

APPENDIX

A Trail Signage Strategy and Best Practices Review



Trail Signage Strategy and Best Practice Review

Town of East Gwillimbury

September 2021

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wsp


East Gwillimbury



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INTRODUCTION

PURPOSE AND VALUE OF AN EFFECTIVE TRAIL SIGNING SYSTEM (PARKS CANADA)

*“A good sign system is not only important to **transmit information** and **ensure the safety of visitors**, but also vital to Parks Canada’s public image and identity. A coordinated and effective identity program will enable Parks Canada to be **identified in a distinct, consistent way** the public can **recognize** in all circumstances. It helps **symbolize the values, goals and dedication** Parks Canada strives for in protecting and presenting nationally significant examples of Canada’s natural and cultural heritage.”*

Parks Canada Exterior Signage Standards and Guidelines (March 2007)

 Parks Canada	Parcs Canada
Point Pelee National Park of Canada	Pointe-Pelée Parc national du Canada
Middle Island	Île Middle
Canada 	

PURPOSE AND VALUE OF AN EFFECTIVE TRAIL SIGNING SYSTEM

- Guidance regarding traffic operations
- Provides information related to safety
- Promoting the network
- Helps to “brand” the system
- Identifies landmarks
- Attracts new users, help them find the system
- Guides users through the system, navigate in a safe and effective way, reassure users they are on the system/network
- Convey essential information about trail routes and accessory facilities, events, nearby services
- Informs users of their responsibility/expectations regarding use and etiquette
- Information on local historical, cultural, natural features and points of interest

PURPOSE AND VALUE OF AN EFFECTIVE TRAIL SIGNING SYSTEM

Design a system with the following key goals in mind:

- To enable first – time visitors and repeat users to recognize municipal trail facilities clearly and instantly by means of a uniform sign system
- To ensure that users can find, and navigate safely throughout the system
- To ensure that signs function within the context of their environment and do not detract from the user experience or quality of the environment
- To ensure that signage clearly and consistently addresses visitor safety
- To realize cost savings through standardization of both design and material and to improve the effectiveness and efficiency of the design, fabrication, installation and maintenance

INTENDED ACTIVE TRANSPORTATION USERS

- **Utilitarian users**
 - Destination-oriented trips to work, school, and services
 - Rely on consistent information for efficient routes to their destinations
- **Recreational users**
 - Experience-oriented trips for leisure, fitness or sport typically shorter distances than tourists
 - Rely on consistent information leading to route but may also seek contextual information and direction to services
- **Tourists**
 - Typically longer distance trips as part of a vacation or experience
 - Rely on information leading them along their route and may seek contextual information, direction to services and destinations to explore
 - May choose indirect routes if they are more scenic compared to the direct route

Source: York Region Sustainable Mobility Wayfinding Guidelines (2018)

CYCLING VS PEDESTRIAN SIGNAGE PRINCIPLES

- Cycling wayfinding will typically be used to help people follow routes that are **part of a cycling network**
 - Includes signs that identify quiet local streets, bicycle lanes, cycle tracks and multi-use trails
 - Signage that describes distance and destination information can be provided along cycling routes of any type in order to help cyclists orient themselves to nearby destinations
- Pedestrian wayfinding typically focuses less on distinct routes and more on **highlighting area and destination signage**
 - Fosters an environment where people wish to discover new places and build people's confidence to walk in places and for distances that they have not tried before
 - Signage supplements their understanding of how to get somewhere on foot, replacing their reliance on driving, or overcoming indirect public transit route options

Source: York Region Sustainable Mobility Wayfinding Guidelines (2018)



BACKGROUND

EXISTING SIGNAGE IN EAST GWILLIMBURY TODAY



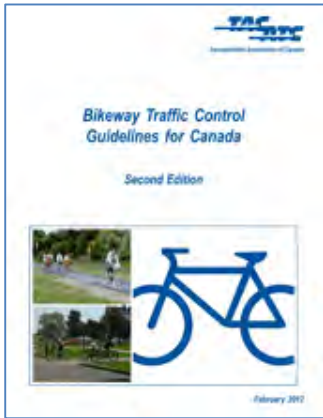
EXISTING SIGNAGE IN EAST GWILLIMBURY CONTINUED



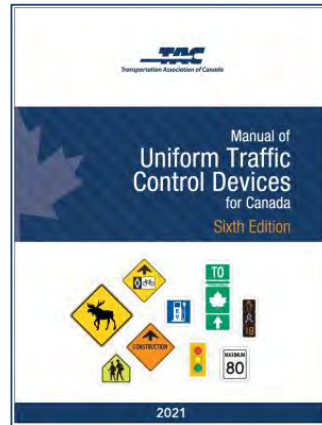


BEST PRACTICES FOR TRAIL SIGNAGE

SIGNAGE GUIDANCE



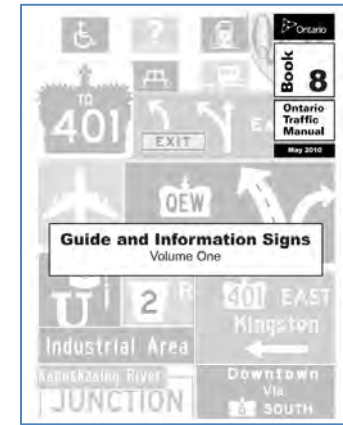
Transportation Association of Canada (TAC) Bikeway Traffic Control Guidelines for Canada



Transportation Association of Canada (TAC) Manual of Uniform Traffic Control Devices for Canada



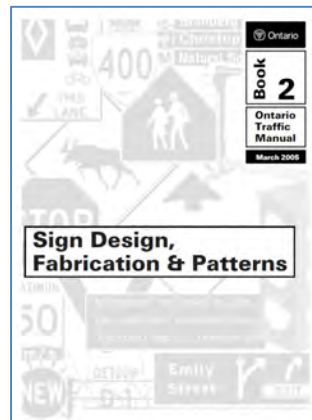
Ontario Traffic Manual Book 18 - Cycling Facilities



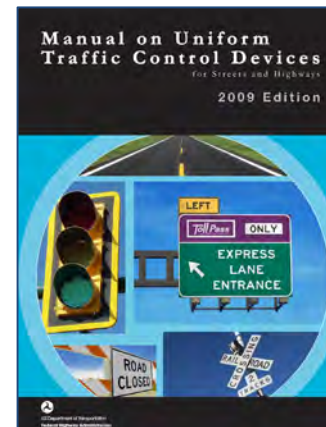
Ontario Traffic Manual Book 8 - Guide and Information Signs



York Region Sustainable Mobility Wayfinding Guidelines



Ontario Traffic Manual Book 2 - Sign Design, Fabrication and Panels



Federal Highway Administration (FHWA) Manual of Uniform Traffic Control Devices, Chapter 2K Tourist-Oriented Directional Signs and Chapter 9B Bicycle Guide Signs



Metrolinx / GO Transit Static Signage Catalogue October 2011

SIGN DESIGN PRINCIPLES

Fundamental principles were developed as part of the Region's Wayfinding Guidelines should be observed in order to establish consistency and efficiency of signage throughout the Region.



Conspicuity
Signs attract the attention of users



Simplicity
Signs are legible and comprehensible



Predictability
Signs are consistent in communication



Progressive Disclosure
Information is manageable and digestible



Progression
Signs are placed in a position allowing for users to maintain movement



Connectivity
Network of signs and paths should allow users to see walking or cycling as a means of mobility

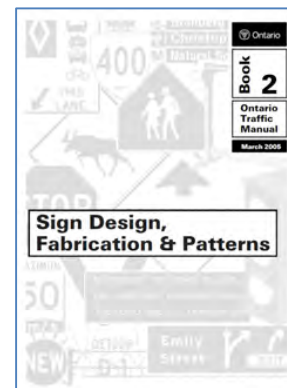
Source: York Region Sustainable Mobility Wayfinding Guidelines (2018)

OTHER CHARACTERISTICS OF A GOOD TRAIL SIGNAGE SYSTEM

- Functional
- Attractive and informative
- Easy to understand and follow
- Designed in scale with the location/setting
- Visually integrated with the landscape
- Informs but does not distract or detract from the quality of the overall experience
- Consolidates information and avoids clutter
- Improves visitor enjoyment and appreciation
- Provides opportunity for user education
- Limits the number of messages to avoid graphic overload
- Uses simple language and short familiar words
- Uses universal symbols where ever possible
- Placed so that users can approach the sign
- Weatherproof and vandal resistant
- Modular format so it can be added to and updated
- Has a long aesthetic lifespan
- Cost effective
- Accessible (size of text, contrast, etc.)
- Assists with minimizing visitor/user risk and can reduce the level of public liability

SIGNAGE SHOULD BE CONSISTENT WITH...

- York Region Sustainable Mobility Wayfinding Guidelines
- Ontario Regulation 413/12 of the Accessibility for Ontarians with Disabilities Act 2005)
- OTM Book 2 Sign Design, Fabrication and Patterns
- TAC Sign Pattern Manual
- Metrolinx / GO Transit Static Signage Catalogue



POOR SIGNAGE

- Detracts from the site and from the visitor experience (poor design, poor quality, lack of maintenance, etc.)
- Poor design or poorly written text may not get the message across effectively
- May discourage future use/repeat visits
- They are not maintenance free



SIGN CLUTTER



SIGNS ON SIGNS



HOME MADE SIGNS



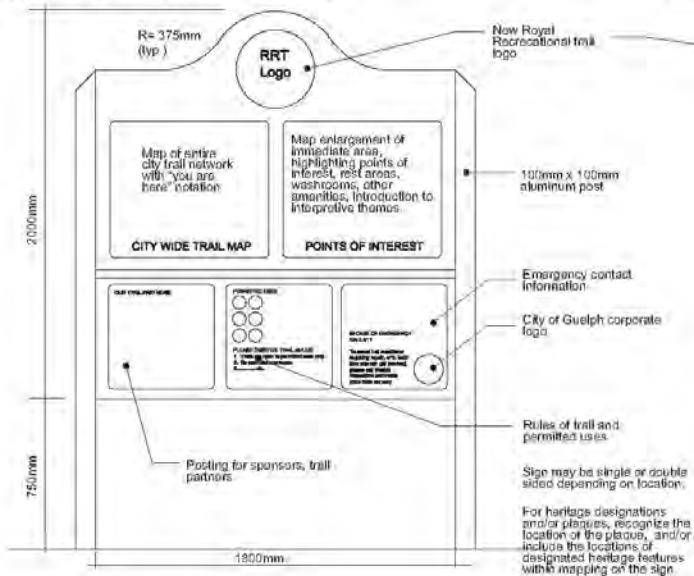
SIGNS ON TREES

A FAMILY OF SIGNS

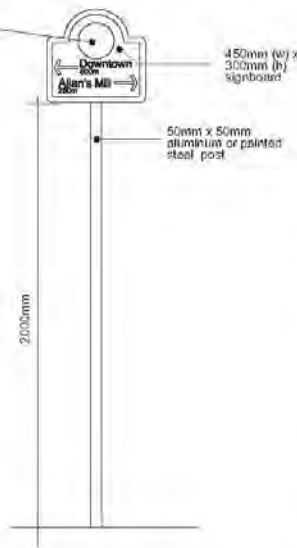
- An important element of the overall design
- Develop a “Family of Signs” by creating a **design theme and characteristics** that can be reflected in the different types of signs (materials, colours, graphics, fonts, etc.)
 - Gives the signs a **consistent and finished** look that helps to unify the system and can be essential in branding the trail system as a whole
 - Careful balance between providing enough information for users and avoiding over-signing / sign clutter
- Trail signs can be grouped into:
 - Trail head Signs
 - Gateway Signs
 - Directional / Marker Signs
 - Interpretive Signs
 - Regulatory / Safety / Information Signs

FAMILY OF SIGNS – EXAMPLE: GUELPH, ON

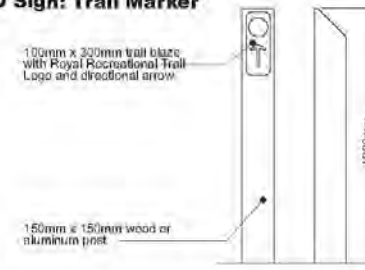
Type A Sign: Major Trailhead Sign



Type C Sign: Directional Sign



Type D Sign: Trail Marker

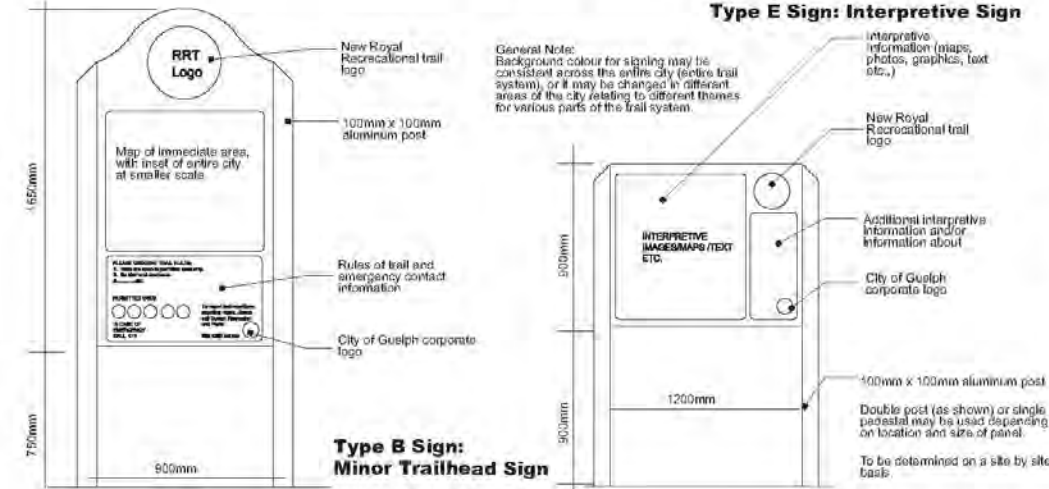


Sign Placement

The following chart provides some guidance regarding the frequency with which each sign type should be placed throughout the trail system. It is important to note that this chart is intended as guidelines only and that signage must be considered on a site-specific basis.

Sign Type	Frequency / Typical Location	Other Comments
General Sign Types		
Type A Sign (Major Trailhead Sign)	At every major trailhead. (Refer to network map for suggested locations of major staging areas/trailheads).	Must be considered as part of an integrated design for the trailhead/staging area
Type B Sign (Minor Trailhead Sign)	At every minor trailhead/staging area (Refer to network map for suggested locations of major staging areas/trailheads)	Must be considered as part of an integrated design for the trailhead/staging area
Type C Sign (Directional Sign)	Where main trails intersect with other main trails, where main trails intersect with minor trails, at connecting links to nearby communities	
Type D Sign (Trail Marker)	At regular intervals along the trail system (500m for rural trails with motorized uses, 250m for urban/town trails where walkers are a major user group) At trail directional change points	
Type E Sign (Interpretive Sign)	Located within view of features to be interpreted.	Frequency dependent upon number of features to be interpreted and anticipated major trail user mode. Consider 1 sign for every 20 minutes of active trail use (20-minute walk, 20-minute ride) for a dedicated interpretive trail. For trails where sporadic features are to be interpreted, signs should be located at feature sites.
Other Signs		
Regulatory sign	As required throughout the system to inform users of maximum rate of travel, hazards etc.	Use sign types recognized by Ministry of Transportation and Transportation Association of Canada. To be placed in advance of feature/point. Distance from sign to feature is determined by design speed of trail to allow users sufficient reaction time (minimum 30m is recommended).
Trail Etiquette	At each trailhead, access point or roadway crossing.	Can be stand alone sign or can be incorporated into trailhead signs.

Type E Sign: Interpretive Sign

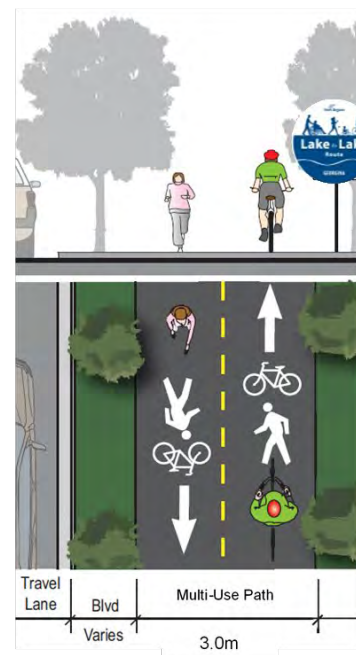
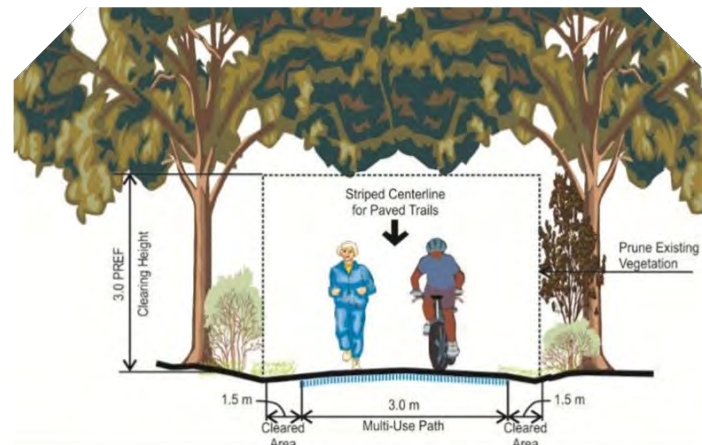
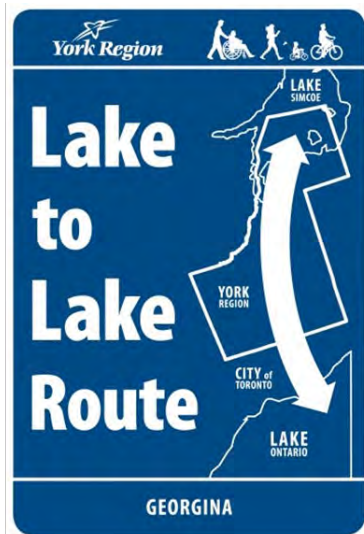


Type B Sign: Minor Trailhead Sign

A FAMILY OF SIGNS – EXAMPLE: BRAMPTON, ON



A FAMILY OF SIGNS – EXAMPLE: YORK REGION LAKE TO LAKE TRAIL, ON



TRAILHEAD SIGNS

- Largest of the pathway signs in the “family of signs”
- Located at main parking areas
- Provide overview of the pathway route/network in the form of map(s)
- Communicate level of accessibility so users can make an informed decision about whether to proceed on the path or not
- Also typically provide emergency contact information, an introduction to interpretive themes, and pathway etiquette



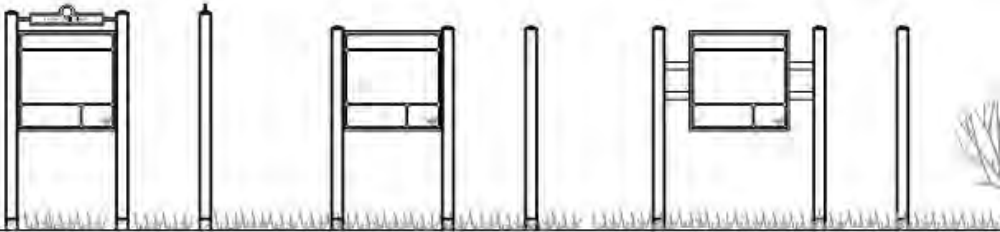
TRAILHEAD SIGNS



MINOR TRAILHEAD SIGNS



FRONT SIDE FRONT SIDE FRONT SIDE

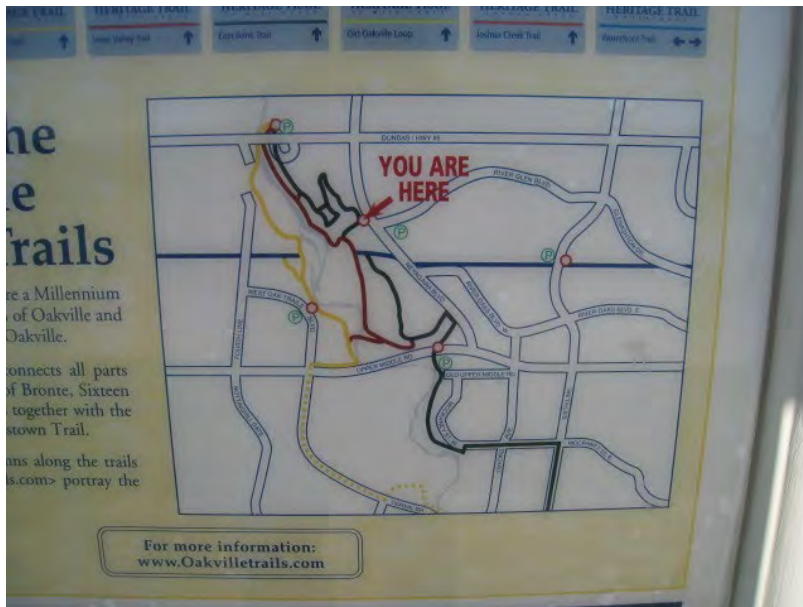


MINOR TRAILHEAD SIGN



TRAILHEAD SIGNS: "YOU ARE HERE"

- A key element of the trailhead sign
- Mapping may or may not use an air photo background, often depends on the scale of the map



KEEPING THE INFORMATION UP TO DATE



JOHN ROWSWELL HUB TRAIL

TRAIL ETIQUETTE

- Please keep on the trail.
- Respect others right to use the trail.
- Walk, run, ride, or roll in a safe, predictable manner.
- Keep to the right, except when passing.
- Keep the trail and ecosystems litter free.
- Do not disturb or approach wildlife.
- Do not damage or remove trees or plants.
- Keep pets on a leash (By-law 98-211) and clean up after them (By-law 87-125).
- Motorized vehicles are prohibited on the trail, except motorized wheelchairs, maintenance or emergency vehicles.
- Recreational Trail, Use at Your Own Risk
- Trail will not be maintained from October 15th to May 15th.

Welcome Trail Users,

The Hub Trail is an approximately 25 km multi-use, non-motorized trail system that connects many significant points of interest throughout the city, including the waterfront walkway, Bellevue Park, Algoma University, Sault College, the new Sault Area Hospital and the Fort Creek Conservation Area.

This trail system provides access to several parts of the City and links together key cultural, historical, and natural areas of the community. The trail also provides community residents with an alternative, environmentally friendly mode of transportation, decreasing auto-dependency within the City.

With both on and off-road trail facilities, the trail system also provides increased recreational opportunities for residents and visitors to Sault Ste. Marie.

By choosing to use the Hub Trail, you are not only exploring the incredible points of interest throughout the community, but you are making a difference in the well being of both yourself and the community. We hope you enjoy your experience on the Hub Trail.

Yours truly,

The Mayor and Council of Sault Ste. Marie



CLERGUE PARK

WATERFRONT

FORT CREEK

EMERGENCY INFORMATION

Police, Fire, Ambulance - 911

General Maintenance Questions Or Issues - 705-759-5201

FUNDING PARTNERS

- Government of Canada
- Province of Ontario
- City of Sault Ste. Marie

QR CODE

Scan this barcode using your smart phone device to visit the City of Sault Ste. Marie Website.



HEALTH BENEFITS

Walking

Walking is one of the easiest and most enjoyable forms of physical activity. All you need is a good pair of shoes and comfortable clothing.

There are many benefits of walking:

- Refreshes the mind, reduces fatigue and increases energy
- Reduces risk of heart disease, diabetes and osteoporosis
- Strengthens bones
- Trains heart, lungs and muscles to work more efficiently
- Lowers blood pressure and cholesterol
- Relieves stress and tension

Active Transportation

Active Transportation is any trip using active/human power such as, walking, cycling or wheeling. Active transportation can help to provide a cleaner environment and improve health.

Working Active Transportation Into Your Life:

- Make active transportation part of your regular travel destinations (i.e. work and school).
- Get off the bus or park your car a few blocks away from your destination and walk the extra distance.
- Think twice about using your car for every trip: could you walk or use your bike?
- Bike or walk with your children to the park or to their after school events.



FINN HILL

BOARDWALK

FORT CREEK

JOHN ROWSWELL

John Rowswell served as Mayor of the City of Sault Ste. Marie from December 2000 until his death on August 31, 2010.

Mayor Rowswell entered municipal politics with a strong focus on economic growth and expansion. He was committed to building a vibrant and diverse community with the goal of providing citizens an extraordinary quality of life.

John Rowswell advocated the creation of large scale projects including the construction of the Hub Trail and the ongoing development of the waterfront walkway. He was a passionate supporter of the Hub Trail system linking neighbourhoods to provide economic, environmental, recreational and health benefits for residents and visitors.



The John Rowswell Hub Trail is dedicated to the memory of Mayor John Rowswell 1965 - 2010



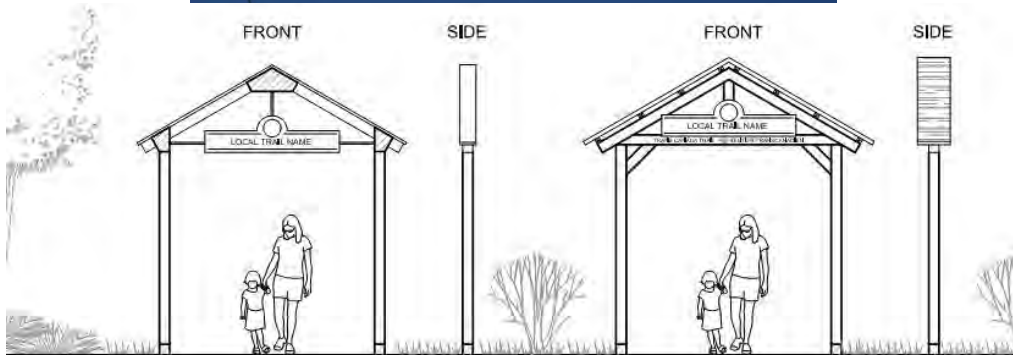
Quick Response (QR) Code

Scan with a handheld device, provides instant access to a designated website.

Website can be easily modified so that information (mapping, events, programs, etc.) are current.

GATEWAY SIGNS

- Located at municipal boundaries
- “Welcome”
- “You are Entering”

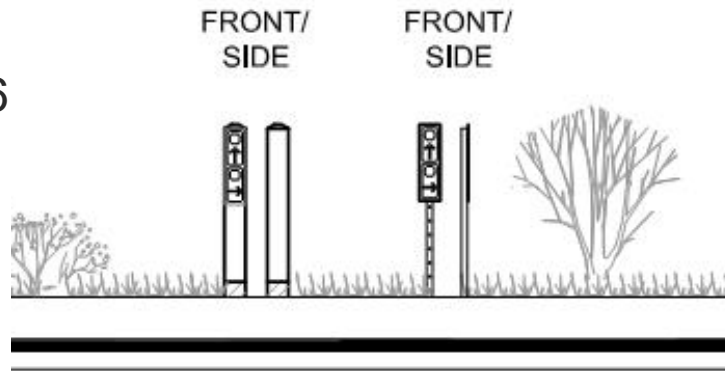


GATEWAY SIGNS



TRAIL DIRECTIONAL / MARKER SIGNS

- Located at pathway intersection points and at regular intervals on long uninterrupted sections
- Assure users they are on the main route
- Contain directional arrows, distance to destinations along or nearby the pathway, can include GPS information to assist with Emergency Response
- “TrailKey”™: a 190 mm (6 in) square aluminum extrusion with radius corners and is slotted for graphics panels



TRAIL DIRECTION MARKERS



DIRECTIONAL SIGN AT COMPLEX LOCATION

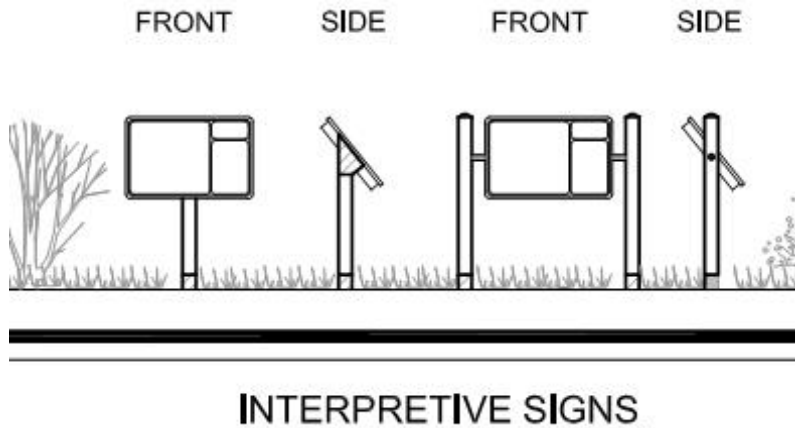


Applications:

- Used where the trail route follows a complex alignment, particularly in an urban area
- Used for a temporary alignment (e.g. when trail is closed for construction or major maintenance)

INTERPRETIVE SIGNS

- Located at points of interest along the trail (natural heritage, cultural heritage, cultural history, significant views)
- Located where there is a learning opportunity
- Can be incorporated into rest area along the trail
- Excellent opportunity for partnership (e.g. have local naturalist groups develop the theme and information for the sign)
- In contrast to other types of trail signs, interpretive signs can be “information intensive” with lots of graphics and text

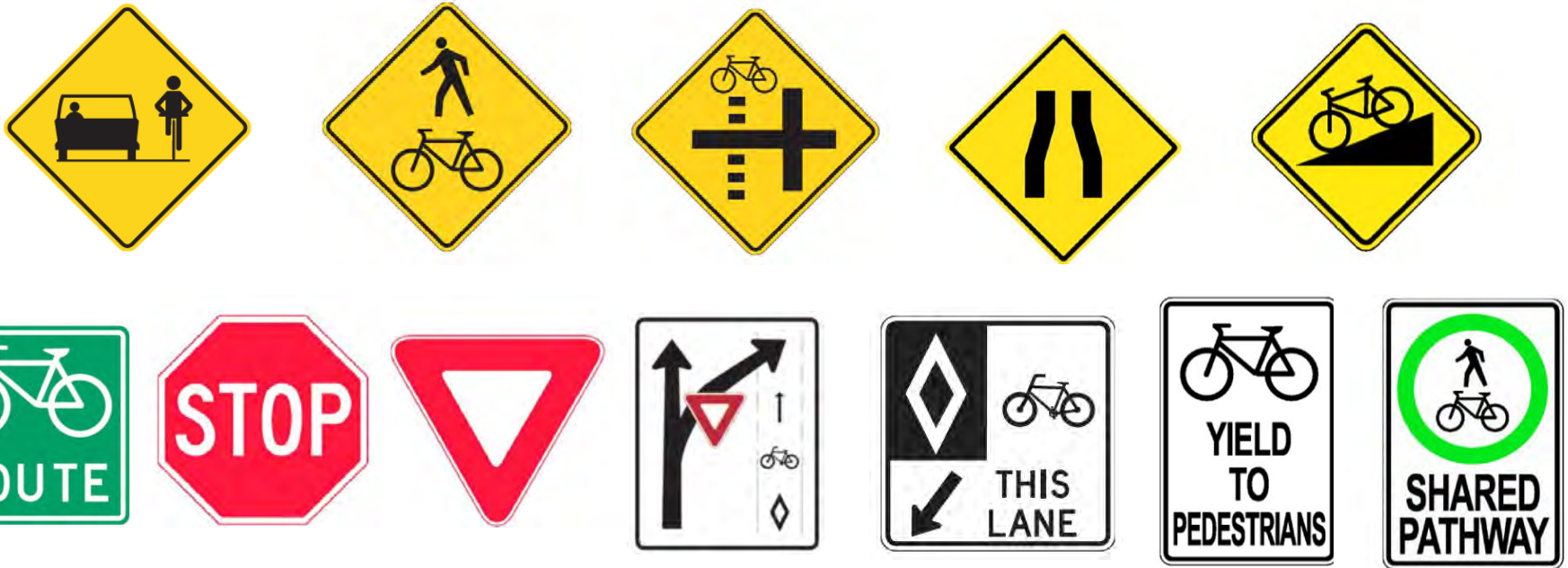


INTERPRETIVE SIGNS: RECOGNIZING CONTRIBUTORS



“REGULATORY” SIGNS

- Provide important messages regarding safety (e.g. stop for road crossings, shared pathway, narrow pathway, steep descent ahead etc.)
- Use symbols and sign character that is consistent with those in use on roadway systems
- Sign size is smaller than those used on the roadway system
- Positive reinforcement of pathway user behaviour
- Transportation Association of Canada (TAC) Bikeway Design Guidelines
- Manual of Uniform Traffic Control Devices (MUTCD) for Canada



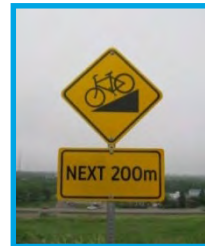
"REGULATORY" AND IMPORTANT USER INFORMATION



PERMITTED VS.
PROHIBITED



FACILITIES / SERVICES
NEARBY, POINTS OF
INTEREST



CAUTION / WARNING

MATERIALS

Durability is one of the most important factors when choosing the material for a sign due to the effects of :

- Weather (i.e. moisture, sun, wind)
- Vandalism (i.e. graffiti, cutting/scratching, fire)
- Salt

Before choosing the right sign material it is important to consider:

- Long term maintenance requirements
- Budget limitations
- Anticipated life expectancy
- Graphic requirements/complexity

SIGNBOARD

Coroplast Signs (4mm Corrugated Plastic)

- Lightweight and cost effective,
- Ideally suited for a wide variety of indoor and short-term outdoor uses.



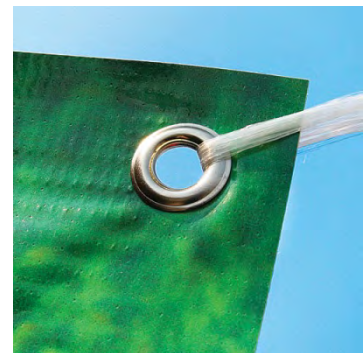
PVC (Sintra) Signs (Polyvinyl Chloride)

- Lightweight polyvinyl chloride (PVC)
- Rigid and durable, suitable for short term outdoor use.
- Heat formable, chemical resistant and has superior dent and scratch resistance.



Vinyl Banner Signs

- Digitally printed onto a durable, weather resistant outdoor vinyl banner material
- Temporary outdoor solution with high-end graphic quality



SIGNBOARD

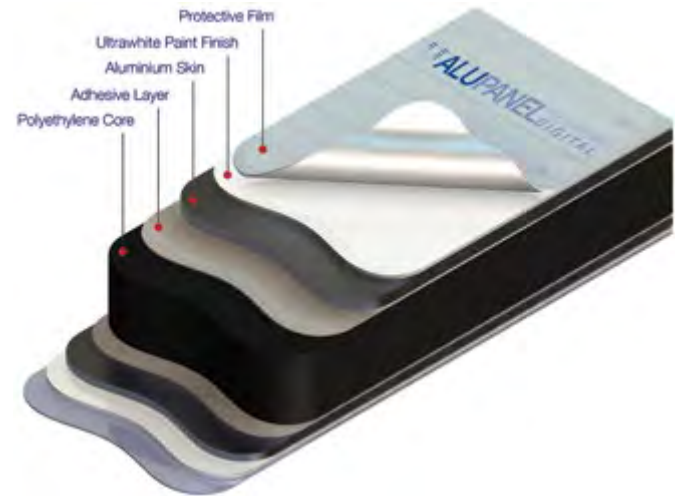
Aluminum Signs

- Manufactured from aluminum panels that are printed with high quality images and sealed with a baked enamel finish
- Can be easily mounted to a wide variety of posts,
- Rust resistant and can withstand very low temperatures (-40°F)



Alupanel Signs (i.e. Aluminum Composite Panel)

- Formed by laminating two sheets of aluminum to either side of a plastic core material
- Creates a rigid and stable form for outdoor use.
- Smooth surface finish, excellent impact resistance, weather resistant, fire retardant and erosion resistant



SIGNBOARD

Sun Glaze Enamel Signs (i.e. Fantasy Signs)

- Durable, 100% recyclable aluminum panel with bright, vibrant and high quality full colour digitally printed graphics.
- Product is finished with a UV enamel top coat which prevents graphics from fading
- Solvent resistant, allowing graffiti to be wiped off without damaging the graphics.
- Has no layers, making it impervious to water, and will not delaminate.
- Can be cut into any size or shape.



High Pressure Laminate (i.e. Folia Signs)

- High quality digital image printed on a high pressure laminate panel
- Waterproof, durable, graffiti, burn and corrosion resistant
- Can be cut into any desired shape to fit the theme of any landscape environment



SIGNBOARD

Sandblasted Wood

- Sandblasted out of a durable wood such as cedar.
- If properly treated, these signs can last for 25 years
- More rustic and natural feel to a trail environment
- Classic look and excellent durability



Cast Metal Signs

- Most commonly used for an entrance sign or a heritage plaque
- Common metals used are brass and aluminum.
- Produced by pouring molten metal into a form or mould
- Long life and durability, and create a notable piece within the landscape



SIGNBOARD

Bronze Plaque

- Used most commonly as a commemorative or memorial plaque
- Long lasting, durable element within any landscape environment.
- Produced by pouring molten bronze into a sand mould, then polished to the desired finish.
- High cost





SIGN INSTALLATION

LATERAL AND VERTICAL CLEARANCES – CYCLING

Exhibit 7-2: Vertical and lateral clearance for cycling wayfinding signs along rural roads

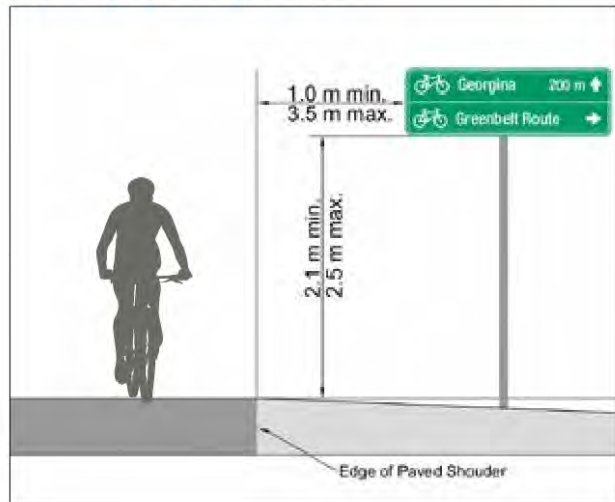


Exhibit 7-3: Vertical and lateral clearance for cycling wayfinding signs along urban road

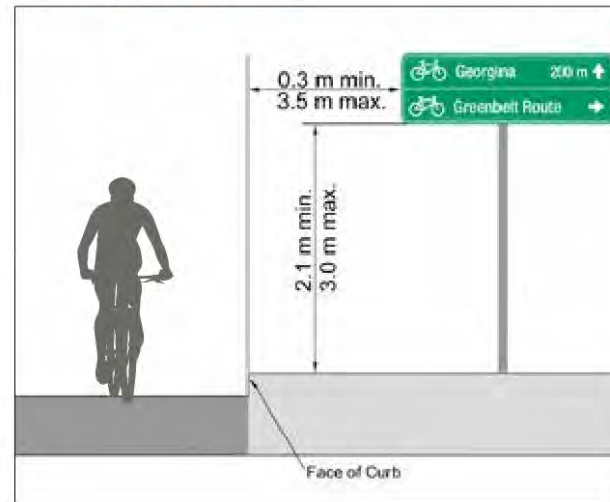


Exhibit 7-4: Vertical and lateral clearance for cycling wayfinding signs along multi-use paths

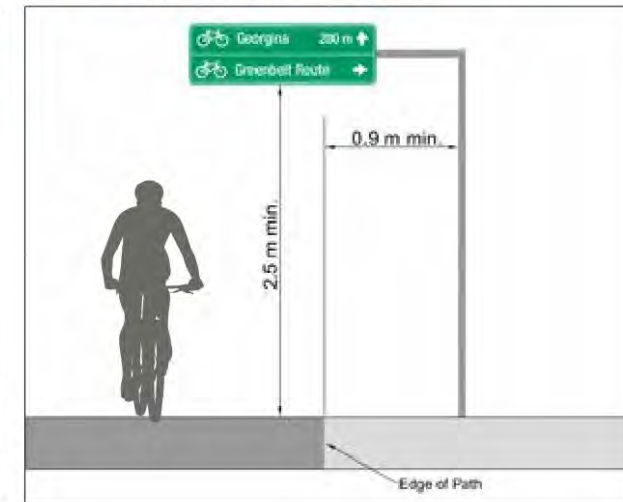
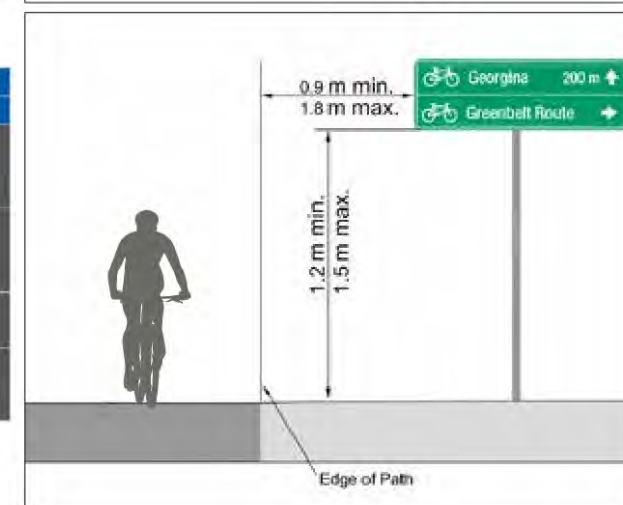


Exhibit 7-1 Summary of Lateral and Vertical Clearances for Cycling Wayfinding Signs

Facility	Vertical Clearance	Lateral Clearance		
		Min.	Max.	Max.
Rural roadway Measured from the edge of paved shoulder to the near edge of the sign Exhibit 7-2	Min. 2.1 m Max. 2.5 m	1.0 m	3.5 m	
Urban street Measured from the face of curb to the near edge of the sign Exhibit 7-3	Min. 2.1 m Max. 3.0 m	0.3 m	3.5 m	
Multi-use Path Measured from the edge of the path to the near edge of the sign Exhibit 7-4	Min. 1.2 m Max. 1.5 m	0.9 m	1.8 m	
	Min. 2.5 m	If minimum lateral clearance to sign cannot be met; however, minimum 0.9 m lateral clearance to post is still required		



Source: York Region Sustainable Mobility Wayfinding Guidelines (2018)

LATERAL AND VERTICAL CLEARANCES – PEDESTRIAN

Exhibit 7-5 Summary of Lateral and Vertical Clearances for Pedestrian Wayfinding Signs

Sign TYPE				Lateral Clearance		
				Min.	Max.	
Destination Fingerboard Measured from ground to the bottom edge of the sign Exhibit 7-6	VERTICAL CLEARANCE	Min.	2.1 m	Not applicable – the post is detectable and the protruding sign is mounted above the heads of pedestrians		
		Max.	3.0 m			
Map / Information Totem		Not applicable – this type of sign is detectable because it is of a constant width and extends to the ground, so no clearances to pedestrian activity areas are required				
Trailhead Sign If located adjacent the path and outside of a pedestrian activity area Measured from the edge of the path to the near edge of the sign Exhibit 7-7		Min.	1.2 m	0.9 m	1.8 m	
		Max.	1.5 m			
If located within a pedestrian activity area at the trailhead (must meet the clearances to the path noted above) Measured from the ground to near edge of sign Exhibit 7-8		Max.	0.68 m	Not applicable – the posts and protruding sign are detectable		

Source: York Region Sustainable Mobility Wayfinding Guidelines (2018)

PLACEMENT AND SPACING REQUIREMENTS

EXHIBIT 7-10: Sign placement and spacing for bike route identification signs

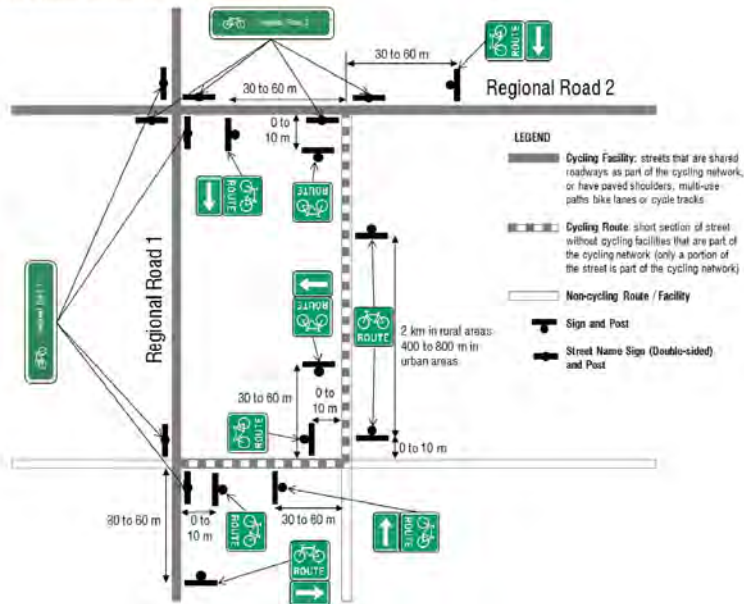


EXHIBIT 7-11: Sign placement and spacing for cycling destination signs

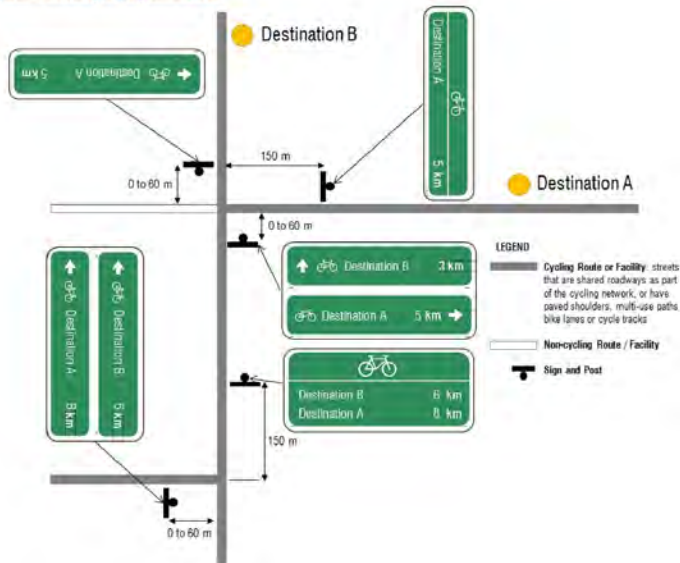


Exhibit 7-9 - Summary of Placement and Spacing Requirements

Type of SIGN	Decision Point or Intersection	Spacing*
Integrated Bicycle Route Identification Street sign	At intersection	Not applicable
Standalone Bicycle Route Identification sign	0 to 10 m on the far side of intersections.	Rural areas: every 2 km
		Urban areas: every 400 to 800 m
Bicycle Route Directional sign Destination Decision sign	Stop-controlled intersection: 0 to 10 m on far side of intersection	Not applicable
	Free-flow intersection: 15 to 60 m in advance of intersection	Not applicable
	Traffic signal controlled intersection: 30 to 60 m in advance of intersection	Not applicable
Destination Confirmation sign	150 m following a decision point or intersection	Every 3 km
Advance sign only if Bicycle Route Directional sign or Destination Decision sign is not conspicuous from 60m away	30 m in advance of the inconspicuous sign	Not applicable

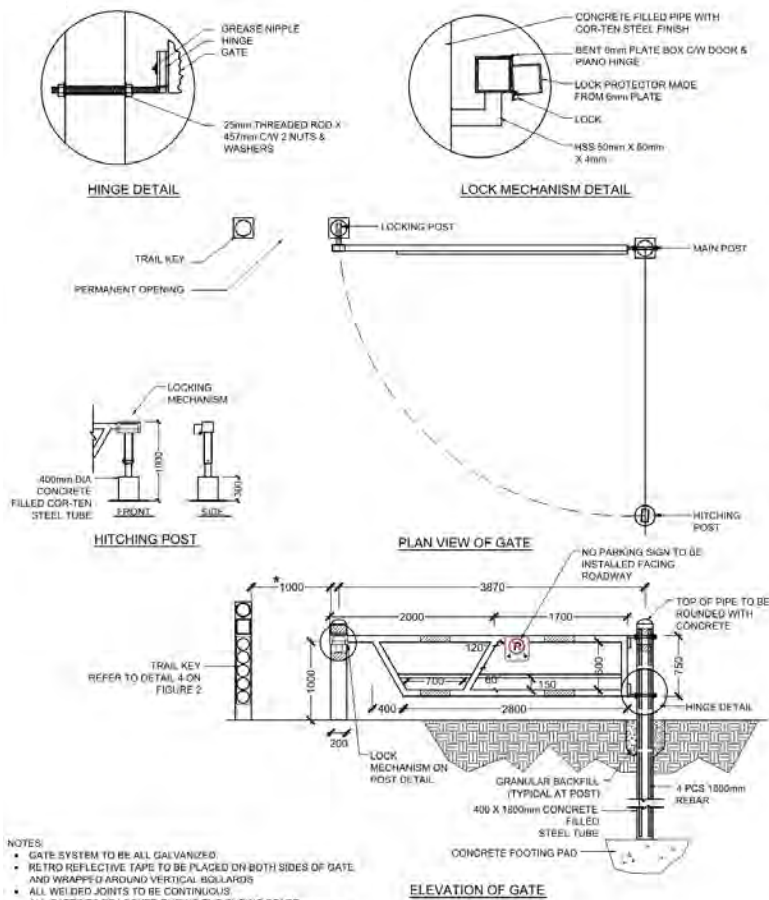
* All signs, including other road signs, should be spaced at least 25 m apart and in sequence where possible.

Source: York Region Sustainable Mobility Wayfinding Guidelines (2018)



TYPICAL DETAILS

TYPICAL ROAD CROSSING LAYOUT



- NOTES:**
- GATE SYSTEM TO BE ALL GALVANIZED
 - RETRO REFLECTIVE TAPE TO BE PLACED ON BOTH SIDES OF GATE AND WRAPPED AROUND VERTICAL ISOLATORS
 - ALL WELDED JOINTS TO BE CONTINUOUS
 - ALL GATES TO BE LOCKED DURING THE CURING STAGE
 - TOP OF NEW CONCRETE FOOTING TO BE LEVEL WITH THE SURFACE OF EXISTING GRADE
 - ALL HARDWARE TO BE GALVANIZED
 - ALL DIMENSIONS IN mm (MILLIMETERS)
 - ALL METAL COMPONENTS SHALL CONFIRM TO RELEVANT OPS
 - PERMANENT OPENING TO BE A MINIMUM OF 1000mm FOR ACCESSIBLE TRAILS TO A MAXIMUM OF 1000mm TO LIMIT MOTORIZED VEHICLES FROM ENTERING TRAIL

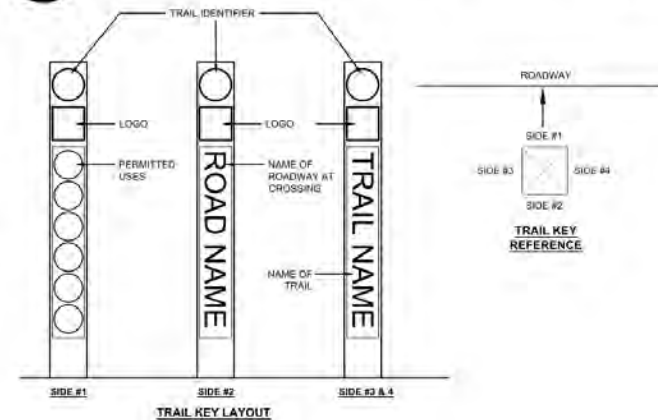
2 TYPICAL SWING GATE DETAIL

SCALE: NTS



3 TYPICAL SIGN INSTALLATION DETAIL

SCALE: NTS



4 TRAIL KEY DETAIL

SCALE: NTS

Source: Uxbridge Active Transportation Plan (2021)

TYPICAL RURAL ROAD CROSSING SIGNAGE



Place 100m to 120m before any stop sign. If two stop signs are less than 100m apart then a second stop ahead is not required if an unobstructed sightline exists between the two.

▲ S1: STOP HEAD



Mounted on the right side of the trail close to significant entrance points. For snowmobile use, One sign every 10km.

▲ S2: MAXIMUM 50km/hr. SIGN



For use at all intersections where other motorized vehicle use occurs, including driveways.

▲ S3: STOP SIGN



OFSC approved cautionary and regulatory signage installed at every intersection with another trail, highway, railway, or other crossing. Every 5km if no intersection.

▲ S4: OFSC PRESCRIBED TRAIL SIGN



Sign advises snowmobilers, cyclists, and other users of no trespassing on private property without a permit. Sign also includes other permitted and non-permitted uses of the trail. Erected at entrance to trail well off groomed portion of the trail.

▲ S5: TRAIL ENTRY AND RESTRICTION SIGN

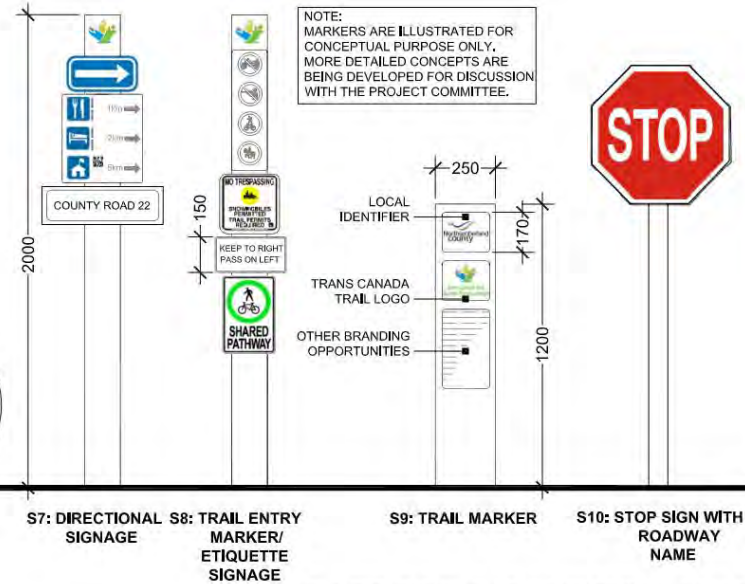


To be installed on the right hand side of the trail at all trail entrance points and road crossings, 20 to 30m from traveled portion of the Intersection. OFSC approved. No other signs to be mounted at the same location.

▲ S6: USE AT OWN RISK SIGN

▲ TYPICAL OFSC SIGNAGE TYPES

OFSC APPROVED Cautionary and Regulatory signs



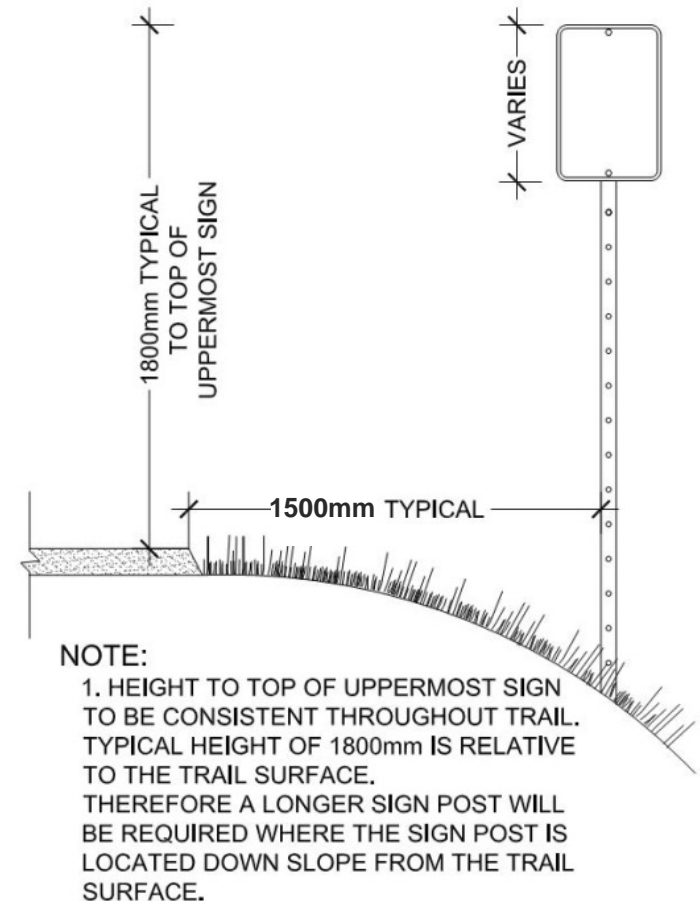
▲ TYPICAL SIGN SCHEMATICS
SCALE: NTS

DRAFT FOR DISCUSSION ONLY

OFSC APPROVED CAUTIONARY AND REGULATORY SIGNS TAKE PRECEDENCE OVER ALL OTHER SIGNS UNLESS REGULATED BY LAW REFER TO "OFSC SIGN GUIDE SUPPLEMENT" VERSION 8, JUNE 25, 2011

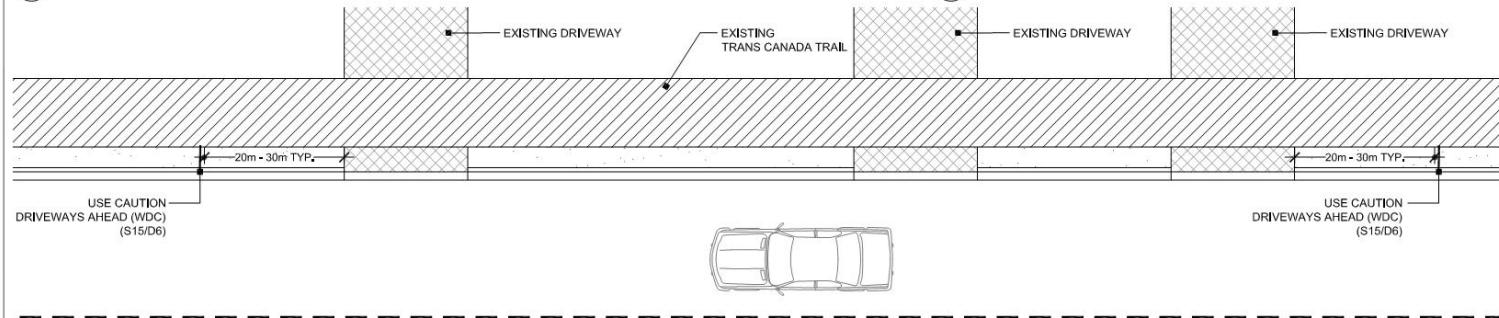
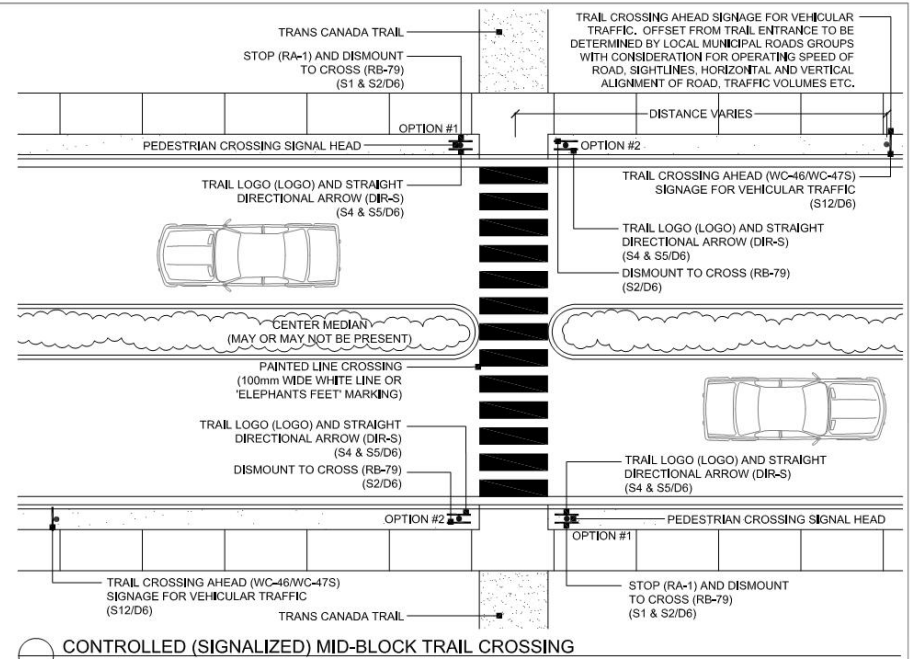
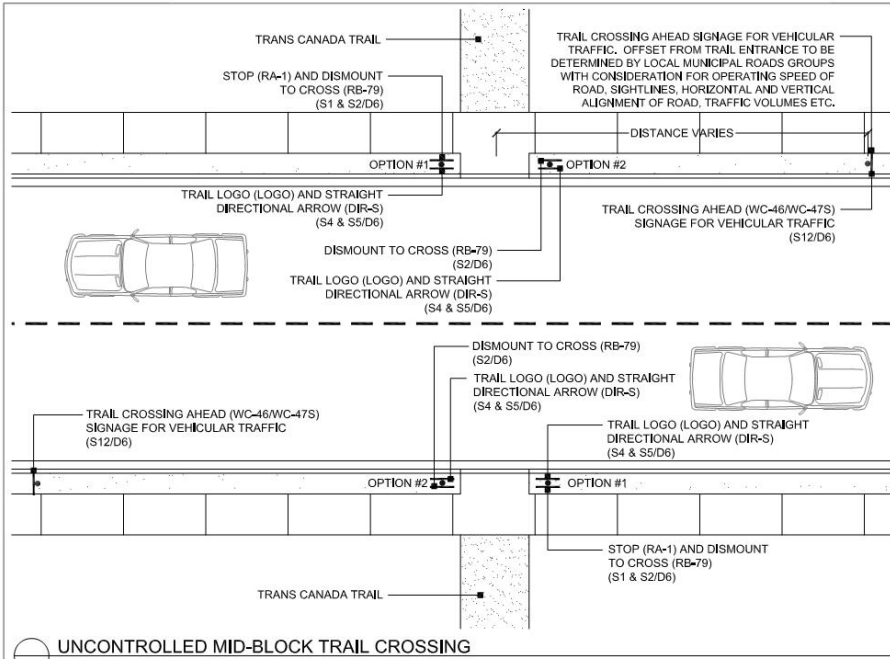
MOUNTING / PLACEMENT

- Direct burial
 - Embedded anchor system
 - Foundation
 - Pad Mounted
-
- Large signs require engineering to examine structure and wind loading
-
- Roadside signs-consult with traffic control standards regarding placement (clear zones and breakaway requirements)
-
- For pedestrian signs the centreline of sign to the ground should be +/- 1.5m



TYPICAL SIGN MOUNT BESIDE TRAIL

TYPICAL MID-BLOCK CROSSING



DRAFT FOR DISCUSSION ONLY

CONTROLLED MID-BLOCK CROSSING

Mid-Block Pedestrian Signal

The Mid-Block Pedestrian Signal allows cyclists and pedestrians to cross while motor vehicles are stopped. A mid-block pedestrian / pathway crossing of a multi-lane road should be considered only at locations with adequate sight lines and only if the nearest controlled intersection is too far to expect users to travel to it.



Photo Credit: MMM Group, 2012 – Mid-Block Pedestrian Signal without Median Refuge

Multi-use Path Crossing with Median Refuge Island

A protected space in the centre of the road enables allows cyclists pedestrians trying to cross traffic coming from one direction at a time. The median refuge may or may not include a Mid-block Pedestrian Signal. Where a mid block pedestrian signal is not provided the pedestrian crossing pavement markings should not be applied to avoid any confusion regarding right-of-way. Pedestrian islands are typically installed on uncontrolled midblock crossings

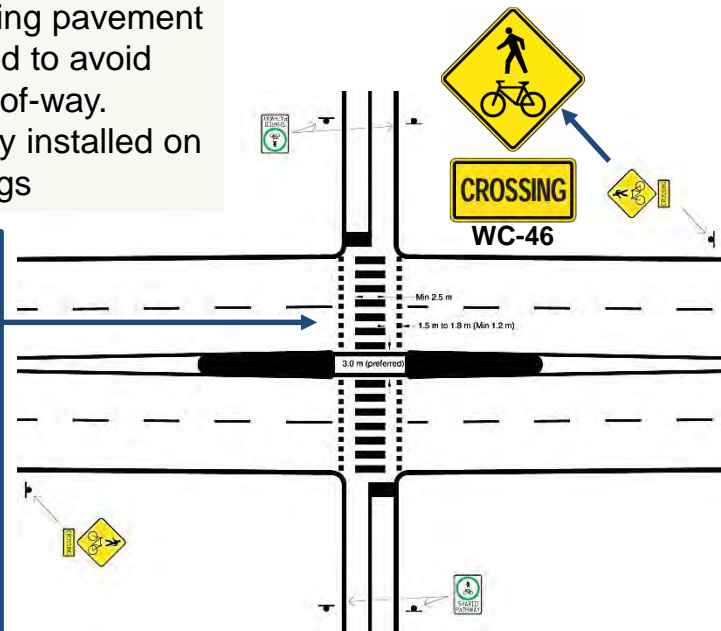
OTM Book 15 – Pedestrian Crossing Facilities:

“Pavement markings to delineate pedestrian crossings are not recommended in the design of a refuge island.” Section 3.3.1.2

Also, “marked crosswalks with painted pavement markings are not recommended at uncontrolled crossings as they create a false sense of security on the part of pedestrians...” Section 3.3.1

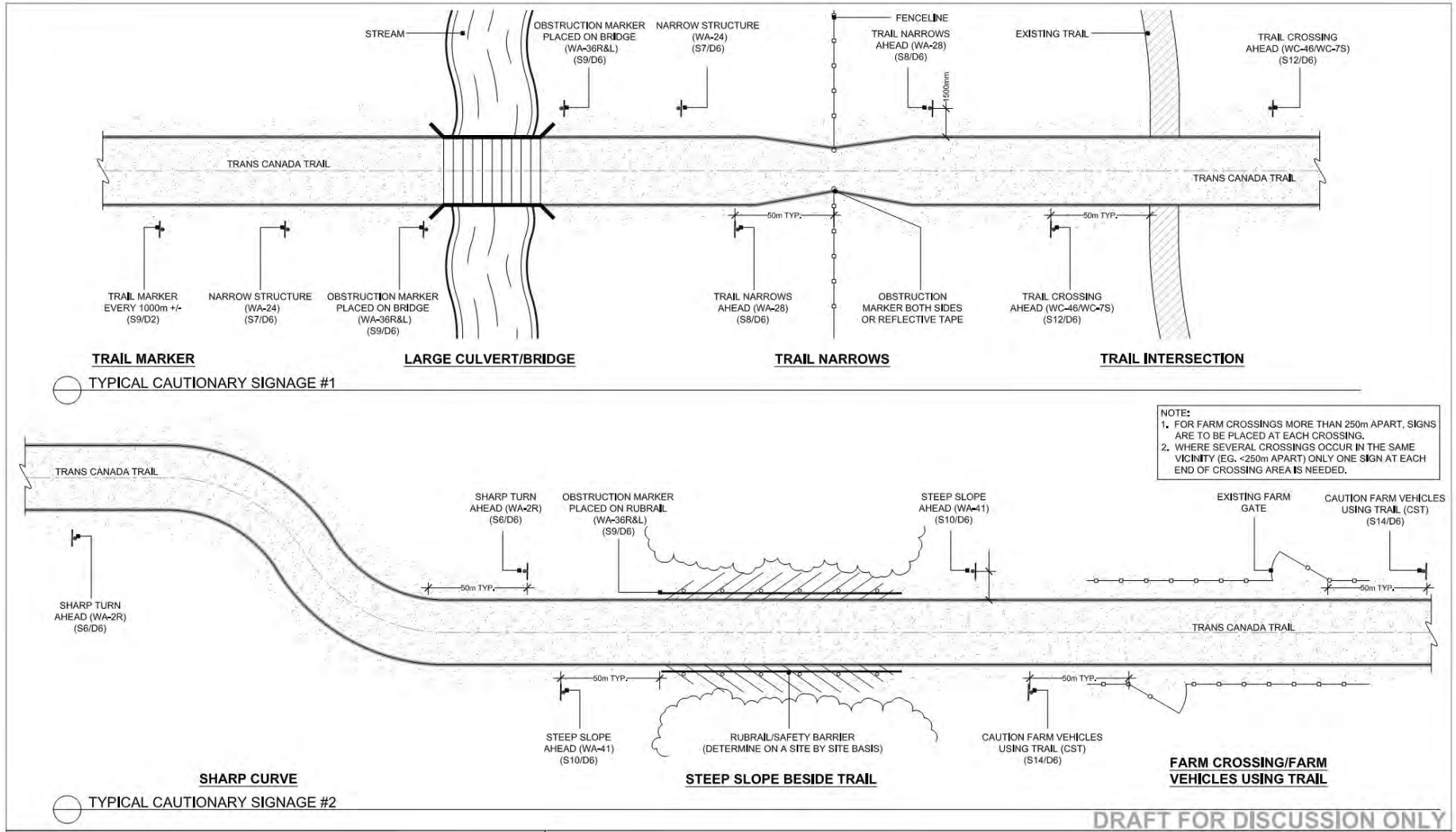


Photo Credit: MMM Group, 2010 – Mid-Block Pedestrian Signal with Median Refuge



Credit: TAC Bikeway Traffic Control Guidelines, 2012

CAUTIONARY SIGNAGE PLACEMENT





NEXT STEPS

NEXT STEPS

- Town staff to review and provide input on preferred Family of Signs approach
 - May want to review with preferred sign contractor for their input
- Town to share most current signage and branding guidance for municipal destinations and trails
- WSP to draft a Family of Signs concept for Town review
- WSP and Town to confirm pilot location(s) for implementing new trail signage in the Town



APPENDIX A

YORK REGION SUSTAINABLE MOBILITY WAYFINDING GUIDELINES



SUSTAINABLE MOBILITY WAYFINDING GUIDELINES

YORK REGION
Transportation Services





IBI Group in
association with
Vélo Québec
Association



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The image features a vibrant blue background with dark silhouettes of trees and branches. A prominent white geometric shape, resembling a stylized '1' or a corner bracket, is positioned on the right side. The number '1.0' is written in a bold, blue, sans-serif font within the white shape. The overall aesthetic is modern and clean, suggesting a version number or a design element.

1.0

1.0 Introduction

Wayfinding provides direction to help people navigate through space and among places. The design of wayfinding is more than signs - it also includes pavement markings, names, landmarks, maps and sometimes changes to the built environment all within a set of conventions that simplify communication. When wayfinding is successful, it goes beyond providing information, and supports place-making, enriching the public realm.

Wayfinding that highlights options for walking and cycling are important investments that help to build a multi-modal transportation system.

1.1 Purpose

These guidelines are a toolkit for wayfinding signage and pavement markings that may be used as a reference for walking and cycling practitioners in the cities, towns, and hamlets throughout York Region. The guidelines are intended to provide a coordinated system for both pedestrian and cycling wayfinding signage, and options for supportive pavement markings and trailhead signage.

1.2 Goals of Information Signing

As described by the Transportation Association of Canada's Bikeway Traffic Control Guidelines for Canada (2012), wayfinding signage indicates information for route selection, for locating off-road facilities, or for identifying geographical features or points of interest. Ontario Traffic Manual (OTM) Book 8 Guide and Information Signs (Volume 1, 2010) describes this family of signs as essential to:

- Direct users along roadways. For cyclists and pedestrians, they must direct them along bicycle routes, bikeways and trails
- Identify intersecting routes
- Provide direction on centres of population and other destinations

OTM Book 8 clearly identifies that guide and informational signs are an aid to users reaching their destination; they cannot be relied on as the only source of information for making a trip. Using maps and route planning are considered fundamental to making a trip.

City of Burlington's multi-use path and cycling network trailhead signs and destination direction signs



1.3 Wayfinding Specific to Cyclists and Pedestrians

Wayfinding describes how a person orients themselves and navigates through an area or space. It is about knowing:

- Where you are
- Where you want to go
- How to get there from where you are

People respond to their built environment. Each trip becomes a memory which informs how the world is understood around us. Routes that are frequently travelled become the default navigation choice, because we know how to reach a destination without getting lost and know approximately how far (or long) the trip is and what to expect along the way.

If trips are predominantly taken by motor vehicle, then the natural tendency for many people is to try to walk or cycle on the same route that they would drive, because this is the route they are familiar with. The problem with this approach is that the most efficient driving routes may not necessarily be the most desirable options for walking or cycling.

This issue can become most pronounced in areas where highways or arterials are used to travel between neighbourhoods within an urban area. In certain cases, neighbourhoods may be within a walking or cycling distance as the bird flies, but an overreliance on highways in order to plus a desire to avoid traffic has created a mental map that is spatially skewed.

This issue can become most pronounced in areas where highways or arterials are used to travel between neighbourhoods within an urban area. In certain cases, neighbourhoods may be within a walking or cycling distance as the bird flies, but an overreliance on highways plus a desire to avoid traffic has created a mental map that is spatially skewed.

The provision of pedestrian and cycling signage can therefore be understood as a way of encouraging people to reconsider their travel options, based on new information in order to challenge their unconscious assumptions about travel.

1.4 Intended Users

The system is intended for people who are walking or cycling of all ages and abilities. Cyclists can generally be divided into the following categories by trip purpose:



Photo Credit Shawn Smith

UTILITARIAN USERS

These are users who are undertaking destination-oriented trips to work, school, and services. They rely on consistent **information leading them along an efficient route to their destination.**



Photo Credit Shawn Smith

RECREATIONAL USERS

These are users who are undertaking experience-oriented trips for leisure, fitness or sport over typically shorter distances than tourists. They rely on **consistent information leading them along their route, but may also seek contextual information and directions to services.**



TOURISTS

These are users who are undertaking longer distance trips as part of a vacation or getaway experience. They rely on **consistent information leading them along their route, but may also seek contextual information, directions to services, and destinations** to explore on route. They are more likely to choose an **indirect route if it is scenic** over a more direct route.

Wayfinding must address all of the above types of cycling trips – providing information on direct bike routes and bikeways, indirect and scenic routes, and services and destinations.

There is also a need to distinguish wayfinding for pedestrians from cyclists. Pedestrians are more likely to stop along their route to read larger amounts of information on signage. Using comparable exertion, cyclists are able to travel at much greater speeds than pedestrians. As such, cyclists are more likely to rely on smaller amounts of information that can be seen from a greater distance allowing them to interpret it quickly and make a decision.

Accordingly, this report provides different wayfinding solutions for pedestrians and cyclists. This difference in requirements, however, does not preclude pedestrians from finding value in using signage designed for cyclists, to assist with their journey and vice versa.

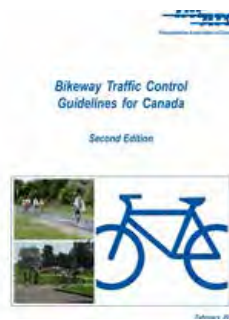
1.5 Guidance Context

This wayfinding guidance has been developed as part of the *Pedestrian and Cycling Planning and Design Guidelines for York Region*. Street typologies and detailed design drawings are components of the Design Standards for Pedestrian and Cycling Facilities toolkit, to provide the framework for the design and construction of great streets.

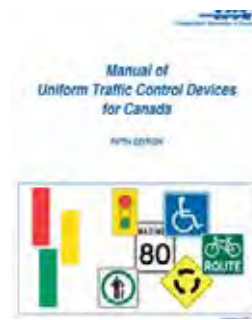
The Pedestrian and Cycling Planning and Design Guidelines for York Region are an update of the *2008 Planning and Design Guidelines* and directly supportive of the work of *York Region's Great Streets* context sensitive design manual and policy directions stemming from the recently updated Transportation Master Plan.

These guidelines focus specifically on pedestrian and cycling wayfinding applications. Planning, designing and implementing the applications will require reference to other manuals and documents with content on bikeways, bicycle signage and sign design in general, that address related topics in greater detail. These resources include:

Exhibit 1-1: Relevant Manuals



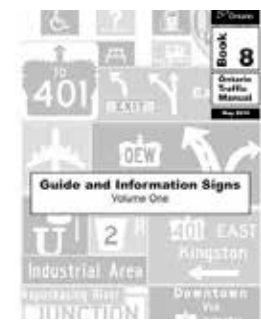
Transportation Association of Canada (TAC) Bikeway Traffic Control Guidelines for Canada, Version 2



Transportation Association of Canada (TAC) Manual of Uniform Traffic Control Devices for Canada



Ontario Traffic Manual Book 18 - Cycling Facilities



Ontario Traffic Manual Book 8 - Guide and Information Signs



Ontario Traffic Manual Book 2 - Sign Design, Fabrication and Panels



Federal Highway Administration (FHWA) Manual of Uniform Traffic Control Devices, Chapter 2K Tourist-Oriented Directional Signs and Chapter 9B Bicycle Guide Signs



Metrolinx / GO Transit Static Signage Catalogue October 2011

In addition, these guidelines build upon the knowledge developed in the following cycling wayfinding guidelines:

Exhibit 1-2: Cycling-specific Wayfinding Guidelines from Other Jurisdictions



Wayfinding Guidelines for Utility Cycling in Metro Vancouver, September 2013



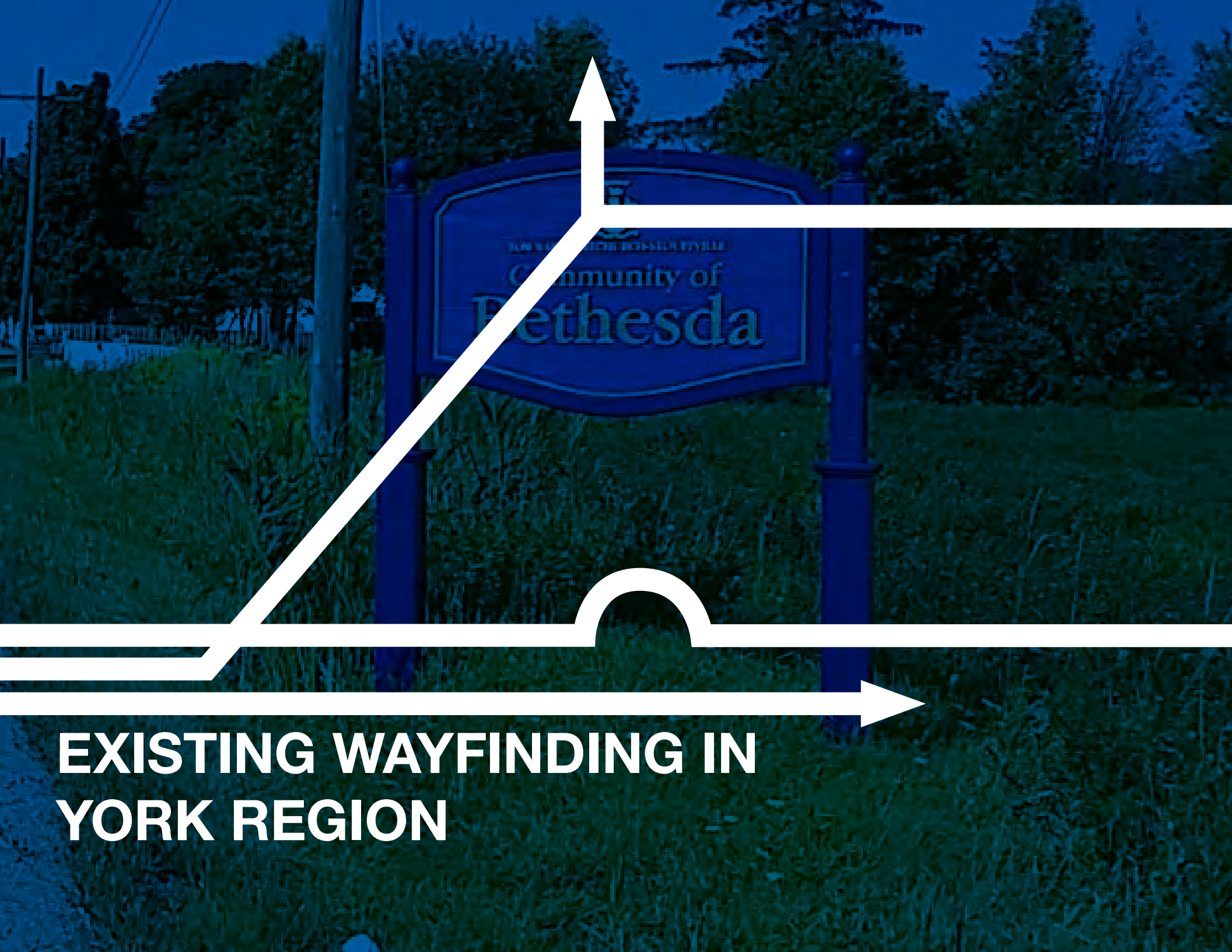
Capital Region District Interim Cycling Destination Wayfinding Guidelines, October 2014



Toronto 360° Wayfinding Strategy, August 2012



2.0



COMMUNITY OF
Bethesda

**EXISTING WAYFINDING IN
YORK REGION**

2.0 Existing Wayfinding in York Region

An inventory of existing signage in use in York Region revealed a variety of signs installed by various agencies to help people navigate the region as they walk or cycle.

2.1 Existing and Planned Assets

The current signs in place predominantly focus on trails. The Region publishes paper cycling maps, and is currently developing a cycling comfort map, which may further inform route choices being made by users.

Examples of existing wayfinding signs in York Region are provided in Exhibit 2-1.

Exhibit 2-1 - Existing Wayfinding Signs in York Region

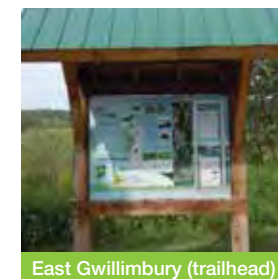
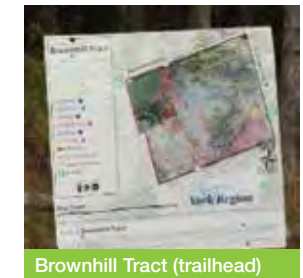
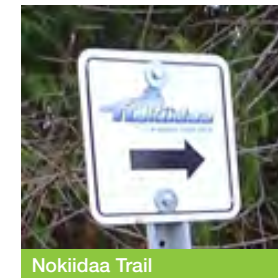
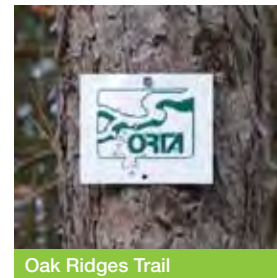
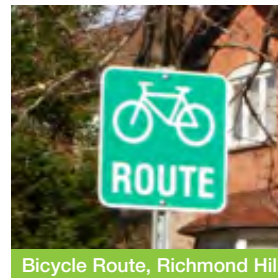


Exhibit 2-2 - Examples of Wayfinding Signage by Municipalities in York Region

A number of municipalities in York Region have or are in the process of planning wayfinding assets to serve users in their area. This includes signage for the Bartley Smith Greenway Trail, Township of King Trail and the multi-jurisdiction Lake-to-Lake route, as illustrated in Exhibit 2-2.

Wayfinding signs used by other agencies of interest to York Region are illustrated in Exhibit 2-3.

Exhibit 2-3 - Examples of Other Agency's Signage



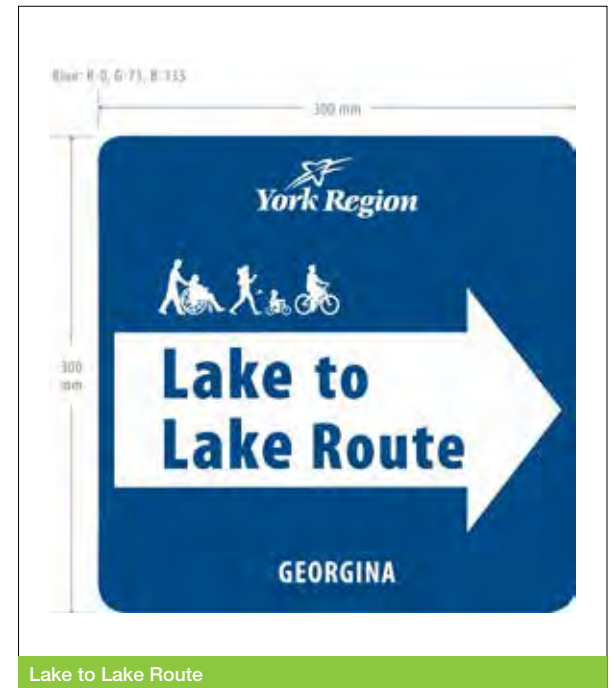
GO Transit / Waterfront Trail Wayfinding Signs



Bartley Smith Greenway Trail



King City Trails



Lake to Lake Route

2.2 Opportunities

Based on the inventory of existing and planned wayfinding assets for walking and cycling, a number of opportunities to expand and enhance these investments were identified:

Unsigned Assets refers to existing walking and cycling infrastructure and destinations that have been established without the provision of wayfinding. There are a number of opportunities that exist within the Region where the addition of wayfinding signage would provide immediate benefit, destinations such as GO Train stations and popular public spaces.

Information is lacking in many crucial locations, such as at key decision points, or on local streets that may represent potential connections between existing trails or dedicated cycling infrastructure.

Continuity is needed where current routes (and information) end, as suggested connections may be difficult to identify in-situ and/or on maps. Connections between on- and off-street routes may be challenging without continuity across the system.

Cohesive Network Awareness is needed for cycling travel in particular, to create a system that is easy to recognize, especially for people new to cycling or those unfamiliar with an area. This also allows for users to discover easy routes that can be taken by cycling in place of busy routes taken by personal vehicles.

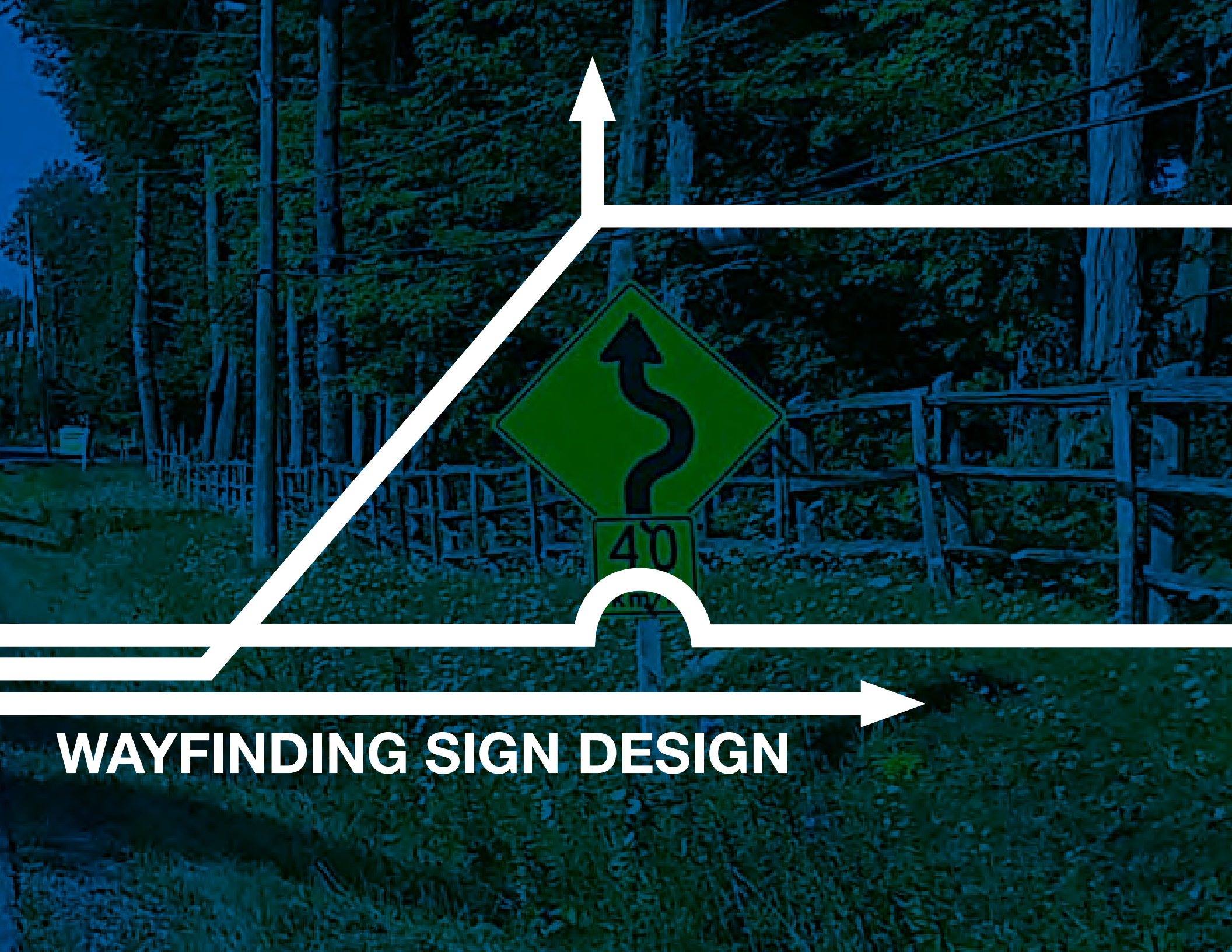
Promoting Destinations is a natural outcome of signing key civic landmarks. Information on wayfinding signs helps to build awareness about how the places people would want to walk or cycle to are distributed spatially, while also raising awareness of public assets such as parks, community centres, public libraries, civic buildings and landmarks.



Lake Drive East, Georgina, on the Lake to Lake Cycling Route, Photo Credit Shawn Smith



3.0



WAYFINDING SIGN DESIGN

3.0 Wayfinding Sign Design

Fundamental principles for wayfinding should be observed in order to establish consistency and efficiency of signage in York Region. Consistency and efficiency support the ability of users to collect, understand, make decisions about, and react to information obtained from signage. Wayfinding principles can also inform how information is communicated by third-party systems in privately owned public places.

Wayfinding Principles and General, Practical Applications

3.1 Principles



Conspicuity

The sign needs to attract the attention of the user. Conspicuity of design and placement is critical to ensure that signs are easily discerned by users.

- If roadway signs for motorists (e.g. Tourism Oriented Destination Signage) are also pertinent to cyclists and are visible from cycling facilities on the road or in the boulevard, the signage does not have to be repeated on the cycling facility.
- Where signs are intended for pedestrians and cyclists only, such as on trails, they may be scaled down in size.
- Minimum sign sizes are provided.
- Oversized signs are permissible where investigations show a need for emphasis or context-specific design speed. The excessive use of oversized signs is discouraged since it has the effect of deemphasizing the conspicuity and importance of standard-sized signs.
- Separation should be provided between wayfinding signs and between other regulatory and warning signs.



Simplicity

Signs must be legible and comprehensible, and not become overcrowded with information.

- The size of the sign depends on the length of the message, and the size and spacing of letters and symbols so that it is legible from a distance that allows for the sign to be read in full prior to riding past it without slowing down.
- Where practical, signs with symbols rather than words should be used to convey the message. A simple, conventional symbol like the bicycle is instantly recognized.
- Use of bilingual text should be consistent with legislation and policies in place in the applicable jurisdiction.
- Use the minimum number of signs to clearly convey the information and guidance required by users, thereby avoiding sign clutter.
- Referenced sign guidelines should be followed as they relate to colour, lettering, spacing, borders, standard symbols, illumination and reflectorization.



Predictability

Information should be communicated in a consistent manner. The hierarchy of information on the signs must be consistent, ensuring that people will be able to predict where to look on a sign for the information they want. This is particularly important for users taking unfamiliar routes to their destinations or on route to an unfamiliar destination.

- Naming of destinations and use of abbreviations must be consistent.
- On directional and destination signs for cyclists, the bicycle symbol should be to the left of the destination symbol and word legend.
- Arrows are placed on the side of the sign to which they are pointing: arrows pointing left or up should be on the extreme left side of the sign; arrows pointing right should be on the extreme right side of the sign.
- Symbols for destinations, when used, should be to the left of the word legend.
- Directional and destination signs in one assembly should all be the same width.
- Signs should be placed in consistent locations so users know where to look for information.



Progressive Disclosure

Information should be provided in a manageable amount for users. Providing too much information at once can be difficult to interpret quickly and remember. However, providing too little information can leave users unable to make the appropriate decision.

- In advance of decision points, only information needed for that decision should be provided. Information should be reiterated following a decision point, and repeated as needed. This is especially important for users who are not familiar with an area, and require ongoing confirmation that they are moving in the correct direction.
- Sign assemblies should present information in a descending order of importance.
- Sign assemblies should generally present the information about the through movement first, followed by the left, and then the right movement.
- At intersections, one destination is signed for each route leaving the intersection (three for a four-legged intersection, two for a T-intersection), selecting the major destination or the destination nearest the junction. Additional destinations can be added on subsequent directional or confirmation signs.
- Generally directional and destination wayfinding sign assemblies should not exceed four signs



Progression

Signs should be placed in a position allowing for users, cyclists in particular, to maintain movement.

- The size and placement of the sign must take into account travel speeds, visibility and the time it takes for the user to interpret the sign and make a travel decision to turn, stop or continue.
- Directional signs are placed in advance of and/or at intersections to notify cyclists of upcoming turns and changes in direction of cycling facilities or to find destinations.
- Advance signing of directional and destination signage is generally not necessary given the lower speed of cyclists, typically less than 40 km/h and more likely ranging from 15 to 35 km/h, unless the sign placement is not conspicuous.



Connectivity

The network of signs and paths should allow users to see walking or cycling as a means to mobility, used in place of motor vehicles.

- Identification signage of bikeways and trails is provided at intersections with the roadway network.
- Identification signage of bikeways and trails is provided at regular intervals along long stretches these facilities.

3.2 Text Case and Fonts

Upper case letters are more legible for unfamiliar words; mixed case (upper and lower case) is more legible for familiar words with the user recognizing the shape of the ‘envelop’ created by the unique pattern of dots, letter ascenders and descenders before individual letters are recognized. Ontario Traffic Manual recommends mixed case for street name signs, and guide, destination and directional signs.

Pedestrian Wayfinding Signs

Ontario Regulation 413/12 of the Accessibility for Ontarians With Disabilities Act (2005) recommends characters that use a sans serif font. Helvetica is a widely used and available typeface that complies with AODA legislation, and may be implemented by most sign shops.

Other sans serif fonts may be used, such as Clearview or FHWA 2001 Canadian Edition / Highway Gothic that are standard typefaces used by facilities that fabricate signs for roadside installation.

Generally, the sign message is recommended to be at a height between 1.2 and 1.6 m above the ground for readability from an average viewing distance; however, in areas where the sign may be obscured by crowds, it is recommended to be more than 2 m above the ground. Note that for people with low vision, the viewing distance is generally 17.5 mm.

Helvetica

Cycling Wayfinding Signs

FHWA 2001 Canadian Edition (also known as Highway Gothic) is the preferred font for signs erected along public roadways in Ontario and intended for people who are cycling. This typeface has been specially designed in shape and form to ensure contrast and legibility when viewed while in motion. This is particularly important when approaching signs from a distance under conditions that threaten visibility such as inclement weather. Furthermore, it is a standard typeface used by facilities that fabricate signs intended for people travelling by motor vehicle, and will ensure a consistent look and feel for standalone cycling wayfinding signs, street signs that integrate the bicycle symbol and other roadside guide signs used by the traveling public. In general, most signs in York Region will use Highway Gothic C.

Highway Gothic C

3.3 Colours

Signs that are similar in function are typically designed to use the same colour combination for text, symbols, backgrounds and borders. Colour along with shape help to organize the messages. People can recognize sign colours and shapes at far greater distances than they can distinguish symbols or read sign text. Colours are identified first and are therefore the most effective way to help users locate particular signs quickly and understand their general function.

Cycling Wayfinding Signs

The Ontario Traffic Manual has assigned colours to various classes of signs. Guide signs used on Ontario's streets have the following colour combinations:

- **White** message and border on **Green** – recommended for route identification signs, street name blades, and destination signs including those for cycling wayfinding. Also used for specific traffic generator marker signs such as bus station, train station, airport, ferry, university / college,
- **White** message and border on **Blue** – recommended for specific destination markers such as hospital, emergency helipad, and public telephone, and for services such as picnic area, scenic lookout, and public boat launch

- **Black** message and border on **White** – used for some destination markers with regulations such as carpool lot (with green permitted circle)

Ontario's Tourism-Oriented Directional Signing (TODS) is white on blue; bicycle rental operations are included as an eligible service.

Colours on tab signs should be the same as on the primary sign

Sign borders frame the message content and make it easier to read when displayed as part of a sign assembly. Non-retroreflective borders, typically 10 to 15 mm wide, should be inset (i.e. black borders); retroreflective borders may be inset or edge borders.

Pedestrian Wayfinding Signs

Typically destination signs are white on green and service signs are white on blue, aligning with the recommendations for cycling wayfinding signs. However, these signs may vary in colour to reflect municipal and local branding or preferences.

Maps are recommended to be designed using high tonal contrast.

Ontario Regulation 413/12 of the Accessibility for Ontarians With Disabilities Act (2005) specifies for trailhead signs that the text has high tonal contrast with its background in order to assist with visual recognition.

Exhibit 3-1: Standard Print Colour Specifications as per OTM Book 2

COLOUR NAME	PANTONE® MATCHING SYSTEM (PMS)	PROCESS COLOUR			
		Cyan (C)	Magenta (M)	Yellow (Y)	Black (K)
Green	342	100	0	69	43
White	N/A	0	0	0	0
Blue	294	100	56	0	18.5
Black	426	0	0	0	100

3.4 Graphic Standards

Graphic standards should be based on:

- Ontario Traffic Manual, Book 2 Sign Design, Fabrication and Patterns including the Electronic Master Sign Library with files in Adobe® Illustrator® (ai) and Adobe® Acrobat® (pdf) format
- Transportation Association of Canada's Sign Pattern Manual that includes with files in Adobe® Illustrator® (ai) and Adobe® Acrobat® (pdf) format .eps and .pdf file formats, Encapsulated PostScript (eps) format
- Metrolinx / GO Transit Static Signage Catalogue, October 2011

3.5 Identifying Destinations

The major focus of these guidelines is how to guide cyclists along the cycling network to the places they want to go. In order to do this, a set of destinations and their names must be agreed regionally in order to meet the principles of simplicity and predictability. A hierarchy of destinations is necessary in order to prioritize which destinations to include when there are too many possible destinations than can fit legibly on a sign.

Destination wayfinding signs may be installed on "regionally significant" routes to guide cyclists to the following destinations:

- Major tourist attractions of Regional Significance as defined by regional tourism
- Public trails
- Municipalities
- Downtown areas, rural hamlets and BIAs
- Major public transit hubs / stations
- Bike shops / bike service centres / bike rental facilities / bike pumps or repair stations
- Public washroom facilities
- Schools and post-secondary institutions
- Major municipal or Regional roads
- Public community / recreational centres

When used on Trails, signs that provide information for services and amenities, distinct from on-street destination signs, may be useful including:

- Toilets
- Water
- Rest or picnic area
- Air pump
- Repair station
- Bicycle shops or rentals
- Transit stations

Exhibit 3-2 Sample Destinations



Markham City Centre



Unionville GO Station



Canada's Wonderland



Highway 7 Bicycle Lanes

One of the first steps in the development implementation of wayfinding signs for York Region, will be an exercise to identify and list assets that should be signed in each implementation area or along specific corridors. There will often be many destinations suggested as candidates to sign and it will be difficult or impossible to resource signing them all. For each area or corridor where destination wayfinding signs are to be installed, the following considerations can be reviewed in order to choose which destinations will be featured on the signage. These considerations may be used to narrow down an initial list of candidate destinations.

Demographics - Signage systems should be tailored to meet the needs of the area's demographics. For example, communities with a permanent population of elderly people will have very different needs to a neighbouring community that attracts a lot of tourists, but has a small permanent population. If local facilities attract users or visitors during the normal business season that do not reside in the area of the facility, then it can be considered for designation as a tourist destination.

Areas of interest - Identify schools, hospitals, shopping areas (including the location of main entrances in larger shopping complexes) and tourist attractions, as well as the major origins and destinations, and identify the type of transport or route people take to reach them.

Walking distances to public transport - Provide maps linking transport hubs with major activity centres (for example schools, universities and shopping areas).

Major walking, cycling and accessible routes (formal and informal) - Consider the condition and use of existing routes. Identify the areas where pedestrians, people with impaired mobility and cyclists might need help finding key destinations while avoiding obstacles (for example major intersections).

Potential journeys - Identify alternative routes that are quicker, safer, or more scenic.

Key crossing points over waterways, railways and major roads / freeways - Identify alternative routes to less comfortable routes that provide access to limited crossings of key barriers.

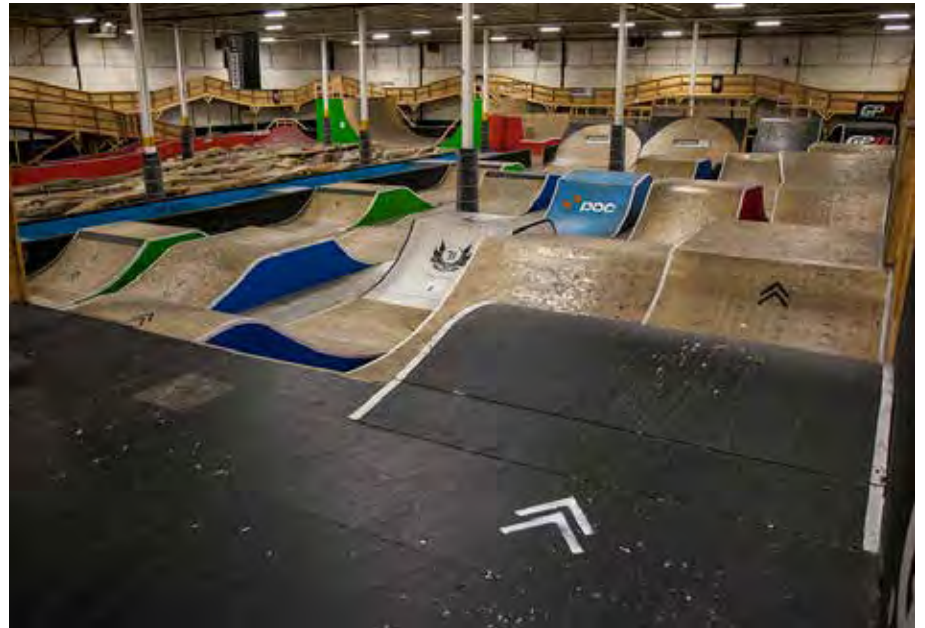
Existing signage - Review its location, condition and whether it needs to be upgraded or replaced.

Generally speaking, only public assets or institutions such as schools, hospitals, heritage sites or tourist attractions should be promoted on wayfinding programs that are publicly administered. Major shopping malls, or shopping or business districts may be considered if they function as a significant landmark in the area, but individual private businesses should not be promoted by a publicly-funded wayfinding system. It is recommended that a strong rationale for regional significance be documented for why it is that any private for-profit destinations be included on publicly funded wayfinding signage, as other businesses will likely wish to receive the same treatment once they see that private businesses are being promoted.

Exhibit 3-3 Sample Destinations (cont.)



Historic Unionville



Joyride 150 Indoor Bike Park



McMichael Gallery



Pacific Mall

3.6 Displaying Destination Information



For Walking:

Destination signage directed to pedestrians may use the pedestrian symbol on the left of the destination symbol and word legend.

Distances should be displayed in metres.

Distances should be shown to the nearest 50 m when more than 50 m away from the destination, and the nearest 10 m if less than 50 m away.

Destinations should be signed up to 900 m away equivalent to a walking time catchment of 5-10 minutes at a walking speed of 1.5 to 3 m/sec (5 to 10 km/h).



For Cycling:

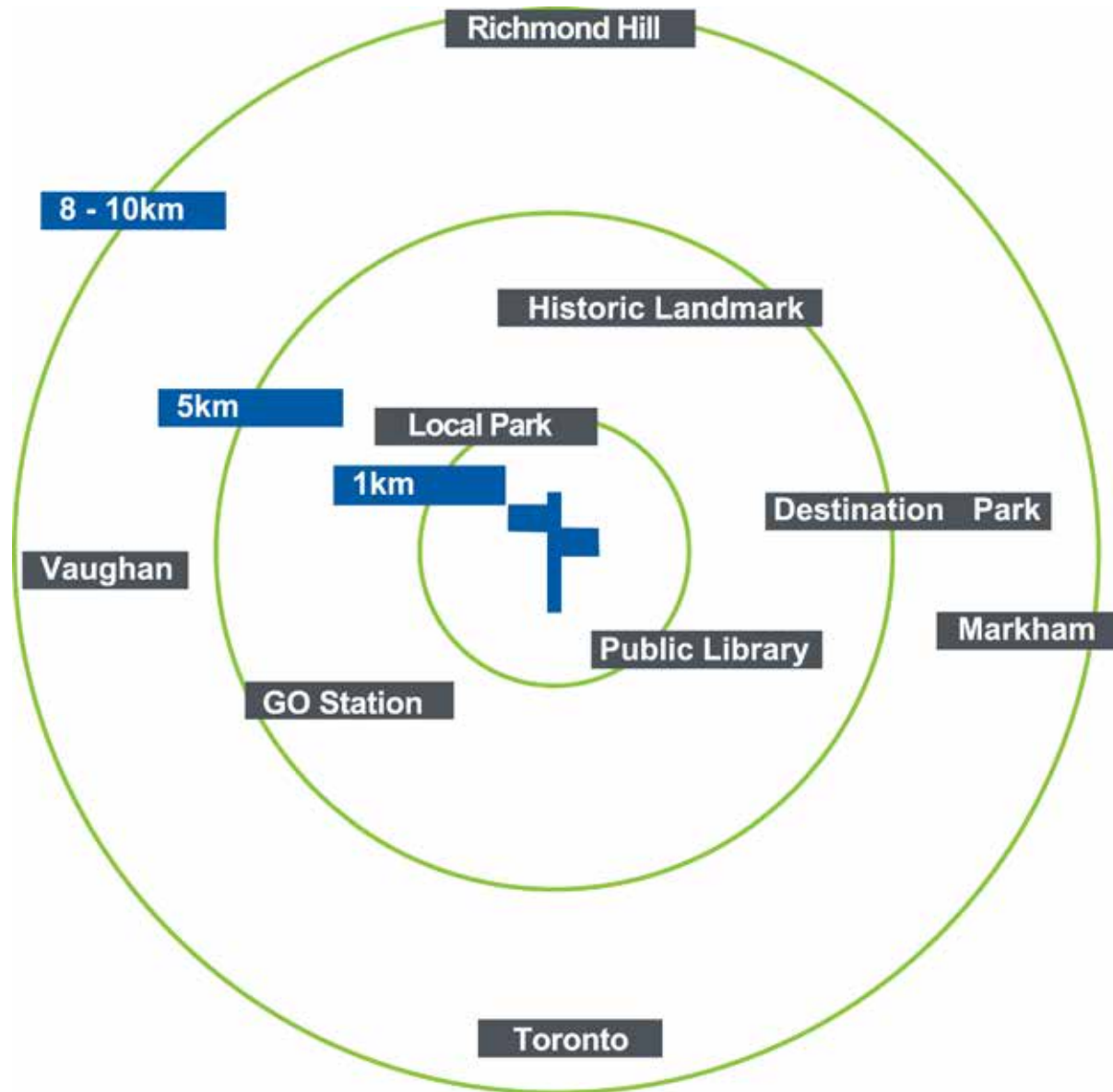
Destination signage directed to cyclists shall use the bicycle symbol on the left of the destination symbol and word legend.

Distances should be displayed in kilometers.

Distances should be shown to the nearest 1 km when more than 800 m or more away from the destination, to the nearest 0.5 km when between more than 300 m and 800 m away, and no distance is required if 300 m or less away.

Destinations should be signed up to 10 km away equivalent to a cycling time catchment of 25-40 minutes at a cycling speed of 15 to 25 km/h.

Exhibit 3-4: Travel Distances and Appropriate Destination Types for Cyclists



Destination hierarchy based on distance and destination type can be used to assess, select and prioritize primary, secondary and tertiary destinations. Longer, more continuous routes can focus on signing primary, secondary and tertiary destinations; shorter routes should focus on nearby destinations at the primary or secondary level depending on the length of the route.

The Exhibit 3-4 visualizes a conceptual distribution of different destination types for inclusion on cycle wayfinding signs. Destinations are distributed across three groups according to their distance from the decision point where the sign will be placed.



4.0



CYCLING WAYFINDING SIGNS

4.0 Cycling Wayfinding Signs

Cycling wayfinding will typically be used to help people follow routes that are part of a cycling network. This may include signs that identify quiet local streets, and connections to more obvious cycling facilities, such as painted bicycle lanes, cycle tracks or multi-use trails. Signage that describes distance and destination information can be provided along cycling routes of any type in order to help cyclists orient themselves to nearby destinations.

4.1 Principles



Bicycle Route Identification Signs

These signs assist users in locating and following along a particular cycling facility, which may require turns. They also confirm to users that they are still on a specific cycling route, particularly on longer sections, and have not lost their route. They are also used to identify off-road trails where they intersect roads.



Bicycle Route Directional Signs

These signs inform users of changes in direction of a route, where to make turns, or inform the user that they are traveling 'to' another route or trail.



Destination Decision Signs

These signs show the direction and distance to nearby destinations at key decision points or intersections that are of interest to people cycling along the route.



Destination Confirmation Signs

These signs assure the user that they are on the correct route towards one or more destinations after making a turn or after a major intersection. There are also used along longer sections of a route to a destination, i.e. spaced 3 km, as assurance.



Advance Signs

When Bicycle Route Directional Signs or Destinations Signs at turn-offs are not conspicuous, Advance Signs are used to inform users of upcoming turn-offs to destinations. Advance signs are typically not required for people who are cycling because they are travelling at speeds less than 60 km/h.

Signing of cycling routes and destinations must consider if the routes are comfortable for a wide range of cycling abilities. Where traffic speeds and volumes are higher than 1,000 vehicles per day and traffic speeds are at or above 40 km/h, a dedicated cycling facility is desirable and may be designed to help cyclists follow the cycling route. Dedicated cycling facilities, such as bike lanes and paths in the boulevard will therefore be the preferred facility type for the majority of York Regional roads. Routes and destinations that cannot be reached by a combination of low volume / low speed streets, multi-use trails and dedicated cycling facilities on busier roads should not be signed.

A system of Destination Decision and Confirmation signs may be installed on a cycling route or network independent of the Bicycle Route Identification and Directional signs.

4.2 Bicycle Route Identification Signs

There are two types of Bicycle Route Identification signs:

- Integrated Bicycle Route Identification Street sign mounted on street sign posts
- Standalone Bicycle Route Identification signs

Post-mounted Integrated Bicycle Route Identification Street Sign

Exhibit 4-1: Integrated Route Identification Street Sign 600mm x 150mm



The Integrated Bicycle Route Identification Street sign (Exhibit 4-1) adds a bicycle symbol to the post-mounted Street Name signs. A system of these signs is recommended over a system of Standalone signs in order to minimize and simplify the number of signs. Because users are familiar with the standard location and placement of Street Name signs, they are more conspicuous than Standalone signs. Bicycle Route Directional signs, including turn-off and advance signs, are typically not required with the Integrated signs. The number of signs are minimized, and their placement and the users' expectations of where to look for them is simplified. It is an elegant approach that communicates information clearly with a minimum number of signs to manufacture, install and maintain.

The Integrated system of signs reduces the overall amount of sign "clutter" present in the public realm. Some Standalone signs may still be necessary to provide clarity if the cycling route deviates from the street network.

Where overhead, mast-arm mounted signs are used to identify street names, bicycle routes will be identified by separate post-mounted Bicycle Route Identification Street signs.

This integrated system is popular in Vancouver, and has been adopted within the GTHA by the Town of Ajax (Exhibit 4-2). Incorporating information into signage that road users are already in the habit of looking for allows for a more intuitive approach. These are then supplemented with destination signs at decision points in the cycling network.

Exhibit 4-2: Photo of Integrated Route Identification Street Sign in the Town of Ajax



Standalone Bicycle Route Identification Sign

Exhibit 4-3: Stand-alone Bicycle Route Identification Sign, (OTM sign M511)
450mm x 450 mm



Standalone signs (Exhibit 4-3) are useful when signing a route or cycling facility that is made up of a number of short segments of streets with numerous turns. These signs require an agency to support a separate cycling route signing system from the street name sign system, in terms of manufacturing, **installing and maintaining a separate set of signs. This sign is recommended in both TAC and OTM Book 18 with the word “ROUTE” included to improve comprehension.**

This sign is applicable to shared roadways with traffic speeds less than 1,000 vehicles per day and traffic speeds below 40 km/h, and paved shoulders. On roads with facilities for the exclusive use of cyclists, such as bicycle lanes and raised cycle tracks, the Reserved Bicycle Lane sign (OTM sign Rb-84 and Rb-84A) shall be used instead of the Bicycle Route Directional sign.

The Standalone Identification signs are typically supplemented with Bicycle Route Directional signs.

Bicycle Route Identification Signs may identify routes along multi-use paths. The paths may be identified by other local, regional, provincial or national route signage such as the Nokiidaa Trail, Greenbelt Route, etc. All applicable route identification signs should be placed on the same signpost. In order to ensure legibility and a coherent sign information hierarchy, the signs should be the same size. Route information should be positioned based on the significance of the route being communicated. The convention is to place National routes on top, followed by Provincial, Regional and then Local route information.

Exhibit 4-4: Example sign assembly for two overlapping routes with higher-order regional route on top of local route signage



4.3 Bicycle Route Directional Signs

Directional signs provide information about turn-offs and connections to cycling routes (Exhibit 4-5). They can be used with the Standalone and Integrated Bicycle Route sign systems.

Arrow tab signs are used to communicate when the cycling route or facility makes a turn. It is particularly useful with the Integrated Bicycle Route Street sign system when a cycling route ends on one street, turning onto another street.

The “TO” tab sign is used to communicate important connections to nearby cycling routes or facilities that are not made apparent by the Bicycle Route signs on their own. For example, the Integrated Bicycle Route Street sign may be installed on two parallel routes; the “TO” sign can be used to sign an important connection between the two. It must be used with the appropriate Arrow tab sign showing the direction in which the cycling route can be found.

The “BEGINS” and “ENDS” tab signs are used to communicate when a bicycle route begins or ends abruptly. Generally the cycling network should provide sufficient connections such that these signs are not necessary. However, when a cycling route begins or ends abruptly, particularly during interim conditions, these signs may be installed.

Arrow and “BEGINS” and “ENDS” tab signs are mounted below; “TO” tab signs are mounted above the Standalone Bicycle Route Identification sign. These sign assemblies are placed before the intersection where the turn will be made. They must be conspicuous enough that users can see, interpret and act upon the information. If they are not conspicuous at the turn, then an Advance sign should be installed (see Advance Signs).

If there is more than one Bicycle Route with turns at an intersection, then the signs are mounted as an assembly beside each other – one Standalone Bicycle Route Identification sign for each route with the appropriate Arrow sign mounted below each. The one with the left turn is located on the left side of the assembly, and the right turn on the right side.

All tab signs are the same colour as the main Bicycle Route Identification sign that they supplement, white on green.

Exhibit 4-5: Bicycle Route Identification sign (OTM sign M511) with sample Tab signs
Stand-alone side-mounted on road or trail:
450mmx450mm sign with
450mmx300mm tab above or below



Exhibit 4-6: Family of Directional tab signs
 450mmx300mm tab
 Straight Arrow tab (TAC IS-7)



Left and Right tab



TO Route tab (TAC sign IS-17)



Left Arrow tab (TAC IS – 8L)



Left Arrow tab (TAC IS 9-L)



Route BEGINS tab (TAC IS-16)



Right Arrow tab (TAC IS-8R)



Right Arrow tab (TAC IS – 9R)



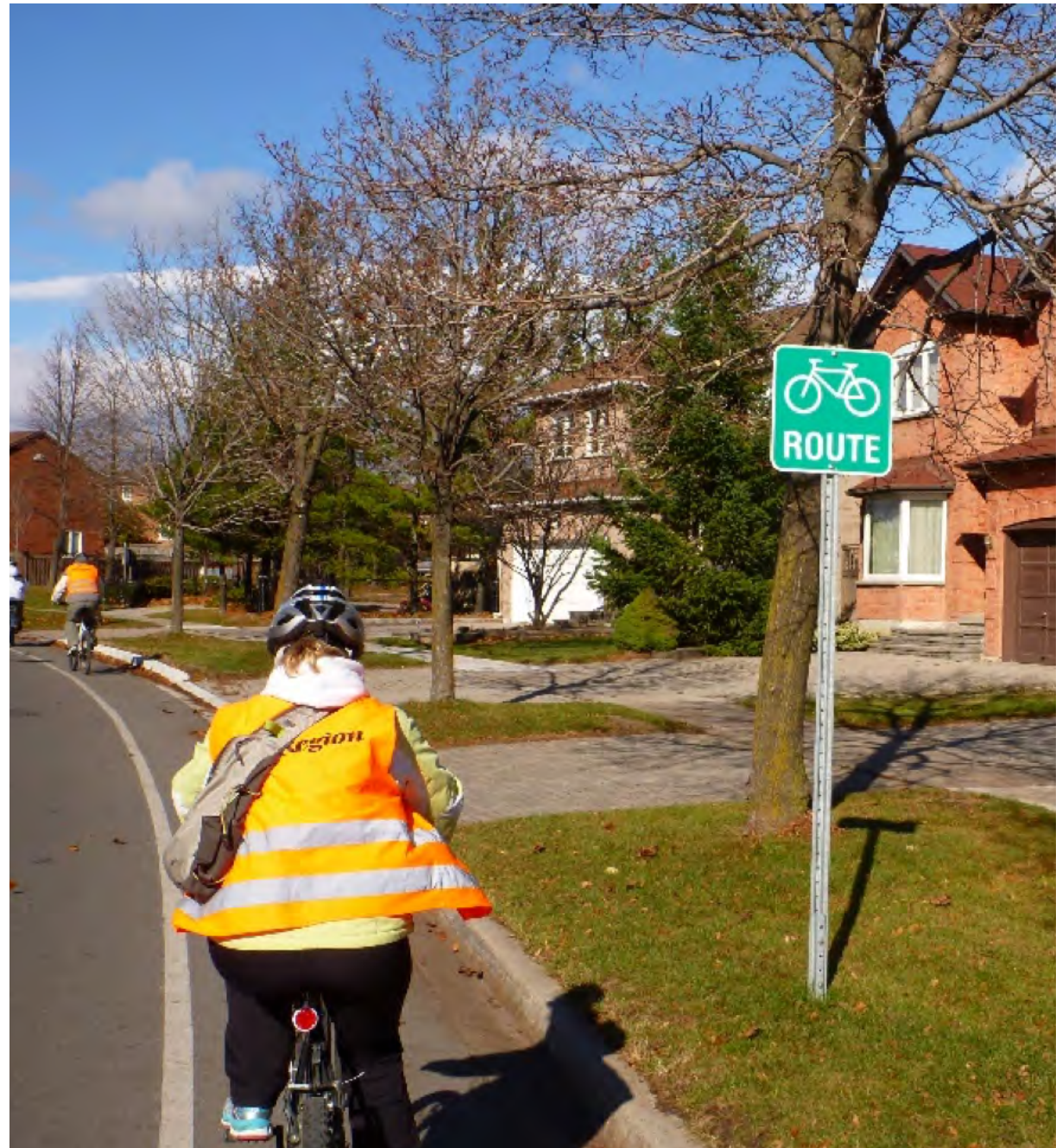
Route ENDS tab (TAC IS-15)



Exhibit 4-8: Bicycle Route Identification sign in the City of Vaughan

When communicating directions to named trails or routes, such as the Greenbelt Route or Lake to Lake Route, the “TO” and arrow tab signs can be combined with the named trail or route sign and installed at decision points on the cycling network, as shown in Exhibit 4-7.

Exhibit 4-7: Sample Bicycle Route Directional tabs combined with named trail / route signs



4.4 Destination Information Signs

Destination Decision signs (Exhibit 4-9) assist users in finding a route to destinations within a reasonable cycling distance. A person's decision to walk, cycle or drive may be made based on the distance to the destination and how much time they wish to spend travelling. The Destination Decision signs, therefore include distance. Decision signs are placed at decision points to notify cyclists of upcoming turns and changes in direction to find destinations in such a way that they can maintain movement and are able to make the appropriate turn. They can be supplemented by Destination Confirmation signs, and Advance Destination Decision signs if the sign is not conspicuous.

On shared rights of way, signing of destinations for motorists will generally fulfill the needs of cyclists. Separate signing is necessary only when cyclists are directed to cycling routes that differ from those of motorists, or for destinations that are of interest only to cyclists.

The sign is made up of the following elements:

- **Arrow** in the direction of the turn-off to the destination. Arrows pointing left and straight (up) should be located at the extreme left of the sign; arrows pointing right should be located on the extreme right of the sign.
- **Bicycle symbol** located on the left side of the destination name word legend.
- **Destination name.** Naming of destinations and use of abbreviations must be consistent.
- **Symbols** associated with the destination name, if used, should be to the left of it but to the right of the bicycle symbol.
- **Distance numerals** followed by the abbreviation 'km' shall be placed to the right of the destination name.

When more than one destination is signed at one time, then the following principles should be followed for sign assemblies:

- Generally Destination Decision wayfinding sign assemblies should not exceed four signs.
- Destination Decision signs in one assembly should all be the same width.
- Sign assemblies should present information in a descending order of importance. Sign assemblies should generally present the information about the through movement first, followed by the left, and then the right movement.
- At intersections, one destination is signed for each route leaving the intersection (three for a four-legged intersection, two for a T-intersection), selecting the major destination or the destination nearest the junction. Additional destinations can be added on subsequent directional or confirmation signs.
- Generally Destination Decision wayfinding sign assemblies should not exceed four signs.

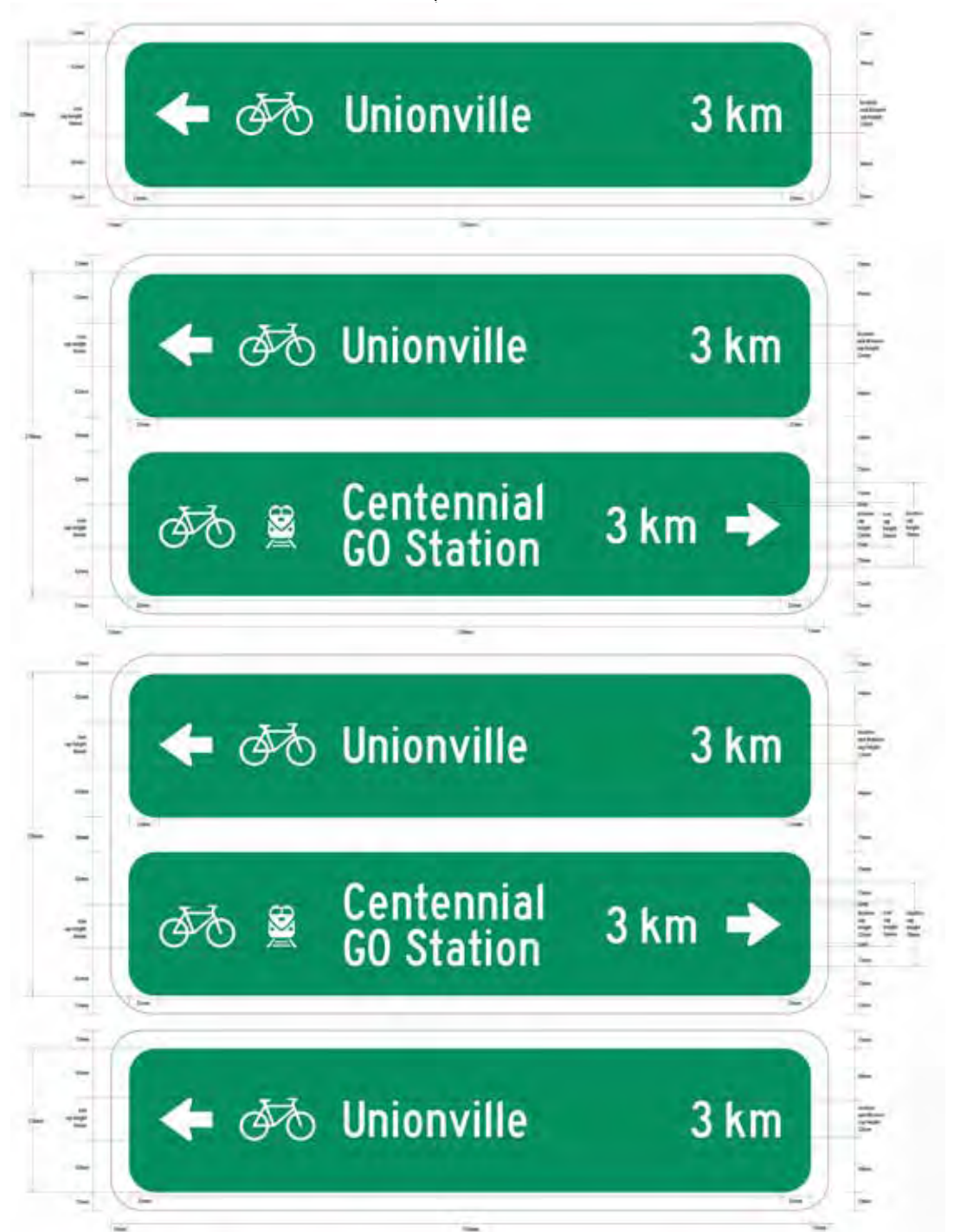
Exhibit 4-9: Destinations Decision Signs

One location: 900 mm x 150mm

Two locations: 900mm x 300mm

Three locations: 900mm x 450 mm

Types of destinations to be signed are discussed in Section 3 Identifying Destinations and Section 3.2 Displaying Destination Information. **Destinations that cannot be reached by a combination of low volume / low speed streets, multi-use trails and dedicated cycling facilities on busier roads should not be signed.**



4.5 Destination Confirmation Signs

Confirmation signs provide users reassurance after a decision point that they have taken the correct turn towards their destination. These signs are placed within a short distance following a decision point, or at regular intervals along longer routes, i.e. spaced approximately 3 km apart.

The sign is made up of the following elements:

- **Bicycle symbol** located on the top of the sign or sign assembly.
- **Destination name.** Naming of destinations and use of abbreviations must be consistent.
- **Symbols** associated with the destination name, if used, should be to the left of it.
- **Distance numerals** followed by the abbreviation 'km' shall be placed to the right of the destination name.

Arrows are not required since the Destination Confirmation sign is placed on the route to the destination. If turns are required farther along the route, then another Destination Decision sign is placed followed by the associated Confirmation sign.

When more than one destination is confirmed at one time, then the following principles should be followed:

- Generally not more than four destinations should be listed on one sign.
- Destinations should be listed in ascending order of distance with the closest destination first.

Types of destinations to be signed are discussed in Section 3 Identifying Destinations and Section 3.2 Displaying Destination Information.

[Exhibit 4-10: Photo of Destination Signs used as part of Route Verte system in Quebec](#)



Exhibit 4-11: Destination Confirmation Signs

One location: 600 mm x 150mm

Two locations: 600mm x 300mm

Three locations: 600mm x 450 mm



4.6 Pavement Markings for Wayfinding

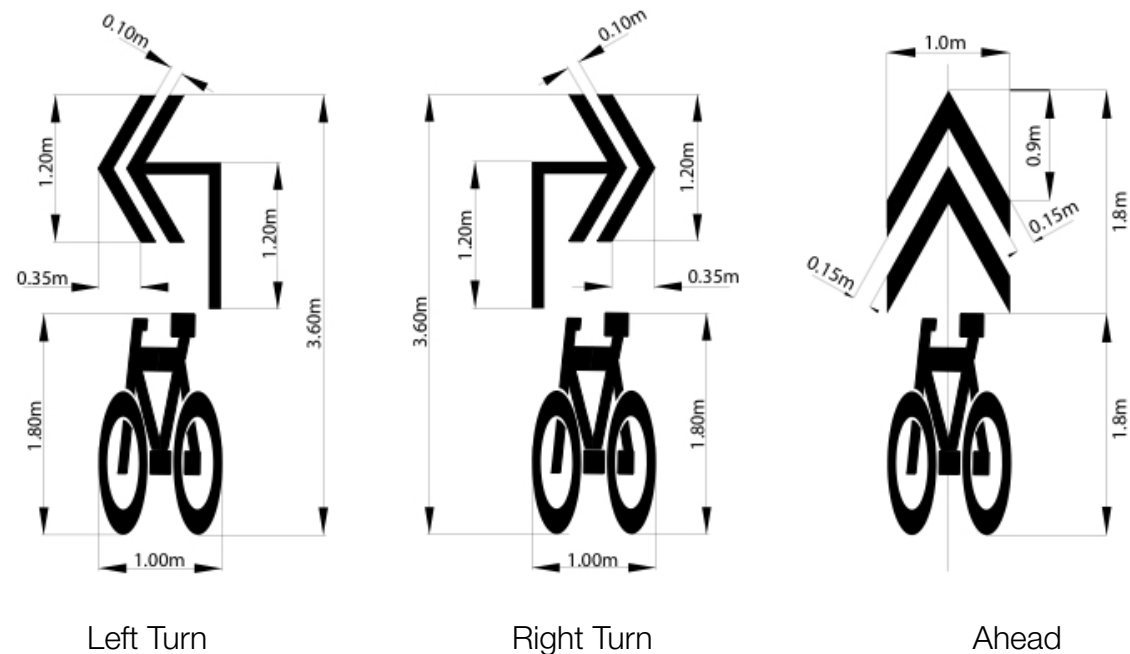
Pavement markings can complement wayfinding signs to facilitate navigation.

Shared Lane Pavement Marking or “sharrow” is a pavement marking that is composed of a bicycle symbol and two white chevrons. For cycling routes on quiet streets, this type of marking can support wayfinding signage, to ensure that turns are not missed. This type of marking is recommended for streets where the traffic volumes are below 1,000 vehicles per day and traffic speeds are at or below 40 km/h.

The Confirmation sharrow, as shown in Exhibit 4-12, can be used in 2 locations within the width of a roadway:

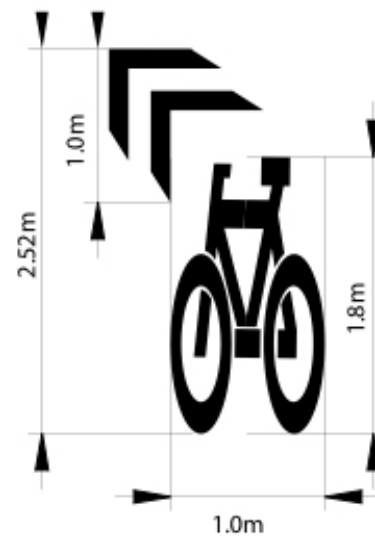
- Where there is sufficient width for a cyclist and motorist to share a single lane side-by-side, the Confirmation sharrow is placed with the points of the chevrons 1m away from the face of the curb, providing cyclists room to manoeuvre and allowing them to avoid debris and catchbasin grates.
- Where there is insufficient width for a cyclist and motorist to share a single lane side-by-side, the sharrow is moved to the centre of the lane, indicating to both cyclists and motorists that cyclists are encouraged to ride in the centre of the lane.

Exhibit 4-12: Left, Right and Ahead Confirmation Sharrows
Source: City of Toronto Wayfinding Guidelines



Where there is a verge in the road (as opposed to a hard turn) a bear left / bear right sharrow pavement marking may optionally be used, instead of the turn left / turn right sharrow.

Exhibit 4-13: Bear Left Confirmation Sharrows
Source: City of Toronto Wayfinding Guidelines



5.0

4 mi

Fountain Square

3 mi

Indiana Avenue

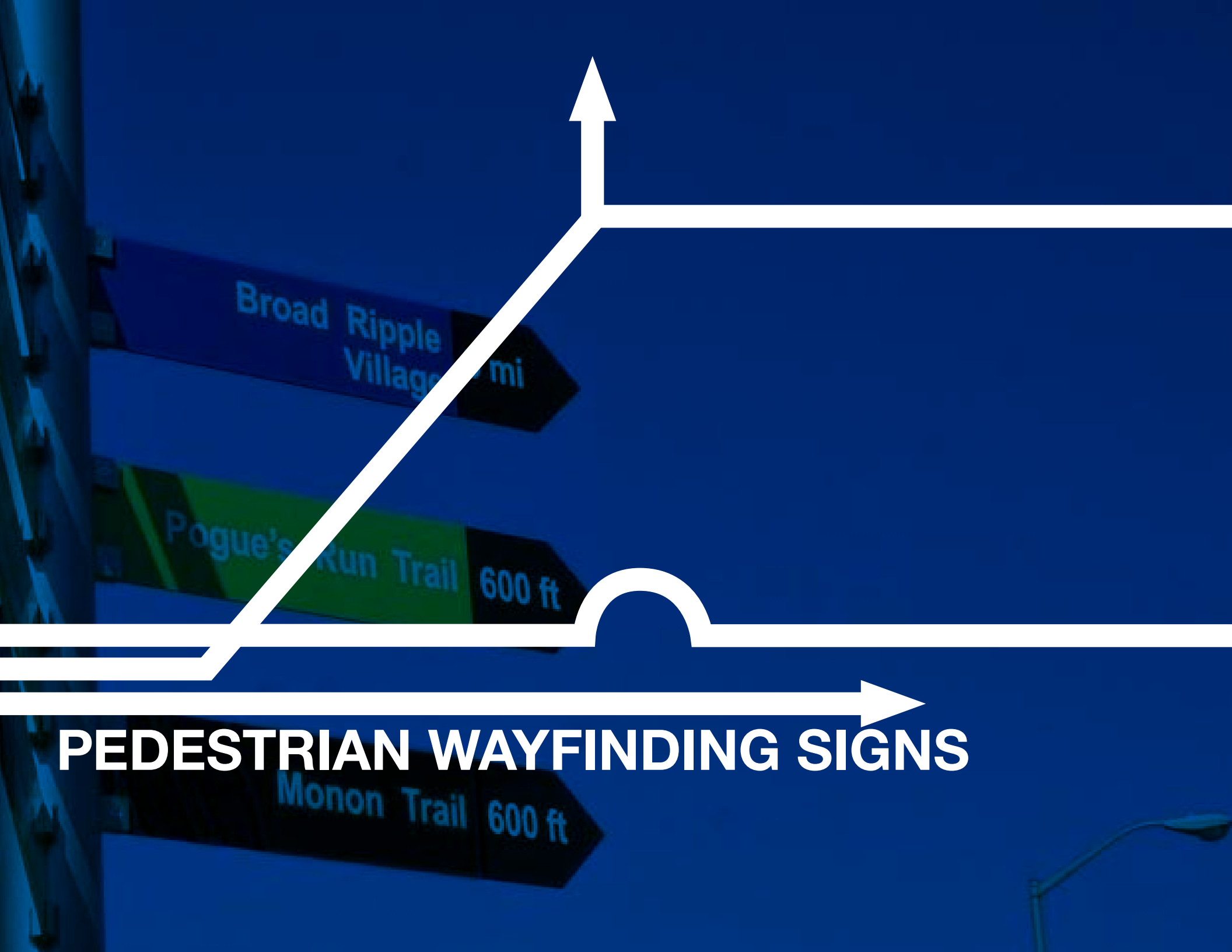
2 mi

The Canal District

1.5 mi

Wholesale District

Mass Ave



PEDESTRIAN WAYFINDING SIGNS

5.0 Pedestrian Wayfinding Signs

Wayfinding signage designed for pedestrians helps to foster an environment where people wish to discover new places. The provision of information may help build people's confidence to walk in places and for distances that they have not tried before. The signage supplements their understanding of how to get somewhere on foot, replacing their reliance on driving, or overcoming indirect public transit route options.

Wayfinding designed for pedestrians generally focuses less on distinct routes, and more on highlighting areas and destinations of interest. Pedestrian wayfinding, therefore, predominantly focuses on destination signs.

5.1 Principles



Destination Fingerboards

These signs installed in pedestrian areas show the direction and distance to nearby destinations.



Map / Information Totems

Map totem signs are information-rich, wayfinding signs that can include a variety of information around a map about multiple destinations placed within a pedestrian area.



Trailhead Signs

Ontario Regulation 413/12 of the Accessibility For Ontarians With Disabilities Act (2005) specifies that a recreational trail must have at each trail head, i.e., where the trail begins or where major sections of the trail begin, signage that provides specific information about the accessibility of the trail. Additional information including a map, destinations, trail etiquette, etc. can be added.

5.2 Directional Signs

Destination Decision signs for pedestrians are in the form of one or more fingerboards mounting on a single post with each fingerboard pointing in the direction of the destination. They are intended for high pedestrian activity areas such as:

- Transit hubs
- Major pedestrian intersections in town centres
- Public plazas

The sign is made up of the following elements:

- **Arrow** placed at the end of the fingerboard farthest from the post. It points in the same direction as the fingerboard, i.e., if the fingerboard is mounted to the post on right side of the sign, a left arrow is located on the extreme left side of the sign; if the fingerboard is mounted to the post on the left, a right arrow is located at the extreme right side of the sign.
- **Destination name.** Naming of destinations and use of abbreviations must be consistent is recommended to be in a sans serif font.
- **Symbols** associated with the destination name, if used, should be to the left of it.
- **Distance numerals** followed by the abbreviation 'm' shall be placed to the right of the destination name.
- **Pedestrian symbol** is optional. If used it is placed on the right side of the sign to the right of the destination name.

This type of sign requires the information to be provided on both sides of the fingerboard to be seen by users traveling in all directions.

Pedestrians travel at a relative slow speed so are able to take in more information at one time and can stop easily to read more information. When more than one destination is signed at one time, then the following principles should be followed for sign assemblies:

- Generally Destination fingerboard assemblies should not exceed three to four signs pointing in any one direction to simplify the information and reduce sign clutter.
- Fingerboards in one assembly should all be the same width.
- Fingerboard assemblies should present information in a descending order of importance. Typically the major destination is signed first above minor destinations; however, if all destinations are of equal importance, then the nearest destination is on the top with distances to destinations increasing on subsequent signs below it.

Types of destinations to be signed are discussed in Section 3 Identifying Destinations and 3.2 Displaying Destination Information.

Exhibit 5-1: Destination Fingerboard
850mm x 215mm (colours used may vary based on corporate identity and/or preferences of the Town/City where the system is being installed)

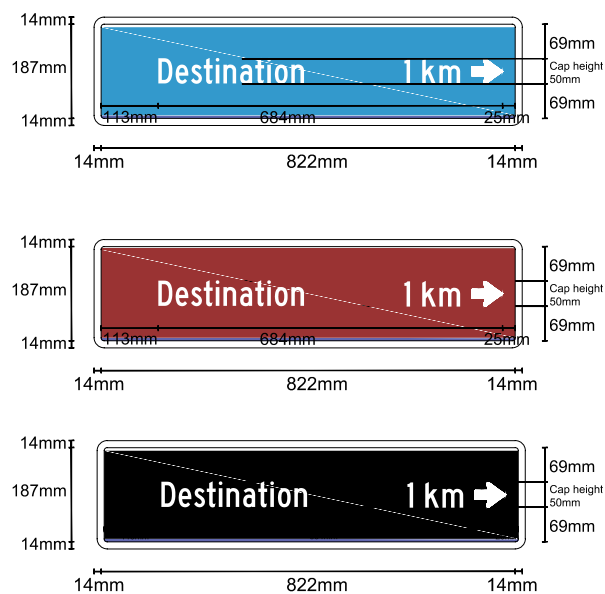


Exhibit 5-2: Sample assembly of Destination fingerboards on one post.



Exhibit 5-3: Pedestrian Destination fingerboard, City of Barrie



Exhibit 5-4: Sample Map / Information Totem

5.3 Destination Information Signs

Totems or panel signs are highly visual with information on destinations and services and include large, comprehensive maps. They illustrate information that helps pedestrians orient themselves within a neighbourhood or district so that they may walk short distances to nearby destinations. They are generally located in high pedestrian activity such as:

- Transit hubs
- Major pedestrian intersections in town centres
- Public plazas

They may standalone or complement nearby Destination fingerboards.

Essential elements on Map / Information totems include:

- **Name** of neighbourhood or district where it is located
- **One to three destinations with directional arrows and distance.** Average walking time is optional. Types of destinations to be signed are discussed in Section 3 Identifying Destinations and 3.2 Displaying Destination Information.
- **Main map** with “you are here” symbol and five minute walk radii
- Smaller **Context map** with “you are here” symbol.
- **Supplementary interpretive information** is optional, such as a description or photograph of nearby cultural, heritage or natural features.
- **Contact and emergency information**
- **Legend** on the bottom

The maps should include street name labels, plus named alleys, laneways and side streets with high tonal contrast between the mapped information and map background. Other map totems in the area can be included on the map. Once a map design is established, it should be reproduced in several places.



5.4 Trailhead Signs

Trailheads are established to provide access to trails, where they begin, intersect major roads or intersect other major trails. They typically have some amenities such as parking (for motor vehicles and or / bicycles), gateways, visitor kiosk, trash / recycling receptacles, benches, or picnic tables, etc. Trailheads and the associated trails are generally outside of the roadway rights-of-way so the signs will be independent of information signs on the roadways.

Ontario Regulation 413/12 of the Accessibility for Ontarians With Disabilities Act (2005) specifies that a recreational trail must have at each trailhead signage that provides the following information:

- **Length** of the trail.
- **Type of surface** of which the trail is constructed.
- Average and minimum **trail width**.
- Average and maximum **running slope and cross slope**.
- The **location of amenities**, where provided.

The Regulation also specifies that the text on the signs must have a high tonal contrast with its background in order to assist with visual recognition. A sans serif font is required. If other media, such as park websites or brochures, are used by to provide information about the recreational trail, beyond advertising, notice or promotion, the media must provide the same information as listed above.

Other information that may be included on the trailhead sign includes:

- **Map** illustrating the trail route and network, “you are here” symbol, nearby cycling facilities or network, location of amenities.
- **Supplementary interpretive information** is optional, such as a description or photograph of cultural, heritage or natural features in the area.
- **Trail user etiquette information.**
- **Contact and emergency information along with important location information** for first responders to locate the trail in case of an emergency.
- **Legend** on the bottom.

Exhibit 5-5: Sample Trailhead sign

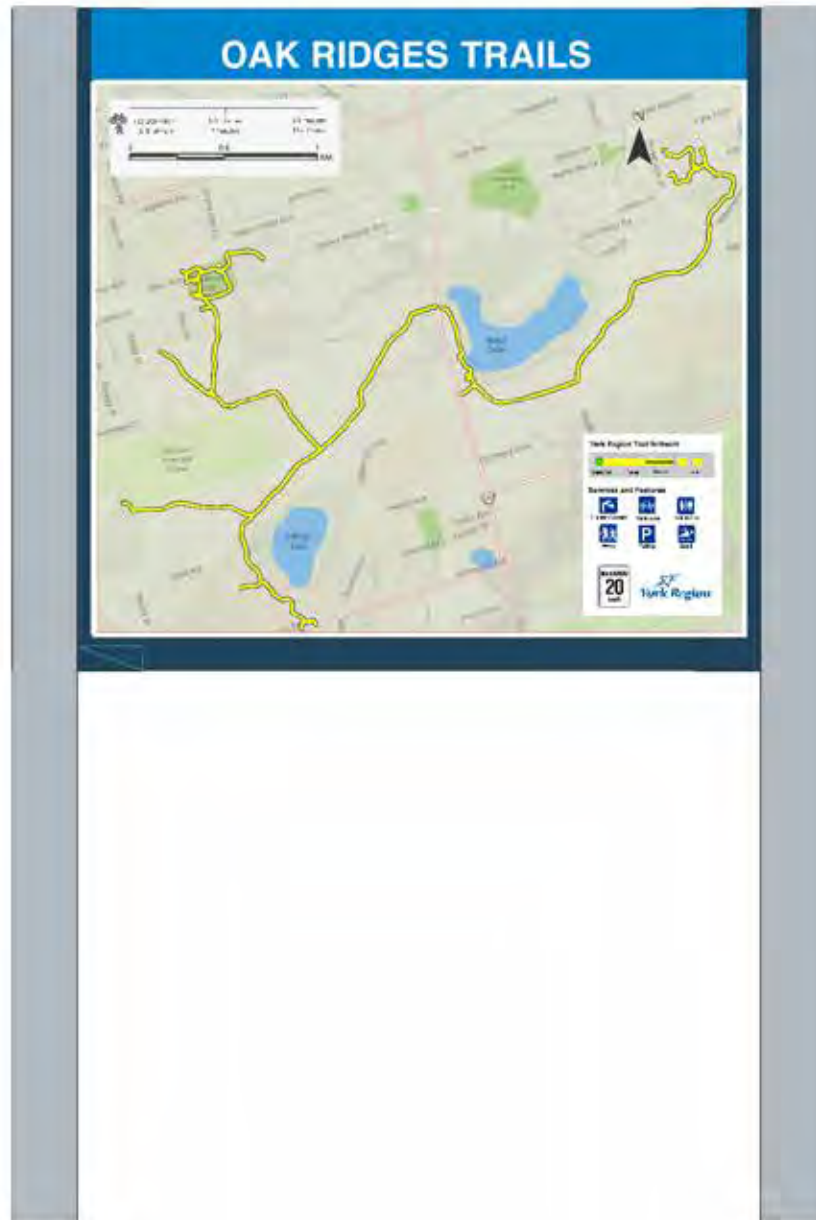


Exhibit 5-6: Oak Ridges Corridor Conservation Reserve Trailhead

OAK RIDGES CORRIDOR CONSERVATION RESERVE

Oak Ridges Corridor Conservation Reserve (ORCCR) is comprised of approximately 600 hectares of green space in the heart of the Oak Ridges Moraine. This area serves to protect the headwaters of the Humber and Rouge Rivers and plays an integral role in the recharge of their waters. With over 15 km of maintained trails, visitors are given a window into one of the most diverse collections of habitat on the Oak Ridges Moraine. This property includes wetlands, kettle lakes and forests, supporting many unique wildlife and plant species. Large portions of the property are provincially designated as Areas of Natural and Scientific Interest for their physical and ecological values.

The ORCCR is made up of lands owned by the Province of Ontario and Toronto and Region Conservation (TRCA) and is managed by TRCA.

ATTENTION

- ORCCR is a rugged natural area;
- Trails are not winter maintained;
- Weather and trail conditions will vary;
- Staff presence is intermittent and emergency access is limited;
- Visitors enter the property at their own risk and bear full responsibility for their own safety;
- **IN CASE OF EMERGENCY CALL 911**

RECREATIONAL TRAIL RULES & ETIQUETTE

- No motorized vehicles;
- Dogs must be on leash at all times;
- All trails are multi-use; Cyclists must yield to pedestrians;
- Stay on designated trails and respect trail closures;
- Carry out all garbage, including pet waste;
- Do not light fires.

To access this trail map online, visit trca.ca/humber-river/trail-guides

PERMITTED ACTIVITIES:

Hiking

Cycling

Snowshoeing

Cross-Country Skiing

Bird Watching

Dog Walking

Geocaching is permitted in accordance with TRCA's Geocaching Policy, www.trca.ca/geocaching

Primary Multi-Use Trail and Secondary Trail Accessibility Information – Bathurst to Bayview

TRAIL	LENGTH (km)	TYPICAL SURFACE	USABLE SURFACE (%)	TYPICAL CROSS-SLOPE (%)	MINIMUM CROSS-SLOPE (%)	MAX. SLOPE (%)	TYPICAL ROAD WIDTH (m)	TYPICAL TRAIL WIDTH (m)
1017 Bathurst to Bayview (Public Access)	10.2	Grass	26.8	3.2	15.9	89.1	208	Chopped Lumber Stone

Primary Multi-Use Trail Accessibility Information (no Secondary Trails) – Bayview to Bethesda

TRAIL	LENGTH (km)	TYPICAL SURFACE	USABLE SURFACE (%)	TYPICAL CROSS-SLOPE (%)	MINIMUM CROSS-SLOPE (%)	MAX. SLOPE (%)	TYPICAL ROAD WIDTH (m)	TYPICAL TRAIL WIDTH (m)
1012 Bayview to Bethesda (Public Access)	8.8	Grass	34.8	5.1	15.7	100	154.5	Chopped Lumber Stone

LEGEND

- Forest Cover
- River
- Post Marker
- Parking Lot (NOT winter maintained)
- Trail Access

- Trailhead (Info Kiosk)
- No Public Access
- Primary Multi-Use Trail (Oak Ridges web-trail)
- Secondary Trail

RECREATIONAL TRAILS

If you have additional questions or concerns, please contact Toronto and Region Conservation Authority at 416-641-6600 or visit www.trca.ca

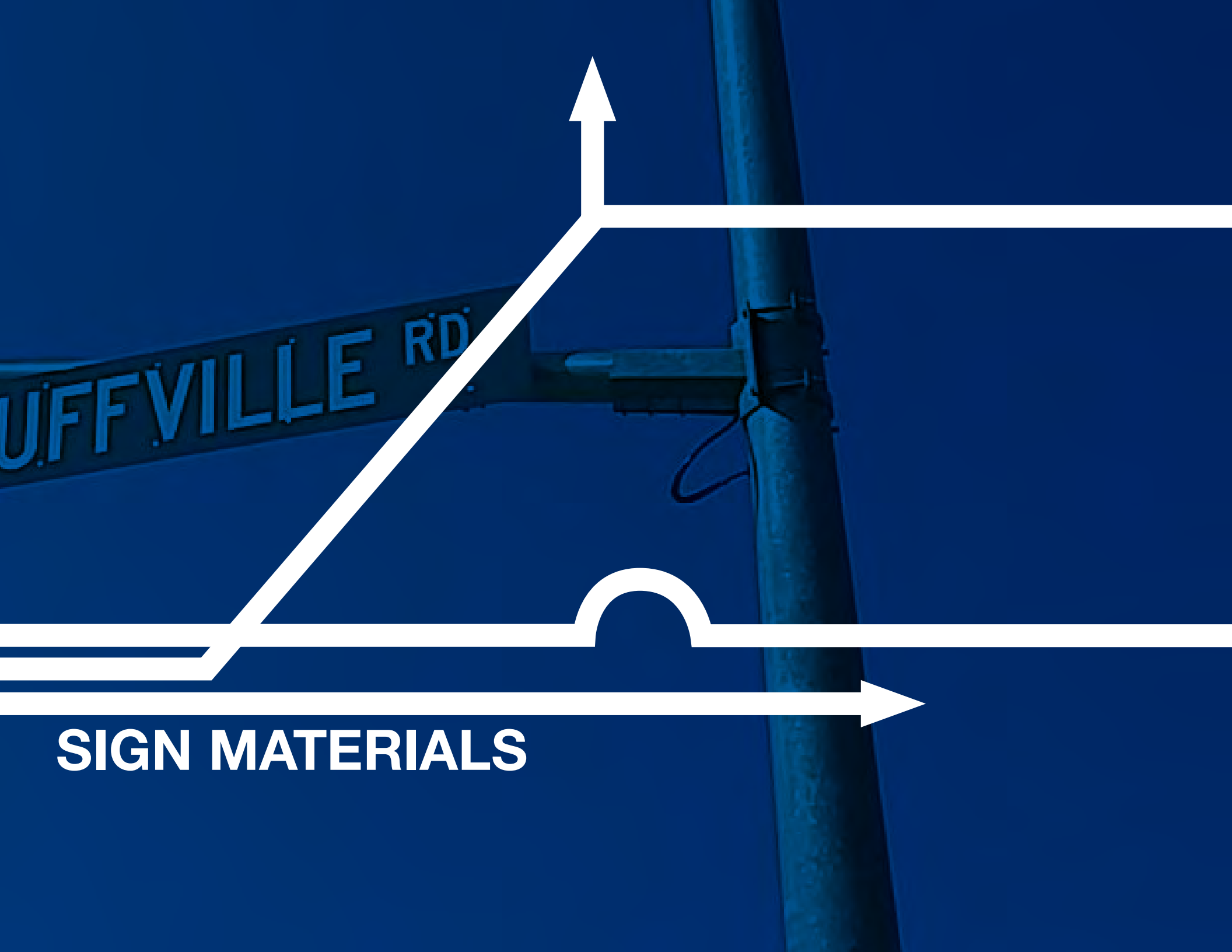


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6.0



UFFVILLE RD

SIGN MATERIALS

6.0 Sign Materials

Sign fabrication considers the materials for sign face, sign substrate to which the face material is applied, and supports such as posts, structures and hardware. These materials should be consistent, durable to withstand the elements, and cost effective in terms of fabrication and maintenance.

Some of the options for sign materials are presented in these guidelines. Sign material technology is continually evolving. New materials may be used if they have been sufficiently tested to demonstrate that they meet or exceed the performance characteristics of materials currently in use.

6.1 Cycling Wayfinding Sign Materials

Wayfinding signs erected in the public right-of-way are recommended to be fabricated to meet the Ontario Traffic Book 2 fabrication standards. Roadside signs are generally manufactured of adhesive sheeting screen printed with inks and coatings and with a computer cuttable overlay film. The sheeting typically degrades before the substrate and other components of the sign. Material guarantees are typically 7 to 10 years, and service life has been reported to range from 7 to 20 years or more depending on the sheeting.

The Ontario Traffic Manual requires signs that convey essential directional information that is relevant during the hours of darkness to be conspicuous at night, as well as the day. The colour of these signs must also appear the same at night as by day.

Material that reflects light back to the light source, i.e. headlights, is retroreflective. It is achieved by using a reflectorized, adhesive sheeting applied to the rigid sign blank for roadside signs. The standard for reflectorization in the Ontario Traffic Manual is in ASTM Specification D 4956-01a and subsequent revisions.

Little research has been done on the conspicuity of retroreflective signs at night intended for cyclists. Cycling wayfinding signs may or may not be illuminated by the headlights used on bicycles, depending on their field of illumination and strength. In addition, ordinary street lighting does not meet the requirements for sign illumination for road users. As an alternative, external or internal illumination may be used for signs. This should be considered for wayfinding signs at critical decision locations.

OTM Book 2 recommends sheeting grades from Type I to Type IV for permanent signing meeting ASTM Specification D 4956-01a (or its subsequent revisions). Cycling wayfinding signs erected within the street right-of-way are recommended to meet the municipality's sign sheeting grades for other roadside guide and information signs to provide consistency in terms of conspicuity and life cycle.

6.2 Pedestrian Wayfinding Signage Materials

The substrate material to which the sign face material is applied is typically fabricated from aluminum, steel, or plywood. Other, newer materials such as fiberglass, plastic, composites, recycled materials continue to be developed and may be considered if they have been sufficiently tested to meet or exceed the standards of conventional materials. OTM Book 2 references Ontario Provincial Standard Specifications for metal and plywood substrates, with York Region generally using aluminium for the substrate (OPSS 2001 and subsequent revisions).

A standard Integrated Bicycle Route Street sign, Standalone Bicycle Route Identification sign, or single Bicycle Destination Decision aluminium sign is expected to cost in the range of \$150 to \$350 per sign (2018 Dollars) to supply and install with a life span of typically 10 years. Non-standard sizes will cost more.

Pedestrian wayfinding signs erected in pedestrian activity areas can be made of a wide variety of materials. In selecting materials, consideration should be given to consistency in visual appearance and conspicuity, durability, and maintenance along with cost-effectiveness. Durability is influenced by weather, humidity, impact resistance (if hit by a vehicle or other object), graffiti, etc.

Pedestrian Destination Fingerboard signs can be made of materials similar to cycling wayfinding signs. A single sign is expected to cost in the range of \$150 to \$350 per sign (2018 Dollars) to supply and install with a life span of typically 10 years. Non-standard sizes will cost more.

A variety of options for Map / Information Totem signs and Trailhead signs are available; three common options are described below.

Map / Information Totems and Trailhead signs will vary significantly in cost depending on size, graphic material development, materials, installation methods, and in-situ conditions such as surface and / or subsurface conditions for installation and availability of power sources if illuminated. For planning purposes only, the cost to supply and install a 2-sided totem or trailhead sign is expected to range from \$6,000 to \$10,000 per sign (2018 Dollars).

Digital Printing

Digital printing signage presents information through a digital screen, encased in smash-resistant polycarbonate screen (such as cabinet-style signs).

Advantages

- More adaptable than other options - content is easily replaced, if or when information needs updating.
- Maintenance costs
- Can be backlit and is effective in urban areas where many pedestrians use the signs at night

Disadvantages

- Higher capital costs than other options
- Less damage resistant - graffiti or scratching can deface the surface, making the sign illegible.
- For urban areas, digital printing that can be backlit is recommended for pedestrian wayfinding maps / information totems.

Aluminium panels

Aluminum panels present information on a vinyl sheet with printed graphics and steel structural framing.

Advantages

- More adaptable than vitreous enamel panels - can be updated by re-printing content
- Lower capital and maintenance costs than other options

Disadvantages

- Less damage resistant than other options
- Less adaptable and greater costs for updates than digital signage
- Requires separate lighting for night-time viewing – cannot be backlit

Vitreous enamel panels

Vitreous enamel panels on a steel frame present information on a panel which appears glass-like while retaining the strength and durability of steel.

Advantages

- Lower capital and maintenance costs than digital signage
- More damage resistant than other options - hard-wearing and graffiti-resistant

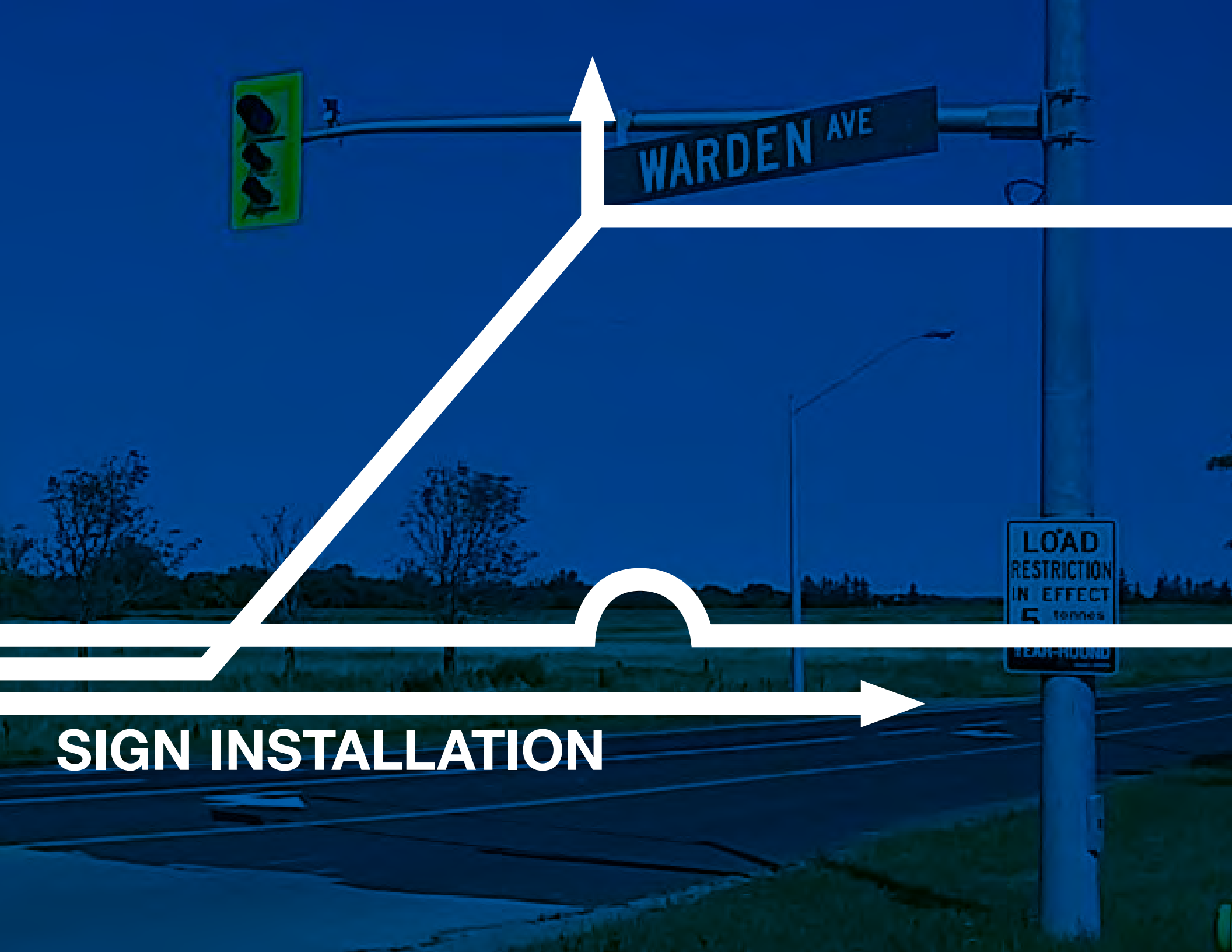
Disadvantages

- Less adaptable than other options - difficult to change content
- Requires separate lighting for night-time viewing – cannot be backlit





7.0



WARDEN AVE

LOAD
RESTRICTION
IN EFFECT
5 tonnes
YEAR-ROUND

SIGN INSTALLATION

7.0 Sign Installation

Wayfinding sign installation considers:

- Vertical clearance or protrusion of the sign in relation to the ground.
 - Lateral clearance of the sign in relation to the roadway, cycling facility or path.
 - Longitudinal spacing of various types of wayfinding signs in relation to destinations, decisions points, intersections and other signs.
-

Local conditions, such as vegetation, other signs, and fixed objects (bus shelters, buildings, utility cabinets, etc.), must be considered when the signs are actually installed. Appropriate adjustments will need to be made to ensure their visibility during daytime and nighttime.

Wayfinding signs may be mounted on the same posts as other guide and information signs but must NOT be mounted on the posts for regulatory, warning or temporary condition signs

7.1 Lateral and Vertical Clearances

Lateral clearance is specified to provide a safe offset between the user and the sign that is a fixed hazard near their path of travel. Vertical clearance is specified to provide the height of sign for visibility.

If lateral clearances cannot be met, then vertical clearances to users of a facility are required.

[Exhibit 7-1 Summary of Lateral and Vertical Clearances for Cycling Wayfinding Signs](#)

Cycling Wayfinding Signs

Lateral and vertical clearances for mounting cycling wayfinding signs adjacent roadways follows the requirements for roadside signs. Clearances associated with signs mounted adjacent multi-use paths are smaller unless the sign protrudes into the

lateral clearance, than a larger vertical clearance is required.

The lateral clearance and vertical clearances for cycling wayfinding signs mounted beside facilities are determined based on the type of facility as follows:

Facility				Lateral Clearance	
		Min.	Max.	Min.	Max.
Rural roadway Measured from the edge of paved shoulder to the near edge of the sign Exhibit 7-2	VERTICAL CLEARANCE	Min.	2.1 m	1.0 m	3.5 m
		Max.	2.5 m		
Urban street Measured from the face of curb to the near edge of the sign Exhibit 7-3	VERTICAL CLEARANCE	Min.	2.1 m	0.3 m	3.5 m
		Max.	3.0 m		
Multi-use Path Measured from the edge of the path to the near edge of the sign Exhibit 7-4	VERTICAL CLEARANCE	Min.	1.2 m	0.9 m	1.8 m
		Max.	1.5 m		
		Min.	2.5 m	If minimum lateral clearance to sign cannot be met; however, minimum 0.9 m lateral clearance to post is still required	

Exhibit 7-2: Vertical and lateral clearance for cycling wayfinding signs along rural roads

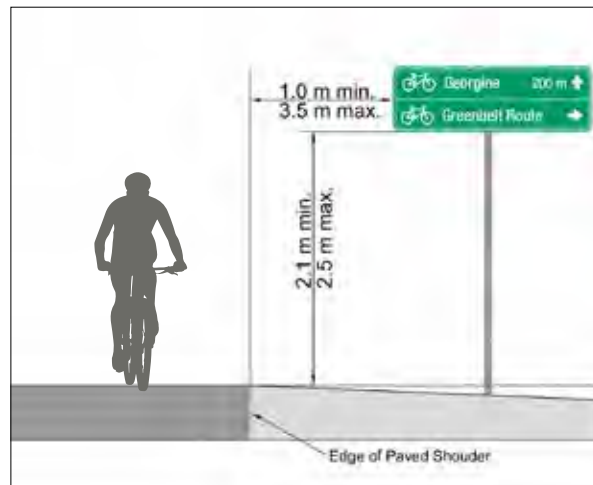


Exhibit 7-3: Vertical and lateral clearance for cycling wayfinding signs along urban road

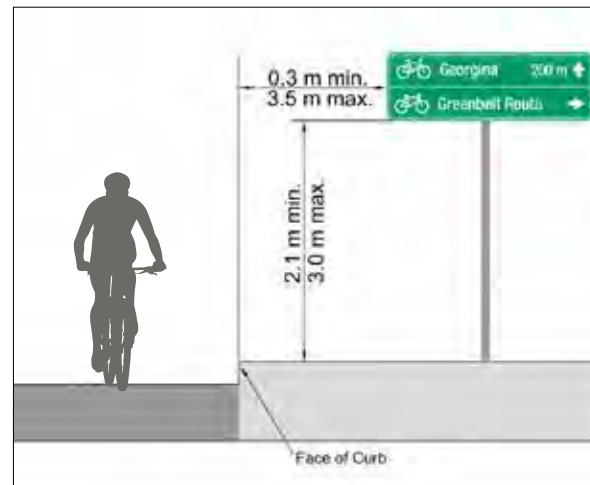
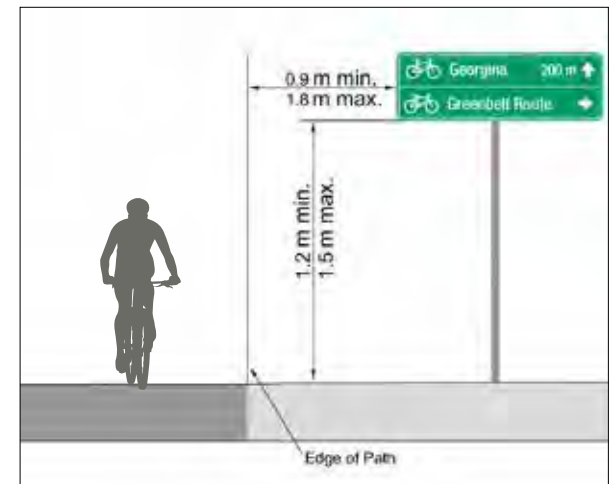
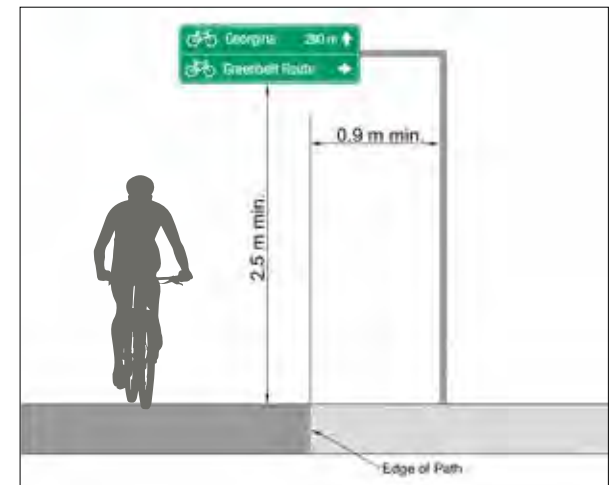


Exhibit 7-4: Vertical and lateral clearance for cycling wayfinding signs along multi-use paths



Pedestrian Wayfinding Signs

Objects that are more than 2.1 m high are generally over the heads of pedestrians. Pedestrians who use long canes will usually detect and avoid objects on the sidewalk that extend from the ground to 0.7 m above it. Therefore, signs installed in pedestrian activity areas must either provide 2.1 m of vertical clearance, or extend below 0.68 m from the ground. Signs that are within 0.7 m and 2.1 m must not protrude beyond the posts by more than 0.1 m.

The lateral clearance and vertical clearances for pedestrian wayfinding signs mounted in pedestrian activity areas facilities are determined based on the type of sign as follows:

Exhibit 7-5 Summary of Lateral and Vertical Clearances for Pedestrian Wayfinding Signs

Sign TYPE	Lateral Clearance		
	Min.		Max.
Destination Fingerboard Measured from ground to the bottom edge of the sign Exhibit 7-6	Min.	2.1 m	Not applicable – the post is detectable and the protruding sign is mounted above the heads of pedestrians
	Max.	3.0 m	
Map / Information Totem	Not applicable – this type of sign is detectable because it is of a constant width and extends to the ground, so no clearances to pedestrian activity areas are required		
Trailhead Sign If located adjacent the path and outside of a pedestrian activity area Measured from the edge of the path to the near edge of the sign Exhibit 7-7	Min.	1.2 m	0.9 m
	Max.	1.5 m	
If located within a pedestrian activity area at the trailhead (must meet the clearances to the path noted above) Measured from the ground to near edge of sign Exhibit 7-8	Max.	0.68 m	Not applicable – the posts and protruding sign are detectable

Exhibit 7-6: Vertical and lateral clearance for pedestrian Destination Fingerboard signs in pedestrian activity areas



Exhibit 7-7: Vertical and lateral clearance for pedestrian Trailhead signs located near paths and outside pedestrian activity areas

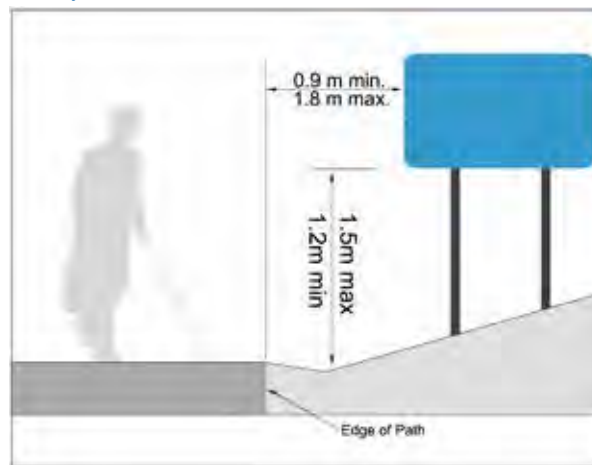
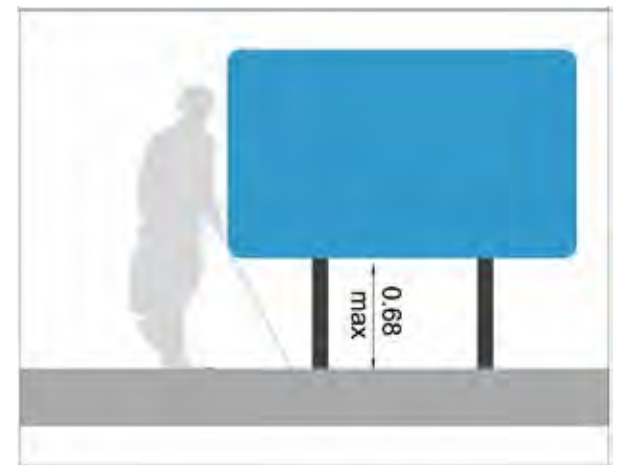


Exhibit 7-8: Sign clearance for pedestrian Trailhead sign located in pedestrian activity areas (but outside the path)



7.2 Horizontal Placement and Spacing

Cycling Wayfinding Signs

Destination signs for people who ride bicycles, including Decision, Confirmation, and Advance (if required) signs, are placed leading to a destination. As discussed in Section 3.0, the first sign will be installed a certain distance from the destination, as follows, and additional Decision and Confirmation signs will be installed along the cycling facilities or routes leading to it until the destination is within 300 m:

- **Primary Destination** (large districts) signs will start up to 8 km to 10 km away.
- **Secondary Destinations** (neighbourhoods and large transit hubs) signs will start up to 5 km away.
- **Tertiary Destinations** (local transit stations, libraries, other local destinations) may be signed when they are up to 1km away.

Placement and spacing of signs by sign type is as follows and illustrated in Exhibit 7-10 and Exhibit 7-11:

Exhibit 7-9 - Summary of Placement and Spacing Requirements

Type of SIGN	Decision Point or Intersection	Spacing*
Integrated Bicycle Route Identification Street sign	At intersection	Not applicable
Standalone Bicycle Route Identification sign	0 to 10 m on the far side of intersections	Rural areas: every 2 km Urban areas: every 400 to 800 m
Bicycle Route Directional sign Destination Decision sign	Stop-controlled intersection: 0 to 10 m on far side of intersection	Not applicable
	Free-flow intersection: 15 to 60 m in advance of intersection	Not applicable
	Traffic signal controlled intersection: 30 to 60 m in advance of intersection	Not applicable
Destination Confirmation sign	150 m following a decision point or intersection	Every 3 km
Advance sign only if Bicycle Route Directional sign or Destination Decision sign is not conspicuous from 60m away	30 m in advance of the inconspicuous sign	Not applicable

* All signs, including other road signs, should be spaced at least 25 m apart and in sequence where possible.

Exhibit 7-10: Sign placement and spacing for bike route identification signs

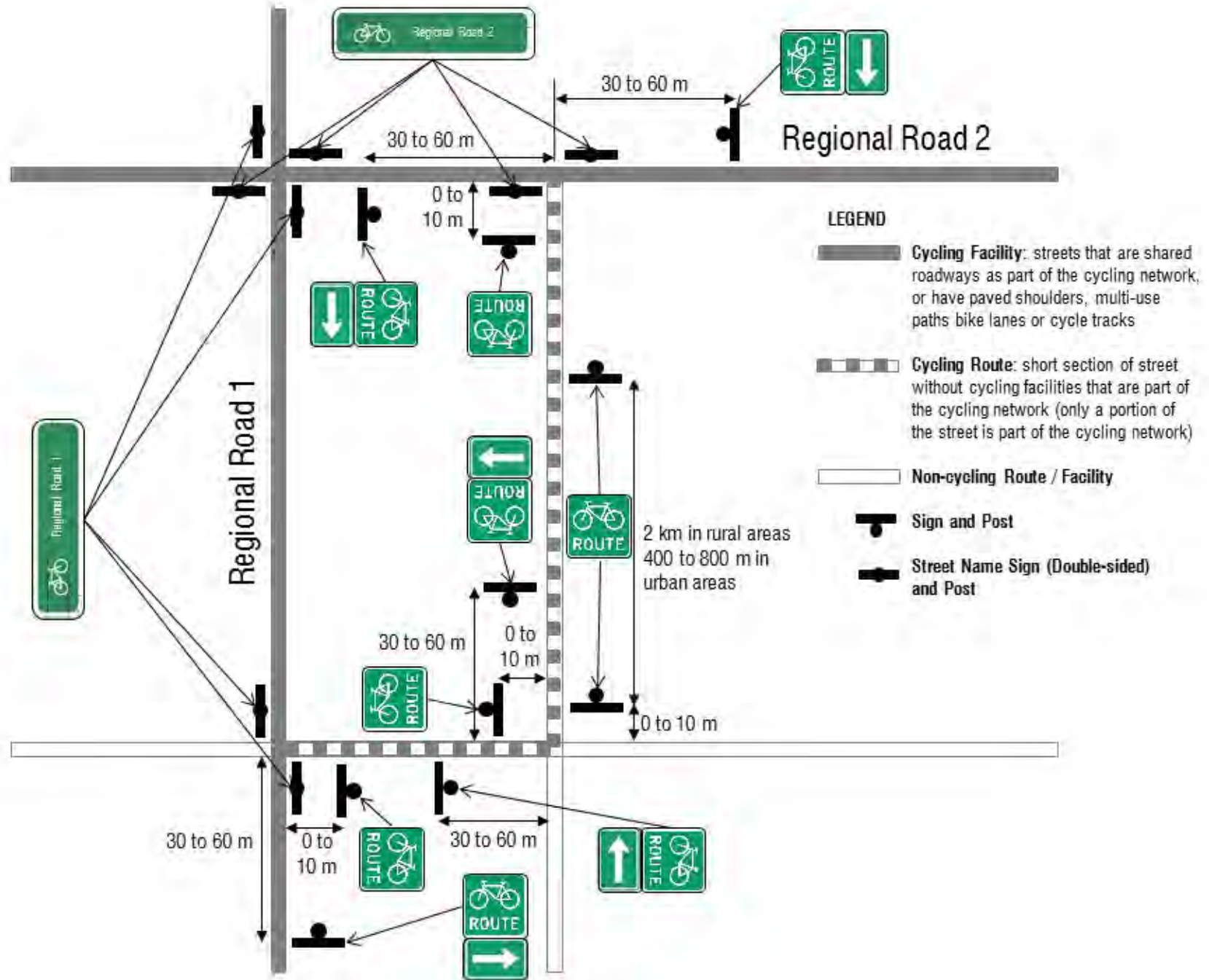
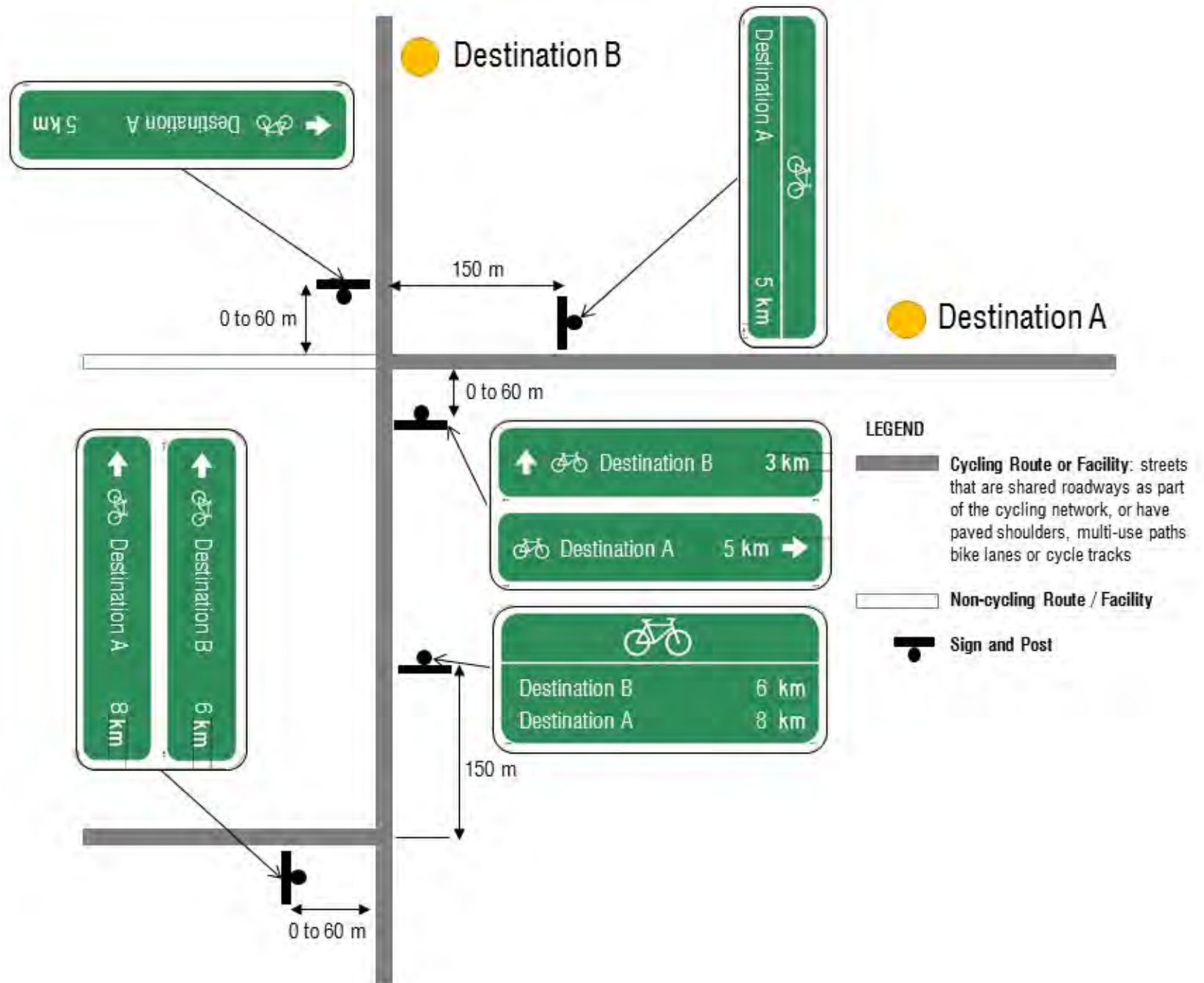
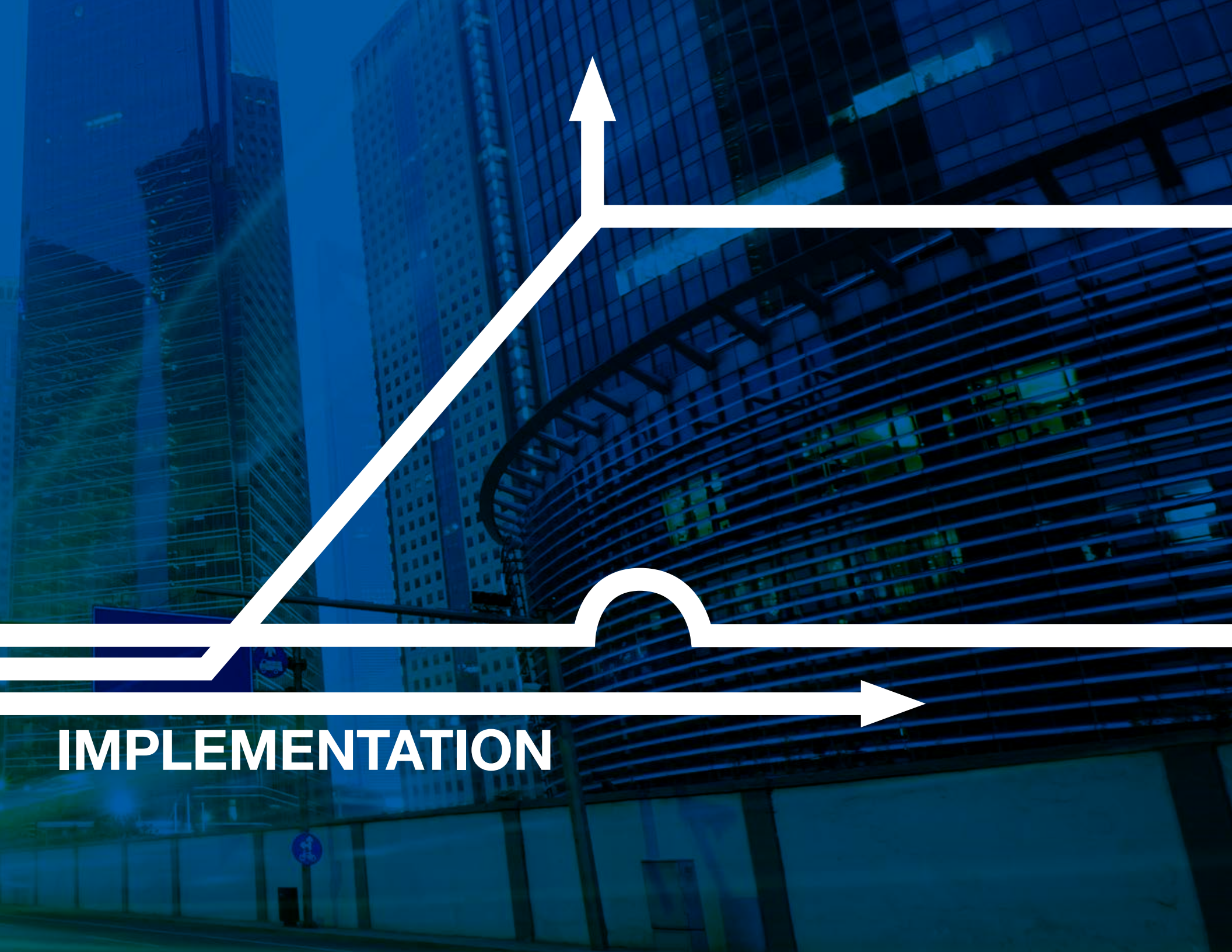


Exhibit 7-11: Sign placement and spacing for cycling destination signs





8.0



IMPLEMENTATION

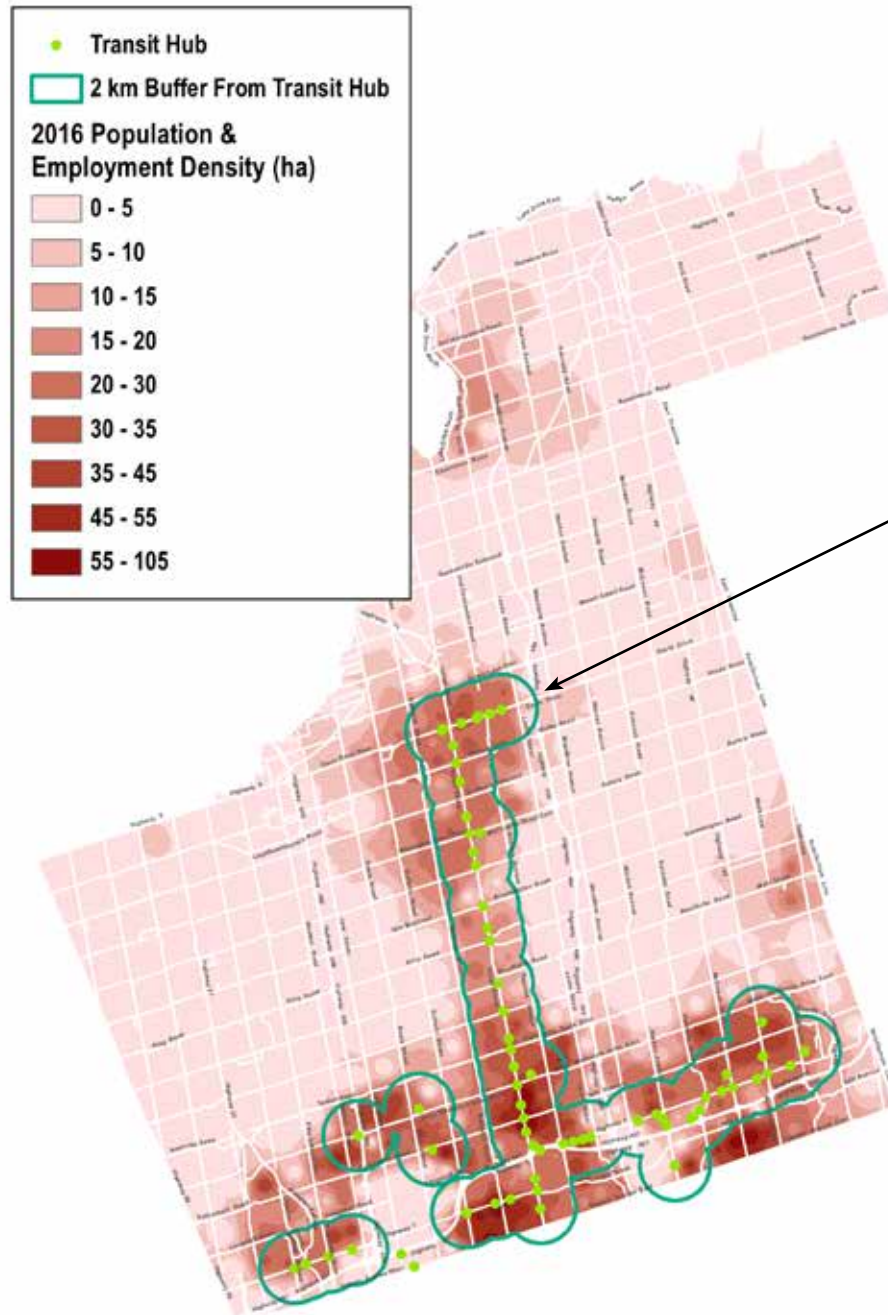
8.0 Implementation

Travel choices being made by the general public do not follow jurisdictional boundaries. Between origins and destinations are a combination of Regional and municipal roads, and people walking and cycling will use both. A key challenge for the design of wayfinding signage will be the coordination of implementation schedules between local and regional jurisdictions. A coordinated approach is important for pedestrian-focussed installations. It will be even more critical to ensure the cohesion of longer distance cycling routes, and for cycling destinations that are up to 10 km away.

8.1 Inter-Jurisdictional Coordination

The implementation program developed by York Region should ideally balance the resources available from different participating agencies, alongside the serving of areas that would best serve the general public. To this end, population centres and transit linkage opportunities have been mapped, as shown on Exhibit 8-1, to identify areas where investments in wayfinding signage and markings may yield the most benefit.

Exhibit 8-1: Opportunity areas for Sustainable Mobility Wayfinding



Warden Avenue is a popular cycling route from Highway 7 to Lake Simcoe, stretching the full north-south length of York Region. It can be improved with better wayfinding signage. It was selected as the pilot project to apply the recommendations of the Wayfinding Guidelines.

8.2 Regional Responsibilities

York Region's installation program areas include Regional roadways. York Region will fabricate, install and maintain all the signs necessary for approved wayfinding programs associated with on-road cycling facilities on Regional roads.

Wayfinding signage on trails associated with the York Regional Forests, including trailhead signage, are also be the responsibility of York Region.

The Region is exploring the possibility of manufacturing the signs at the Regional sign shop, in order to provide improved coordination with municipalities.

8.3 Municipal Responsibilities

Installation program areas that are located on roads under municipal jurisdiction are the responsibility of the local municipality.

In addition, local municipalities are responsible for any wayfinding signage associated with facilities in the boulevard along Regional roads including boulevard trails and sidewalks. The Region will explore partnership opportunities to support installation of wayfinding signage within the boulevards of Regional roads, whenever possible.

Wayfinding signage on any off-road trails or trail segments of regional significance is the responsibility of the municipality having jurisdiction over the corresponding trails or trail segments.

8.4 Other Agencies

Assets that may be under the jurisdiction of other agencies may be involved in the wayfinding signage program, such as trails under the jurisdiction of the Lake Simcoe Region Conservation Authority, Toronto region Conservation Authority, Ontario Parks, etc., or cycling routes along Ontario Highways. Cooperation and co-ordination are encouraged to install and maintain a system of signs that meet the sign design principles presented in this guideline.

8.5 Identifying Cycling Implementation Priorities

Generally speaking, “regionally significant” cycling routes (not owned by the Region) should meet the following conditions to be considered for signing in accordance with these guidelines:

- The cycling route should connect between more than one municipality within the Region.
- The route should be of sufficient length to attract users and provide connectivity. Five kilometres is considered to be an appropriate minimum length. Shorter links could be considered where they provide a direct connection between longer trail systems, including designated named cycling routes or trails.
- Cycling facility surface should accommodate utilitarian cycling. Either a paved or stone dust course is preferred. Trails that are largely made up of wood chip or dirt surfaces are inappropriate as cycling routes for the general population, i.e. they may be only suitable for the mountain biking segment of the population.
- The cycling route may provide access to key destinations such as municipal centres, key tourist attractions or major community facilities (e.g., major public transit hubs, educational institutions)
- The cycling route may have branding or region-wide recognition

Signing of cycling routes and destinations must consider if the routes are comfortable for a wide range of cycling abilities. Where traffic speeds and volumes are higher than 1,000 vehicles per day and traffic speeds are at or above 40 km/h, a dedicated cycling facility is desirable and may be designed to help cyclists follow the cycling route. Dedicated cycling facilities, such as bike lanes and paths in the boulevard will therefore be the preferred facility type for the majority of York Regional roads.

Routes and destinations that cannot be reached by a combination of low volume / low speed streets, multi-use trails and dedicated cycling facilities on busier roads should not be signed.

8.6 Maintenance Program

Provisions for maintenance will follow the same coordination structure as for the project's installation. The Region will be responsible for the maintenance of signs for facilities operated by the Region, while local municipalities will be responsible for roadways under their jurisdiction, as well as boulevards, sidewalks and multi-use trails along Regional roadways.

An inventory of all signs erected for pedestrian and cycling wayfinding should be maintained including information on the type of sign, contents, material, size, type and size of post, and location.

Ontario Regulation 239/02 of the Municipal Act (2001) prescribes minimum maintenance standards including inspection and replacement requirements for regulatory and warning signs; it does not apply to information / guide signs. However, the jurisdictional body that erected the signs should develop an inspection and replacement program for pedestrian and cycling wayfinding signs to maintain these assets in good working order. Early spring inspections before the higher spring / summer / fall cycling season are recommended every one to two years. Any signs that do not meet retroreflectivity requirements of the Ontario Traffic Manual, or are illegible, improperly oriented, obscured or missing are recommended to be replaced within 30 days. Agencies should also respond to any reports of signs missing or in poor condition within a 30-day period.



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