strategy with a 10-Year Transit Vision and a 5-Year Implementation Strategy. Work toward implementing short-term directions for transit including improved connectivity and coordination, improved accessibility, fare integration, transit amalgamation and transitioning to a sustainable transit fleet.
- Building on the short-term directions undertaken, begin implementing the long-term directions for transit.
- To begin working toward a County-wide transit service model, undertake a Simcoe Area transit plan, assemble a working group comprised of County staff, delegates from municipal transit agencies and departments and other stakeholders.

4 Goods Movement

Supporting the continued efficient movement of goods is an important commitment of the TMP Update. Commercial vehicles (i.e. medium and heavy trucks) are responsible for the movement of the majority of the goods shipped to, from, within and through the County. They also support essential services such as construction, repair and maintenance, waste management, and emergency response. Freight rail service also operates in areas of the County, and facilitating its increased use represents an important opportunity.

4.1 Commercial Vehicles

Background and Considerations

Together with the Provincial highway network, the County arterial road network provides connectivity between communities within the County and to markets and destinations beyond along roadways designed to accommodate the physical needs and geometry of heavy vehicles (albeit with seasonal restrictions along selected County routes). The Provincial highway network forms the main travel route for truck movement in the County, especially Highways 400 and 11, while the County road network provides important “feeder” connections.

2008 TMP Goods Movement Corridors

Simcoe County’s 2008 TMP identified the following Goods Movement Corridors:

- Provincial highway network (excluding Highway 12 west of Highway 400);
- County Road 10 in New Tecumseth;
- County Road 50 in Adjala-Tosorontio;
- County Road 93 in Midland; and
- The then-future County Road 127 in Oro-Medonte.

These corridors were used as part of the Multiple Evaluation Framework in the 2014 TMP Update to prioritize road projects. Given that these Goods Movement Corridors were not considered differently in County policy beyond previous TMPs, they were not carried forward to the current TMP Update. Instead, the relative commercial trip volumes based on analysis of the MTO’s Commercial Vehicle

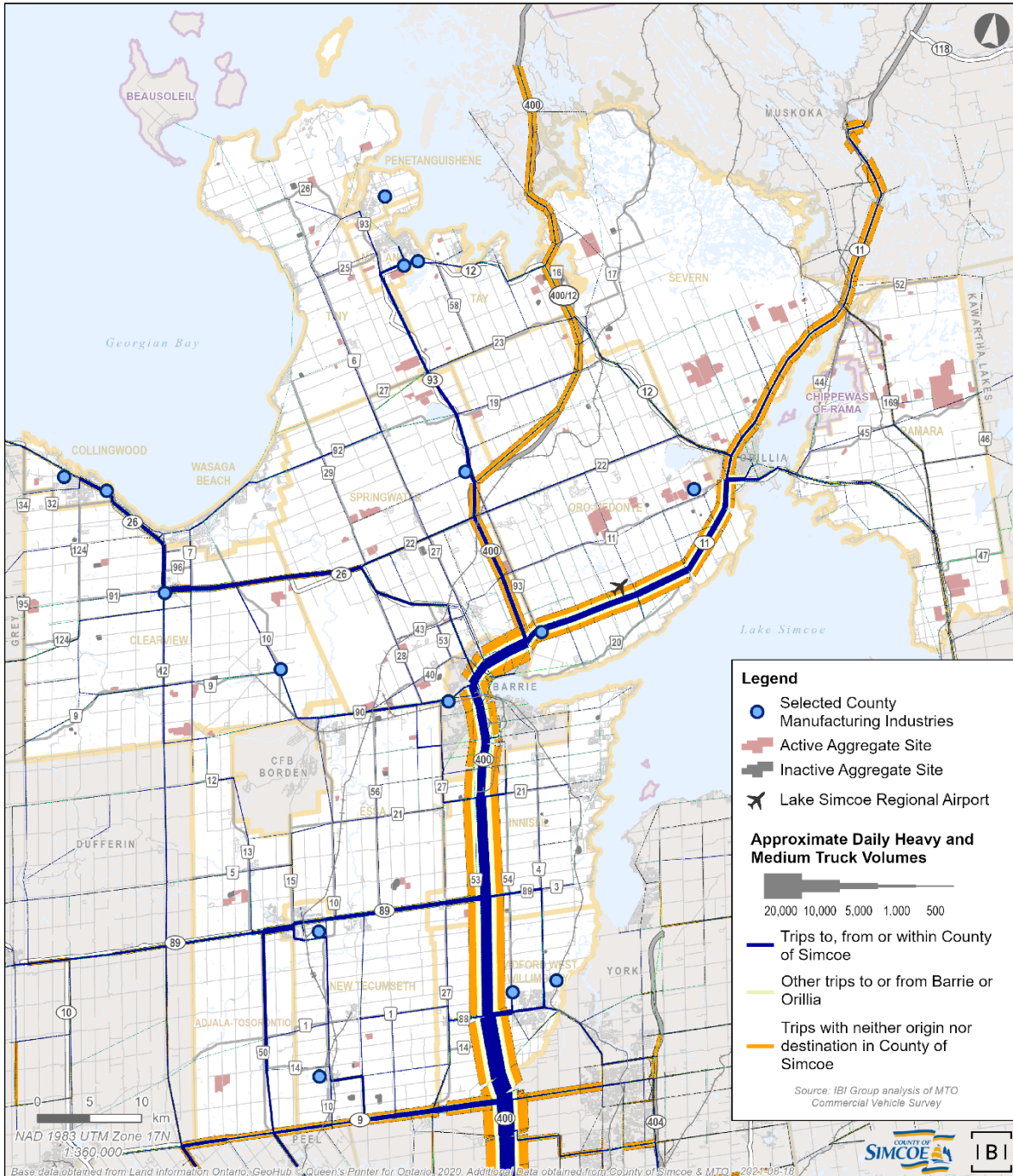
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Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

Survey were used to represent the Goods Movement goal in the Multiple Account Evaluation in Phase II (see Exhibit 4.1).

Exhibit 4.1: Approximate Daily Commercial Vehicle Volumes in Simcoe County



Source: Arcadis IBI Group analysis of MTO 2012 Commercial Vehicle Survey.
Note: Truck flows based on modelled travel routings and may be misaligned in some locations. Identified manufacturing locations do not represent an exhaustive list of all trip generators/industries in Simcoe County.

Provincial Strategic Goods Movement Network

In February 2022, the Province released *Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe*. The 2051 plan outlines a Strategic Goods Movement Network⁴ (SGMN) that identifies key corridors to support freight movement across the Greater Golden Horseshoe, including the County of Simcoe, as shown in Exhibit 4.2.

Most Provincial highways in the County are included in the SGMN, with the exception of the following considerable lengths of arterial highway⁵:

- Highway 12 from its western terminus at Highway 93 in Midland southeasterly to County Road 169 in Ramara;
- Highway 93 north of County Roads 23 and 27 to its northern terminus at Highway 12 in Midland; and
- Highway 26 east of County Road 28 in Minesing east/south to Highway 400 to Barrie.

The following County roads are included as part of the SGMN:

- **County Road 169** in Ramara – this serves as the direct connection between Highway 12 to the south and Highway 11 to the north (whereas the alternative Highway 12 connection via Orillia is not included in the SGMN);
- **County Road 28** (George Johnston Road) together with **County Road 90** between County Road 28 in Minesing and the Barrie boundary in Springwater (these County roads are included in the SGMN to connect from Barrie/Highway 400 westerly instead of Highway 26);
- **County Road 42** in Clearview (part of a direct connection between Stayner/Highway 26 to the north and Highway 89 to the south);
- **County Road 50** in Adjala-Tosorontio between Highway 9 to the south and Highway 89 to the north (this was included instead of the parallel,

⁴ Note: A truck route network is a regulatory designation that can be updated relatively quickly (e.g. bylaws and signage), while a Strategic Goods Movement Network is a multi-jurisdictional road and highway network that can inform planned operation and capital improvements and priorities on the spine of the truck route network over the long-term.

⁵ The roadway segments signed as Highway 89 through Alliston and as Highway 26 through Collingwood are also not part of the SGMN. These are local municipal roads that are part of the Province's Connecting Links program.

County Road 10 connection to the east, a segment identified in this TMP update for future development-driven road widening); and

- **County Road 10** in New Tecumseth as part of Industrial Parkway to the south of Alliston.

A local municipal roadway is also part of the SGMN: the remainder of Industrial Parkway between County Road 10 in New Tecumseth westerly to Highway 89. This roadway has been identified for transfer to the County by 2031 as part of road rationalization exercise of previous TMPs.

Recommendation

Strategic Goods Movement Corridor Alignment

As the movement of goods and commercial vehicles are critical to the County's economy and in supporting the lives of its residents and visitors, consideration should be given to key goods movement corridors to ensure alignment between different levels of government. Although all County roads permit heavy vehicle traffic, it is important that the County of Simcoe be consistent with Provincial plans and maintain or upgrade key corridors, as necessary.

There is considerable alignment between the Province's Strategic Goods Movement Network (Exhibit 4.2) and commercial vehicle volumes shown previously as Exhibit 4.1. However, commercial vehicle volumes indicate that the extent of the Provincial highway network in the SGMN within Simcoe County should be extended (e.g. to include the remainder of Highways 26 and 93, as well as Highway 12 at least east of Highway 400). Additional County road segments could be included for consideration in the SGMN, such as County Roads 10, 22 and 27.

It is recommended that the County of Simcoe work with MTO to further refine the SGMN within Simcoe County boundaries to reflect current and anticipated commercial vehicle travel patterns, drawing on sources such as the Province's updated Commercial Vehicle Survey data. One objective of this alignment is to ensure that the Provincial highway network be designed to continue to carry a high proportion of inter-regional commercial vehicle traffic, reducing the amount of "spillover" onto County and local roads.

While most County roads permit and support heavy commercial vehicle traffic, identification as part of the SGMN would put focus on the planning and management of freight on these key corridors, in coordination with the Province, and help support the GGH as economically competitive. Additionally, first- and last-

mile connections to and from the SGMN is an important consideration in supporting access to pick-up/drop-off points (e.g. distribution centres, businesses, places of employment or homes).

In order to realize this objective, the County is committed to actively exploring opportunities for collaboration with local municipalities, offering support through comprehensive secondary planning and neighborhood planning initiatives dedicated to bolstering and enhancing these vital connections.

It is recommended that the County of Simcoe monitor these strategic goods movement routes for potential heavy-vehicle-related issues, such as traffic congestion, safety, difficulty of access to existing or new truck trip generators, and adherence to design standards to accommodate turning trucks.

Coordinated Heavy Vehicle Route Management

The County of Simcoe is comprised of 16 lower-tier municipalities, each with their own by-laws regulating heavy vehicle movements. This can present a challenge for drivers of commercial vehicles aiming to identify and navigate on only those routes that permit heavy vehicles as they travel throughout the County.

It is recommended that the County work with the local municipalities, as well as the MTO, to establish a consolidated truck route network information platform, which would also enable a centralized resource for both members of the public and members of the trucking industry. This may be coded into the MTO's ON511 travel information platform, or housed on the County of Simcoe website, or both.

Other Recommendations

The risk of potential conflicts with other road users, as well as trucks travelling through settlement areas, as discussed previously in Section 2.2, is also an important consideration. The County of Simcoe should continue to apply guidance from the Province's *Freight-Supportive Guidelines*⁶, to balance the needs of both freight movement and passenger transportation on shared mobility corridors.

Future study is also recommended to understand how drivers currently access truck route restrictions and designated routes, and to consider how road restriction information could be intercepted by GPS software used by truckers.

⁶ Ministry of Transportation of Ontario (2016). *Freight-Supportive Guidelines*.

<<https://www.ontario.ca/files/2022-03/mto-freight-supportive-guidelines-en-2022-03-31.pdf>>
Accessed October 2022.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

Some County roads have seasonal load restrictions and are identified through Schedule 15 of the County's Traffic By-Law (No. 6609). Further truck restrictions along County roads are not recommended.

Exhibit 4.2: MTO Strategic Goods Movement Network



Source: *Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe* (MTO, 2022)

Actions

- Work with the MTO to further refine the Provincial Strategic Goods Movement Network within Simcoe County boundaries to reflect current and anticipated commercial vehicle travel patterns, and to ensure that the Provincial highway network is designed to carry a high proportion of inter-regional commercial vehicle traffic, reducing the amount of “spillover” onto County and local roads.
- Continue to monitor the County’s strategic goods movement routes for potential goods-movement related issues.
- Work with the MTO and local municipalities to establish a consolidated truck route information platform as a centralized resource for members of the trucking industry as they navigate heavy vehicles through Simcoe County.
- Apply guidance from the MTO *Freight-Supportive Guidelines* to balance needs of both freight movement and passenger transportation on shared mobility corridors.
- Work to reduce or to limit further seasonal load restrictions on County roads.

4.2 Freight Rail

Background and Considerations

Facilitating the increased use of freight rail can represent a key strategy to support goods movement in the County of Simcoe. A more extensive network of railways once existed, but abandonments of service have led to just the following freight railways remaining in service within County boundaries today:

- The Canadian Pacific Railway (CPR) Mactier Subdivision;
- The Canadian National Railway (CN) Bala Subdivision; and
- Barrie-Collingwood Railway (BCRY).

The CPR and CN lines are Class I railways that carry a wide range of freight from domestic and international containers to bulk materials such as crude oil; however,

these are primarily through movement with very limited movement of freight to or from Simcoe County, an exception being automotive products produced in Alliston. Both lines are single-track with occasional sidings to allow trains in opposite directions to pass. It can be anticipated that traffic on the CPR and CN lines will increase as populations and the national economy grow, with increasingly long trains. This would create the need for more and longer passing sidings or for sections of double track.

The BCRY in operation today is a 35-kilometre long, single-locomotive shortline railway owned by the City of Barrie. The line runs west from Barrie and crosses the CPR line at Utopia, home of a small interchange yard. The line currently has a small number of customers and runs short trains at slow speeds twice per week.

The County has purchased the 38-kilometre portion of the former railway between Utopia and Collingwood, with the intention of preserving the right-of-way for a future transportation corridor (e.g. bus rapid transit, light rail transit, etc.), and to use the corridor as an active transportation trail in the meantime. Much of the abandoned track remains intact. The active-transportation trail alongside the corridor is already in place between Collingwood and Stayner, and the County has conducted an Environmental Assessment to develop the remainder of the corridor for active transportation, with plans aiming to salvage the existing rail line as much as possible, given the longer-term intended use of the corridor.

The County's actions are in line with the Province's recent strategy, *Connecting the GGH: A Transportation Plan for the Greater Golden Horseshoe (2022)*, which includes a direction (number 43) to:

Explore opportunities to use linear corridors to expand sustainable transportation options, such as:

- a. Locating new active transportation and transit routes along electricity transmission and rail corridors that cross the region.
- b. Protecting abandoned, disused, or soon to be abandoned corridors for transportation use in the long-term.

Recommendation

It is recommended that the County continue to maintain the inactive BCRY corridor as an intact corridor for current and potential future multi-modal transportation purposes. It is also recommended that the County of Simcoe support modal shift initiatives that expand freight rail use.

The County should also continue to coordinate with relevant partners and stakeholders (e.g. Metrolinx) and apply Transportation Association of Canada guidance relating to the planning and implementation of rail grade-separation projects.

Identifying and prioritizing safety improvements for at-grade road crossings is also important to reducing conflict between transportation modes, and a key action of the GGH Plan. As the population of the County grows, the safety of vulnerable road users (e.g. pedestrians and cyclists) should continue to be prioritized where roads and other transportation infrastructure abuts or crosses freight rail lines.

Actions

- Support modal shift initiatives that expand rail use, coordinating with relevant partners and stakeholders.
- Initiate a study to review the business case and implementation timing for the potential long-term uses of the BCRY, and continue to protect it as an intact corridor for potential higher-order transit use or freight use in the future.
- Work with the City of Barrie to ensure the integrity and long-term viability of the entire length of the BCRY remains intact and feasible.
- Develop guidelines and standards to manage development in proximity to the BCRY to protect the corridor for future transportation uses, including higher-order transit.
- If transit service is determined to be viable, work collaboratively with Metrolinx, the MTO, Town of Collingwood, Township of Clearview and Township of Essa to review the potential for development of Transit Oriented Communities along the Barrie-Collingwood Railway in the future.
- Continue to apply TAC guidance within the planning and implementation of rail grade separation projects.

5 Air Travel

Background and Considerations

There are a number of licensed land and water airports in the County of Simcoe. The majority of these airports, such as the Collingwood Regional Airport, primarily service private air traffic and also serve a tourism function. The most significant of these airports from a County perspective is the Lake Simcoe Regional Airport (LSRA), located in the Township of Oro-Medonte. It is jointly owned by the County of Simcoe (90%) and the City of Barrie (10%). The LSRA is an important economic development opportunity for the County, and its Customs Port of Entry status means it can be continued to be promoted to foster international goods movement, and eventually air passenger traffic.

The County has invested in LSRA to ensure that air services are available. With a 6,000-foot runway, the LSRA can accommodate many types of larger aircraft used for passenger and cargo services. Currently there are no scheduled passenger services, but the recent initiatives related to the airport include developing the **LSRA Strategic Plan**, which was approved by the shareholders and the Board in 2018. The Airport has been moving forward on developing their strategic advantage as outlined in the Strategic Plan. The County's objectives for the airport include ensuring that key services can continue to function, as well as attracting passenger services in the future.

In January 2022, the County of Simcoe assumed control of Line 7 North (now renamed to County Road 127) between County Road 22 and Highway 11, extending the County road network to the airport. This upload allows the County to maintain the road to an appropriate standard and upgrade the road over time. Highway 11 provides uninterrupted (free-flow) access from County Road 127 towards Barrie and Orillia, and the airport is under 15-minutes driving time to the downtowns of both municipalities. It is noted that the alignment of County Road 127 passes the airport and may conflict locally with a future runway extension, which is unlikely to be needed in the short-term but possible within the 2051 planning horizon of the TMP Update. The County of Simcoe is currently assessing County Road 127 to ensure it meets County road standards given the recent upload, and an Environmental Assessment is expected to be completed in the near future.

The review of access roads to Lake Simcoe Regional Airport identified the aging road design standards in place at the Highway 11 and County Road 127 interchange.

An aerial view of the interchange is shown in Exhibit 5.1. The interchange falls under MTO jurisdiction and is a modified jug-handle design dating to the 1950s and 1960s⁷. A service station and restaurant are located adjacent to the interchange on the northwest corner of County Road 127 and Highway 11, and County Road 127 connects directly to the highway with a right-in, right-out access configuration. A detailed study of the geometrics is outside of the scope of the TMP Update; however, the design is sub-standard on access spacing and likely several other design factors. It is also noted that County Road 127 is the only upper-tier/Provincial road access along Highway 11 along a span of 25 km between County Road 93 to the west (just east of Barrie and Highway 400 in Springwater) and County Road 11/Highway 12 South in Orillia, with modern interchange designs meeting current design standards. (There is also a partial non-standard interchange at Line 15 N/Memorial Ave at the west boundary with Orillia.)

Exhibit 5.1: Highway 11 and County Road 127 Interchange



Source: Google Maps (2022)

⁷ The King's Highway 11. (2022). < <https://www.thekingshighway.ca/Highway11.htm> > Accessed November 2022.

Recommendation

The TMP supports the continued implementation of the LSRA Strategic Plan, and ongoing support of the airport as an important facilitator of goods movement. It is recommended that the County of Simcoe update the Strategic Plan, as required, in the coming years to consider post-pandemic conditions related to travel demand and goods movement. If scheduled passenger service begins, the County should assess the feasibility of expanded transit service connecting to the airport. The alignment of County Road 127 should be included in future LSRA Strategic Plan updates in case a runway extension is considered, potentially a long-term need at or beyond the 2051 horizon.

A study of the County Road 127 and Highway 11 interchange is recommended to assess safety, deficiencies and potential mitigation measures. From an initial review, an Environmental Assessment towards an interchange replacement appears appropriate. An interchange EA can be a large undertaking even without considering the follow-on cost to design and construct a replacement interchange, and it is recognized that the MTO has a long priority list of projects and limited resources. Therefore, the County is recommended to consult with the MTO regarding potential EA timing and to also consider an interim traffic operations and safety study to determine if any mitigation measures can be identified. The latter study might be completed under existing MTO retainer practices at a much lower cost. As part of the TMP Update, the cost of an EA or interchange replacement has not been estimated and the indicated traffic study would be relatively low cost.

Actions

- Update the *Lake Simcoe Regional Airport Strategic Plan*, as required, in the coming years to consider post-pandemic conditions related to travel demand and goods movement.
- Assess the feasibility of expanded transit service connecting to the airport, if scheduled passenger service begins.
- Review and coordinate with the MTO to assess the safety of and access to County Road 127 and the Highway 11 interchange to ensure consistency with County road standards. Consultation to include potential timing of an interchange replacement Environmental Assessment.

6 Active Transportation and Trails

The provision of active transportation (AT) infrastructure and uptake through programs, policies and practices is an important component of the TMP Update. This section builds from the Priority and Ultimate Cycling Networks (shown in Exhibit 6.1, and developed as part of Phase II of the study) by proposing a range of strategies and recommendations that will facilitate the County’s efforts to support active transportation among residents and visitors.

Background and Considerations

Recreational and active transportation facilities serve tourism demand, improve liveability of the County and improve health of residents and visitors. To increase the success and sustainability of cycling, the ‘Five E’s’—or steps to success to transportation and road user safety—will ensure a comprehensive, inclusive and sustainable approach, especially for active school travel⁸:

- **Education:** Develop the skills/awareness to walk/wheel to school safely;
- **Encouragement:** Inspire the uptake of active travel modes;
- **Engineering:** Develop safe and accessible communities/routes to schools;
- **Enforcement:** Ensure traffic rules are followed to improve safety; and
- **Evaluation:** Implement solutions, measure success and show impact.

In particular, education is an important priority to increase public awareness about the benefits of active transportation, and produce safer conditions for all road users, all while supporting the economic development of the County by bolstering cycling tourism efforts. Additionally, **transportation equity** is an important concept in ensuring potential barriers and impacts to under-served or vulnerable groups are addressed, and that the needs of all people impacted by the transportation system are considered.

As part of Phase II of the TMP study, the active transportation network was developed with a focus on infrastructure improvements. A total of 15 routes were identified for the Priority Cycling Network and a further 6 routes were added based

⁸ Green Communities Canada (2020). *Ontario Active School Travel – Steps to Success*.

<https://ontarioactiveschooltravel.ca/steps-to-success-the-5-es/#fivees> Accessed September 2023

on stakeholder input. Phase III of the TMP Update focuses on developing supporting policies and programs to build active transportation capacity to maximize the benefits of the proposed active transportation network.

Existing Programs to Support Active Transportation

Existing active transportation programming initiatives undertaken by the County of Simcoe include the following:

- **Trails Connecting Communities Program:** This program provides funding to assist local municipalities in the development of AT and recreational trail opportunities, with a focus on expanding and enhancing the trail network for active uses. The program is available to local municipalities, and eligible projects may be funded up to 50% of the total cost by the County to a maximum of \$30,000, with County funding being matched by the local municipality.
- **Simcoe Cycling Without Aging:** This program is offered by community stakeholders and is designed to enhance the lives of older adults and help engage them with the community through cycling. The program currently operates at selected long-term care and assisted living facilities including Georgian Village and Manor in Penetanguishene, Simcoe Manor in New Tecumseth, and Sunset Manor in Collingwood. Efforts to explore funding opportunities are ongoing to enable program expansion across all care homes throughout the County of Simcoe.
- **CycleSimcoe:** This collaborative initiative between County of Simcoe, Tourism Simcoe County, Bruce Grey Simcoe and Ontario by Bike provides a centralized website for information on cycling in the County. The website includes trail and cycling route maps, upcoming cycling tours and events, details on repair stations, and cycling packages.
- **Simcoe County Trails Strategy:** In 2014, the County of Simcoe released a guide to the investment and development of a County-wide network of passive-use trails. The network sought to connect communities while also providing linkages to natural, cultural and tourism assets to increase visitation, recreation and active transportation opportunities.
- **Experience Simcoe County:** This website, jointly run by the County of Simcoe and Tourism Simcoe County, presents various tourism activities and resources such as walking events, cycling events and maps, trail routes and links to hiking and cycling associations.

- **Simcoe Muskoka On the Move Initiative (Simcoe Muskoka District Health Unit):** The initiative fosters interdisciplinary collaboration between school boards, school transportation consortia, municipalities, public health, etc. to support school travel planning programming.

Recommendation

Recommended policy areas and corresponding directions related to the provision of active transportation facilities are presented in Exhibit 6.2. The policy areas and corresponding directions were based on relevant policies carried forward from the 2014 TMP Update, and also built upon existing programs, policies and input received from stakeholder consultation.

The directions outlined in Exhibit 6.2 have been grouped under the following policy areas:

- **Incorporate active transportation considerations into the planning, design and maintenance process:** Given the growing rate of cycling tourism and active transportation needs, there is an opportunity to incorporate specific guidelines on the provision of high-quality active transportation facilities with the County's existing planning, design and maintenance process. The County of Simcoe should rely on best practices regarding facility design, signage and wayfinding, and winter maintenance standards outlined in the recently updated *Ontario Traffic Manual (OTM) Book 18 – Cycling Facilities*⁹. Identified directions aim to better consider the needs of vulnerable road users during design and maintenance of the transportation network.
- **Expand and improve the active transportation network:** These strategies are intended to enhance and expand the existing cycling network in the shorter term, and work towards a long-term network with County-wide connectivity. Strategies under this category support the implementation of the priority cycling network and identification of further corridors for improvement. Strategies to improve the identification of trail surface types (e.g. paved versus crushed limestone) and user type limitations are also included; however, identification of specific segment surfaces are subject to future study.
- **Coordinate and collaborate with local and external municipalities:** The County of Simcoe plays a role in supporting the AT efforts of its local

⁹ *OTM Book 18 – Cycling Facilities (2021)* was developed in association with the Ontario Traffic Council and provides guidance to Ontario municipalities on the uniformity and treatment of cycling design facilities, and is consistent with the Highway Traffic Act regarding municipal roads and infrastructure. A 2021 update provides up-to-date guidance for the County of Simcoe in developing its cycling network and determining appropriate facility types and design for each route.

municipalities through funding and coordination between municipalities on County-wide projects. Actions have been identified that aim to improve the collaboration between the County and local municipalities and increase pathways of communication. Additionally, the Simcoe Muskoka On the Move Regional Steering Committee (Simcoe Muskoka District Health Unit) represents an existing opportunity for collaboration available to local municipalities County-wide, overseeing and supporting school travel planning.

The County should also coordinate with external municipalities regarding cross-jurisdictional routes. The City of Barrie and City of Orillia are identified as potential partners among selected priority routes, and so connections along external roads or trails are subject to external municipal review. Coordination with other adjacent municipalities (including York Region, Peel Region, Dufferin County, Grey County, District of Muskoka, Kawartha Lakes and Durham Region) is also recommended to ensure inter-municipal connectivity of cycling routes.

- **Promote active transportation outreach:** Outreach programs, special events and partnerships with local communities and organizations play an important role in promoting active transportation as a viable form of transportation. A series of actions related to existing, expanded and new programs have been identified that aim to promote active travel tourism initiatives, build a sense of community and further public education.
- **Support multi-modal connections:** The AT network can serve as an important solution to the first and last miles of journeys taken by public transportation. Providing strong connections to other modes, such as building cycling facilities around transit hubs, is considered through this policy area.

Actions

- Incorporate active transportation considerations into the planning, design and maintenance process (throughout Planning department as well as Transportation and Engineering department) to work towards the development of the long-term network and with County-wide connectivity.
- Adopt the active transportation policy areas and supporting directions to support the provision of active transportation facilities and uptake.

Exhibit 6.2: Active Transportation Policy Areas and Directions

Policy Areas and Corresponding Directions	Timeline
Incorporate AT considerations into planning, design and maintenance	
Use the database of routes identified in the TMP Update as the basis for developing the County-wide ATMP and Implementation Strategy.	Short-Term
Update funding eligibility for the County’s existing Trails Connecting Communities Program to include RTO7 signage standards for trail interpretive and wayfinding signage.	Short-Term
Review winter maintenance standards for snow-clearing of AT facilities.	Short-Term
Develop a prioritization framework to identify maintenance of cycling routes and off-road trails within the County right-of-way with consideration for facility use. The responsibilities of the County and local municipalities in clearing these facilities would also be determined.	Medium-Term
Prioritize the maintenance of cycling routes and off-road trails based on the criteria developed in the prioritization framework.	Medium-Term
Review and consider relevant recommendations outlined in the <i>Investigation of Supportive Policy for Active School Travel (2022)</i> report by the Ontario Active School Travel Council of Green Communities Canada and Western University, as deemed appropriate.	All phases
Consider vulnerable, lower-income and equity-deserving populations and communities when assessing priorities for connectivity, with attention also given to connections to local employers and schools. Profile of existing and future active transportation users may also be considered in network planning and determining facility type.	All phases
Expand and improve the active transportation network	
Adhere to standards and best practices outlined by the Ontario Traffic Manual <i>Book 18 – Cycling Facilities (2021)</i> and the Geometric Design Guide for Canadian Roads by the Transportation Association of Canada (2017), as well as other key reference documents, for the selection and design of appropriate on-road cycling facilities. Consult the Road Design Reference Guidelines (Exhibit 2.3) developed as part of TMP Update when planning for AT facilities.	Short-Term

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Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

Policy Areas and Corresponding Directions	Timeline
<p>Continue to work toward completion of the following signature projects in the short-term:</p> <ul style="list-style-type: none"> Review uncompleted segments of the Simcoe County Loop Trail¹⁰ (Priority Routes B, K and N), identify required infrastructure improvements, and increase funding to complete all projects within the 2022-2026 Term of Council. 	Short-Term
<p>When planning new trail construction and major resurfacing and maintenance, work with local municipalities and trail user groups to identify appropriate trail surface types – e.g. crushed limestone, paved, aggregate.</p>	All phases
<p>Identify and provide parking facilities at trailheads, where possible, to support active transportation uptake, and investigate as part of project scope.</p>	All phases
<p>Continue to work toward implementation of the remainder of the AT trail (i.e. Stayner to Utopia) along the abandoned Barrie-Collingwood Railway corridor owned by the County. Continue to design the trail in consideration of the potential longer-term multi-modal uses of the corridor (see also freight rail recommendations).</p>	Short/Medium-Term
<p>Consider other abandoned railways as primary opportunities for the development of off-road AT infrastructure. Identified corridors should be acquired for use by the County and its local municipalities for future development opportunities.</p>	Medium-Term
<p>Consider additional inter-municipal AT links including waterfront connections.</p>	Medium-Term
<p>Initiate a feasibility study in partnership with Town of Innisfil for a waterfront trail through Innisfil.</p>	Short-Term
<p>Develop trail crossing and surface treatment standards for Great Lakes trail.</p>	Medium-Term
<p>Consider the use of hydro and other utility corridors, as well as waterways and active/inactive rail corridors, as potential off-road AT connections, in partnership with local municipalities.</p>	Medium-Term

¹⁰ The Simcoe County Loop Trail is a 160-kilometre trail route that traverses seven local municipalities, as well as Barrie and Orillia. The trail connects to Georgian Bay in the north, Lake Simcoe in the south and Lake Couchiching in the east.

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Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

Policy Areas and Corresponding Directions	Timeline
Coordinate and collaborate with local and external municipalities	
<p>Consider increasing the funding offered by the Trails Connecting Communities Program by 50% to support local municipal efforts in implementing AT projects. Where possible, expand the criteria and eligibility for cooperative funding of the maintenance of on-road routes and off-road trails.</p>	Short-Term
<p>Use the mapping of existing on- and off-road AT facilities developed as part of the TMP to update the County database of route information. Incorporate mapping into local municipal resources and tourism information, as necessary.</p>	Short-Term
<p>Expand availability of online information regarding trail surface types and user type limitations (i.e. snowmobiles permitted in winter; pedestrians, cyclists, horses permitted in other seasons). Include information such as surface type, narrow roads, winter maintenance, permitted trail users and other trail conditions on the County’s trail map website.</p>	Short-Term
<p>Develop an ATMP Terms of Reference and follow up with the completion of an AT plan in partnership with the local municipalities as a blueprint for the development of future County-wide AT facilities.</p>	Short-Term
<p>Consider allocating dedicated staff and resources to assemble and manage a group of local municipal representatives, representatives from adjacent municipalities, stakeholders, interest groups and affected agencies to develop an AT steering committee or technical advisory committee to help develop the ATMP, while building on the County’s previous initiatives such as the Trails Strategy.</p>	Medium-Term
<p>The County and its partners should explore additional funding sources and opportunities in addition to those recommended by the TMP.</p>	Short-Term
Promote active transportation outreach	
<p>Build on existing staff efforts from the County and its partners, AT facilities and existing programming to further promote active forms of transportation. This could also include additional partnerships with the Simcoe Muskoka District Health Unit and the Active and Healthy Communities Initiative.</p>	Short-Term

Policy Areas and Corresponding Directions	Timeline
Continue to promote AT related tourism initiatives such as long-distance cycling tours, high endurance cycling competitions such as the Centurion, plus the Welcome Cyclists’ Program at the County and local level to promote AT modes as a more viable form of Tourism County-wide.	Short-Term
Joint effort with lower-tier municipalities on education and outreach strategies for road safety and safety program incentives. This can further public education on Leading Pedestrian Intervals (LPI) ¹¹ within built up areas for County roads.	Short-Term
Consider organizing promotional events to align with the completion of specific construction projects for active transportation users to help increase awareness for local users and promote active transportation uptake.	All phases
Identify a local champion, such as the Simcoe Muskoka District Health Unit, to be a steward for AT and healthy communities promotion and outreach.	Medium-term
Support multi-modal connections	
Encourage active modes for utilitarian trips throughout the day to reduce the reliance on private automobiles—e.g. the County can explore opportunities for collaborating with local community groups and employers to increase awareness and skill building related to the use of last mile facilities and transfer hubs.	Short-term
Integrate alternative transportation networks (i.e. GO Transit, micro-transit, sidewalk facilities), and consider the needs of micro-mobility modes (e.g. scooters, cargo bikes). Adopt policy direction to support the safe uptake of micro-mobility modes, consistent with direction from the Province ¹² .	Short-term

¹¹ A Leading Pedestrian Interval provides pedestrians an advanced walk signal to start crossing an intersection several seconds before vehicles are given a green signal. The purpose of an LPI is to increase the visibility and improve the safety of vulnerable road users, especially older adults, and emphasize their right-of-way over turning vehicles.

¹² The Province of Ontario e-scooter pilot program (January 1, 2020 to January 1, 2025) allows municipalities to choose where and how e-scooters may be used, and outlines best practices for municipalities. More information about the pilot program available here (accessed September 2023): <<https://www.ontario.ca/page/electric-kick-style-scooters-e-scooters#section-2/>>. Information from the Province about riding an e-bike available here: <<https://www.ontario.ca/page/riding-e-bike>> (accessed September 2023)

7 Road Safety

Supporting road safety in the County of Simcoe is a key aspect of the TMP Update. The Road Safety Strategy includes a targeted set of actions focused on improving safety on County roads for all road users.

A safety lens is embedded throughout various components of the TMP Update, as reflected in the following topics:

- **Complete Streets:** The adoption of a Complete Streets approach is integral to ensuring context-sensitive road design and safe multi-modal infrastructure and is considered throughout the planning process.
- **Functional Road Classification:** Reviewing the County’s road classification system, with consideration for accommodating vulnerable road users, will ensure the County road network aligns with best practices.
- **Commercial Vehicles:** It is important to support the movement of heavy vehicles carrying goods while managing their negative impacts including potential conflicts with other road users as well as trucks travelling through settlement areas.
- **Active Transportation:** The Priority and Ultimate Cycling Networks seek to accommodate cyclists of all ages and abilities and other vulnerable road users, meaning that safety considerations are of utmost importance.

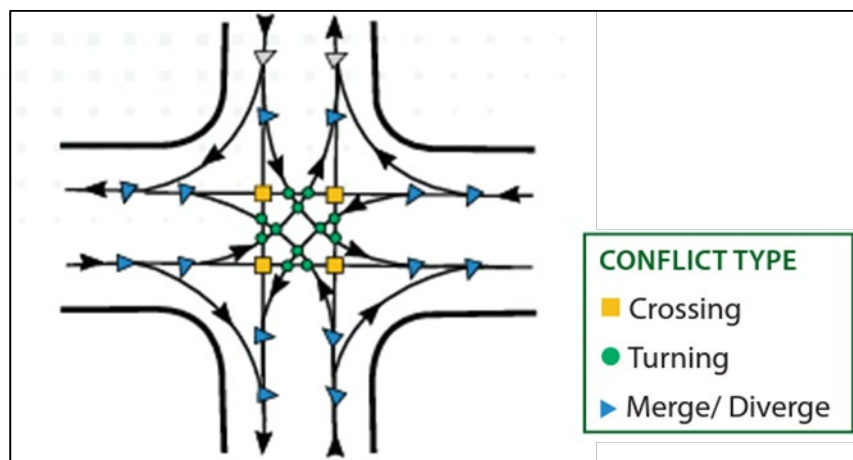
Additional safety considerations are detailed in this section.

Background and Considerations

The County of Simcoe is committed to continuing its record of high safety performance along the County road network. For instance, separate to this TMP Update study, the County has recently completed an Automated Speed Strategy to assess the need for automated speed enforcement (ASE) to address speeding on County roads, a concern commonly noted during public engagement for this study. Additionally, the 2014 TMP Update recommended a “roundabout first” approach to intersection design. Considerable progress in the County has been made since then, with several roundabouts in various stages of completion, design and construction. This includes a planned roundabout to be constructed at County Road 53 and Carson Road in Springwater, an intersection that saw a higher level of collisions.

It is common for intersections to be the most frequent setting for traffic collisions as they present the highest number of potential conflicts. A typical intersection of two two-lane roadways has 32 conflict points, as shown in Exhibit 7.1. The higher the number of conflict points, the greater the risk of collision. Additionally, there are four total “crossing” type conflicts, which are the most hazardous. Because roundabouts only have eight total conflict points, none of which are crossing movements, they can lead to safer intersections. As a result, collisions in roundabouts tend to be less serious and are less likely to result in injury or death for motorists. Slower speeds entering and existing roundabouts also lead to better outcomes for pedestrians and cyclists if they are struck by motorists. When implemented at appropriate locations in suitable contexts, roundabouts are an effective traffic management tool that can also: reduce long-term operation and maintenance costs compared to intersections with traffic control signals and equipment to maintain, be more operationally efficient than conventional intersections as vehicle flow is maintained, and lead to reduced emissions by lessening vehicle idling.

Exhibit 7.1: Typical Intersection Conflict Points and Types



Source: Adapted from MnDOT Minnesota’s Best Practices and Policies for safety strategies on Highways and Local Roads (2011)

Understanding the types of collisions and identifying locations with high levels of reported traffic collisions can help to target actions that improve traffic safety. As part of Phase I of the TMP Update, an analysis was conducted of collision data in Simcoe County for a nine-year period, 2012 to 2020. A total of 4,379 collisions were reported on County roads (i.e. excluding provincial and local-municipal roads), including 30 collisions with fatal injuries and 927 with non-fatal injuries; the remaining collisions involved property damage only.

The County's fatal collision rate is significantly lower than the Provincial average. The most recent MTO Ontario Road Safety Report (2019) reported an annual collision fatality rate of 0.55 per 10,000 licensed drivers for the province. The 30 Simcoe County road collisions involving fatal injuries, when expressed on an annual average basis and compared to an estimated 229,061 licensed drivers in Simcoe County in the 2016 Transportation Tomorrow Survey, yields a lower fatality rate of 0.15 collisions involving fatal injuries per 10,000 licensed drivers. It is recognized that this is only a rough comparison, as non-Simcoe County residents also drive on Simcoe roads, and County residents also drive outside of Simcoe County roads.

Input received from stakeholders and members of the public during this study identified road safety concerns at a number of locations, often with respect to the need for improved traffic control, speeding concerns and concerns about cyclist and pedestrian safety. Additional information about the collision analysis, as well as a summary of public and stakeholder road safety concerns, is included in the *Phase I: Multi-Modal Needs and Opportunities* report.

Stakeholder input also highlighted the need for better lighting on County roads, especially at intersections, to ensure the safety of all road users. Continuing to follow best practices, including guidance from the Transportation Association of Canada's *Illumination of Isolated Rural Intersections* design guidelines¹³, the County can ensure that lighting and illumination facilities support safety outcomes or a sense of security for drivers, pedestrians, cyclists and other vulnerable road users.

Recommendation

The County of Simcoe Safety Strategy aims to improve the safety of all road users, including vulnerable road users, transit riders and motorists. Safety considerations are a key component to standard road network planning and design processes, and indicators related to safety (e.g. collisions, pedestrian injuries and fatalities) should be tracked and reported on regularly.

The following are recommended as part of the County of Simcoe Safety Strategy:

- **Establish a Safety Council:** Input received as part of the Municipal Advisory Committee highlighted stakeholder support for establishing a Safety Council consisting of County staff and representatives from the 16 lower-tier municipalities. A Safety Council represents an important

¹³ Transportation Association of Canada (2001). *Illumination of Isolated Rural Intersections*. <<https://www.tac-atc.ca/en/publications/ptm-iiri>> Accessed September 2023.

opportunity to facilitate knowledge and resource sharing. It is recommended that the Safety Council meet twice annually to discuss road safety related matters across the County, as well as programs and initiatives aimed at increasing road safety.

- **Allocate capital budget and resources:** The Safety Council should be granted staff resources and be provided with a budget to initiate studies aimed at analysing and improving road safety. Similarly, a portion of the County capital budget should be allocated for minor improvements aimed at increasing road safety, or to undertake minor projects recommended by the Safety Council.
- **Leverage information from the County’s Annual Average Traffic Count program:** Information should be gathered from the County’s Annual Average Traffic Count Program to generate new insights to improve road safety. The collection of two types of information should also be considered to better inform road safety analysis:
 - **Vehicle classification:** Traffic count equipment should be considered that differentiates between different vehicle types, in particular light vehicles vs. medium/heavy vehicles at minimum, at key strategic locations; and
 - **Speeds:** Traffic count equipment that also captures speeds, or separate speed studies, should be used to help inform operational or design decisions where vehicle speeds are a concern.
- **Continue to assess collision hotspots and include safety considerations in the selection of data collection points:** The County should continue to collect data and conduct analyses of road safety conditions with a focus on identifying collision hotspots. Analyses can be used to inform future road safety investments, including appropriate traffic calming measures. The County should collect data on every major segment—the areas between settlement areas, or major County road or provincial highway intersections—of County roads periodically, including those with speed concerns, once every three years. Permanent data collection points may be most applicable at high volume locations with speeding concerns or other issues and may be identified through the ongoing traffic count or safety program.
- **Consider traffic calming measures:** While traffic calming is typically more appropriate for local and collector roads where cut-through traffic

can be a concern, the County may also consider traffic calming measures at selected road segments, such as along rural roadways that transition into settlement areas with measures including horizontal deflections, roundabouts and visual gateway features, as a response to speeding concerns. Different measures are suited to specific contexts for both rural and urban areas, and it is important to apply the most appropriate measure that responds to the circumstances of a location.

As well as responding to public and stakeholder engagement, a traffic calming program for the County should be informed by the *Canadian Guide to Traffic Calming* (2018) by the Transportation Association of Canada, with the aim of reducing driver speeds, decreasing traffic volumes where appropriate, improving driver awareness and caution, and enhancing overall safety for all road users.

- **Continue “roundabout first” approach to intersection design:** The County should build on its momentum and continue implementing roundabouts at appropriate locations as a safer, operationally efficient and greener method of traffic control. For locations where County roads intersect with local municipal roads, consultation with the local municipality should be coordinated, as appropriate. The safe integration of pedestrian crossings and cyclist movement through roundabouts, where feasible or required, is also an important consideration.

Actions

- Establish a County Safety Council, with representation from local municipalities for the purpose of resource sharing, and allocate funding and resources for studies aimed at analyzing and improving road safety.
- Explore additional opportunities in collaboration with the Ontario Provincial Police and municipalities to use automated speed enforcement.
- Leverage information from the Annual Average Traffic Count program to inform the Safety Strategy and improve road safety County-wide.
- Consider additional traffic calming measures appropriate to the design context (e.g. rural settlement areas) along County roads where there are speeding and safety concerns. Locations and measures to be determined as part of future safety studies or data reviews.

8 Emerging Technologies

New and emerging transportation technologies could represent important opportunities in the development of a future-looking transportation network. Technological advancements that support electric, shared, automated and connected transportation options are reshaping mobility and can help increase non-private vehicle travel and reduce emissions, supporting the TMP study Goals and Vision. By developing policies that support the identification and adoption of technologies that work for the needs and context of the County of Simcoe, the County can take advantage of new technologies as appropriate.

Background and Considerations

The County of Simcoe has a proven record of implementing new mobility opportunities that work for the scale and context of its communities. For example, the CT Link program, which is supported by the County of Simcoe, is an accessible, on-demand transportation service that provides door-to-door transportation for individuals with mobility needs and older adults to access medical appointments. The service demonstrates a commitment on the County's part to leverage emerging transportation technologies, offering a micro-transit service through an online portal to meet the transportation needs of County residents. Leveraging new mobility options will be of increasing importance for the County of Simcoe moving forward.

Connected and Automated Vehicles (CAVs)

Connected vehicles (CV) and automated vehicles (AV) will affect the County's transportation network and can lead toward the safe and efficient operation of both cars and trucks. For reference, these two technologies are defined as the following:

- **Connected vehicles (CV)** refer to vehicles equipped with wireless communication technology that allows the vehicle to exchange information with other vehicles (V2V), roadside infrastructure (V2I) or the broader cloud of technologies (V2X).
- **Automated Vehicles (AV)** refers to passenger motor vehicles, commercial motor vehicles or transit vehicles equipped with driving technology that allow the vehicle to drive itself under certain circumstances. The universal classification system developed by the

Society of Automotive Engineers (SAE) categorizes different levels of automation for motor vehicles (Levels 0 through 5) based on their level of automation. This is summarized in Exhibit 8.1, alongside examples of driving systems currently available.

As of 2019, Ontario permits vehicles equipped with higher levels of automation (SAE Level 3 technology) on Ontario roads that are eligible for purchase in Canada. The Province is also undertaking a 10-year Automated Vehicle Pilot Program that allows qualifying applicants to test automated vehicles and cooperative truck platoons on Ontario roads (described below).

Evolving technologies related to CAVs are being actively developed and tested, with potential impacts that could improve the safety, efficiency and accessibility of the transportation landscape. Examples of CAVs that will impact the way people, goods and services travel include the following¹⁴:

- **Automated scanning** involves vehicles that automate the process of scanning the environment for the purpose of collecting data.
- **Automated pick-up or delivery** comprise automated freight and delivery vehicles.
- **Cooperative truck platooning** is the linking of two or more trucks equipped with connectivity technology and automated driving support systems that are driven together.
- **Driverless taxis** are used for passenger transport.
- **Low-speed automated shuttles** are typically used as a first-mile / last-mile solution to transport passengers between specific locations.
- **Utility devices** can support operations such as snow removal and garbage collection.

¹⁴ TAC (2022). *Connected and Automated Vehicles: A Primer for Canadian Municipalities*. <<https://www.tac-atc.ca/sites/default/files/site/doc/publications/2021/prm-cav-e.pdf>> Accessed October 2022.

Exhibit 8.1: Automation Levels for Motor Vehicles

Automation Level	Description and Examples
Driver Support	
Level 0: No Automation	No automated features (warning features only).
Level 1: Driver Assistance	Adaptive cruise control automatically adjusts the vehicle speed to maintain a safe distance from vehicles ahead.
Level 2: Partial Automation	Technologies capable of steering, braking, accelerating, parking and changing lanes without driver assistance, but that still require active driver supervision. Examples include Tesla’s Autopilot (Tesla), Cadillac Super Cruise (GM) and ProPilot (Nissan).
Automated Driving	
Level 3: Conditional Automation	The vehicle manages most safety-critical driving functions, but the driver must be prepared to take control of the vehicle. There are no vehicles with Level 3 technology available for public purchase for use on public roadways in Canada.
Level 4: High Automation	The vehicle is capable of performing all driving functions under certain conditions. The driver may have the option to control the vehicle. Waymo, a Google self-driving car project, is testing Level 4 vehicles without a driver in controlled conditions in some jurisdictions. Loblaws (Canada’s largest retailer) and Gatik (a technology company providing AVs for business-to-business short-hail middle-mile logistics) commenced a partnership to test Canada’s first driverless delivery fleet to move items between distribution centres and retail locations across the Greater Toronto Area. Announced in 2020, the partnership is testing Level 4 automated vehicles under Ontario Regulation 306/15 Pilot Project – Automated Vehicles.
Level 5: Full Automation	The vehicle is capable of being driverless, meaning full-time automated driving in all conditions without need for a human driver. Currently, there is no public information on Level 5 systems being tested.

Source: Adapted from Society of Automotive Engineers (2021)¹⁵ and Transportation Association of Canada (2022)¹⁶

¹⁵ SAE International (2021). *Taxonomy and Definitions for Terms Related to Driving Automation System for On-Road Motor Vehicles*. <https://www.sae.org/standards/content/j3016_202104/>

While there may be many potential benefits to CAVs, including increased safety and efficiency of vehicular transportation, the County should follow Provincial direction on this evolving space, as the technical and regulatory context around their integration remains uncertain. The County can take preliminary steps to prepare for CAVs by monitoring technology advancements and by identifying some of the risks and detriments CAVs may bring to help mitigate negative impacts on residents and communities. For example, the growing demand for CAVs may see increases to overall vehicle kilometres travelled (VKT) if people are able to live further away from destinations because of the increased ease of driving and a higher tolerance for longer commutes. This in turn may result in more congestion and increases the possibility of zero-occupancy trips. Energy use is also an important consideration and may increase as demand for new mobility systems grows. Municipal policies are key to shaping how CAVs are deployed and that their use support County-building goals.

Electric Vehicles

Zero-emission vehicles (ZEVs), most notably electric vehicles (EVs) as well as hydrogen fuel cell vehicles, could be a key contributor to achieving Canada's transportation sector greenhouse gas emissions reduction target by 2030. In 2021, ZEVs comprised 5.2% of all new motor vehicles registered¹⁷. Additionally, in June 2021, the Government of Canada announced a mandatory target for all light-duty vehicles sold in Canada to be zero-emission by 2035¹⁸.

As part of its fast-charging roll-out program, the Province of Ontario has undertaken the expansion of EV prevalence through the installation of supportive infrastructure. In February 2022, the Province announced its Ivy Charging Network, a joint venture between Hydro One and the Ontario Power generation. Through the Ivy Charging Network, Ontario has deployed EV fast chargers at all 20 renovated ONroute stations along the province's busiest highways, Highway 400 and Highway 401—this includes the installation of eight rapid charging ports each at the

¹⁶ TAC (2022). *Connected and Automated Vehicles: A Primer for Canadian Municipalities*.

<<https://www.tac-atc.ca/sites/default/files/site/doc/publications/2021/prm-cav-e.pdf>>

¹⁷ Statistics Canada (2022). *Automotive Statistics*. <<https://www.statcan.gc.ca/en/topics-start/automotive>>

¹⁸ "Building a green economy: Government of Canada to require 100% of car and passenger truck sales be zero-emission by 2035 in Canada" in *Transport Canada News* (2021, June 29).

<<https://www.canada.ca/en/transport-canada/news/2021/06/building-a-green-economy-government-of-canada-to-require-100-of-car-and-passenger-truck-sales-be-zero-emission-by-2035-in-canada.html>>.

Innisfil and Barrie Onroutes in 2022. All ONroutes are now equipped with at least two EV chargers at each site, with busier areas equipped with more. The chargers are available to all drivers on a pay-per-use basis and serve all vehicle types. Three more locations are planned to open by 2025.

The County purchased its first fully electric vehicle in 2020, which is used by staff for visits to County garages, facilities and vendors throughout the region. Additionally, the County has taken decisive steps to support the transition toward electric vehicles by investing in public EV charging stations in a number of strategic areas throughout the County, as follows:

- **County Museum:** 1151 Highway 26, Midhurst, Springwater;
- **Washago Carpool Lot:** Highway 169 and Highway 11, Washago, Severn;
- **Station Park:** 212 Huron Street, Stayner, Clearview; and
- **County Administration Office:** 1110 Highway 26, Midhurst, Springwater.

In view of these advancements toward electric vehicle infrastructure, the need to support this technology will become more pressing throughout the County, such as the tourist-oriented communities along the Georgian Bay shoreline, where visitors could be travelling longer distances from their home charging systems. As electric vehicles and hybrid vehicles become more common due to anticipated lower prices and increasingly strict climate change and environmental policies, the County of Simcoe should continue building on its efforts, and support the efforts of its member municipalities, to develop a robust EV charging network across the County.

Recommendation

The following recommendations will support the provision of new and emerging transportation technologies in the County of Simcoe:

- **Monitor technological trends and follow Provincial direction:** Follow both technology trends and transportation planning impacts in other jurisdictions. As the MTO advances its own initiatives to facilitate two-way communication of traffic and road condition information between vehicles and infrastructure, the County should also be prepared for future advancements in technology by monitoring developments in CAVs and following the direction of the Province. Drivers exiting Provincial Highway 400, for example, would expect seamless connectivity to continue onto the County road network with real-time

and predictive information like road condition warnings in winter as well as alternative route suggestions.

- **Promote emerging transportation technologies through outreach and marketing:** As CAVs, EVs and other emerging transportation technologies become more commonplace, it will be increasingly important that residents are educated about the benefits and potential impacts (including safety) of new mobility modes and services. The County may consider launching educational campaigns, distributing resources and hosting engagement events to acquaint residents with the emerging transportation technology sector, including recent activity in Ontario and how they are being integrated onto Ontario roads today. The County may also consider internal working groups or steering committees to help lead efforts, with potential involvement from key stakeholders such as Honda or other car manufacturers.
- **Identify supportive policies and infrastructure to be ahead of the game:** Municipal policies and traffic management systems are both important to ensuring the continued rollout of CAVs support County-building objectives and align with provincial plans. Infrastructure to support CAV deployment, traffic control devices that consider both human drivers and automated driving systems, and traffic laws and regulations should be considered in anticipation for a growth in CAVs.
- **Build on County efforts to expand EV charging infrastructure:** As more County residents make the switch to electric vehicles, the provision of EV charging infrastructure will be of increasing importance. The County should continue to support electrification efforts through the expansion of charging stations County-wide, identifying potential funding streams through Federal and Provincial programs¹⁹. Further, it is recommended that the County explore opportunities to install EV charging infrastructure in carpool lots, as part of the recommended carpool lot strategy outlined in Section 10.
- **Continue transitioning the municipal fleet:** The purchase of an electric vehicle in 2020 marked an important step in the County's transition to

¹⁹ The Province of Ontario has recently introduced a proposal called 'Building public electric vehicle charging infrastructure' while Infrastructure Canada provides funds to Ontario municipalities through the Canada Community-Building Fund, formerly known as the Gas Tax Fund, each of which may be leveraged in the future to fund electric vehicle charging infrastructure in the County in the future.

more sustainable vehicles. The County should continue its efforts through the purchase of additional EVs as part of its municipal fleet. In addition, the Transit Strategy developed as part of Phase II of the TMP Update recommended the eventual transition to a zero-emissions bus fleet and terminal infrastructure to support new and emerging technologies.

Actions

- Support and undertake outreach and marketing opportunities to promote emerging transportation technologies, as required.
- Identify supportive policies and infrastructure that will allow for the safe integration of emerging transportation technologies onto County roads.
- Build on recent efforts to expand EV charging infrastructure County-wide.
- Continue to transition the municipal fleet to electric vehicle models.

9 Transportation Demand Management

Transportation Demand Management (TDM) is the use of strategies, policies, infrastructure and technologies to optimize the transportation network by influencing and directing travel behaviour toward reduced single-occupancy vehicle use. TDM can work to reduce the pressure placed on the road network by changing travel demands, times and modes, leading to reduced congestion and reduced parking demand.

Background and Considerations

As the County of Simcoe continues to experience residential and employment growth, targeted TDM strategies may become increasingly important. TDM initiatives can also replace or delay more expensive capital projects, such as corridor widenings, by optimizing the existing transportation network. Meeting existing and future travel needs in the County through targeted policies, rather than building new roadways and retrofitting existing ones to increase capacity for single-occupancy vehicles, is also important in encouraging sustainable travel modes and reducing the impact on the environment.

As outlined by Transport Canada's transportation demand management guide for Canadian communities²⁰, TDM measures influence travel by:

- **Shifting modal choice** by getting more people walking, cycling, taking transit or carpooling instead of driving;
- **Reducing overall trips** by incentivizing more people to work remotely, shop online, or share rides;
- **Reducing driving trips** by achieving that more people make fewer and shorter driving trips or to closer destinations); and
- **Shifting time and routes** by getting more drivers to change the time or route of their trip to avoid congestion.

As the County of Simcoe is largely a rural municipality, effective TDM strategies will need to be customized such that they are appropriate for the scale and context of

²⁰ Transport Canada (2011). *Transportation Demand Management for Canadian Communities: A Guide to Understanding, Planning and Delivering TDM Programs*.

<https://publications.gc.ca/collections/collection_2011/tc/T22-206-2011-eng.pdf> Accessed 2022.

the County to effectively manage existing and anticipated demand. Further information on improving travel options for residents of rural communities can be found in Transport Canada's guide *Improving Travel Options in Small & Rural Communities* (2009).

Successful TDM programming improves the awareness of mobility options and seeks to remove the barriers that residents face when considering alternative modes of travel. In considering opportunities to implement or advance different types of TDM initiatives, it is important to factor in the needs of equity-deserving groups and consider what impact TDM could have on their access to mobility options. While TDM may be effective in nudging users to more sustainable modes, measures that mitigate the potentially negative impacts that they could have on equity-deserving groups should be built in to an overall TDM program.

TDM initiatives and strategies can be categorized into three main groups listed below, with examples of specific TDM measures listed in Exhibit 9.1.

- **Market-Based Strategies:** Measures that seek to modify an individual's choice for a mode of travel by changing the cost of that trip.
- **Behaviour-Based Strategies:** Measures that seek to modify when and how an individual travels by shifting travel demand to off-peak hours or onto different travel modes.
- **Land-Based Strategies:** Measures that focus on the functional relationship and proximity between major travel origins and destinations, most notably between home and work.

Exhibit 9.1: Transportation Demand Management Measures

Examples of TDM Measures and Strategies	
Market Based Strategies	
Parking Adjustments	Instituting, or increasing, paid parking rates at places of employment and attractions can either help to deter vehicular trips in favour of alternative modes or can also help to create more high-occupancy vehicle (HOV) trips.
Road Pricing	Road pricing initiatives encompass a number of strategies that involve charging motorists directly for their use of particular roadways. Different road pricing measures include implementing road tolls, introducing congestion charges or installing high occupancy toll lanes, among others. Revenues generated from road pricing schemes are often leveraged to finance other transportation programs.
Behaviour-Based Strategies	
Employer-Based Programs	Employers encourage use of alternative modes for employees commuting to work, and can include carpool matching services, onsite transit information, transit fare subsidises or allowances, limited provision of free on-site parking, etc. Programs such as Smart Commute can help employers coordinate carpool matching services, and leverage tools and resources through customized programming for commuters.
Public Transit Improvements and Incentives	Improving transit infrastructure and services increases the likelihood of commuters using this travel mode for both work and leisure trips, including improving service to under-served or unconnected communities and linking them with larger communities and higher grade transit networks. Incentives to ride on public transit, such as corporate subsidies on transit cards or reward programs are similarly TDM measures that can shift user behaviour to more sustainable modes like transit.
Active Transportation	In addition to infrastructure improvements such as bike lanes and multi-use paths, AT improvements can also include special events and incentives to discourage private automobile use in favour of modes such as walking, cycling or in-line skating.
Carsharing	Providing a fleet of vehicles at a place of employment so that employees who travel to work by alternative modes can still drive on an as-needed basis.

Examples of TDM Measures and Strategies	
Ridesharing or Carpooling	Creating a network of commuters who share similar travel patterns and can therefore increase the number of non-SOV passenger vehicle trips.
Remote Work (Teleworking)	Employers who allow their employees to work at home help to reduce traffic congestion by removing vehicular trips that would otherwise be made, many of which would be made during peak hours.
Flextime	Allowing employees the flexibility to choose their work hours helps to decrease peak hour trips by shifting these trips to off-peak times.
Programming to Influence Behaviour Change	Implementing programs and marketing campaigns that encourage the use of alternative travel modes, often coupled with financial incentives or prizes for participation.
Land-Based Strategies	
Park and Ride	Park and ride are parking facilities that are typically included at public transit stations, bus stops and highway on-ramps to facilitate transit, rideshare or carpool use. They are common in urban fringe locations and encourage users to park their vehicles and ride transit, instead of driving and parking there.
Street Reclaiming and Complete Streets	Street reclaiming involves reallocating road space that is designated for vehicular movement to accommodate other social, cultural, recreational and economic uses. Street reclaiming may involve the redistribution of road space to support active transportation uses and public transit.
Zoning and Development Approvals	Zoning and development approvals can be amended to encompass considerations for TDM. The reduction or elimination of parking minimums in new developments, for example, can actively reduce the prevalence of driving as a preferred mode among new residents, and instead nudge them to more sustainable modes such as transit or active transportation.
Transit-Oriented Development	Transit Oriented Development is a policy that aims to increase the concentration of residential and mixed-use developments near public transit in order to nudge more residents onto nearby transit services and away from automobiles. Mixed-use zoning can be leveraged to similarly increase the concentration of places where people live, work and play within walking distance to minimize the need for automobiles to access daily requirements.

Supporting Transit Uptake

In planning different types of TDM measures, considerations for how they can support and integrate with public transit services in the County may be key to advancing mode shift objectives and facilitating more intermodal trips.

Recommendations to improve public transit were developed as part of Phase II, and are summarized in Section 3 of this report, including a comprehensive set of short- and long-term actions to advance transit objectives and grow ridership.

The County of Simcoe is an important commuter zone in the Greater Toronto Area commuter shed. Targeted TDM measures that make getting to and from commuter rail services in the County easy and convenient could be essential to supporting commuters and reducing vehicle trips. For instance, TDM measures that facilitate transit connections, improve station access, introduce park and ride facilities at or near commuter rail stations, or provide incentives for transit ridership or disincentives for single-occupancy vehicle trips, among others, can be important catalysts to encourage and grow transit ridership in the County.

Recommendation

The adoption of TDM measures can support the County of Simcoe in its management of the transportation system into the future. However, it is important to note that while traffic reduction and management strategies can help optimize the existing road network, they do not replace the need to identify and respond to existing and forecasted needs.

The following are recommended to support County efforts at managing transportation demand:

- **Promote context appropriate TDM measures:** It is recommended that the County consider selected TDM measures as a means of reducing peak hour demand and congestion, reducing parking demand, and advancing the Goals of the TMP Update more generally. As the rural context and low density of many areas within the County of Simcoe limits the effective application of some TDM measures, municipal staff must determine which TDM strategies are appropriate for the scale and context of the County. Simple measures, such as providing workplace incentives for active transportation or transit use, can result in the incremental shift toward sustainable modes. More comprehensive plans and programs should be carefully deployed to catalyze more lasting modal shifts that factor in the needs of different transportation users.

- **Dedicate resources and staffing to support a multi-modal transportation network:** The County may consider allocating dedicated staff and resources to the planning and management of various components of its transportation network including, but not limited to, advancing transportation demand management programs, active transportation network expansion and uptake, transit service improvements and ridership uptake, as well as other transportation-supportive strategies the County sees appropriate.
- **Monitor best practices and initiate TDM trials and pilots:** Precedents of successful TDM programs and policies in other Canadian and North American jurisdictions can provide a basis for implementation in the County of Simcoe. Dedicated staff should monitor best practices and consider initiating TDM pilots with the aim of gathering data and insights to inform more permanent TDM measures in the County.
- **Advance a park and ride strategy:** Ridesharing and the provision of commuter parking lots is a TDM strategy that can represent meaningful opportunities for residents to reduce their dependency on single-occupancy vehicles. Building from the 2014 TMP Update, a study is recommended to assess strategies to increase the provision of park and ride facilities across the County.

As a TDM measure, park and ride facilities can generate important modal shifts away from private vehicles, reducing the total amount of traffic and increasing ridership on public transit and ridesharing. It is recommended that the County consider the development of park and ride facilities in concert with existing transit and future transit plans. Additional consideration for park and ride planning should be integrated with a County carpool lot study and other ridesharing initiatives. This is further discussed in Section 10.

Actions

- Identify context appropriate TDM measures, monitor best practices and initiate TDM trials and pilots, as required.
- Dedicate County resources and staff to help manage various components of the transportation network, including advancing actions related to transportation demand management, active transportation, and other transportation-supportive strategies identified in this report, as the County sees appropriate.
- Develop a County park and ride strategy (also discussed in Section 10), to assess the provision of park and ride facilities across the County.

10 Carpool Lots

Carpool lots are locations where pre-arranged carpool partners can meet in order to travel together in one vehicle. Ridesharing, or carpooling, is a well-established and effective TDM measure that could help reduce single-occupancy vehicles across the County.

Carpool lots exist across Ontario, many of which are owned and operated by the MTO. Carpool lots are typically located near primary travel corridors or are served by public transit, making them convenient locations for commuters to meet and carpool to a common destination together.

Background and Considerations

Currently, there are nine Provincially owned carpool lots and one County-owned carpool lot in and around the County of Simcoe, as follows:

- **Bradford West Gwillimbury:** Highway 400 and County Road 88;
- **Barrie:** Highway 400 and Essa Road / Essa Road and Ardagh Road;
- **Innisfil:** Highway 400 and County Road 89 / Highway 400 and County Road 21;
- **Oro-Medonte:** County Road 93 and Highway 11;
- **Severn:** Highway 12 and Lower Big Chute Road;
- **Springwater:** County Road 27 and Highway 26; and
- **Wasaga Beach:** Highway 26 and Sideroad 33 and 34 Nottawasaga.

The County-owned carpool lot is located in **Washago** (Township of Severn) at County Road 169 and Highway 11. The County also owns a parking lot at Spruce Grove Park (County Road 27 and County Road 22) in **Springwater** that serves as a non-official commuter carpool lot, among other uses.

The 2014 TMP Update identified five priority locations for potential future carpool lots to be built over the short-term (five years). These were selected due to their proximity to population and employment centres, proximity to major roadways,

availability of existing transit connections and available land. Priority locations are as follows:

- **Orillia:** University Avenue and Old Barrie Road²¹;
- **Midland:** County Road 93 and County Road 25;
- **Tiny (Perkinsfield):** County Road 6 at Perkinsfield Park;
- **Oro-Medonte (Craighurst):** Highway 400 and County Road 22; and
- **New Tecumseth (Alliston):** County Road 10 and Highway 89.

Six additional carpool lot locations were identified in the 2014 TMP Update for longer term implementation, driven by demand and future population and infrastructure growth. Long-term carpool lot locations are as follows:

- **Adjala-Tosorontio:** Highway 9 and County Road 50;
- **Essa (Angus):** County Road 90 and County Road 10;
- **Clearview (Sunnidale Corners):** County Road 10 and Highway 26;
- **Springwater (Elmvale):** Area of County Road 6 and County Road 92;
- **Tay (Waubashene):** Highway 400 and Highway 12; and
- **Ramara (Atherly):** Highway 12 and County Road 44.

Recommendation

A gap analysis was undertaken to support recommendations for the expansion of carpool lots in the County of Simcoe. The analysis included a review of existing parking lot locations, followed by a review of population settlement areas with a population above 10,000 residents to identify optimal locations for future carpool lots. In the analysis, access to Provincial highways in the County were considered, focusing on existing commuter sheds and travel patterns of County residents as a means of tapping potential demand. The analysis identified a need for carpool lots that could service commuters travelling to Barrie, Orillia, York Region and Toronto.

Results of the analysis were consistent with those recommended locations identified in the 2014 TMP Update. Additionally, Tottenham (New Tecumseth) and Collingwood were also identified as candidate locations for future carpool lots.

These locations were identified due to their commuter base and relative proximity

²¹ Candidate location is located outside the County of Simcoe – the 2014 TMP Update identified the City of Orillia, Georgian College and Lakehead University as potential partners.

to the Provincial highway network. Phasing of the recommended carpool lot locations is provided in Exhibit 10.1, and a map of recommended carpool lot locations is provided in Exhibit 10.2. Further study is required to assess feasibility and implementation of specific locations best suited for building carpool lots.

The following are recommended to encourage carpooling in the County of Simcoe:

- **Carry forward 2014 TMP recommended locations alongside newly identified locations:** It is recommended that the priority locations and locations for long-term implementation previously identified in the 2014 TMP Update be carried forward, alongside newly identified locations. These areas represent important opportunities to foster a higher uptake of carpooling within the County, which could be supported further with targeted campaigns (described subsequently).
- **Promote carpooling as a key TDM measure alongside park and ride initiatives:** It is recommended that the County promote carpooling as a more eco-friendly and cost-saving travel option. Preferential parking and financial incentives could be considered to entice more commuters to carpool or use a park and ride to continue their journey on public transit.
- **Undertake a carpool lot study underpinned by performance and feasibility criteria:** It is recommended that the County undertake a carpool lot study to determine specific locations, property availability and requirements, access configuration and lot size, costing and more detailed priority of identified carpool lots. Performance criteria (e.g. traffic volumes, population and employment areas, visibility and safety) and feasibility criteria (site ownership, environmental considerations and cost) are important elements to consider in determining specific locations.

Location of carpool lots in Collingwood may be informed by results of the recommended East-West Capacity Improvement Study for Northwest Simcoe. Additional analysis is also required for locations in Midland and Tiny, as well as for locations in Adjala-Tosorontio and Tottenham, to determine whether separate locations or combined locations for each is preferred.

Additional opportunities for carpool lots may arise into the future (e.g. carpool lot at the proposed Highway 400 / Line 6 interchange) and should be identified and included in the future study.

- Provide carpool lots at or near transit facilities, where feasible:**
Integrating carpool lots at or near transit facilities is an effective way to incentivize higher transit ridership among County residents. This also includes consideration for a carpool lot at the proposed Innisfil GO Station.
- Combine with EV charging stations rollout:** Considerations should be given to equipping the carpool lots with electric vehicle charging infrastructure. This would support residents’ transition to EVs and allow drivers to charge their vehicles when they commute from the lot to their final destination.
- Forge partnerships with institutional and jurisdictional agencies:**
Where prospective carpool lot locations abut Provincial roads, the County could consider establishing partnerships with the Ministry of Transportation or Infrastructure Ontario for the planning, funding and management of the site. Partnerships should be forged with local municipalities as well as other key commercial, industrial and institutional players in close proximity to the site.

Exhibit 10.1: Phasing of Recommended Candidate Carpool Lots

Carpool Lot General Location Area	Local / External Municipality	2014 TMP Timing	Recommended Phasing
University Avenue and Old Barrie Road	Orillia	Short-term	By 2031
County Road 93 and County Road 25	Midland	Short-term	By 2031
County Road 6 and Perkinsfield Park	Tiny	Short-term	By 2051
Highway 400 and County Road 22	Oro-Medonte	Short-term	By 2031
County Road 10 and Highway 89	New Tecumseth	Short-term	By 2031
Highway 9 and County Road 50	Adjala-Tosorontio	Long-term	By 2051
County Road 90 and County Road 10	Essa	Long-term	By 2051
County Road 10 and Highway 26	Clearview	Long-term	By 2051
County Road 6 and County Road 92	Springwater	Long-term	By 2051
Highway 400 and Highway 12	Tay	Long-term	By 2051
County Road 44 and Highway 12	Ramara	Long-term	By 2051
Tottenham	New Tecumseth	-	By 2031
County Road 32 and Sixth Line	Collingwood	-	By 2041

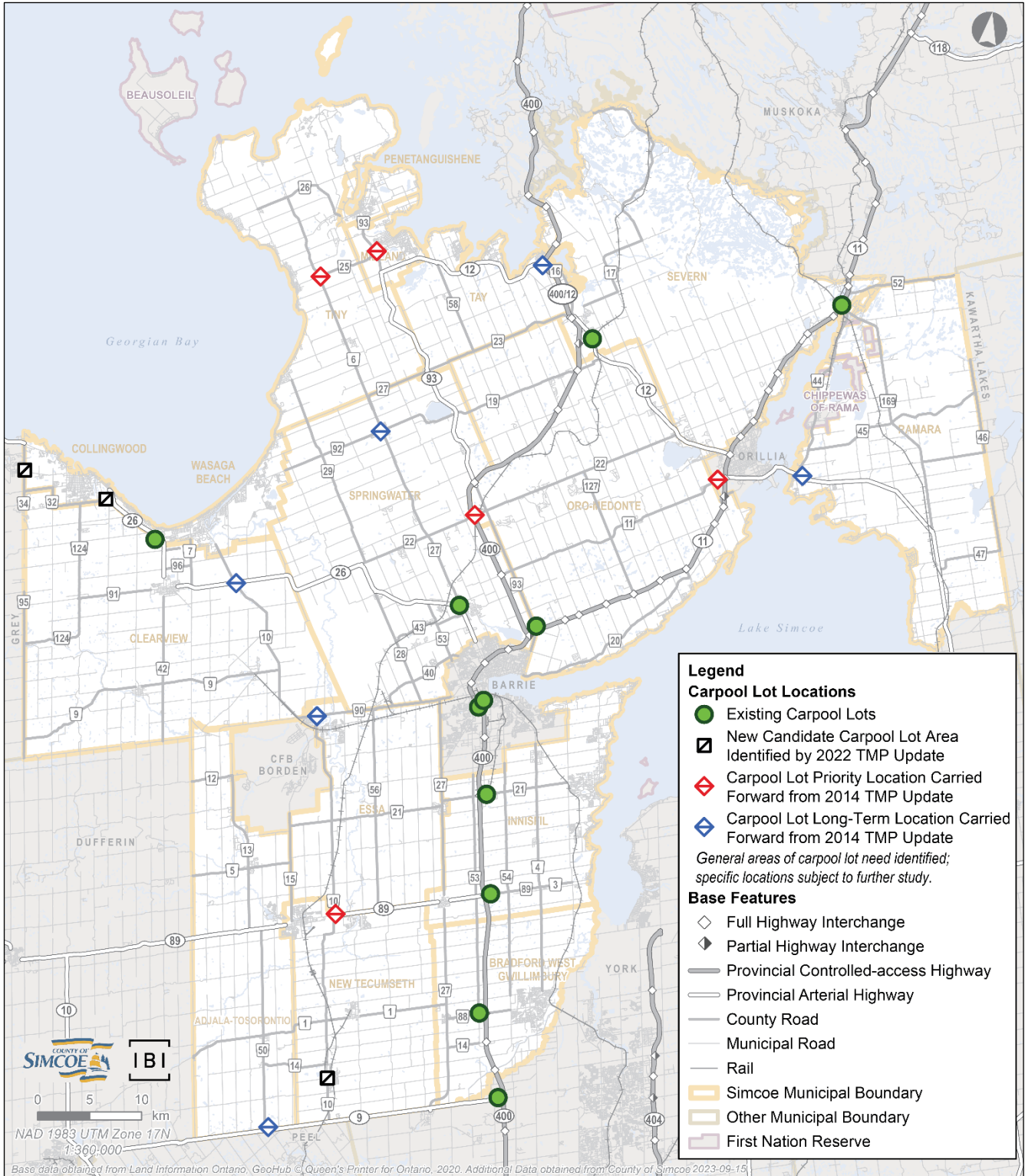
Carpool Lot General Location Area	Local / External Municipality	2014 TMP Timing	Recommended Phasing
County Road 34 and Mountain Road ²²	Collingwood / Grey County	-	By 2031

Actions

- Carry forward 2014 TMP Update recommended carpool lot locations alongside newly identified locations, to promote carpooling in the County.
- Undertake a carpool lot study or studies to determine specific locations and priority of the identified candidate carpool lot locations.
- Install EV charging infrastructure at carpool lot locations.

²² A carpool lot at County Road 34 and Mountain Road is recommended to be implemented in partnership with Grey County to support transit uptake/ride sharing to the Blue Mountain Ski Resort area, and beyond.

Exhibit 10.2: Areas Recommended for Carpool Lots



11 Costing and Implementation

This section provides a mode-by-mode implementation plan for recommended projects identified in Phase II of the TMP Update study.

11.1 Roads

The implementation plan for the County of Simcoe road network consists of preliminary cost estimates and phased project timing. The following sections list the basic assumptions made and process undertaken in developing both aspects of the implementation plan.

Costing Assumptions

Unit cost for road improvements were derived from MTO’s *Parametric Estimating Guide* (2011). The cost estimates are adjusted to the year 2023 by account for approximately 27% inflation between 2011 and 2022, based on more recent construction tenders. The unit cost range for different improvement types are shown in Exhibit 11.1. Due to major uncertainties in costing at this stage, and as per MTO standard practice, a range of costs has been provided.

Exhibit 11.1: Estimated Unit Costs for Road Improvements

Recommendation	Improvement Type	2022 Cost Range
Road Widening	+2 lane rural cross-section	\$3.4 to 6.5 M per km
New Road	New 2 lane rural cross-section	\$4.8 to 8.8 M per km
Jurisdiction Transfer (Upload)	Platform widening and reconstruction	\$2.0 to 4.1M per km

Phasing Assumptions

Project timing recommendations were based on forecasted 2031, 2041 and 2051 volume-to-capacity ratios. Projects were further refined based on relative need in the context of the County road network. The horizon periods are as follows:

- Short-Term: 2023 to 2031;
- Medium-Term: 2032 to 2041;
- Long-Term: 2042 to 2051; and
- Beyond 2051.

Implementation Plan

Exhibit 11.2 summarizes the cost estimate ranges and project timing (phasing) for each of the recommended road network projects – project IDs correspond to the map provided in Exhibit 11.4. Additionally, estimated costs by phasing period are summarized in Exhibit 11.3.

Exhibit 11.2: Costing and Phasing Details by Project – Roads

ID	Project	Local Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
1	CR 10 – Industrial Pkwy to 12 th Line	New Tecumseth	2.8	2 lanes to 4 lanes	Long-Term (to 2051)	\$9.6	\$18.3
2	CR 88 and Bond Head Bypass – CR 27 to Hwy 400 and Bond Head Bypass	Bradford West Gwillimbury	2.6	2 lanes to 4 lanes	Medium-Term (to 2041)	\$24.2	\$45.1
			3.2	New 2 lane road			
3	CR 4 – CR 89 to Line 8	Bradford West Gwillimbury	10.0	2 lanes to 4 lanes	Short-Term (to 2031) ²³	\$33.9	\$64.8
4	CR 4 – Barrie City Limit to CR 89	Innisfil	13.9	2 lanes to 4 lanes	Short-Term (to 2031) ²⁴	\$47.1	\$90.1
5	CR 89 and CR 3 – Hwy 400 to 20 th Sideroad	Innisfil	8.3	2 lanes to 4 lanes	Medium-Term (to 2041)	\$28.2	\$53.9
6	CR 21 – CR 27 to 20 th Sideroad	Innisfil	12.1	2 lanes to 4 lanes	Short-Term (to 2031) ²⁵	\$41.2	\$78.8
7	CR 54 – Barrie City Limit to CR 21	Innisfil	2.1	2 lanes to 4 lanes	Medium-Term (to 2041)	\$7.2	\$13.8

²³ CR 4 – Project #3 is currently in design, with construction expected to start in 2023.

²⁴ CR 4 – Project #4 is currently undergoing an Environmental Assessment.

²⁵ CR 21 – The first phase of Project #6 is under construction, while the second phase is expected to begin construction in 2023. The third phase is currently in design.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Local Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
8	CR 53 – Barrie City Limit to CR 21	Innisfil	2.0	2 lanes to 4 lanes	Medium-Term (to 2041) ²⁶	\$6.9	\$13.3
9	CR 27 – CR 90 to CR 21	Essa / Innisfil	10.3	2 lanes to 4 lanes	Short-Term (to 2031) ²⁷	\$35.2	\$67.2
10	CR 10 – CR 9 to CR 90	Clearview	7.3	2 lanes to 4 lanes	Long-Term (to 2051)	\$24.7	\$47.1
11	CR 32 – Concession 10 N Nottawasaga Road to Hwy 26	Collingwood / Clearview	5.8	2 lanes to 4 lanes	Long-Term (to 2051)	\$19.9	\$38.0
12	CR 53 – Carson Road to Barrie City Limits	Springwater	2.5	2 lanes to 4 lanes	Long-Term (to 2051)	\$8.3	\$15.9
13	CR 43 – CR 53 to Hwy 26	Springwater	2.8	2 lanes to 4 lanes	Long-Term (to 2051)	\$9.6	\$18.3
14	CR 93 – CR 25 to Hwy 12	Midland	2.0	2 lanes to 4 lanes	Medium-Term (to 2041)	\$6.9	\$13.3
15	East-West Capacity Improvement Study	Collingwood / Clearview	2.8	Study	Short-Term (to 2031)	\$0.15 ²⁸	\$0.15
16-25	Various Corridors	Various	N/A	Protect for future study	Beyond 2051	N/A ²⁹	N/A

²⁶ CR 53 – Project #8 is currently undergoing an Environmental Assessment.

²⁷ CR 27– Project #9 is currently undergoing an Environmental Assessment.

²⁸ Assumes a total project cost of \$300,000 to be shared between the County and MTO.

²⁹ No capital cost is assumed. Any costs associated with protecting corridors would be incurred through usual ongoing planning work.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Local Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
26-33	Various Provincial Corridors (committed and unconfirmed) ³⁰	Various	N/A	Various	All	N/A ³¹	N/A
A	Industrial Parkway – Hwy 89 to CR 10	New Tecumseth	4.82	Transfer to County ³²	Medium Term (to 2041)	\$2.4	\$4.9
B	5th Line – CR 10 to CR 27	New Tecumseth	11.7	Transfer to County ³²	Medium Term (to 2041)	\$5.9	\$12.0
C	5th Line – Hwy 400 to 10 Sideroad	Bradford West Gwillimbury	2.42	Transfer to County ³²	Medium Term (to 2041)	\$1.2	\$2.5
D	10 Sideroad – 8th Line to 5th Line	Bradford West Gwillimbury	5.94	Transfer to County ³²	Medium Term (to 2041)	\$3.0	\$6.1
E	6th Line – CR 53 to 20th Sideroad	Innisfil	9.18	Transfer to County ³²	Medium Term (to 2041)	\$4.6	\$9.4
F	Nottawasaga 27/28 Sideroad – CR 124 to Hwy 26	Clearview	8.16	Transfer to County ³²	Short Term (to 2031)	\$4.1	\$8.4

³⁰ Provincial highway improvements in the TMP Update that are not currently on the MTO capital program are considered as unfunded County recommendations/municipal undertakings, with the County being responsible for securing EA approvals, funding arrangements, and the MTO approvals for design and construction. Future cost-sharing discussions with the MTO will be considered on a case-by-case basis. The MTO may consider cost-sharing arrangements depending on the degree that the improvements are warranted by projected development traffic versus existing/projected background traffic and by the timing of the construction. Further details on committed and unconfirmed provincial projects recommended by the County are outlined in the Phase II: Transportation Network Alternatives report.

³¹ Provincial projects are not costed.

³² Assumes 25% of the roadways transferred require platform widening and reconstruction over the study horizon.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Local Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
G	Concession 12 Sunnidale Rd – CR 7 to Clearview / Springwater Boundary	Clearview	8.58	Transfer to County ³²	Short Term (to 2031)	\$4.3	\$8.8
H	Flos Rd 4 – Clearview / Springwater Boundary to Hwy 93	Clearview	20.27	Transfer to County ³²	Short Term (to 2031)	\$10.1	\$20.8
I	Forbes Rd – CR 27 to Hwy 400	Springwater	4.7	Transfer to County ³²	Long Term (to 2051)	\$2.4	\$4.8
J	Line 3 N – CR 23 to CR 19	Oro-Medonte	5.17	Transfer to County ³²	Short Term (to 2031)	\$2.6	\$5.3
K	Line 6 N / Line 7 N – CR 19 to CR 22	Oro-Medonte	10.97	Transfer to County ³²	Short Term (to 2031)	\$5.5	\$11.2
L	Division Rd – Hwy 12 to Hwy 11	Severn / Oro-Medonte	10.05	Transfer to County ³²	Medium Term (to 2041)	\$5.0	\$10.3
M	Ramara Township Rd 46 – Hwy 12 to CR 169	Ramara	5.91	Transfer to County ³²	Long Term (to 2051)	\$3.0	\$6.1
-	Carpool Lot Studies	Various	N/A	Study or studies to assess locations, property requirements, access configurations, and priority of implementation.	Short-Term (to 2031)	\$0.06	\$0.08

ID	Project	Local Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
-	Carpool Lot Implementation	Various	N/A	Construction of preferred carpool lots.	Medium-Term (to 2041) and Long-Term (to 2051)	\$1.6 ³³	\$2.4

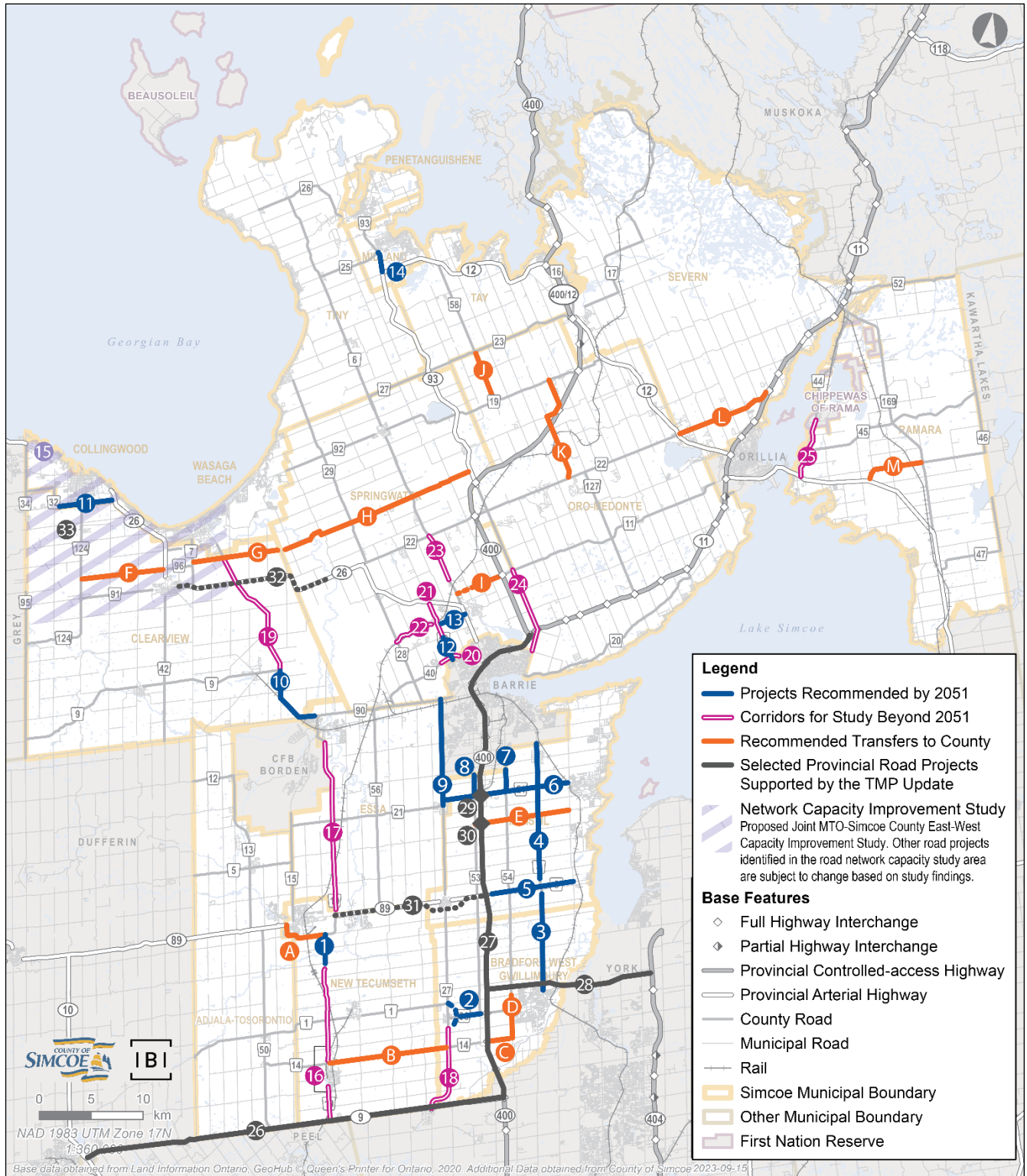
Exhibit 11.3: Summary of Costs by Phase – Roads

Phase	Low Cost (\$M)	High Cost (\$M)	Low Cost Annual (\$M)	High Cost Annual (\$M)
Short-Term: 2023 to 2031	\$184.2	\$355.7	\$23.0	\$44.5
Medium-Term: 2032 to 2041	\$96.3	\$185.7	\$9.6	\$18.6
Long-Term: 2042 to 2051	\$78.1	\$149.7	\$7.8	\$15.0
Total	\$358.6	\$691.0	\$12.8	\$24.7

Note: Carpool lot costs include study costs in short-term phase and implementation costs spread evenly over medium- and long-term.

³³ Assumes an average of \$80,000 to \$120,000 annually over 20 years.

Exhibit 11.4: Recommended Road Network Map



Note: Project limits are approximate. Project IDs correspond to Exhibit 11.2.

11.2 Active Transportation

The implementation plan for the County of Simcoe active transportation network consists of preliminary cost estimates and phased project timing. The following sections list the basic assumptions made and process undertaken in developing both aspects of the implementation plan.

Costing Assumptions

Assumed unit costs are presented in Exhibit 11.5, and were adapted from industrial knowledge and recent construction tenders in southern Ontario. Due to major uncertainties in costing at this stage, a range of cost have been provided. Note that only projects anticipated in the long-term planning horizon of 2051—the Priority Cycling Network—are costed. The Ultimate Cycling Network, carried forward from the 2014 TMP Update, remains a longer-term objective and is phased beyond 2051, and thus not costed at this stage.

Exhibit 11.5: Estimated Unit Costs for Active Transportation

Line Item	2022 Cost Range
Signed and Marked Route	\$15,000 to \$30,000 per km
Paved Shoulders (1.5 m wide) - on existing gravel shoulders	\$70,000 to \$110,000 per km
Buffered Paved Shoulders (2.0 m wide) - on existing gravel shoulders	\$80,000 to \$120,000 per km
Buffered Paved Shoulders (2.0 m wide) - road reconstruction required	\$500,000 to \$700,000 per km
Multi-Use Path/Trail	\$400,000 to \$700,000 per km
Trail Re-Surfacing / Surface Upgrades	\$75,000 to \$125,000 per km
Intersection Upgrades	\$50,000 to \$250,000 per km
Wayfinding	\$8,000 to \$13,000 per km
Feasibility Study	\$200,000 to \$300,000 ea

Phasing Assumptions

The implementation of the Priority Cycling Network on-road facilities is largely reliant on the capital program established for major road work (e.g. resurfacing or reconstruction), to help minimize disruptions and save costs as a result of bundling

project elements into larger projects. As a result, more detailed timing was not possible to define. However, where significant road work is not anticipated or the projects are standalone (e.g. multi-use trails), projects should be implemented independently, scheduled into the County’s capital budget program. Further, several “signature projects” were identified as short-term projects, with construction expected by 2031.

The Ultimate Cycling Network, carried forward from the 2014 TMP Update, remains a long-term objective, but has been phased in the “Beyond 2051” horizon.

The horizon periods are as follows:

- Short-Term: 2023 to 2031;
- Medium-Term / Long-Term: 2032 to 2051; and
- Beyond 2051.

Implementation Plan

Exhibit 11.6 summarizes the cost estimate ranges and project timing (phasing) for each of the active transportation projects recommended by the TMP Update – project IDs correspond to the map provided in Exhibit 11.8. Additionally, estimated costs by phasing period are summarized in Exhibit 11.7.

Exhibit 11.6: Costing and Phasing Details by Project – Active Transportation

ID	Project	Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
A	CR 25 – Trans Canada Trail to CR 93	Tiny / Midland	5.4	Convert existing wide gravel shoulders to buffered paved shoulders	Medium / Long Term (to 2051)	\$0.4	\$0.6
B*	Oro-Medonte Rail Trail – 1 Line South to James Street West	Oro-Medonte / Orillia	30.2	Upgrade existing off-road trail surface (where needed), crossings, wayfinding and pavement markings	Short Term (to 2031)	\$3.9 ³⁴	\$7.2

³⁴ Oro-Medonte Rail Trail – Project B assumes 25% of the existing trail replaced or new, 25% of the existing trail re-surfaced or upgraded, one intersection upgrade per 10 kilometre, and wayfinding improvements at 50% of the unit cost.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
C	CR 21 – CR 27 to CR 4	Innisfil	9.2	Build new multi-use path or buffered paved shoulders	Medium / Long Term (to 2051)	\$3.7	\$6.4
D*	CR 4: Mapleview Drive (Barrie) to 8 th Line	Barrie / Innisfil / Bradford West Gwillimbury	25.1	Build new multi-use path within road right-of-way, or consider buffered paved shoulders	Medium / Long Term (to 2051)	\$10.1	\$17.6
E	Concession Road 6 – CR 32 to CR 9	Clearview	19.5	Implement signage and pavement markings to indicate a shared cycling route	Medium / Long Term (to 2051)	\$0.3	\$0.6
F	CR 9 – Fairgrounds Road to Grey Road 124	Clearview	13.2	Due to limited road surface, implement paved shoulders on one side of road (uphill direction) as interim treatment, with paved shoulders implemented on both sides of the road if road reconstruction becomes feasible	Medium / Long Term (to 2051)	\$0.5 ³⁵	\$0.7
G	Clearview Collingwood Train Trail – CR 32 to Centre Line Road	Clearview	14.1	Upgrade existing off-road trail crossing at roadway intersections, wayfinding and pavement markings	Medium / Long Term (to 2051)	\$1.8 ³⁶	\$3.4

³⁵ CR 9 – Project F assumes the cost for the interim implementation described – paved shoulder on one side only.

³⁶ Clearview Collingwood Train Trail – Project G assumes 25% of the existing trail replaced or new, 25% of the existing trail re-surfaced or upgraded, one intersection upgrade per 10 km, and wayfinding improvements at ½ of the unit cost.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
H	Clearview Collingwood Train Trail Extension – Centre Line Road to CR 27	Clearview / Essa	29.3	Build new multi-use trail, new trail crossings, wayfinding and pavement markings	Medium / Long Term (to 2051)	\$11.7	\$20.5
I	Georgian Bay Cycling Route – Poplar Sideroad to Balm Beach Road via Beachwood Road, Shore Lane, River Road and Tiny Beaches Road	Wasaga Beach / Tiny	45.0	Implement signage and pavement markings to indicate a shared cycling route along Tiny Beaches Road, and consider traffic calming to reduce car speeds; build buffered paved shoulders during road reconstruction along routing in Wasaga Beach, as needed	Medium / Long Term (to 2051)	\$0.7 ³⁷	\$1.4
J	CR 32 – High Street to Concession Road 6	Collingwood / Clearview	4.2	Build asphalt multi-use path (subject to future development, to be incorporated into future development charges study)	Medium / Long Term (to 2051)	\$1.7	\$2.9

³⁷ Georgian Bay Cycling Route – Project I assumes that the cost for the interim implementation described – a shared cycling route.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
K*	Trans Canada Trail Improvements and Extension ³⁸	Various – County-wide	184.5	Upgrade existing off-road trail surface, build new asphalt multi-use trail, update trail crossings, and add wayfinding and pavement markings	Short Term (to 2031)	\$24.1 ³⁹	\$44.2
L	CR 32 / Sixth Street – Grey Road 19 to High Street	Collingwood	4.1	Widen existing paved shoulders to add buffers, or upgrade and extend multi-use path	Medium / Long Term (to 2051)	\$0.3	\$0.5
M	CR 45 – CR 44 to CR 46	Ramara	17.7	Build buffered paved shoulders during road reconstruction	Medium / Long Term (to 2051)	\$8.9	\$12.4
N	CR 43 – CR 28 to Hwy 26	Springwater	7.6	Build buffered paved shoulders during road reconstruction	Short Term (to 2031)	\$3.8	\$5.3
O	Hwy 89 / CR 89 / CR 3 – Trans Canada Trail to 20 th Sideroad	Innisfil	11.9	Build multi-use path on south side of roadway; implementation to be coordinated with capital road works to widen road along CR 89 and CR 3; further study and coordination with MTO required for route along provincial highway	Medium / Long Term (to 2051)	\$4.8	\$8.4

³⁸ Township of Ramara is working with Rama First Nation to develop an off-road trail connection adjacent to Casino Rama, connecting north to Airport Road. A part of Priority Corridor K can be taken off-road to utilise the future trail.

³⁹ Trans Canada Trail – Project K assumes 25% of the existing trail replaced or new, 25% of the existing trail re-surfaced or upgraded, 15 intersection upgrades, and wayfinding implementation.

ARCADIS IBI GROUP DRAFT REPORT

Phase III: Strategies and Policies to Support the Recommended Network

Prepared for County of Simcoe

ID	Project	Municipality	Length (km)	Improvement Type	Phasing	Low (\$M)	High (\$M)
P*	Lake Simcoe Route – Mapleview Drive / 25th Sideroad / Lakelands Ave / Adams Road / Simcoe Blvd / 7 th Line / St John's Road / Maple Road / Ewart Street / Killarney Beach Road / 20 th Sideroad / Line 13 / CR 4	Innisfil / Bradford West Gwillimbury / Barrie	28.1	County to help provide funding, coordination and support to conduct feasibility study to identify on-road cycling facility needs	Medium / Long Term (to 2051)	\$0.2	\$0.3
Q	10 Sideroad – Canal Road via 5 th Line to CR 4 via Line 12	Bradford West Gwillimbury	12.6	Build buffered paved shoulders with rumble strips	Medium / Long Term (to 2051)	\$6.3	\$8.8
R	3 rd Line / 5 th Sideroad / Canal Road: Trans Canada Trail to 5 th Line	New Tecumseth / Bradford West Gwillimbury	23.3	Implement signage and pavement markings to indicate a shared cycling route	Medium / Long Term (to 2051)	\$0.4	\$0.7
S	Cambrian Road / Boyd Road / Canal Road / Brady Drive / Cooper Falls Rd – Uthoff Trail to Severn River	Severn	18.9	On-road facility identified by stakeholders (i.e. MTO), subject to further feasibility review	Medium / Long Term (to 2051)	\$0.2	\$0.3
T	South Sparrow Lake Road: Severn River to Cambrian Road	Severn	5.6	On-road facility identified by stakeholders (i.e. MTO), subject to further feasibility review	Medium / Long Term (to 2051)	\$0.2	\$0.3

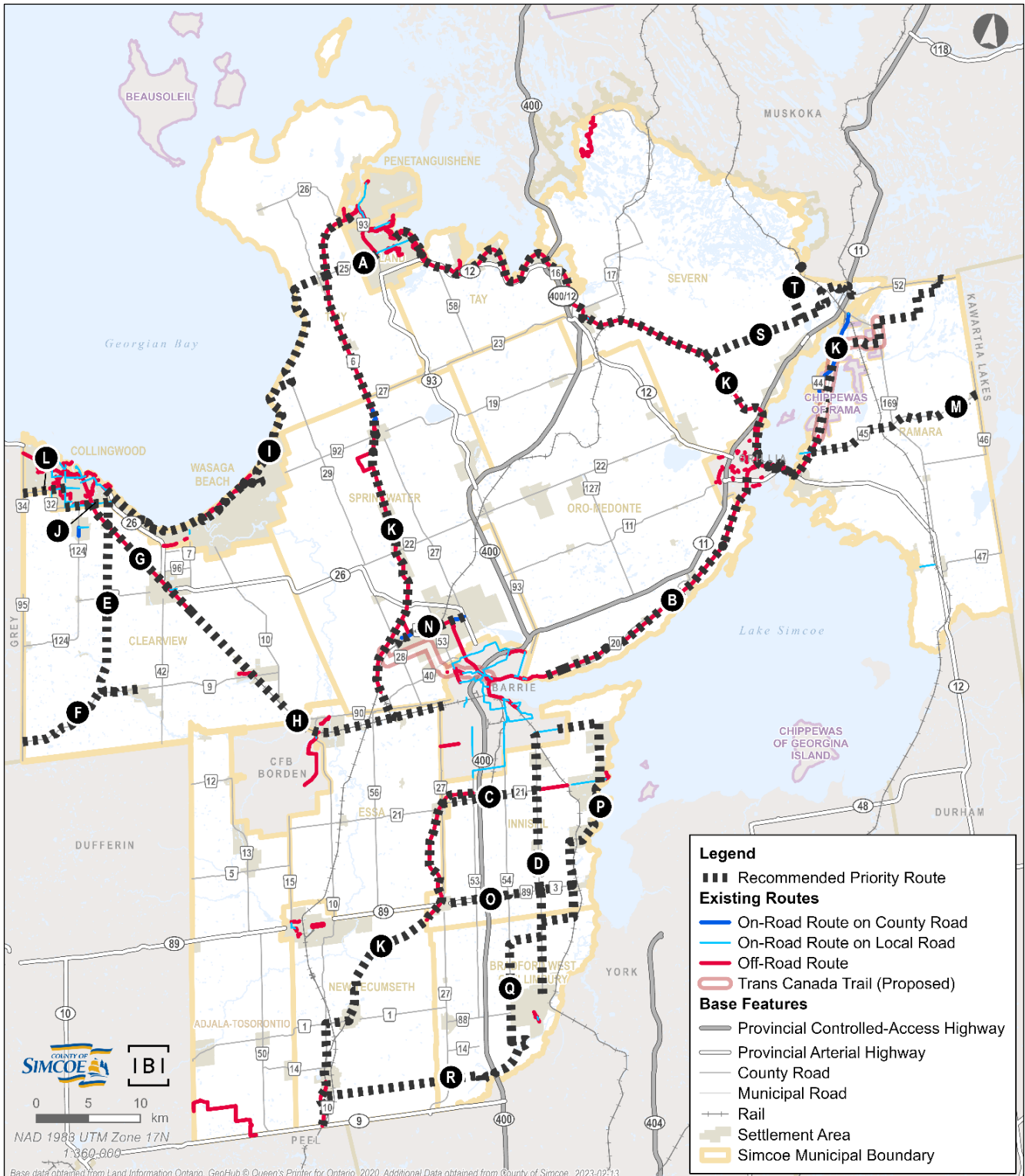
*Note: City of Barrie and City of Orillia are external municipalities identified as potential partners; connections along external roads or trails are subject to external municipal coordination and study.

Exhibit 11.7: Summary of Costs by Phase – Active Transportation

Phase	Low Cost (\$M)	High Cost (\$M)	Low Cost - Annual (\$M)	High Cost Annual (\$M)
Short-Term: 2023 to 2031	\$31.8	\$56.7	\$4.0	\$7.1
Medium-Term: 2032 to 2041	\$26.0	\$42.9	\$2.6	\$4.3
Long-Term: 2042 to 2051	\$26.0	\$42.9	\$2.6	\$4.3
Total	\$83.8	\$142.4	\$3.0	\$5.1

Note: Assumes costs associated with projects not identified for short term (to 2031) are spread evenly over the medium- and long-term horizons (to 2051).

Exhibit 11.8: Recommended Priority Cycling Network Map



Note: Project limits are approximate. Project IDs correspond to Exhibit 11.6.