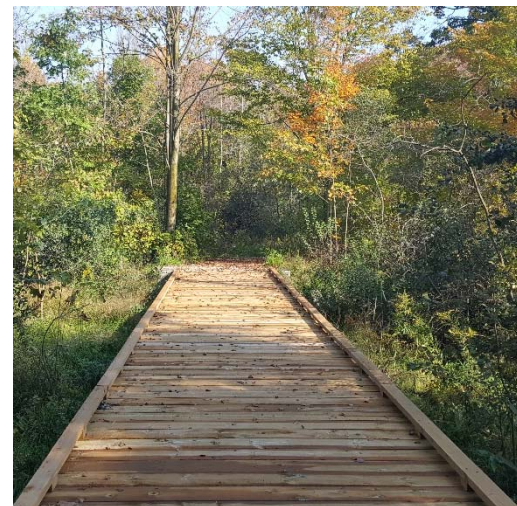




OAKVILLE

Recreational Trail Accessibility Audit and Strategy



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April 8, 2019

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1 Introduction

1.1 Overview

The Corporation of the Town of Oakville is committed to eliminating barriers and providing accessible programs, services and facilities towards achieving Council's vision to be the most livable town in Canada. This includes building an inclusive community where all individuals have equal access to the town's services, programs and facilities in a manner that is integrated and promotes dignity and independence.

The Town of Oakville strives to develop and support an accessible recreational trail system with the direction articulated in the town's Accessibility Policies including the Design of Public Spaces Procedure ([MS-ACC-001-006](#)), intended to address the requirements of the Integrated Accessibility Standards (Ontario Regulation 191/11) set out in the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA)¹.

The **Recreational Trails Accessibility Audit and Strategy** encapsulates the findings of a completed study which inventoried and assessed the current condition of 240 kilometers of trails (and amenities) under the jurisdiction of the Town of Oakville. The main objectives of the study were:

- ▶ Auditing and analyzing the town's recreational trails and identifying areas for improvement;
- ▶ Developing standards for trail development consistent with the Design of Public Spaces Standard component of the Integrated Accessibility Standards of the AODA;
- ▶ Prioritizing trail replacements or enhancements representing health and safety risks;
- ▶ Updating local design standards to ensure they meet or exceed applicable regulations and standards; and
- ▶ Creating a unified and easy to understand signage system for the trail network.

¹ *Accessibility for Ontarians with Disabilities Act (AODA)*¹, Ontario Regulation 191/11 Integrated Accessibility Standards – Technical Requirements for Recreational Trails, Section 80.9 (1) and Technical Requirements Common to Recreational Trails and Beach Access Routes, Sections 80.11 to 80.13 and Exceptions to the Requirements for Recreational Trails and Beach Access Routes, Sections 80.14 to 80.15.

The audit report is organized as follows:

- ▶ **Chapter 2** presents the findings of a survey conducted to determine the current practices of nearby municipalities pertaining to recreational trail accessibility;
- ▶ **Chapter 3** details the data collection methodology used to inventory the accessibility and condition of the recreational trail network and its amenities;
- ▶ **Chapter 4** summarizes the present state of the recreational trail network, with statistics related to trail characteristics, accessibility and condition;
- ▶ **Chapter 5** outlines the accessibility audit findings and the recommended strategy to enhance the accessibility of recreational trails within Oakville;
- ▶ **Chapter 6** outlines the signage audit findings and the recommended strategy to enhance the clarity and consistency of recreational trail signage;
- ▶ **Chapter 7** presents the recommended Level of Difficulty Rating System to clearly and quickly communicate the anticipated conditions of a recreational trail to users; and
- ▶ **Chapter 8** provides the audit summary and recommendations.

The report also includes four appendices providing the presentations made to the Town of Oakville Accessibility Advisory Committee, summarizing the municipal current practice survey results, detailing the prioritization process, and expanding upon the design and signage standard recommendations.

1.2 Definitions

The following terms are used in this report:

- ▶ **Amenities** means items that provide conveniences or services for use by the public, examples of which include water bottle fillers, benches and garbage receptacles;
- ▶ **Cross slope** means the slope of a surface that is perpendicular to the direction of travel;
- ▶ **Maintenance** means activities that are intended to keep existing public spaces and elements in existing public spaces in good working order or to restore the spaces or elements to their original condition, examples of which include painting and minor repairs;
- ▶ **Redeveloped** means planned significant alterations to public spaces, but does not include maintenance activities, environmental mitigation or environmental restoration;
- ▶ **Rest area** means, in respect of recreational trails, a dedicated level area that is intended for public use to allow persons to stop or sit;

- ▶ **Running slope** means the slope of a surface that is parallel to the direction of travel;
- ▶ **Recreational trail (Trail)** is a public pedestrian trail, physically separated from motor vehicle traffic, intended for recreational and leisure purposes. This type of recreational use could include walking, running, cycling, or any other non-motorized form of travel;
- ▶ **Segment**, for the purpose of this study, is used to designate a unique portion of trail within the network. Segments are varied lengths of trail and begin and end based on how they were input into the town's Geographic Information System (GIS). Data was collected for each segment of trail.

1.3 Consultation

The project initiated by developing a study team of town staff from several departments, including:

- Park Planning and Development, Parks and Open Space;
- Strategy, Policy & Communications;
- Engineering and Construction;
- Park Operations, Parks and Open Space;
- Asset Management, Financial Operations; and
- Strategic Business Support

The team met at key milestones and were instrumental in the development of this plan by providing information and support through the course of the project. Through input from the study team, opportunities to partner on initiatives and develop a strategy compatible with other town plans and corporate goals was gained.

The study team met with the Town of Oakville Accessibility Advisory Committee at key milestone during the project to provide information and seek input on the audit and strategy, as follows:

- ▶ **Meeting #1: January 12, 2017** – The study team provided an overview of and received feedback on the:
 - Study goals and objectives;
 - Data collection process and status;
 - Approach for developing the implementation plan; and
 - Elements of the proposed accessibility and signage strategies.

- ▶ Meeting #2: June 8, 2017 – The study team summarized the findings of the audit and presented the recommended strategy, requesting feedback on the:
 - Current accessibility and physical condition of the town’s recreational trail network;
 - Proposed design process and accessibility checklist;
 - Proposed Level of Difficulty rating system; and
 - Current and proposed signage standards.

- ▶ Meeting #3: January 10, 2019 – The study team presented the draft Recreational Trail Accessibility Audit and Strategy report requesting feedback on the report including the:
 - Proposed Level of Difficulty rating system; and
 - New design options for the recreational trail signs.

The input received from the committee proved very supportive and beneficial in structuring and finalizing the recreational trail accessibility audit and strategy.

2 Current Practices Review

2.1 Recreational Trail Accessibility and Condition Evaluation

The study team surveyed nearby municipalities in southern Ontario to gain insight into the practices currently used to evaluate the accessibility and condition of recreational trails. The research results helped to inform the data collection and assessment processes.

The survey, conducted by phone or email, posed questions asking if the municipality had:

- ▶ A recreational trail master plan;
- ▶ Completed a study of existing or future recreational trails;
- ▶ Standards and/or practices for the design, construction, and ongoing maintenance of recreational trails;
- ▶ Design standards related to accessibility; and
- ▶ Uses any software or information systems to manage their recreational trail network.

Appendix A provides a copy of the survey questionnaire.

A total of nine municipalities were invited to participate in the survey. The following sections summarize the feedback received from the three respondents – City of Guelph, Town of Whitby and Town of Halton Hills.

2.1.1 City of Guelph

The City of Guelph Trail Master Plan² provides design guidelines based on trail hierarchy and location. Further trail design standards and guidelines are presented in the City's Facility Accessibility Design Manual³.

The City uses a single layer within its enterprise Geographic Information System (GIS) database to inventory and monitor existing and proposed trails under its jurisdiction. They are working on a system to monitor ongoing maintenance of the trail network.

² Stantec Consulting Ltd. and Marshall Macklin Monaghan. *Guelph Trail Master Plan*. Fall 2012.

³ Designable Environments. *2015 Facility Accessibility Design Manual for the City of Guelph*. June 2015.

2.1.2 Town of Whitby

The Town of Whitby Cycling and Leisure Plan⁴ outlines the long-term objectives and design guidelines for cycling and recreational trails in the municipality.

Outside the plan, the Town has developed guidelines for the design of multi-use pathways⁵ that specify a minimum clear width of 2.5 metres, minimum clear height of 2.1 metres and a cross-slope between 2% and 4%. The municipality also has guidelines for midblock crossing treatments, including the signing of approaches, and intends to conduct a study on wayfinding signs, including best practices for signing trail routes (including noting trail slope, name, and other hazards).

The Town currently inventories trails using GoPro cameras mounted to tricycles. The video is reviewed, with identified maintenance concerns repaired on a priority basis. The Town is evaluating options for trail system inventorying and long-term management.

2.1.3 Town of Halton Hills

The Town of Halton Hills has recently embarked on an Active Transportation Master Plan update. In the interim, the municipality relies on its Trails Master Plan and Cycling Master Plan⁶ for guidance.

The Town designs trails based on industry best practices. The municipality has no official design standards or guidelines but consults with the Town's Accessibility Advisory Committee as part of the design process, with the goal of achieving compliance with AODA requirements.

The Town uses Maplinks software for asset management purposes. The Town also has a Trails Revitalization Capital Budget Program, in which trails are reviewed and input gathered from user groups and public works inspection staff, and areas prioritized for improvement. Trails are also inspected monthly by trained public works staff.

2.2 Recreational Trail Signage

The study team conducted a jurisdictional scan to ascertain recreational trail signage practices currently used in nearby municipalities, specifically the Cities of Mississauga, Hamilton, and Brampton. **Figure 2.1** illustrates sign examples from these municipalities, which are described further in the following sections:

⁴ IBI Group. *Cycling and Leisure Trails Plan for the Town of Whitby*. June 2010.

⁵ Town of Whitby. *Drawing 214: Multi-Use Asphalt Pathway Engineering Standard*. August 2015.

⁶ MMM Group. *Town of Halton Hills Cycling Master Plan*. December 2010.

2.2.1 City of Mississauga

The City of Mississauga Cycling Master Plan⁷ provides signage guidelines primarily for bicycle facilities but does include the following information applicable to recreational trails:

Wayfinding Signs

The Cycling Master Plan emphasizes the benefit of “branding” the trail network. Having a common sign for all trails helps users easily identify trail start locations (i.e. trailheads) and route locations. Branding can also be a valuable promotional tool when raising awareness of trail use.

To ensure clear and consistent messaging, Mississauga applies the “three D’s” principle to organize their wayfinding information:

- ▶ Destination (nearest or intermediate destinations, or less commonly, the end-of-the-line destination);
- ▶ Direction (directional arrows of ahead, left and right); and
- ▶ Distance (to destinations noted on sign).

Specific elements incorporated on individual signs include:

- ▶ Name of route;
- ▶ Distance and directions to destination;
- ▶ Uniform colours or background (e.g., font type, logos);
- ▶ Contact information for emergency or maintenance issues; and
- ▶ Sponsorship credits.

The City uses the guidelines specified in the Ontario Traffic Manual (OTM) books for the placement of trails signs. Per the guidelines, wayfinding signs should be placed:

- ▶ Before and after intersections;
- ▶ With a lateral clearance of not less than 60 centimetres from the near edge of the sign to the near edge of the path; and
- ▶ At a mounting height for ground mounted signs of 1.5 metres (minimum) to 2.5 metres (maximum) from the bottom of the sign to the near edge of the path surface.

Sign location is also important. In determining optimal location:

⁷ iTrans Consulting Inc. *City of Mississauga Cycling Master Plan*. September 2010.

- ▶ Signs should be placed where they are clearly visible;
- ▶ Signs should be placed at a constant distance from the trail edge;
- ▶ Regulation or cautionary signs should avoid including text; and
- ▶ Multiple signs may be mounted on the same post, but the top sign should state the primary message.

Wayfinding sign frequency should be consistent and predictable to provide a sense of security to new trail users. A sign spacing interval of 200 to 250 metres is recommended. Kilometre markers and/or destination signs may also be considered.

Information and Interpretive Signs

Information and interpretive signs are generally used to denote the entrance of a trail or to direct users to select destinations. These signs may include the following information:

- ▶ A route network map;
- ▶ “You are here” marking on all maps;
- ▶ Key destinations marked on all maps; and
- ▶ Warnings/advisories/route etiquette/other interpretive information.

These signs tend to provide a significant amount of information, and as such, are placed in locations that allow trail users to stop and read without impeding others passing by. The sign installations may also be accompanied by other amenities such as shade, seating, waste receptacles and/or water bottle fillers.

The current interpretive sign panels in Mississauga include the City’s logo, the trail name, an easy to read map and text about the trail including its history or nearby points of interest. Where appropriate, information on trail etiquette, a map legend, contact information and sponsorship information are also provided.

2.2.2 City of Hamilton

The City of Hamilton Recreational Trails Master Plan⁸ emphasizes the importance of branding recreational trails to attract visitors and trail users to specific activities and venues within the City. The branding should feature a design that is clear, concise, consistent and visually integrated with the landscape. The plan also recommends the provision of signs to denote difficulty and the fitness level required to use the trail, like downhill skiing trail symbols (i.e. green circle, blue square, and black diamond).

⁸ Seferian Design Group. *City of Hamilton Recreational Trails Master Plan*. May 2016.

The plan classifies trail signage into the following seven categories:

Gateway Signs

Gateway signage is usually the largest in size and located at trail entrances. The main purpose of these signs is to create a sense of welcome, arrival and safety. The signs can also establish a theme and/or emphasize something of historical significance.

Orientation and Trailhead Signs

Orientation and trailhead signage provide users with location information including a map of the trail, trail distances, key features and rules and regulations of the trail network. These signs are typically located at key destinations and major network junctions.

Trail Etiquette Signs

Trail etiquette signage is located at trail access points and indicates permitted usage and regulations that apply to specific routes and the network. The signs also include safety and emergency contact information and friendly reminders such as “Please stay on the trail”.

Regulation Signs

Regulation signage alerts users to specific hazards such as dangerous slopes, sensitive or protected areas, and invasive plants. Traffic control signage may also be used to regulate the movement of pedestrians and bicycles on the trail. These signs are typically the same shape and colour as traffic control devices used on public roads.

Route Markers and Trail Directional Signs

Route marker and trail directional signage reassures users they are travelling on a recognized trail. The signs should be spaced at regular intervals in addition to trail junction points and key intersections. Unique identifiers, such as QR codes, distances to local attractions and nearby resources can also be added to the signs to enhance their usefulness.

Interpretive Signs

Interpretive signage identifies an historical, environmental or other feature that is culturally significant to Canadian or the local community. They can also be used to reiterate proper trail etiquette, safety precautions, rules and regulations. These signs should be highly graphic, easy to read and in visible locations (to minimize vandalism).

Urban Fitness Trail Station Signs

Urban fitness trails offer an outdoor space for trail users to complete guided exercises at each station. QR codes on the station signs provide access to videos detailing the exercises. Full instructions are also given on each sign.

2.2.3 City of Brampton

The City of Brampton PathWays Planning and Design Guidelines⁹ describe the application of the following sign types:

Designation and Directional Signs

Designation and directional signage display pathway or route names, directional arrows, the Brampton PathWays brand and/or distances to specified destinations. These signs should be placed at minor trail access points and locations where the trail changes direction. Directional and designation signs may be mounted individually or in groups (situation dependent) and should be placed in high visibility locations on posts where signs can be mounted on both sides. Designation signs should be continuously spaced at 500 to 700 metre intervals along the trail. Directional signs should be mounted 3 to 5 metres in advance of a change in direction with the appropriate designation sign.

Regulation Signs

All regulation signs should follow guidelines set out in the OTM books, the Transportation Association of Canada (TAC) Manual of Uniform Traffic Control Devices for Canada¹⁰ (MUTCDC) and Transport Canada railway crossing guidelines. Details regarding stop signs, crosswalk and crossover signs, signs and pavement markings for exclusive bike lanes, railway crossing signboards, and interdictory and permissive symbols are covered in Brampton's guidelines, but not detailed here.

Warning Signs

Warning signs indicate potential hazards such as steep slopes, railway crossings and pavement markings to trail users. These signs also follow OTM guidelines and are generally a diamond shape with a yellow background. Examples of warning signs include chevrons, low clearance signs, pavement narrows signs, hazard markers and bicycle crossing/trail crossing signs.

⁹ Marshall Macklin Monaghan Limited, ESG International and City of Brampton. *Brampton PathWays Planning and Design Guidelines*. June 2002.

¹⁰ Transportation Association of Canada. *Manual of Uniform Traffic Control Devices for Canada, 5th Edition*. 2014.

Information Signs

Information signs provide maps of the nearby and full trail network, the location of amenities (e.g., washrooms, change stations, telephones), specific information about the trail, local bylaws and corporate sponsorship logos. The signs are typically mounted on double post frames with a maximum size of 1.2 metres by 1.8 metres.

Interpretive Signs

Interpretive signs detail information on ecological and historical points of interest and current land use along the trail. Brampton does not have a formal sign layout for their interpretive signs as the design depends on the interpretive program and complexity of information to be communicated. The signs are also mounted on double post frames with a maximum size of 1.2 metres by 1.8 metres.

2.3 Recommendations

Based on the findings of this Chapter, it is recommended that the Town of Oakville:

- ▶ Continue to maintain a dialog with local municipalities on best practices for recreational trail development, maintenance, monitoring, signage and wayfinding.

Hamilton Signage:
Orientation/trailhead sign, trail etiquette sign, gateway sign, route marker, regulatory sign

Mississauga Signage:
Information/ Interpretive sign, Wayfinding directional sign

Logo	Route Name
	Network Map
Interpretative Information	Route Legend
Sponsorship and City Contact Information	

Brampton Signage:
Information sign, Designation/ Direction signs

Sign Examples from Other Jurisdictions
Figure 2.1

3 Data Collection

3.1 Study Area and Timeline

The study team inventoried and collected data for nearly 240 kilometres of recreational trails under the jurisdiction of the Town of Oakville between March and May 2017 and in July 2018.

It should be understood that the data collected depicts the quantitative and qualitative properties at that particular time. Some of these properties and conditions may have changed since the date of record due to capital improvements, maintenance or weather events and natural hazards. Trails constructed during or after the data collection period, and trails not under the town's control (i.e. Bronte Creek Provincial Park), were not surveyed.

The purpose of this study is to establish a generalized approach to improve the town's recreational trail system by removing physical barriers, provide better wayfinding and education to the public.

Figure 3.1 illustrates the trails inventoried for the audit.

3.2 Methodology

The data for the recreational trails accessibility audit were collected by a team of surveyors equipped with Trimble Juno 5 or Nomad mobile GPS-enabled data collection devices (GPS device). The surveyors gathered the data by walking or biking the trails within a defined area assigned daily and recording observations. The decision to walk or bike depended on the location, length and grade of the trail. **Figure 3.2** illustrates the equipment used in carrying out the data collection program.

The surveyors recorded data on a variety of attributes pertaining to accessibility, physical characteristics and condition of the recreational trails. **Table 3.1** and **Table 3.2** summarize the attribute information collected for the two feature categories, being:

- ▶ Line features (trail segments); and
- ▶ Point features (objects related to or located near a trail segment).

The surveyors recorded the attribute data for the line features after traversing the entire segment, while point features were inventoried and assessed as encountered along the trail.

TABLE 3.1: LINE FEATURE ATTRIBUTES

Attribute	Possible Values
Surface Type	Asphalt
	Concrete
	Crushed Limestone (limestone screenings)
	Interlock
	Flagstone
	Natural (informal footpath)
	Bridge
	Stairs
	Tar and Chip
	Woodchip
Stable Surface	Yes
	No
Condition ¹	A – Good
	B – Fair
	C – Poor
	D – Informal Footpath
Width	
Typical Cross Slope	
Typical Running Slope	
Narrow Trail Width	

Notes:

1. Refer to Section 3.2 for an explanation of the descriptions.

TABLE 3.2: POINT FEATURE ATTRIBUTES

Attribute	Options
Maximum Cross Slope	
Maximum Running Slope	
Deficiencies ¹	Drainage Issue
	Opening in Surface >20mm
	Edge Protection Recommended
	Safety Issue
	Maintenance Issue
Vertical Clearance Issue ¹	Structure
	Sign
	Vegetation
	Other
Amenity ¹	Bench
	Bike Rack
	Drinking Fountain and/or Bottle Filler
	Garbage Receptacle
Park Asset ¹	Boardwalk
	Ramp
	Railing
	Culvert/Catch Basin
Park Barrier	Bollard
	P-Gate
Park Bridge or Stairs	Bridge
	Stairs

Notes:

1. Photos taken of each inventoried object.

The line features database was created from the town's GIS single line trail network layer and other municipal data sources. In the field, the surveyors checked the attribute information contained in the database on a segment by segment basis and added missing or updated inaccurate data for the following (see **Table 3.1**):

- ▶ *Surface Type* attribute based on visual observation;
- ▶ *Stable Surface* attribute based on a visual assessment of the overall stability of the segment;
- ▶ *Condition* attribute based on a visual assessment of the physical condition of the segment using the following rating system, which is illustrated in **Figure 3.3**:
 - A – Good condition, continue with regular maintenance (i.e. trail grooming and edge mowing)
 - B – Fair condition, minor rehabilitation or maintenance required over a localized segment of trail (i.e. pathway clearing or trail resurfacing)
 - C – Poor condition, notable surface, drainage or grading deficiencies occurring predominantly along a segment of trail, recommended for capital rehabilitation
 - D – Informal footpath, investigate potential to be developed into a formal trail;
- ▶ *Width, Typical Cross Slope, and Typical Running Slope* attributes based on measurements taken in the field with a measuring tape and/or digital level; and
- ▶ *Narrow Trail Width* attribute based on measurements taken in the field with a measuring tape if the segment (or part thereof) was less than 1.0 metre in width.

The data entered for the line feature attributes represent an average or typical value for the entire segment. Some segments may experience spot or area deficiencies, which influence the overall value but may not be uniquely captured.

For point features, surveyors captured the location and took photographs of the object using the GPS device and entered the attribute data (see **Table 3.2**). All information in this category was collected in the field by the surveyors.

3.3 Quality Assurance

The quality assurance program consisted of two primary activities:

3.3.1 Staff Training

Survey staff were provided a comprehensive training program explaining the data collection process, condition assessment and rating procedure (to ensure consistency) and health and safety policies. All staff were provided a data collection handbook for reference in the field, with instructions and guidance on various matters such as how to assess trail condition and measure trail width, running slope and cross slope.

3.3.2 Quality Control of Data Collection

The collected data were checked and verified by the survey supervisor on an ongoing basis to ensure the information gathered was complete and accurate. Because of the scale of the data collection program, the relatively large number of field staff and the level of precision inherent in field measurement and touchscreen data entry, quality assurance was a considerable (and resource intensive) challenge.

To detect and correct errors quickly, both automated and manual checks were used in the quality control process. At the end of each data collection shift, the survey supervisor checked for:

- ▶ Missing values;
- ▶ Excessively high or low values;
- ▶ Measurements with invalid values; and
- ▶ Inconsistency among dependent fields.

If errors were found, the survey supervisor rectified the inaccuracy and continued to review the database until satisfied no further inconsistencies existed. The surveyor was notified of the error and instructed on how to ensure proper data collection in the future if the inaccuracy was considered systemic and not a random occurrence.

3.4 Database Assembly

Data was downloaded from the GPS devices weekly to perform ongoing quality control and avoid data loss in the event of an unforeseen technical difficulty with the unit. The data was then imported into ArcGIS and merged into the project database on an ongoing basis.

The final project database was reviewed for inconsistencies, errors and/or omissions and rectified through supplemental field visits and data collection.



3.5 Recommendations

Based on the findings of this Chapter, it is recommended that the Town of Oakville:








- ▶ Continue to update the recreational trails inventory database as it changes through capital improvements, new development or regular maintenance. Information that should be updated through these changes includes: surface type, width, typical cross slope, typical running slope, maximum running slope and maximum cross slope.



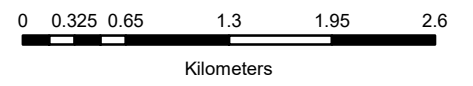
Inventoried Trail Network

Figure 3.1

Legend

-  Trail Network
-  Roads
-  Future Road Network
-  Private Open Spaces
-  Natural Areas
-  Town Parks
-  Greenbelt

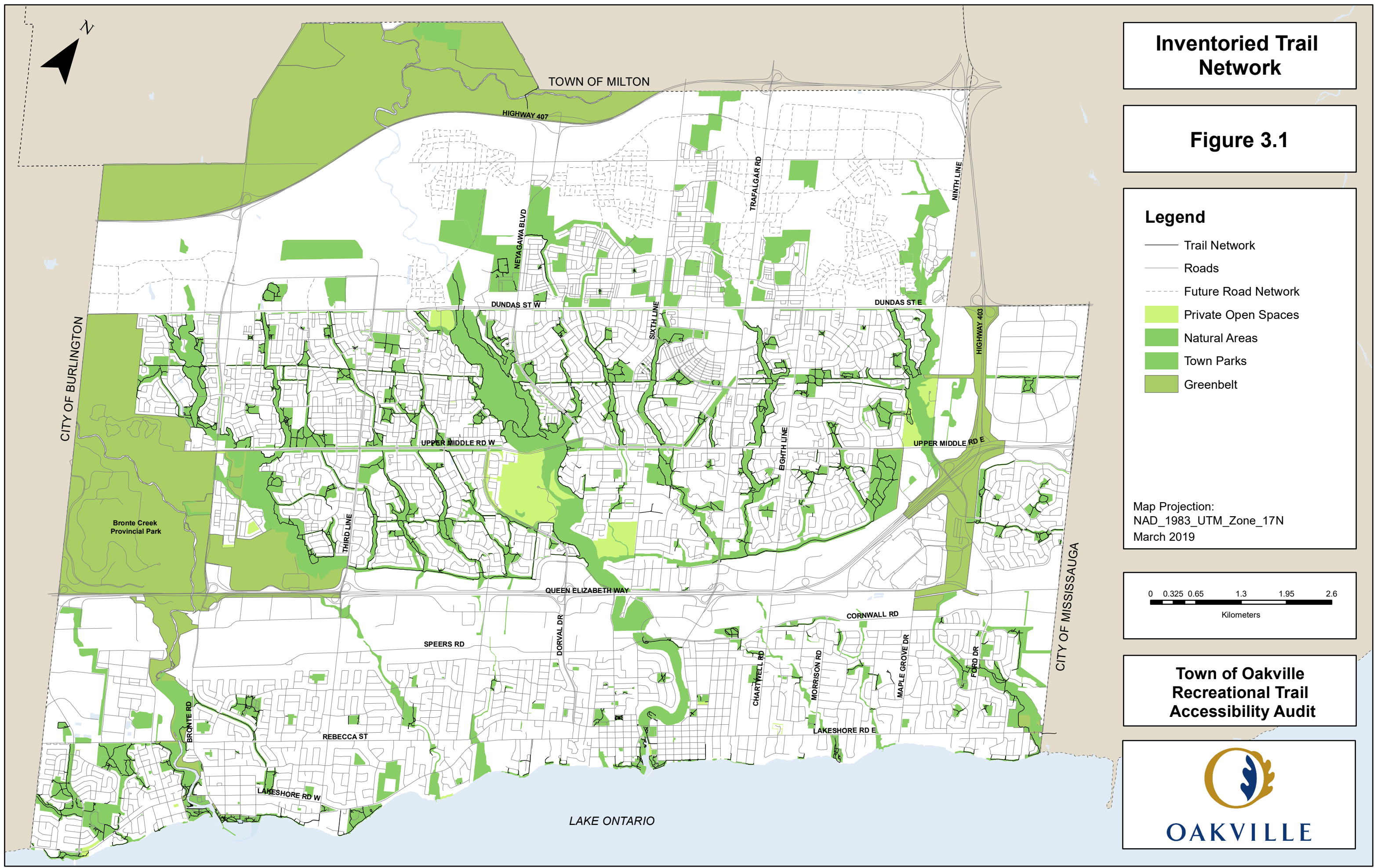
Map Projection:
 NAD_1983_UTM_Zone_17N
 March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE

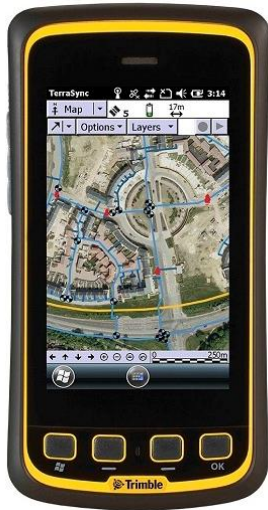




Nomad



Bicycle



Juno 5



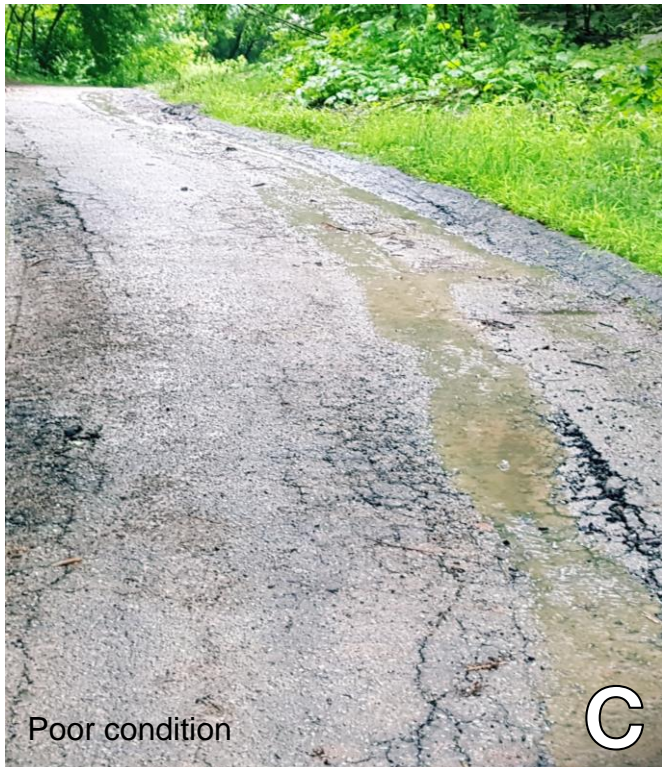
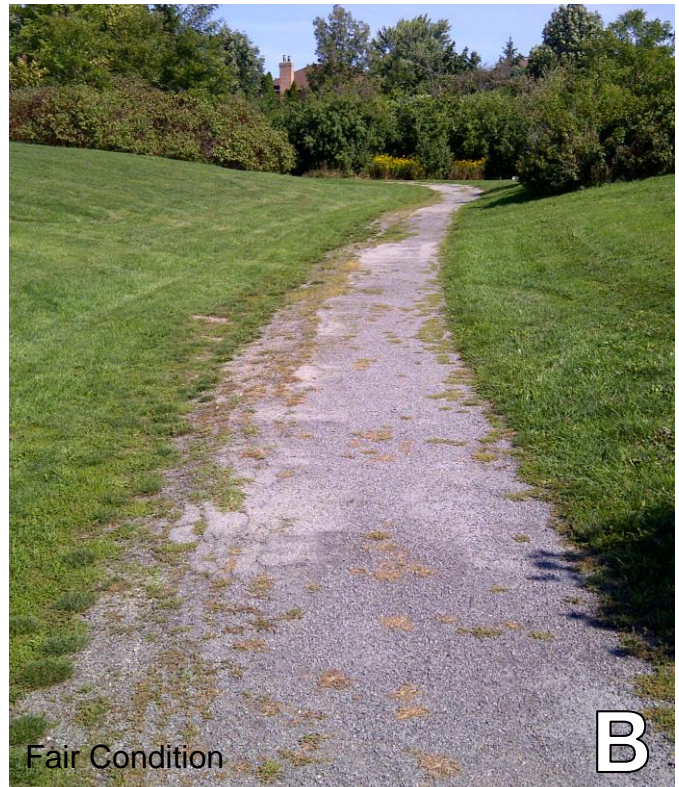
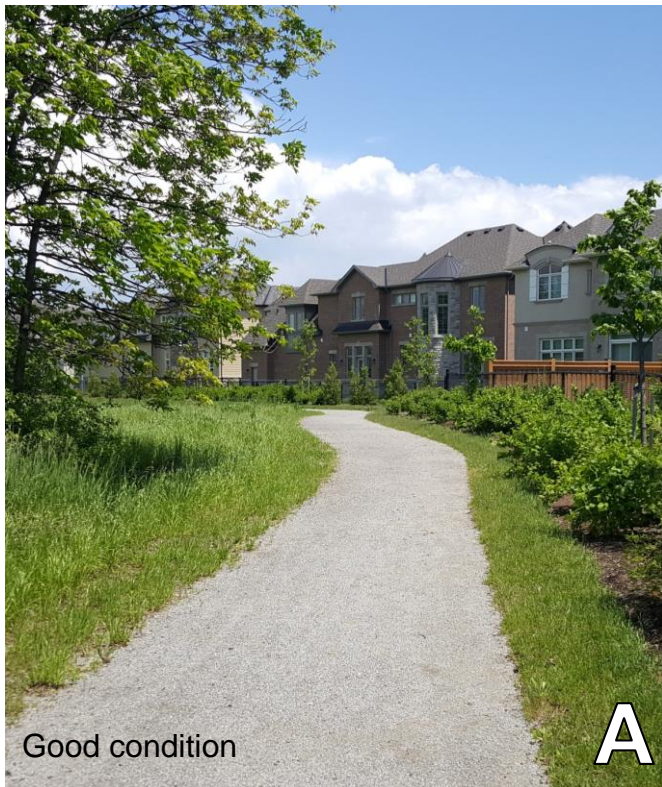
Tape Measure

Digital Level



Data Collection Equipment

Figure 3.2



Recreational Trail Overall Condition Illustrations

Figure 3.3

4 Inventory Assessment

An assessment was completed of the recreational trail inventory. The assessment summarizes trail characteristics and condition, quantifies trail amenities and reports on deficiencies.

The assessment also illustrates trail characteristics compared to the technical requirements from the Integrated Accessibility Standards (Ontario Regulation 191/11) set out in the AODA¹¹. To summarize these requirements, new or redeveloped recreational trails must:

- ▶ Have a minimum clear width of 1,000 millimetres;
- ▶ Have a clear height of head room of 2,100 millimetres above the trail;
- ▶ Have a surface that is firm and stable;
- ▶ Not have surface openings greater than 20 millimetres;
- ▶ Have a clear opening of between 850 and 1,000 millimetres, whether the entrance includes a gate, bollard or other entrance design; and
- ▶ Have edge protection (adjacent to water or a drop-off), that meets the following requirements:
 - The edge protection must constitute an elevated barrier that runs along the edge of the recreational trail in order to prevent users of the trail from slipping over the edge;
 - The top of the edge protection must be at least 50 mm above the trail surface;
 - The edge protection must be designed so as not to impede the drainage of the trail surface.

It should be noted that the following items do not have technical requirements to meet compliance with the AODA:

- ▶ Slope of the trail (running and cross slope);
- ▶ Need for, and location of, ramps on the trail; and
- ▶ Need for, location and design of:
 - Rest areas;
 - Passing areas;

¹¹ *Accessibility for Ontarians with Disabilities Act (AODA)*¹¹, Ontario Regulation 191/11 Integrated Accessibility Standards – Technical Requirements for Recreational Trails, Section 80.9 (1) and Technical Requirements Common to Recreational Trails and Beach Access Routes, Sections 80.11 to 80.13 and Exceptions to the Requirements for Recreational Trails and Beach Access Routes, Sections 80.14 to 80.15.

- Viewing areas;
- Amenities on the trail; and
- Any other pertinent feature.

Instead, the town is obligated to consult with the public, persons with disabilities and must also consult with their Accessibility Advisory Committee.

4.1.1 Trail Characteristics

Table 4.1 summarizes the surface types of the existing trail network. 97.5% of the trail network is hard surfaced primarily consisting of crushed limestone (limestone screenings) and asphalt paving.

TABLE 4.1: SURFACE TYPE

Surface Type	Length (km)	Share (%)
Crushed Limestone	158.2	66.5%
Asphalt	45.4	19.0%
Concrete	15.2	6.5%
Interlock	7.2	3.0%
Tar and Chip	3.6	1.5%
Natural (informal footpath)	4.1	1.5%
Pedestrian Bridges (124 in total)	2.3	1.0%
Woodchip	1.1	0.5%
Flagstone	0.2	0.1%
Stairs (64 in total)	0.1	0.05%
Total	237.5	100%

Table 4.2 summarizes the recorded widths of trail network segments, while **Table 4.3** and **Table 4.4** details the typical running and cross slopes, respectively.

TABLE 4.2: RECREATIONAL TRAIL WIDTH

Trail Width (m)	Length (km)	Share (%)
≤ 1.0	3.7	2%
1.1 - 1.5*	29.1	12%
1.6 - 1.9*	35.0	15%
≥ 2.0*	169.7	71%
Total	237.5	100%

Notes:

1. 2% (3.7 kilometres) of trails had a measured width of less than 1.0 metres
2. * denotes widths ≥ 1.0 metre, which are AODA compliant

TABLE 4.3: RECREATIONAL TRAIL RUNNING SLOPE

Running Slope	Length (km)	Share (%)
≤ 5%	207.9	88%
5.0% - 8%*	19.9	8%
> 8%*	9.7	4%
Total	237.5	100%

Notes:

1. The town has accepted a 5% maximum running slope design standard for trail development
2. 12% (29.5 kilometres) of trails had a running slope greater than 1:20 (5%)
3. * denotes trails primarily located within natural areas such as woodlots and valleylands where terrain is highly variable

TABLE 4.4: RECREATIONAL TRAIL CROSS SLOPE

Cross Slope	Length (km)	Share (%)
≤ 2%	157.1	66%
2% - 5%*	61.9	26%
5.0% - 8%*	14.4	6%
> 8%*	4.1	2%
Total	237.5	100%

Notes:

1. The town has accepted a 2% maximum cross slope design standard for trail development
2. 35% (80.4 kilometres) of trails had a cross slope greater than 1:50 (2%)
3. * denotes trails primarily located within natural areas such as woodlots and valleylands where terrain is highly variable

4.1.2 Trail Condition

The existing state of the recreational trail network within the Town was assessed based on a visual inspection rating assigned by the surveyors during data collection.

Table 4.5 summarizes the overall condition of the network and indicates only two percent (2%) of the network requires capital improvements or rehabilitation. Most of the network is in good condition and can continue with regular maintenance or minor repairs.

TABLE 4.5: OVERALL CONDITION OF RECREATIONAL TRAIL NETWORK

Condition Rating	Length (km)	Share (%)
A – Good	220.0	92.5%
B – Fair	12.5	5.0%
C – Poor	4.3	2.0%
D – Informal Footpath	0.7	0.5%
Total	237.5	100%

Figure 4.1 illustrates the overall condition of the trail network alongside parks and other major pedestrian generators and destinations in the town.

4.2 Amenities

For the purposes of this section, “amenity” refers to any feature on the trail segment that adds to the overall experience of the trail user (excluding signs). The amenities recorded fell into four general categories:

- ▶ Park and trail features;
- ▶ Bridges and stairs;
- ▶ P-Gates and bollards; and
- ▶ Pathway lighting

The park and trail feature categories included: benches, bike racks, drinking fountains/water bottle filler, garbage receptacles. **Figure 4.2** shows the location of these amenities. **Table 4.6** provides a summary of the four different park and trail features, with the average rate observed per kilometre of trail.

Park and trail lighting was considered while undertaking the inventory of trail segments and any deficiencies were noted. However, the presence of lighting is not an attribute required to assess the overall condition of a recreational trail, specifically related to the Technical Requirements for Recreational Trails, Section 80.9(1) of the AODA.

Currently, the town provides pathway lighting systems in many of their new parks (parkettes, neighbourhood parks and community parks). However, the town does not typically provide pathway lighting for recreational trails (outside of the park system). Exceptions have been made in certain locations where a street/sidewalk pedestrian connection was not available or along certain school routes where high pedestrian traffic warranted the addition.

In the past, the town provided a single pole light at the end of a walkway block entering into a natural area trail. This practice is no longer recommended as it potentially creates a false sense of personal security and may encourage the public to use the unlit trail in a night-time environment. In order to mitigate the loss of the single pole light, the town has changed their walkway block standard width from 3 to 6 metres. In doing so, sightlines into the natural area (unlit trail) are opened and access to the unlit area is not promoted by the single pole light.

Many evaluation factors should be made when considering recreational trails or pathway lighting, such as: cost of design and installation, energy consumption, light pollution to neighbouring residents and to natural areas, timing for the eye to adapt to dark conditions (when previously in a lighted environment), and potential effects on flora and fauna. It is recommended that the town continue with their current practices of providing pedestrian lighting in new park areas, but do not recommend providing lighting for entire recreational trail systems within natural areas. Pathway and walkway block lighting should be considered on a case by

case basis, and only where lighting will extend the hours of use by the entire community (i.e. trails to Community Centres or major destinations).

TABLE 4.6: PARK AND RECREATIONAL TRAIL FEATURES

Feature	Number	Frequency (features per km)
Benches	525	2.2
Bike Racks	30	0.1
Drinking Fountains / Bottle Fillers	2	0.0
Permanent Garbage Receptacles	165	0.7
Temporary Garbage Receptacles	372	1.6
Total	1,094	4.6

It is recommended that the town adopt minimum standards for placement and rate of features per trail segment. The following is the recommended list, which should be reviewed with the Town of Oakville Accessibility Advisory Committee:

- ▶ 2 bike racks at each major trailhead
- ▶ 1 water bottle filler per major trail head (where feasible)
- ▶ 1 permanent garbage receptacle (1 at each minor or major trail head or entrance)
- ▶ The creation of rest areas should be considered in the design of new or redeveloped trails - 1 bench or rest area per 500m of trail

Figure 4.3 illustrates the location of all bridges (81) and stairs (63) along with the total number recorded. **Figure 4.4** denotes the location of all P-Gates (219) and bollards (173). Most P-gates and bollards were rated to be in “fine” condition (235) or just needing paint (125). A small number require attention.

4.3 Deficiencies

Deficiency locations were recorded along the trails. These items fell into two main categories, and are summarized within **Table 4.7**:

- ▶ Risks and potential hazards; and
- ▶ Vertical clearance.

Overall, there were relatively few risks and potential hazards observed when considering the extent of the trail network.

TABLE 4.7: RECREATIONAL TRAIL DEFICIENCIES

Risk or Hazard	Number Observed
Drainage Related Issue (Water Ponding, Muddy Spot)	107
Minor Maintenance Required	15
Edge Protection Recommended	5
Opening in Surface >20 millimeters	4
Safety Issue	123

4.4 Recommendations

Based on the findings of this Chapter, it is recommended that the Town of Oakville:

- ▶ Continue to monitor and maintain the existing recreational trail system network and providing trail users with safe and enjoyable experiences;
- ▶ Continue to build hard surfaced pathways as part of the recreational trails system.
- ▶ Continue to build recreational trails to a minimum width of 2.1 metres (North Oakville Trails Plan) with a recommended trail width of 2.4 metres (3.0 metres where maintenance vehicles are required);
- ▶ Continue to develop trails with park and trail features in frequency equal to or better than what currently exists, and consult with the Town of Oakville Accessibility Advisory Committee to determine minimum standards and frequency for park and trail features (benches, bike racks, and garbage receptacles);
- ▶ Undertake a maintenance initiative to resolve any current deficiencies as noted in **Table 4.7**;
- ▶ Continue to provide pedestrian lighting in new park areas, but not lighting recreational trail systems within natural areas. Pathway and walkway block lighting should be considered on a case by case basis, and only where lighting will extend the hours of use by the entire community (i.e. trails to Community Centres or major destinations); and
- ▶ Adopt minimum standards for placement and rate of trail features (benches, bike racks, garbage receptacles) per trail segment.



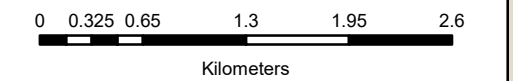
Recreational Trail Segment Condition

Figure 4.1

Legend

- Roads
- Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- Trail Segment Condition**
- A - Good
- B - Fair
- C - Poor
- D - Informal Footpath

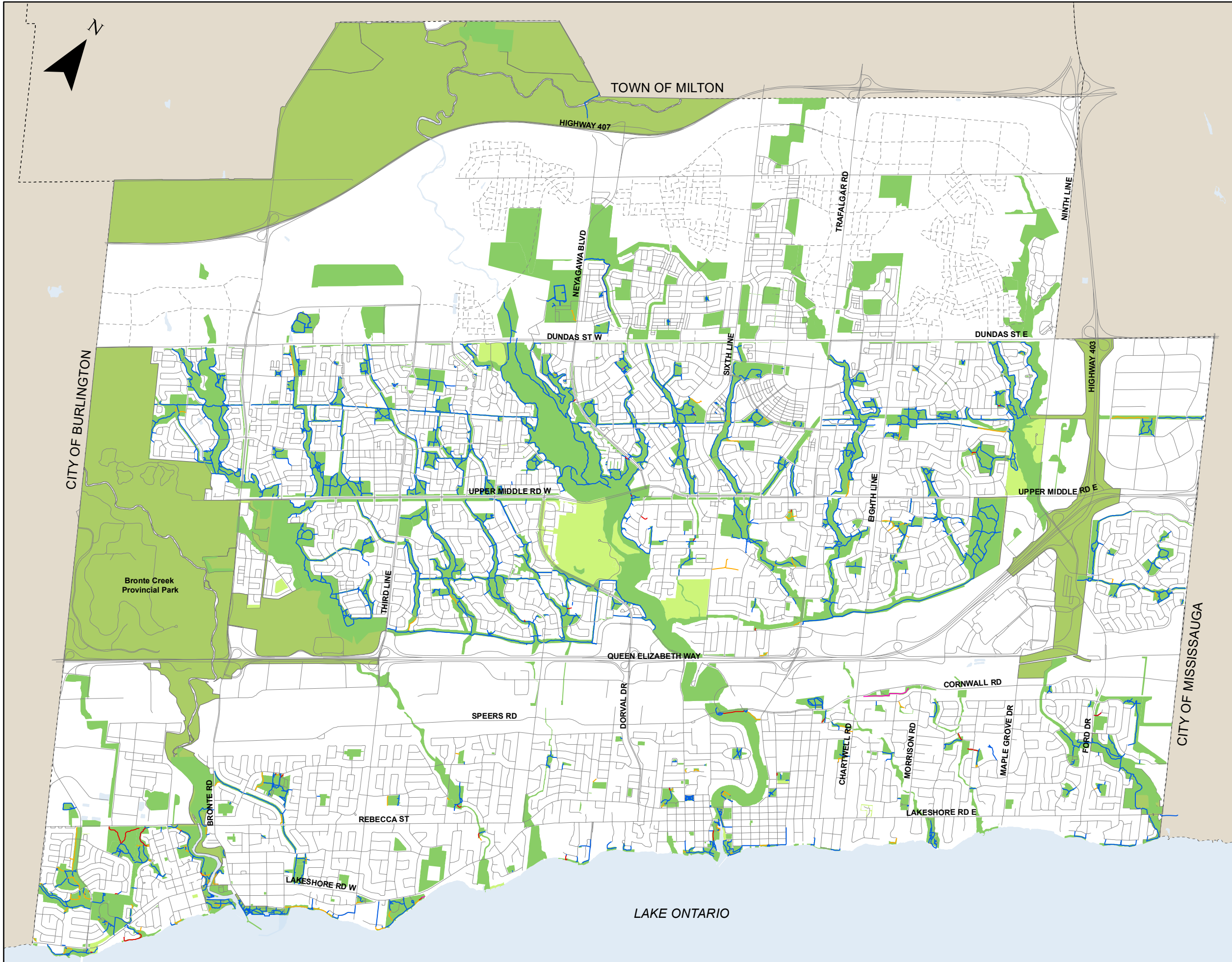
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 March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE





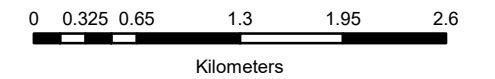
Recreational Trail Amenities

Figure 4.2

Legend

- Trail Network
- Roads
- Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- Park Amenities**
- Benches
- Bike Rack
- Drinking Fountains
- Garbage Receptacles

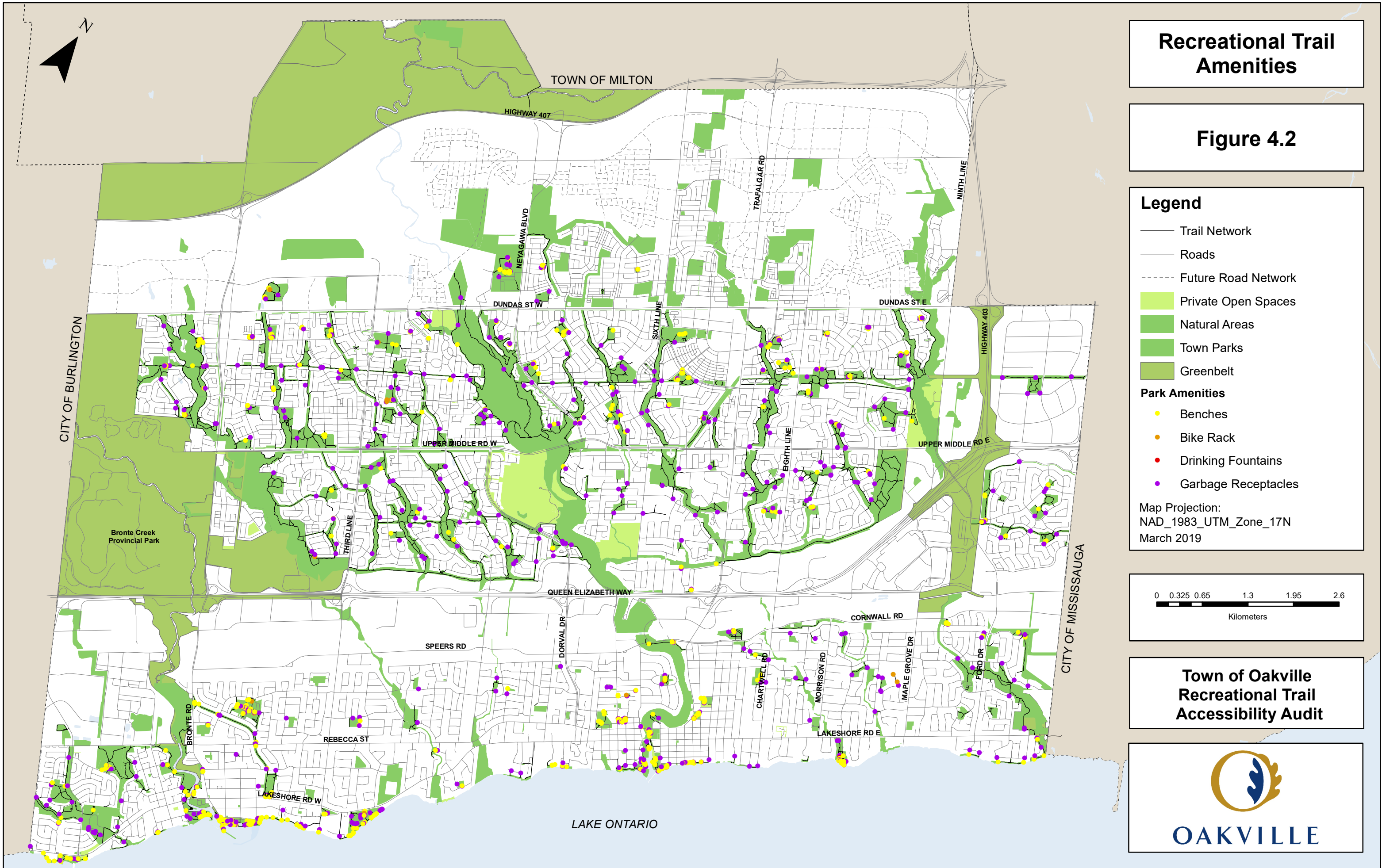
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 March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE















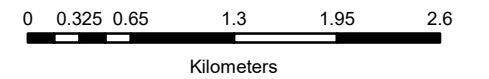
Recreational Trail Bridges and Stair Locations

Figure 4.3

Legend

-  Trail Network
-  Roads
-  Future Road Network
-  Private Open Spaces
-  Natural Areas
-  Town Parks
-  Greenbelt
- Structure Type**
-  Bridges
-  Grade Separation
-  Stairs

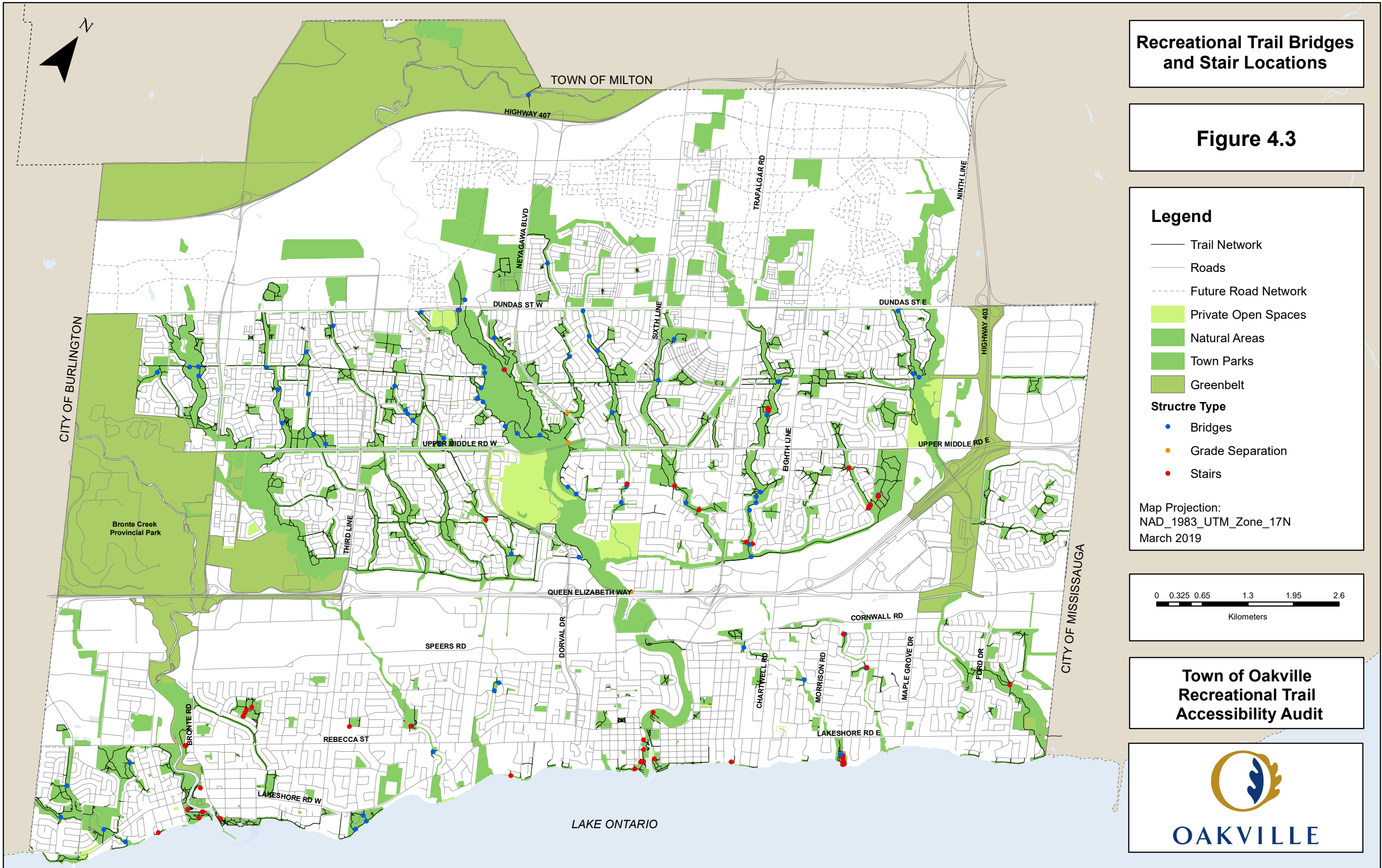
Map Projection:
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Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE





Recreational Trail P-Gate and Bollard Locations

Figure 4.4

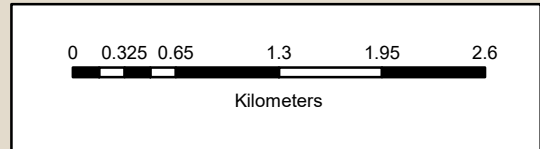
Legend

- Trail Network
- Roads
- Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt

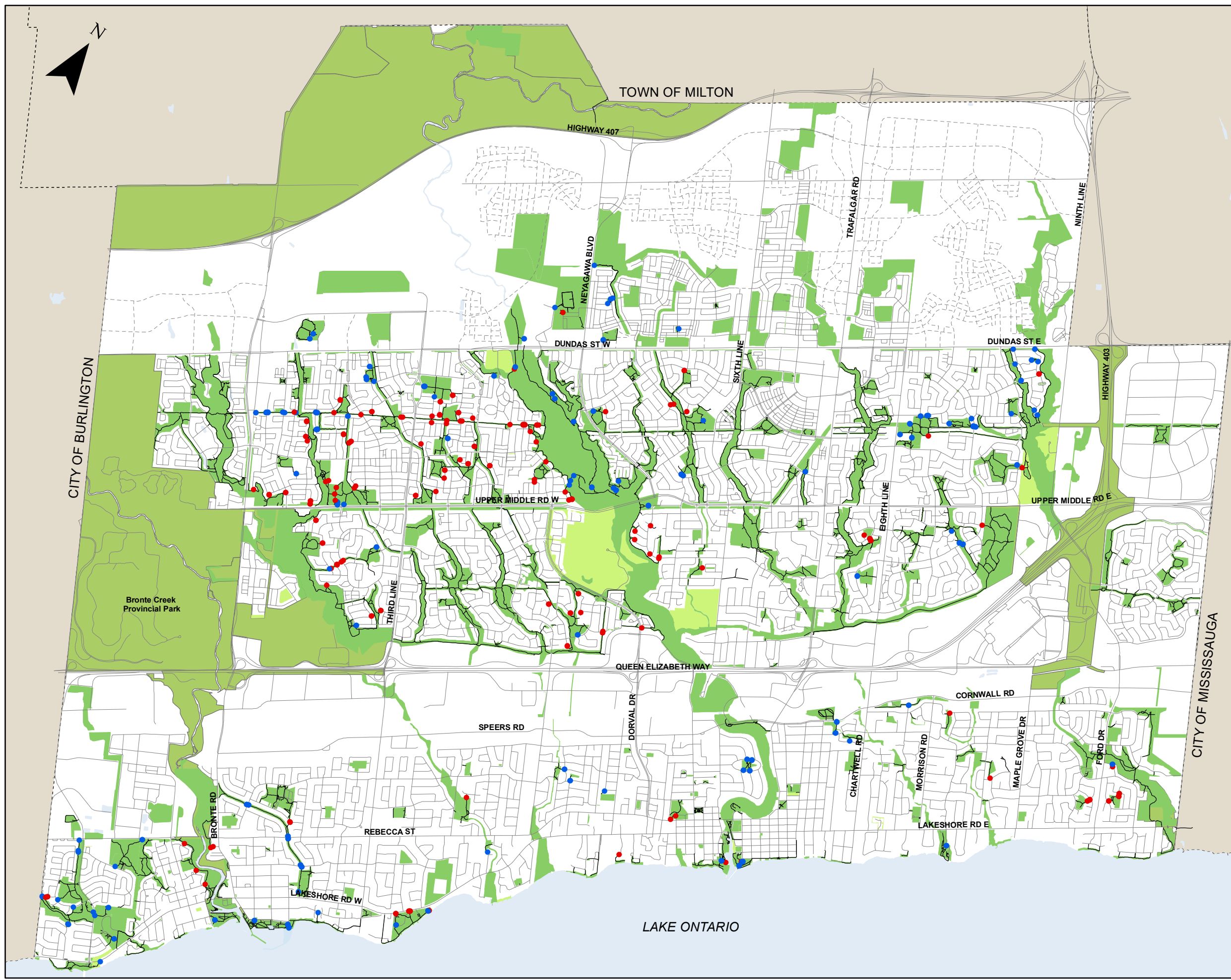
Park P-Gates & Bollards

- Bollard
- P-Gate

Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit



5 Accessibility Strategy

5.1 Accessibility Audit

The first step in developing the accessibility strategy was to assess the accessibility of each recreational trail segment based on the criteria listed in **Table 5.1**. An attribute with a “Yes” response indicates compliance with the Integrated Accessibility Standards of the AODA, while a “No” does not conform.

Trail segments registering “Yes” responses for all attributes were deemed “accessible”. Trail segments not meeting the criteria due to terrain are not required to comply with the Integrated Accessibility Standards of the AODA and were not carried forward for consideration of improvements in the subsequent sections.

TABLE 5.1: ACCESSIBILITY AUDIT CRITERIA

Attribute	State	Accessible?
Surface Type	Asphalt	Yes
	Concrete	Yes
	Crushed Limestone	Yes
	Interlock	Yes
	Flagstone	Yes
	Natural (informal footpath)	No
	Bridge	Yes
	Stairs	No
	Tar and Chip	Yes
	Woodchip	No
Stable Surface	Firm/Stable	Yes
	Unstable	No
Trail Width	≤ 1.0 m	No
	> 1.0 m	Yes
Typical Running Slope (recommended)	> 5%	No
	≤ 5%	Yes
Typical Cross Slope (recommended)	> 2%	No
	≤ 2%	Yes
Overhead Height	< 2.1 m	No
	≥ 2.1 m	Yes
Opening in Surface	< 20 mm	No
	≥ 20 mm	Yes
Edge Protection (if required)	Missing Edge Protection	No
	Edge Protection Present	Yes

5.2 Prioritization of Improvements

Trail segments deemed accessible by nature through the audit (i.e. the terrain is easily navigable) were prioritized for potential improvement. This prioritization is intended to assist the town with planning trail development/redevelopment to meet accessibility standards as well as desired physical conditions.

The research summarized in Chapter 2 and input from the Town provided the basis for the system developed to prioritize the trail segments for redevelopment and/or improvements to meet accessibility standards. The prioritization process comprised five steps:

- ▶ **Step 1 – Determine the Usage Score** based on the proximity of the trail to pedestrian generators. **Table 5.2** summarizes the criteria used to determine the score.
- ▶ **Step 2 – Determine the Physical Score** based on the physical condition of the trail recorded during the field survey. **Table 5.3** summarizes the criteria used to determine the score.
- ▶ **Step 3 – Calculate the Combined Score** by weighting the Usage (20%) and Physical (80%) Scores and rate the trail segments for improvement from highest to lowest priority. A higher score means the segment is a higher priority to make accessible compared to a segment with a lower score.

The Physical Score was assigned a significantly higher weight than the Usage Score. Unlike sidewalks and boulevard multi-use trails, recreational trail use is typically influenced more by condition than proximity to pedestrian generators since trip purpose tends not to be utilitarian in nature. Recreational trail users are inclined to be more interested in the experience than the destination (and reaching it in the shortest amount of time).

- ▶ **Step 4 – Compare the findings to the recommended improvements in the town’s Active Transportation Master Plan (ATMP)** and adjust prioritization accordingly.
- ▶ **Step 5 – Identify other opportunities for improving trail connectivity.** This step was based on a visual analysis of the recreational trail network, considering the relative cost of these improved connections.

Figure 5.1 summarizes the trail network prioritization, with higher ranked trails correlating to a higher priority for improvement.

TABLE 5.2: USAGE SCORE CRITERIA

Attribute (Proximity to)	Criteria	Rating
Transit	Transit stop on segment	5
	Transit stop within 200 m	4
	Transit stop within 400 m	3
	Transit stop within 600 m	2
	Transit stop within 1 km	1
Major Destination (downtown, major employer, mixed use corridor, designated growth area)	Segment is within area OR location is on segment	5
	Within 200 m of area boundary or location	4
	Within 400 m of area boundary or location	3
	Within 600 m of area boundary or location	2
	Within 1 km of area boundary or location	1
School (elementary school, high school or post secondary school)	School on segment	5
	School within 1.6 km	4
	School within 3.2 km	3
	School within 5 km	2
Other Pedestrian Generator (commercial zone, community facility, park, seniors or special needs facility, place of worship)	Segment is within area OR location is on segment	5
	Within 200 m of area boundary or location	4
	Within 400 m of area boundary or location	3
	Within 600 m of area boundary or location	2
	Within 1 km of area boundary or location	1

For the purposes of this study, the presence of park and trail lighting was not directly used to prioritize trail improvements since it is not a condition in the Technical Requirements for Recreational Trails, Section 80.9(1) of the AODA.

TABLE 5.3: PHYSICAL SCORE CRITERIA

Attribute	Criteria	Rating
Surface Stability	Unstable	10
	Stable	0
Trail Width	1 m ≤	10
	> 1 m	0
Condition	D	10
	C	8
	B	2
	A	0
Typical Running Slope	> 5%	10
	Between 1% and 5%	6
	< 1%	0
Typical Cross Slope	> 2%	10
	< 2%	0
P-Gate Condition	Reflective tape not present	5
	Reflective tape present	0
	Missing, broken or needs repair	5
	Present and does not need repair	0
Proximity/Frequency of Risks/Hazards	2 or more risks/hazards	10
	1 risk/hazard	5
	0 risks/hazards	0
Proximity of Vertical Clearance Limitation	1 or more vertical clearance limitations	10
	0 vertical clearance limitations	0

5.3 Rehabilitation Improvement Plan

An improvement plan was developed for the approximately nine percent (20.5 kilometres) of the recreational trail network requiring reconstruction or replacement, and/or to be brought up to an accessible standard. The proposed plan focuses solely on trails that already meet the accessibility criteria or could be made accessible since:

- ▶ It is not recommended for the town to reconstruct/replace facilities that are inaccessible due to topography (i.e. valleyland trails) as these locations would remain highly variable even with the improvement works;
- ▶ The relative severity of the minor or modest deficiencies is highly unlikely to render the facility unusable, impassable or unsafe;
- ▶ The town has an ongoing maintenance and repair program that addresses many minor and modest deficiencies;
- ▶ It would be challenging to identify every potential minor and modest deficiency for rectification in a network of this scale and complexity (variety of surface types, natural features, etc.); and
- ▶ The study focusses on identifying trail segments that have the potential to be accessible and establishing a sustainable improvement program.

Trail segments that cross more challenging terrain were not considered for the plan, as noted in the sections above.

A ten-year program (2019 to 2028) for implementing the recommended rehabilitation improvement plan has been developed assuming an annual expenditure target of approximately \$200,000. This funding level is consistent with the town's budget of approximately \$208,000 in 2017 for trail rehabilitation.

Individual project costs were estimated using benchmark cost estimates. **Table 5.4** summarizes typical benchmark costs for different trail improvements per the town's Active Transportation Master Plan¹². Based on these values, a unit cost of \$100,000 per linear kilometre (or \$100 per linear metre) was selected for cost estimating purposes. Since most of the network is presently hard-surfaced or crushed limestone (granular surfaced), the benchmark cost assumes some new base work (approximately 25%) with half of the excavated material removed from site. The installation of trail signs is also included in this unit cost. It is recognized that the geometry and location of each trail segment will impact the scope of work needed to reconstruct the segment to an accessible standard. As such, the cost estimates derived through this process are considered typical (average) of standard construction techniques and conditions.

¹² Town of Oakville. *Active Transportation Master Plan, Technical Appendix I, Table 1 – Unit Price Schedule*. November 2017.

TABLE 5.4: BENCHMARK COSTS FOR RECREATIONAL TRAIL IMPROVEMENTS

Description	Benchmark Cost (\$ per linear m)
Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting	\$250
Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (Upgrade of Existing Granular Surface)	\$100
Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting	\$140
Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (New)	\$200
Upgrade of Existing Granular Surface Trail to 3.0 metre Wide Compacted Granular Trail Standard	\$50
Off-Road Multi-Use Trail Outside of Road Right-of-Way on Abandoned Rail Bed	\$80
Granular Surfaced Multi-Use Trail in a Woodland Setting	\$120

Table 5.5 summarizes the recommended ten-year rehabilitation improvement plan. Trail segments ranked higher through the prioritization process were given preference for 2019, with descending priority locations assigned to later years. **Appendix B** contains the detailed list of trail segments recommended for improvement in each year from 2019 to 2028.

TABLE 5.5: TEN-YEAR REHABILITATION IMPROVEMENT PLAN

Year	Segments Identified for Improvement	Trail Length (m)	Total Cost
2019	20	2,002	\$200,178
2020	10	2,053	\$205,326
2021	13	2,045	\$204,486
2022	15	2,024	\$202,441
2023	9	2,108	\$210,817
2024	23	2,029	\$202,945
2025	18	2,009	\$200,928
2026	16	2,105	\$210,467
2027	20	2,121	\$212,145
2028	32	2,040	\$203,991
Total	176	20,536	\$2,053,724

Figure 5.2 illustrates the location of the proposed trail improvements over a ten-year program. **Appendix C** provides more detailed maps illustrating the recommended immediate (2019), short-term (2020-2024), long-term (2025-2028) and beyond the ten-year horizon implementation plans.

5.4 Promotion and Education

The study team identified the following initiatives intended to promote and educate users on the recreational trail system and the accessibility of the trail network.

5.4.1 Recreational Trails Education

It is recommended that a public awareness campaign be initiated to better promote the recreational trail system. The campaign should include flyers, advertising, and/or pop-up booths at public events to help communicate the message through a variety of forums and tools. A focus should be placed on emphasizing the extent and accessibility of the trail network.

In early 2018, the town launched its online accessibility map. This tool was developed with the Oakville Accessibility Advisory Committee and provides easy to access information on town accessible features for parks, playgrounds, trails and parking and will help people of all abilities plan activities and travel around town.

5.4.2 Future Promotion Initiatives

Other ideas for future promotion of the recreational trail network include:

- ▶ Creating opportunities to partner and collaborate with Smart Commute Halton initiatives and to achieve common goals of this strategy and the ATMP; related to awareness, route mapping, school travel, etiquette, and transportation demand management;
- ▶ Educating the public on how the trail network is being improved, including communicating the recommendations of this study, through a variety of channels including print, the town's website and social media;
- ▶ Meeting with seniors' centres and groups to inform and educate users on the trail network;
- ▶ Enhancing the utility of and directing users to the town's online Accessibility Mapping. This interactive map displays the accessible features of parks, playgrounds, on- and off-street parking, and recreation trails;
- ▶ Launching a social media campaign to inform and educate users about the trail network;

- ▶ Creating and distributing trail maps that include information on accessibility and trail use/etiquette;
- ▶ Creating interpretive programs for guided or self-guided tours.

Promotion and education initiatives should be funded through council approved capital budgets for trail accessibility improvements or pathway rehabilitation.

5.5 Accessibility Updates to Town Plans, Standards and Guidelines

Pertinent town plans, standards and guidelines were reviewed to assess conformity with the Integrated Accessibility Standards of the AODA, which include:

- ▶ Technical Requirements for Recreational Trails, Section 80.9 (1);
- ▶ Technical Requirements Common to Recreational Trails and Beach Access Routes, Sections 80.11 to 80.13; and
- ▶ Exceptions to the Requirements for Recreational Trails and Beach Access Routes, Sections 80.14 to 80.15.

Proposed modifications are listed in the following sections.

5.5.1 Master Plans

Town of Oakville Active Transportation Master Plan Final Report, November 2017

In Section 3.3 (Designing the Active Transportation Network), it is recommended that the document update the reference to the AODA Technical Requirements for Recreational Trails. Further, this information should also be included in **Appendix D**, specifying the following elements:

- ▶ Minimum clear width;
- ▶ Minimum head room clearance;
- ▶ Trail surface;
- ▶ Openings in the surface;
- ▶ Edge protection;
- ▶ Trail entrance;
- ▶ Signage;
- ▶ Boardwalks; and
- ▶ Ramps.

Parks, Recreation and Library Facilities Master Plan, October 2012

In Section 7 Parkland and Trails Needs and Strategies, it is recommended that the document:

- ▶ In Recommendation #64, include “firm and stable surface” in place of “hard surface”; and
- ▶ Include a statement of general compliance with AODA Technical Requirements for Recreational Trails.

North Oakville Trails Plan, May 2013

In Section 3.3 Supporting Infrastructure, it is recommended that the document:

- ▶ Refer to AODA Technical Requirements for Recreational Trails in Subsection 3.3.1 Boardwalks; and
- ▶ Include a subsection on ramps, with a reference to the AODA Technical Requirements for Recreational Trails.

In Section 3.5 Trail Design Guide – Major Trail (Type A), it is recommended that the document:

- ▶ For “Surface Material”, note that the surface should be firm and stable; and
- ▶ For “Other”, provide or refer to AODA Technical Requirements for Recreational Trails, including the following elements:
 - Openings in the surface;
 - Edge protection;
 - Trail entrance; and
 - Trail head signage.

In Section 3.5 Trail Design Guide – Major Trail (Type B), it is recommended that the document:

- ▶ For “Surface Material”, note that the surface should be firm and stable; and
- ▶ Add “Other” section and provide or refer to AODA Technical Requirements for Recreational Trails, including the following elements:
 - Openings in the surface;
 - Edge protection;
 - Trail entrance; and
 - Trail head signage.

5.5.2 Design Standards

Pathway Barricade (P-Gate) – Drawing No. F-8

It is recommended that the drawing include:

- ▶ A note specifying the minimum trail width of 1,000 millimetres;
- ▶ A note specifying the minimum trail entrance opening of 850 millimetres; and
- ▶ A reference to AODA Technical Requirements for Recreational Trails.

Removable Bollard – Drawing No. F-9A

It is recommended that the drawing include:

- ▶ A note specifying the minimum trail entrance opening of 850 millimetres, shown as spacing on either side of the bollard (when bollards are used at trail entrance);
- ▶ A note specifying the minimum trail width of 1,000 millimetres; and
- ▶ A reference to AODA Technical Requirements for Recreational Trails.

Permanent Bollard – Drawing No. F-9B

It is recommended that the drawing include:

- ▶ A note specifying the minimum trail entrance opening of 850 millimetres, shown as spacing on either side of the bollard (when bollards are used at trail entrance);
- ▶ A note specifying the minimum trail width of 1,000 millimetres; and
- ▶ A reference to AODA Technical Requirements for Recreational Trails.

Park Bench on Concrete Slab – Drawing No. PF-1

It is recommended that the drawing include a note specifying the minimum trail width of 1,000 millimetres or show a minimum 1,000 millimetre offset from the far side of the trail to the park bench slab.

Park Identification Signage – Drawing No. PF-5

It is recommended that the drawing be revised per Section 6.3.



Oakville Universal Design Standards for Town Facilities V1.1, September 2015

The Oakville Universal Standards for Town Facilities does not include requirements for recreational trails. It is recommended that provisions be included.

Town of Oakville Design of Public Spaces, Procedure MS-ACC-001-006

The Corporation of the Town of Oakville Procedure MS-ACC-001-006 Design of Public Spaces can be found on the town's website (www.oakville.ca/townhall/ms-acc-001-006.html). It already refers to the AODA Technical Requirements for Recreational Trails, and therefore no changes are required.

5.5.3 Guidelines and By-laws

North Oakville Urban Design and Open Space Guidelines, November 2009

In Section 3.6.2.1 Community Parks, under the Design Guidelines, it is recommended that the document note the need for walkways and cycling paths to comply with AODA Technical Requirements for Recreational Trails, under item 'd'.

In Section 3.8.2 Trail Design, under the Design Guidelines, it is recommended that the document include an item 'e' noting the need for trails to comply with AODA Technical Requirements for Recreational Trails.

In Section 3.9.6.1 Public Signage, it is recommended that the document note the town's signage standards for recreational trails, once developed and adopted.

Additionally, it is recommended that the note stating the AODA "currently being developed" throughout the document be revised to refer to the current AODA and related regulations.

Parks By-Law Number 2013-013

The By-Law Number 2013-013, A By-law to Prescribe Rules and Regulations for Parks within the Town of Oakville and to repeal By-law 1999-159, as amended does not include requirements for recreational trails. It is recommended that provisions be included.

5.6 Accessibility Checklist

The checklist in **Appendix D** provides guidance for the design of new and redeveloped recreational trails to ensure conformity with the Integrated Accessibility Standards of the AODA. The checklist consists of three parts:

Part 1: Identify any Exceptions to the AODA Requirements

Trail segments located in certain settings are not required to comply with the Integrated Accessibility Standards of the AODA per Exceptions to the Requirements for Recreational Trails and Beach Access Routes, Sections 80.14 to 80.15. These include:

- ▶ Sites protected under the:
 - Ontario *Heritage Act and Endangered Species Act*,
 - Canada *National Parks Act and Historic Sites and Monuments Act*, and
 - United Nations Educational, Scientific and Cultural Organisation's World Heritage List of sites under the *Convention Concerning the Protection of the World Cultural and Natural Heritage*;
- ▶ Locations where complying with the requirements would adversely affect, directly or indirectly, water, fish, wildlife, plants, invertebrates, species at risk, ecological integrity or natural heritage values; and
- ▶ Existing physical or site constraints prohibit modification or addition of elements, spaces or features.

Part 2: Determine Trail Function and Context

Trail segment(s) that serve an accessible function need to be designed to conform to the Integrated Accessibility Standards of the AODA. Examples include:

- ▶ An access route to an accessible playground within a park;
- ▶ A school route within a utility corridor;
- ▶ A recreational trail within the valleylands; and
- ▶ A major trail within the Active Transportation Network.

Part 3: Consultation and Mitigation

For trail segment(s) that cannot conform (entirely) to the Integrated Accessibility Standards of the AODA when constructed new or reconstructed, the town could, for example:

- ▶ Review the non-conforming trails design(s) with the Accessibility Advisory Committee and/or other interested stakeholders [Consult];
- ▶ Propose alternative route(s) that would still provide a means of accessible access [Mitigate]; and
- ▶ Include ramps in the design to overcome a barrier for some users, making the trail more accessible [Mitigate].

5.7 Recommendations

Based on the findings of this Chapter, it is recommended that the Town of Oakville:

- ▶ Endorse and implement the ten-year Rehabilitation Improvement Plan to remove physical barriers and improve safety and security by addressing those items identified in this report;
- ▶ Undertake a public awareness campaign to promote the town's recreational trails system and accessibility standards;
- ▶ Update their master plans, design standards and guidelines and by-laws to reflect current accessibility requirements; and
- ▶ Adopt and apply the proposed Accessibility Checklist in **Appendix D** when planning or designing new or redeveloping existing trails to ensure compliance with the Integrated Accessibility Standards of the AODA.



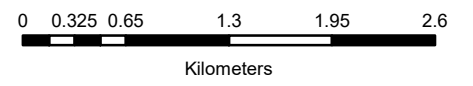
Recreational Trails Prioritization

Figure 5.1

Legend

- Roads
- Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- Trail Prioritization Score**
- 0-10
- 11-20
- 21-30
- 31-40
- Non Accessible (by nature)

Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE





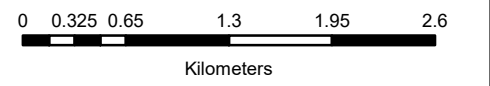
Recreational Trails Rehabilitation Plan

Figure 5.2

Legend

- Roads
- Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- Rehabilitation Year**
- 2019
- 2020 - 2024
- 2025 - 2029
- 2030+
- Non Accessible (by nature)

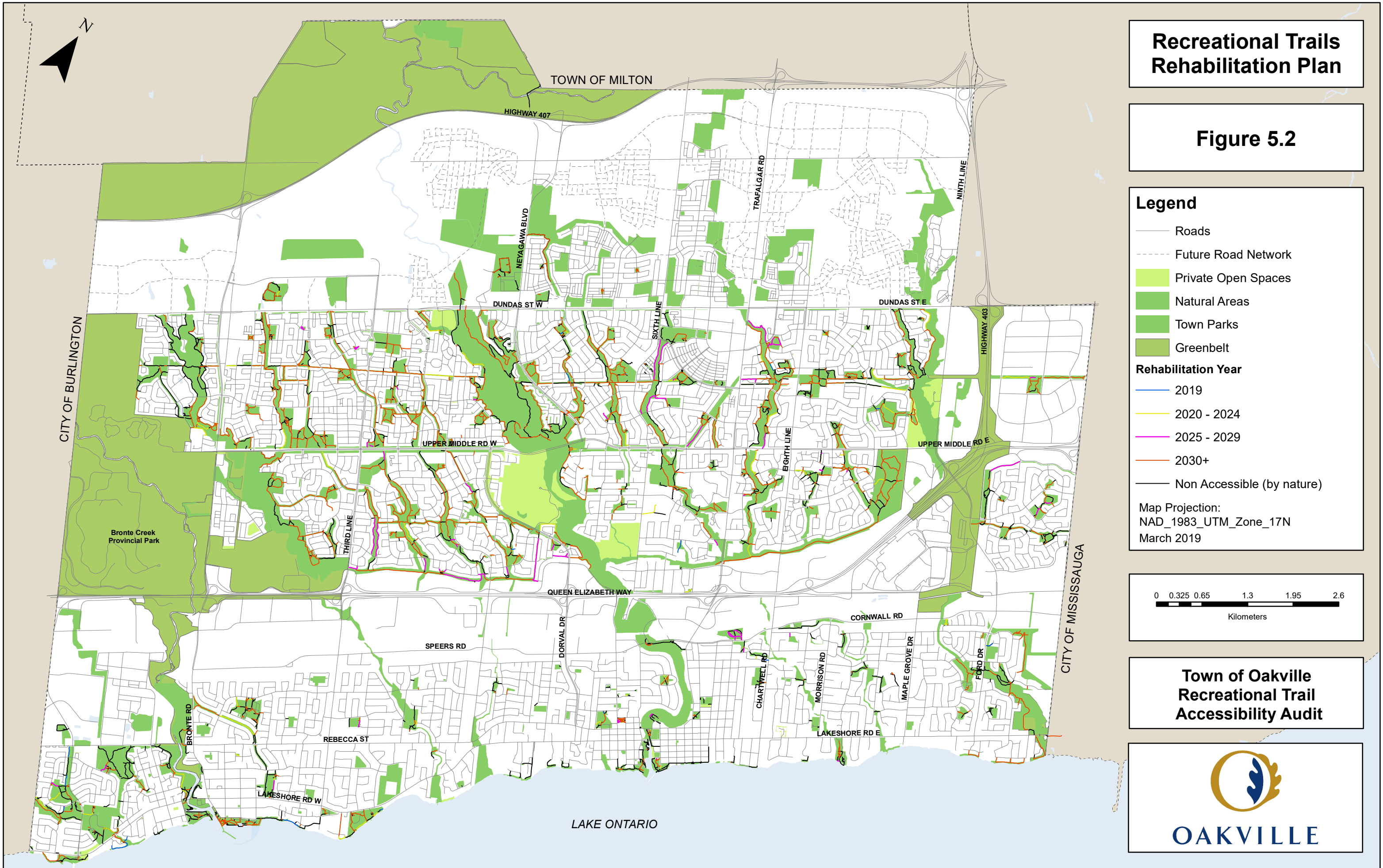
Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE



6 Trail Signage Strategy

6.1 Signage Audit

The town’s recreational trail network includes over 1,040 regulation, warning, information and directional signs to guide and assist users travelling the system. **Figure 6.1** illustrates some of the current signage in place locally.

As part of the data collection exercise, existing trail signs were inventoried, assessed and photographed. The following information was recorded for each sign:

- ▶ Location using the GPS device;
- ▶ Type per the categories listed in **Table 6.1**; and
- ▶ Physical condition based on the rating system detailed in **Table 6.2**. The table also provides recommended remedial actions for each sign condition.

TABLE 6.1: EXISTING SIGN TYPES

Sign Type	Description
Trail and Minor Trail Access	Trail name and nearby roadways and trails
Regulation	Rules/by-laws of the park and/or trail
Trail Name	Blue and yellow Oakville trail name signs
Branding	Keeping Oakville Beautiful/Adopt-a-trail
Trail Marker	Trail names only
Other	Historic, public notices, educational

TABLE 6.2: SIGN CONDITION RATINGS AND RECOMMENDED REMEDIAL ACTIONS

Condition Rating	Description	Recommended Remedial Action
Poor	Cracked, not legible and/or falling over	Remove/Replace
Fair	Partially legible, bent or leaning	Clean, fix/adjust or replace as needed
Needs Updating	Does not match other trail name signs	Update
Good	Fully legible, straight, no compliance issues	Do nothing

Table 6.3 summarizes the existing condition of the trail network signs. Approximately 98% of the signs were rated to be in “Good” or “Fair” condition, with only two percent (2%) classified as “Poor”. Signs in “Poor” condition included regulation signs (16), trail markers (4) and other signs (5).

TABLE 6.3: EXISTING SIGN CONDITION

Sign Type	Condition Rating			Total	% Total
	Good	Fair	Poor		
Trail and Minor Trail Access	22	2	0	24	2%
Regulation	155	104	16	275	26%
Trail Name	352	0	0	352	34%
Branding	255	43	0	298	29%
Trail Marker	3	42	4	49	5%
Other	31	11	5	47	4%
Total	818	202	25	1,045	100%
% Total	79%	19%	2%	100%	

Although all Trail Name signs were rated to be in “Good” condition, a total of 78 were found to “Need Updating” (22% of the signs). Signs in this category did not match the typical Town of Oakville blue and yellow branding.

Not all existing signs meet the specifications of the recommended standards. For signs that do not comply but are in “Good” condition, it is recommended that this signage be replaced when the condition of the sign deteriorates or the information provided on the sign is inadequate or inaccurate.

The audit found that several of the Integrated Accessibility Standards of the AODA pertaining to signage can be fulfilled by installing trailhead signs. Since most of the information required by the regulation is not currently part of the existing Oakville sign template, it is recommended that trailhead signs be installed before addressing other shortfalls within the existing inventory.

6.2 Existing Design Standards

6.2.1 Current Town Documents

The following documents outline current design practices followed by the town for signage:

- ▶ The **Oakville Universal Design Standards (OUDS)** outline the practices followed for the design of town facilities to ensure they are inclusive, user friendly and accommodating. Although most practices specified in the OUDS apply to indoor signage, the basic principles set out in the

document can also be employed for park and trail signs. For example, signs should be uncluttered, incorporate plain language and use graphic symbols to accommodate individuals with limited literacy or that do not speak English.

- ▶ The **North Oakville Urban Design Guidelines (NOUDG)** set out physical design concepts to ensure the development of a high quality, sustainable and integrated employment and residential community. Section 3.8.2 (Trail Design) recommends the development of a continuous trail network for North Oakville and its adjacent municipalities. A consistent, easy to understand signage system will be an important element of this plan, helping to guide and inform individuals using the network.
- ▶ The **North Oakville Trails Plan (NOTP)** includes text referencing the design of trail signs (Section 3.4.1). The document states that signs should be coordinated and where applicable, compliant with the most current Integrated Accessibility Standards of the AODA.

6.2.2 Integrated Accessibility Standards

The Design of Public Spaces provisions within the Integrated Accessibility Standards of the AODA provides some guidance in the design of accessible recreational trail signage. It is also recommended a unified system of clear, concise and consistent recreational trail signage accessible by people of all abilities be developed.

The Integrated Accessibility Standards of the AODA state that a recreational trail must have signage at each trailhead denoting the:

- ▶ 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; and
- ▶ Location of amenities, where provided.

The signage text must be:

- ▶ High tonal contrast with its background to assist with visual recognition; and
- ▶ Sans serif font characters.

If the sign is overhanging the trail, a clearance of 2,100 millimetres must be provided between the bottom of the sign and the trail surface. It is noted that existing Town of Oakville standards and practices do not fully comply with this requirement of the Integrated Accessibility Standards.

6.3 Recommended Design Standards

The following summarizes the recommended design standards for wayfinding, regulation and accessibility signs located on recreational trails in the Town of Oakville (also refer to **Table 6.4** for a condensed version of these standards). The standards are based on the findings of the current practices review summarized in Section 2.2, with the City of Mississauga guidelines favoured given proximity and the benefits of consistency in application between the two adjoining jurisdictions.

Other town plans (such as the ATMP or the Wayfinding Initiative for Downtown Oakville) recommend wayfinding strategies as a means to achieve a variety of goals – navigation and active transportation being key ones. The opportunity to collaborate on and coordinate with other plans, to develop a comprehensive wayfinding strategy, should be explored. It is also recommended that connectivity between the recreational trail network and active transportation network be promoted through wayfinding and network signs.

The new trail sign system (**Figures 6.3 to 6.8**) was developed with accessibility in mind. Large fonts, high colour contrast and sentence casing for content maximizes legibility. Colour blindness was also considered with the implementation of varying shades, distinct symbols and accompanying descriptions. The design combines all the usual surrounding trail etiquette and warning signs into one clear and concise sign, reducing the amount of visual clutter on town trails.

Icons are the main feature of the recommended design, allowing information to be communicated across quickly and efficiently. The icons also allow for people with varying degrees of literacy (children) and/or people with language barriers to get a sense of the hazards and trail amenities. The icon set will be consistent so that it will become easily recognizable when moving from trail to trail, incorporating universal icons when possible and new icons created when necessary. Surface types, trail difficulty, etiquette, hazards and prohibited items are prominently displayed and have a colour system to quickly categorize the information (similar to a traffic light; green = etiquette, yellow = hazards, red = restricted).

Large maps are part of the major trailhead design, showing the trail route and amenities (with a legend) so residents/users can plan their route. Town contact information and branding (logo and Oakville blue) is clear and easy to identify.

6.3.1 Wayfinding Signs

Wayfinding signs convey information to aid the trail user to determine or confirm their destination and/or direction of travel. As noted through the current practices review, branding is an important element of wayfinding sign design. Consistent styling and colours help form a positive image of the recreational trail network and can reassure users who may feel lost.

There are four types of wayfinding signs recommended for Oakville:

A. Major Trailhead Sign

Trailhead Signs should be the largest signs on the trail network. These signs, located at the beginning of every route, provide important information about the trail. It is recommended that the following information be included on all Trailhead Signs in Oakville:

- ▶ Route name;
- ▶ Small network map (showing general location of route);
- ▶ Large, detailed, route map (including location of amenities);
- ▶ Route legend;
- ▶ Route length(s);
- ▶ Trail surface type;
- ▶ Route difficulty (see Chapter 7 for Level of Difficulty Rating System);
- ▶ Maximum and average trail grade;
- ▶ Maximum and average trail cross slope;
- ▶ Minimum and average trail width;
- ▶ Regulation information
- ▶ Contact information for emergency or maintenance issues; and
- ▶ Sponsorship credits.

Trailhead sign sizes vary between municipalities. It is recommended that the signs in Oakville be at least 1200 millimetres (wide) x 1800 millimetres (tall) to ensure all required information can be displayed at a reasonable size. **Figure 6.2** illustrates the suggested content to be included on these signs.

B. Minor Trailhead Sign

Trail Signs are used to convey important information at junctions and reassure users during longer sections of uninterrupted trail they remain on the correct route. It is recommended that Trail Signs be provided at junctions with the following information:

- ▶ Name of route;
- ▶ Distance to major destination(s), if applicable;
- ▶ Direction to major destination(s), if applicable;
- ▶ Level of Difficulty of the following section (including notice of stairs along the route when appropriate);
- ▶ Direction to amenities (washrooms, water, picnic and benches);
- ▶ Regulation information; and
- ▶ Trail characteristics.

In most municipalities, sign colours are typically consistent with corporate standards. For Oakville, it is recommended that trail signs be blue and white. The use of contrasting colours helps ensure the sign is easy to read for all users. **Figure 6.2** illustrates the suggested content to be included on these signs.

Although not a requirement, it is preferable to use positive language on trail regulation signs (“Place Litter in Bins”) rather than negative messages (“Do Not Litter”). This helps to foster feelings of optimism and choice rather than placing restrictions on leisure time. It is recommended that trail regulation signage use black text on a white background and pictograms whenever possible to increase contrast, improve user comprehension and clarity and achieve consistency. **Figure 6.2** illustrates the suggested content to be included on these signs. Specific pictogram lists should be customized for each trail access point.

C. Minor Trail Access Sign

The extensive network of recreational trails meanders through the different neighbourhoods of Oakville, crossing roads and other trails and creating a multitude of access points. While these minor access points do not require a full Trailhead Sign, it is recommended that smaller Minor Trail Access Signs be provided with the following information:

- ▶ Direction to major destination(s) and amenities;
- ▶ Distance to major destination(s) and amenities; and
- ▶ Route Level of Difficulty (including notice of stairs when appropriate).

It would also be beneficial to include:

- ▶ The name of the crossing road on the back of the Minor Trail Access Sign (facing users that are leaving the trail) or on a nearby sign post;
- ▶ Information on direction and distance to a more major road to help orient users not familiar with the area.

Figure 6.2 illustrates the suggested content to be included on these signs.

D. Trail Name/Identification Sign

Trail Name Signs already exist in Oakville at both minor access points and trailheads. These wooden signs provide the trail name in yellow text on a blue background and the municipal address (where appropriate), as shown on **Figure 6.1**. It is recommended that the signs remain in place, as they are well recognized within the community. Over time, the town may wish to consider replacing these signs with blue and white signage consistent with its other installations.

6.3.2 Regulation Sign

Regulation signs specify “permitted” and/or “prohibited” trail activities. They may also specify rules such as “cyclists yield to pedestrians” or indicate fines that may be given to users that violate the permitted/prohibited activity. In some municipalities (such as Hamilton), these signs are referred to as Trail Etiquette Signs.

It is recommended that regulation information be provided at all trail entrance points to ensure users are aware of proper operating practices before accessing the trail. In some cases, this information will already be included on the wayfinding signs, in which case a separate sign is not required.

6.3.3 Accessibility Sign

These signs should be used to complement existing wayfinding signs. Accessibility signs convey information about the relative ease of accessing and using a recreational trail. As outlined in Section 6.3.1, the required information includes route length, trail surface type, average and maximum running and cross slope, average and minimum trail width, and location of amenities such as washrooms and picnic areas.

It is recommended that accessibility information be included on Trailhead Signs and Trail Signs but not for Minor Trail Entrances Signs. Information about route difficulty, amenities and the presence of stairs should be provided in addition to the required material.

It is recommended that recreational trail network map and information listed above be provided on the town’s website in an accessible format. Short and concise language should be used wherever possible.

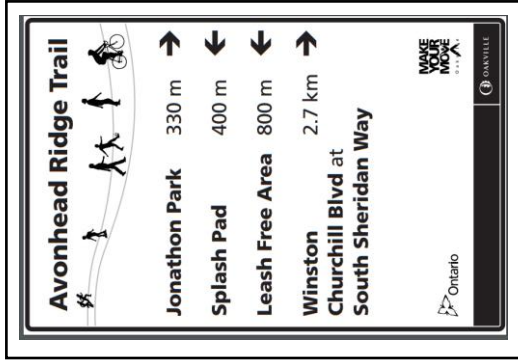
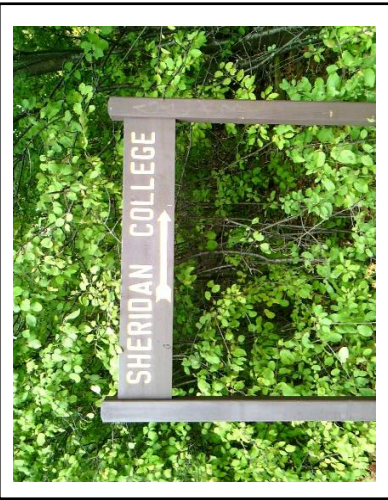
6.4 Recommendations

Based on the findings of this Chapter, it is recommended that the Town of Oakville:

- ▶ Adopt and implement the proposed Trail Signage Strategy, which will consolidate multiple sign types and formats, ensure consistency in sign application and meet the requirements of the AODA.
- ▶ Explore opportunities to collaborate and coordinate with other town plans, to develop a comprehensive wayfinding strategy. Also, connectivity between the recreational trail network and active transportation network be promoted through wayfinding and network signs.

TABLE 6.4: RECREATIONAL TRAIL SIGN STANDARDS (QUICK REFERENCE)

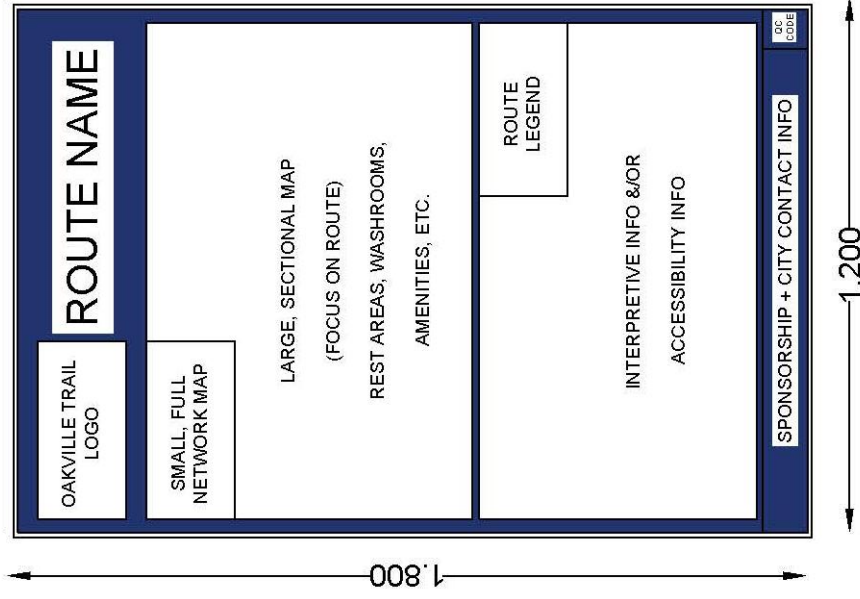
Type of Sign	Description	Prerequisites for Installation	Regulations	Difficulty Rating	Trail Characteristics
WAYFINDING:					
A. Major Trail Head (with map)	To be installed at major trail entrances. Can be a walk, bike or drive-to location.	Parking, washroom, bicycle parking	Yes	Yes	Yes
B. Major Trail Head (no map)	To be installed at primary trail entrances. Minimum 2 kilometre trail system.	Bicycle parking, benches, on-street parking may be available but not required	Yes	Yes	Yes
C. Minor Trail Access	To be installed in conjunction with a Minor trail sign only where a destination location is on route.	Destinations: <ul style="list-style-type: none"> ▶ Neighbourhood or Community Park ▶ Community Center ▶ Waterfront Park 	No	Yes	No
D. Trail Name/ Identification	Oakville branded wood engraved signs.	Installed at all major and minor trail heads (1 per road crossing)	No	No	No
REGULATION	Rules, bylaw and contact information.	Major or minor access points (park or trail)	Yes	No	No
ACCESSIBILITY	Trail characteristics and difficulty rating. Used to supplement existing signs.	Retrofit installations at public request and justified locations	No	Yes	Yes



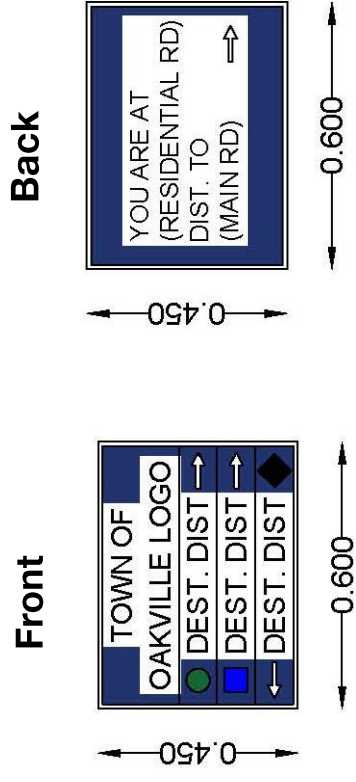
Existing Oakville Trail Signage

Figure 6.1

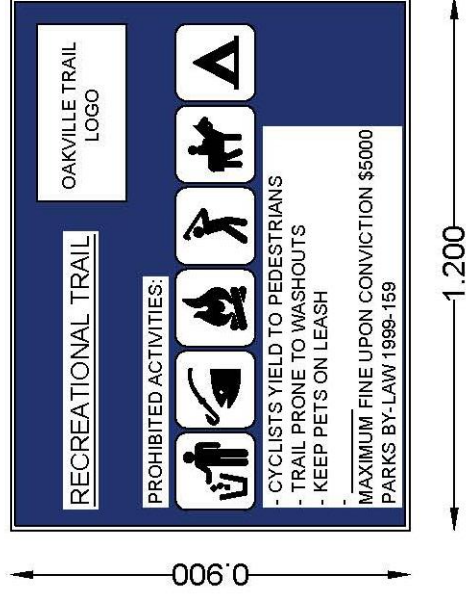
Trailhead Sign



Trail Sign / Minor Trail Access Sign



Regulation Sign



Suggested Trail Signage

Figure 6.2

Large trail title

High colour contrast for visibility

Town brand easily identifiable



Large subheaders

Trail information (difficulty, surface, etc) is clear

- Icons allow for varying literacy levels, language barriers - Universal icons used when possible
- Consistent icon set for recognition
- Concise descriptions to support visuals
- Categorized by colour for quick identification

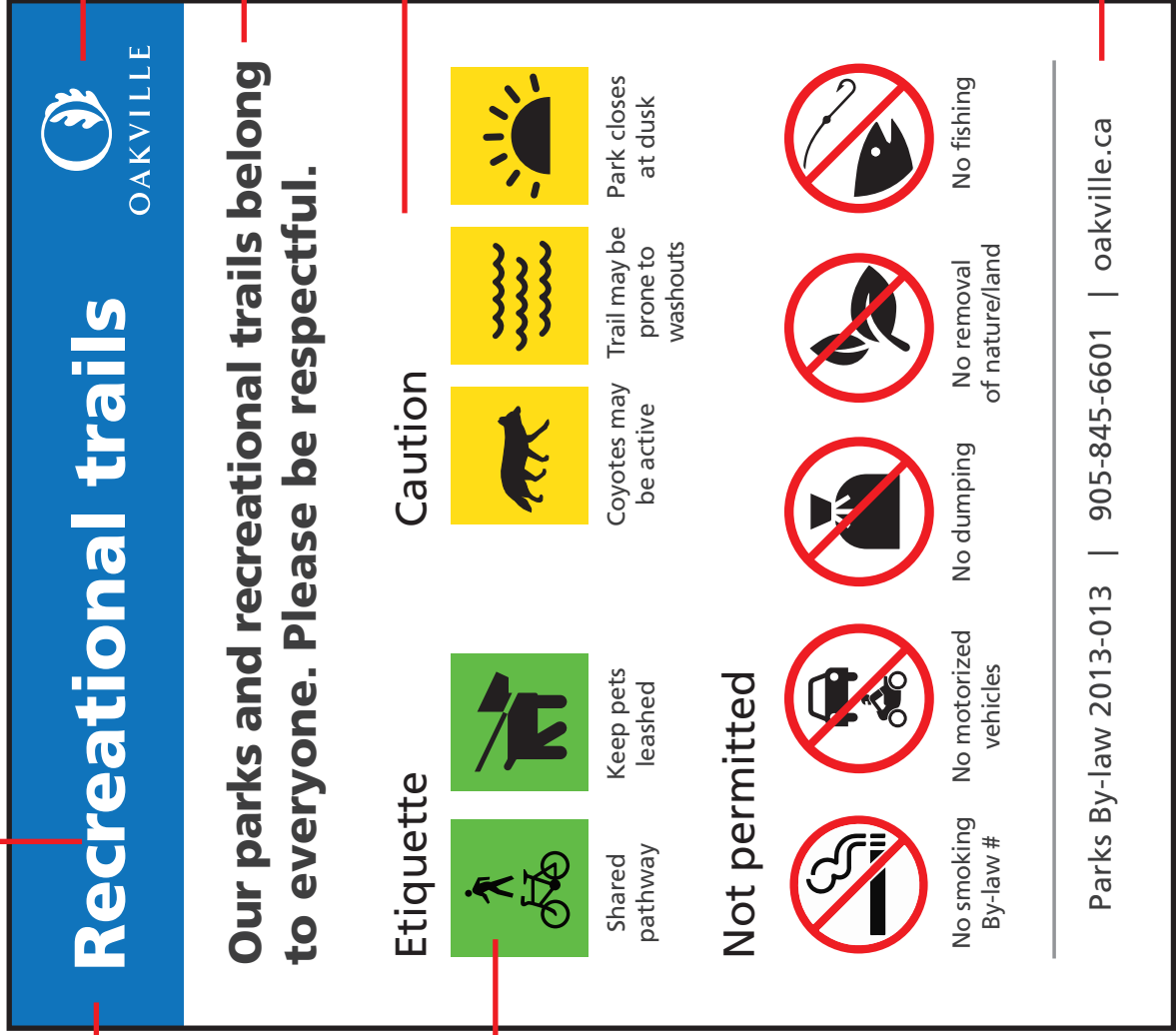
Clear town contact information

Large trail map featuring route and amenities

Major trailhead sign (recommended)

Figure 6.3

High colour contrast for visibility



Town brand easily identifiable

Large subheaders


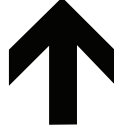

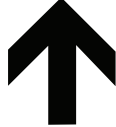
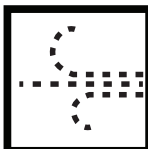

Clear town contact information

Large sign title

- Same icon features as major trailhead
- Icons allow for varying literacy levels, language barriers
- Universal icons used when possible
- Consistent icon set for recognition
- Concise descriptions to support visuals
- Categorized by colour for quick identification

Regulation sign (recommended)

Figure 6.4

<p>Large titles</p>	<p>High colour contrast for visibility</p>	<p>Trail difficulty displayed</p>
<p>Neyagawa trail</p>	 <p>easy</p>	 <p>300 m</p>
<p>Waterfront trail</p>	 <p>moderate</p>	 <p>1 km</p>
<p>Splash pad</p>		 <p>150 m</p>

Trail and amenity distance shown with directional arrows for navigation

Minor trail access sign (recommended)

Figure 6.5

Large trail title

High colour contrast for visibility

Town brand easily identifiable

Neyagawa Trail

OAKVILLE

Length	5.5 km	Surface	crushed limestone
Difficulty	easy	Running slope	Easy
		Cross Slope	2.5%
		Min. width	3 m

Our parks and recreational trails belong to everyone. Please be respectful.

- Pets must be leashed and picked up after
- Cyclists yield to pedestrians
- Park closes at dusk
- No dumping of waste
- No removal of nature
- No motorized vehicles
- No golfing in parks

For a full list of park by-laws, visit oakville.ca.

No smoking By-law #	Shared pathway	Not maintained in winter	Coyotes may be active	Trail prone to washouts

Trail map with amenities

Legend

Parks By-law 2013-013
905-845-6601 | oakville.ca

Trail information (difficulty, surface, etc) is clear

Large subheaders

Prohibited actions in high contrast black and white

- trail etiquette/hazards displayed in short, concise descriptions

Priority hazards featured

Clear town contact information

Large trail map featuring route and amenities

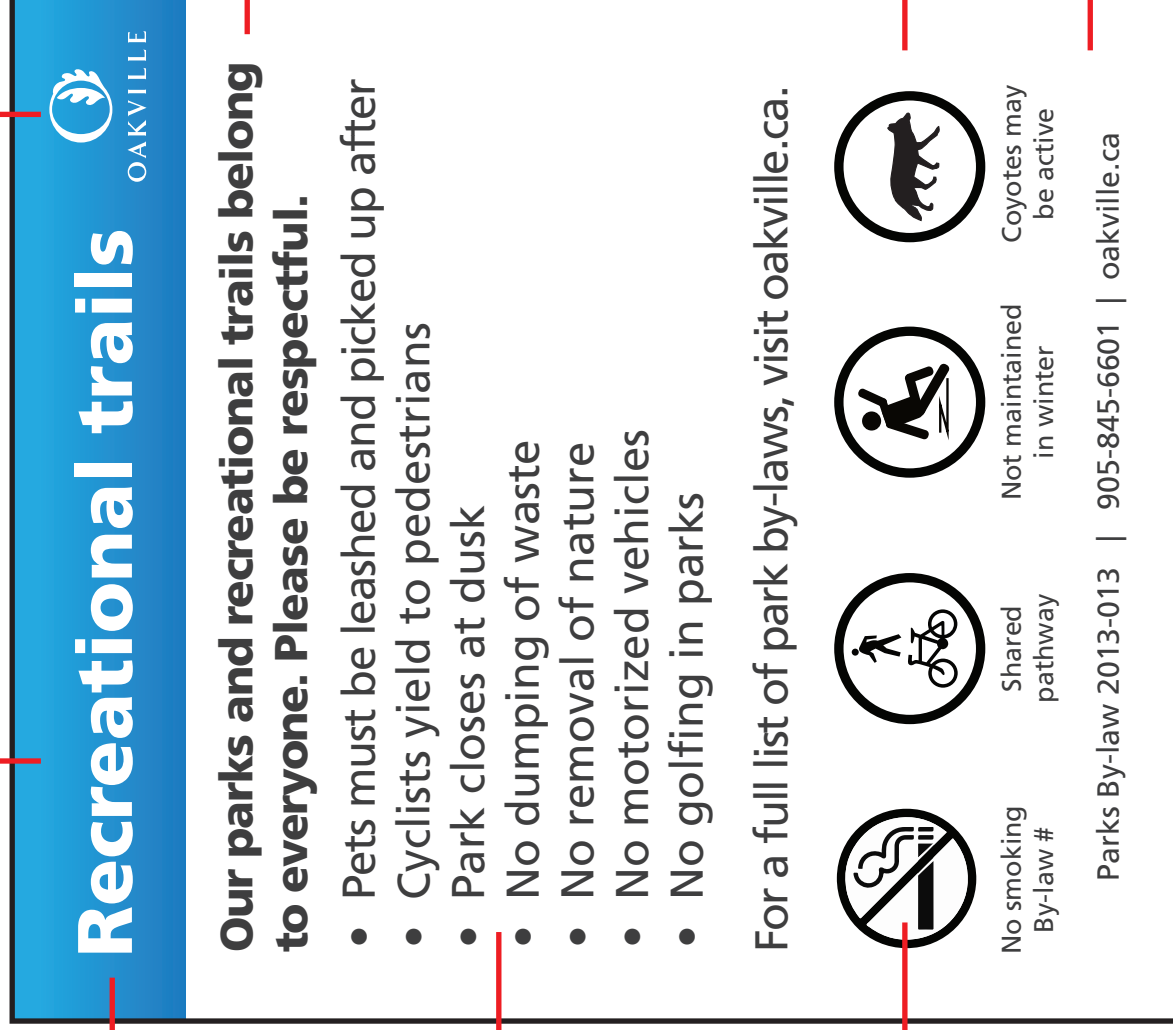
Major trailhead sign (option 2)

Figure 6.6

Large sign title

High colour contrast for visibility

Town brand easily identifiable



Large subheaders

- Same features as major trailhead
- trail etiquette/hazards displayed in short, concise descriptions




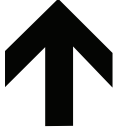
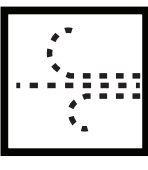

Prohibited actions in high contrast black and white

Priority hazards featured

Clear town contact information

Regulation sign (option 2)

Figure 6.7

<p>Large titles</p>	<p>Neyagawa trail</p>	<p>Trail difficulty displayed</p>	 <p>easy</p>  <p>300 m</p>
<p>High colour contrast for visibility</p>	<p>Waterfront trail</p>	<p>Trail difficulty displayed</p>	 <p>moderate</p>  <p>1 km</p>
<p>High colour contrast for visibility</p>	<p>Splash pad</p>	<p>Trail difficulty displayed</p>	  <p>150 m</p>

Trail and amenity distance shown with directional arrows for navigation

Minor trail access sign (option 2)





Figure 6.8

7 Level of Difficulty Ratings

7.1 Rating System

The introduction of a Level of Difficulty Rating System would help users select (or avoid) trail routes that best (or least) meet their skills and abilities. **Table 7.1** proposes a rating system akin to the ski slope rating system, using a combination of colours, line styles and symbols to communicate trail difficulty (accessibility) to users. It is recommended that the difficulty rating be indicated on recreational trail signs and included with published and online information about the network.

TABLE 7.1: LEVEL OF DIFFICULTY RATING SYSTEM

Difficulty Rating	Symbol and Line Style	Criteria
Accessible		<ul style="list-style-type: none"> ▶ Paved surface, firm/stable, barrier free ▶ 0-5% running slope, 0-2% cross slope ▶ ≥1 metre width, 2.1 metre vertical clearance ▶ Rest areas and trail amenities on route ▶ Accessibility information at entrances and on route
Easy		<ul style="list-style-type: none"> ▶ Hard surface, firm/stable, barrier free, structures present (e.g. bridges) ▶ 0-5% running slope, 0-2% cross slope ▶ ≥1 metre width, 2.1 metre vertical clearance
Moderate		<ul style="list-style-type: none"> ▶ Hard surface, firm/stable ▶ Minor barriers present ▶ 5-10% running slope, 2-8% cross slope ▶ ≥1 metre width, 2.1 metre vertical clearance
Difficult		<ul style="list-style-type: none"> ▶ Natural or hard uneven surface ▶ Major barriers present ▶ > 10% running slope, > 8% cross slope ▶ <1 metre width

Any trail rated “Accessible” is considered accessible to wheelchairs and meets the requirements specified in the Integrated Accessibility Standards of the AODA.

The amenities specified on trailhead signs should include washrooms, benches, water bottle fillers, and picnic areas. The location of stairs should be also indicated.

Since most trail routes in Oakville rarely have only one path option to follow, it is recommended that the Level of Difficulty of each trail segment be indicated on the detailed trailhead route map and conveyed to users through the town's website and other communication channels. Providing this information in a consistent, simplified manner will help users select trail routes that best meet their skills and abilities.

7.2 Trail Segment Ratings

The criteria summarized in **Table 7.1** provided the basis for assigning a difficulty rating to each trail segment in the network. The governing criteria (i.e. the worst condition of all criteria) determined the overall segment difficulty rating. Using a similar approach, an overall difficulty rating was established for all named routes in the network based on a review of the individual segments comprising the route.

Figure 7.1 illustrates the Level of Difficulty ratings for all trail segments.

Note: Segments are varied lengths of trail that begin and end based on how they were input into the town's Geographic Information System (GIS).

Figure 7.2 illustrates the difficulty rating of each trail route (each route was determined by the trails name. The network appears more difficult and less accessible at the aggregate route level since the worst difficulty rating is applied over more segments.

7.3 Recommendations

Based on the findings of this Chapter, it is recommended that the Town of Oakville:

- ▶ Adopt the proposed Level of Difficulty Rating System, which will enhance the trail user experience and help users select trail routes that best meet their skills and abilities.



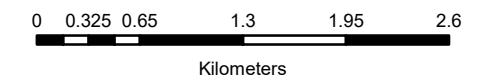
Level of Difficulty by Trail Segment

Figure 7.1

Legend

- Roads
- Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- Level of Difficulty (Segment)**
- Accessible
- Easy
- Moderate
- Difficult
- Non Accessible (by nature)

Map Projection:
 NAD_1983_UTM_Zone_17N
 March 2019



Town of Oakville Recreational Trail Accessibility Audit



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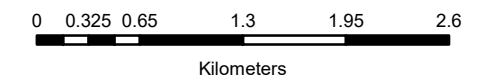
Level of Difficulty by Trail

Figure 7.2

Legend

- Roads
- - - Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- Level of Difficulty (Trail)**
- Accessible
- Easy
- Moderate
- Difficult
- Non Accessible (by nature)

Map Projection:
 NAD_1983_UTM_Zone_17N
 March 2019



Town of Oakville Recreational Trail Accessibility Audit



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8 Summary and Recommendations

8.1 Summary

The following is a summary of the Recreational Trail Accessibility Audit data:

- ▶ The 237.5 kilometres of recreational trails under the jurisdiction of the Town of Oakville are in good condition overall. Only 2% of the trails (by length) require major repairs or need immediate attention;
- ▶ Most of the trail network (by length) meets the width (98%), running slope (88%) and cross slope (65%) requirements of the Integrated Accessibility Standards of the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA);
- ▶ Most trails (by length) (98%) are hard surfaced and stable, such as crushed limestone (66.5%), asphalt (19%) and concrete (6.5%);
- ▶ There are approximately 1,100 park and trail features (benches, bike racks, drinking fountains/bottle filler and garbage receptacles), 124 bridges, 64 stairs, 219 P-gates and 173 bollards on the recreational trail network, with most in good condition; and
- ▶ Most of the 1,045 trail signs were found to be in good condition (79%), with only a few rated poor (2%). Although all Trail Name signs were considered in good condition, several need updating to match the typical Town of Oakville blue and yellow branding (22%).

8.2 Recommendations

The findings of this report validate the ongoing work the Town of Oakville is currently performing to support their diverse and extensive recreational trail network including planning, design and maintenance. Therefore, many of the recommendations contained within this report are in support of continuing many existing practices and initiatives, which include:

- ▶ Continue to maintain a dialog with local municipalities on best practices for recreational trail development, maintenance, monitoring, signage and wayfinding;
- ▶ Continue to update the recreational trails inventory database as it changes through capital improvements, new development or regular maintenance. Information that should be updated through these changes includes: surface type, width, typical cross slope, typical running slope, maximum running slope and maximum cross slope;
- ▶ Continue to monitor and maintain the existing recreational trail system network and providing trail users with safe and enjoyable experiences;

- ▶ Continue to build hard surfaced pathways as part of the recreational trails system;
- ▶ Continue to build recreational trails to a minimum width of 2.1 metres (North Oakville Trails Plan) with a recommended trail width of 2.4 metres (3.0 metres where maintenance vehicles are required);
- ▶ Continue to develop trails with park and trail features in frequency equal to or better than what currently exists, and consult with the Town of Oakville Accessibility Advisory Committee to determine minimum standards and frequency for park and trail features (benches, bike racks, garbage receptacles);
- ▶ Continue to provide pedestrian lighting in new park areas, but not lighting recreational trail systems within natural areas. Pathway and walkway block lighting should be considered on a case by case basis, and only where lighting will extend the hours of use by the entire community (i.e. trails to Community Centres or major destinations);

In addition, the Corporation of the Town of Oakville is committed to eliminating barriers and providing accessible programs, services and facilities towards achieving Council's vision to be the most livable town in Canada. This includes building an inclusive community where all individuals have equal access to the town's services, programs and facilities in a manner that is integrated and promotes dignity and independence. The RTAAS delivers a means of implementation that is practical, fiscally responsible and goals that are measurable. These goals can be achieved by putting into action the recommended initiatives developed through this study, which include:

- ▶ Undertaking a maintenance initiative to resolve any current deficiencies as noted in **Table 4.7**;
- ▶ Endorsing and implementing the ten-year Rehabilitation Improvement Plan to remove physical barriers and improve safety and security by addressing those items identified in this report;
- ▶ Undertaking a public awareness campaign to promote the town's recreational trails system and accessibility standards;
- ▶ Updating their master plans, design standards and guidelines and by-laws to reflect current accessibility requirements;
- ▶ Adopting and applying the proposed Accessibility Checklist in **Appendix D** when planning or designing new or redeveloping existing trails to ensure compliance with the Integrated Accessibility Standards of the AODA;
- ▶ Exploring opportunities to collaborate and coordinate with other town plans, to develop a comprehensive wayfinding strategy. Connectivity between the recreational trail network and active transportation network should be promoted through wayfinding and network signs;

- ▶ Adopting and implementing the proposed Trail Signage Strategy, which will consolidate multiple sign types and formats, ensure consistency in sign application and meet the requirements of the AODA; and
- ▶ Adopting the proposed Level of Difficulty Rating System, which will enhance the trail user experience and help users select trail routes that best meet their skills and abilities.



Appendix A

Jurisdictional Scan Survey Questionnaire

Standards and Practices for the Design, Construction and Management of Recreational/Multi-Use Trail Networks

Background

Paradigm Transportation Solutions Limited (Paradigm), on behalf of the Town of Oakville, is undertaking an accessibility audit of the town's recreational trails to identify and prioritize the town's opportunities for providing a higher level of service to the public. The audit also includes a review and update of the town's standards and practices to ensure consistency with regulations and best practices.

As part of this study, The Town of Oakville is interested in understanding the state of other municipality's guidelines, standards and practices for the design, construction and signing of recreational trails they pertain to meeting criteria outlined in the Accessibility for Ontarians with Disabilities Act (AODA). The town is also interested in understanding any system used by other municipalities to prioritize trail development or redevelopment and any software used in the management of trail networks. We kindly request your assistance in completing this survey, which will assist the town in better understanding the policies and practices in place within other municipalities. When completed, we will provide each participant a copy of the survey findings. Feel free to attach related documents and data that you think would assist us with the study.

Questionnaire

1. Does your jurisdiction have a recreational/multi-use trail master plan?

If yes, could you include a link to the document (if online), a copy of the document, or a summary of the plan (e.g. maps, etc.)?

2. Has your jurisdiction internally or externally completed a study (data collection of trail attributes, accessibility compliance, etc.) of existing or future recreational/multi-use trails?

If yes, could you include a link to the document (if online), a copy of the document, a summary of the study findings?

3. Does your jurisdiction have design standards and practices for the design, construction and ongoing maintenance of recreational/multi-use trails?

If yes, and it is **written**, could you include a link to the document (if online), a copy of the document, or a summary of the document's main components?



4. Does your jurisdiction have any standards or design practices related to accessibility on recreational/multi-use trails.

If yes, could you include a link to the document (if online), or a copy of the document?

5. Does your jurisdiction utilize any software packages or systems to manage and inventory the condition of trails, and associated features (signs, lamp posts, pavement markings, etc.)?

If yes, could you provide a description, or name, of the software packages used and other relevant data management systems used to maintain your recreational/multi-use trail network?

6. Does your jurisdiction have a system to prioritize trail improvements, and construction? What characteristics or traits of the trail network define locations needing reconstruction or improvement?

If yes, could you include a link to the document (if online), a copy of the document, or a summary of the system?

Thank you for your help with this study. We ask that you please include all documents cited in your responses. Thank you!

Name: _____

Position: _____

Municipality: _____

Email: _____

Phone Number: _____

Please return the completed questionnaire to asteinsky@ptsl.com.





Appendix B

Detailed Trail Improvement Implementation Plan

GISID	OBJECTID	Trail Name	Trail Segment Length (m)	Priority Score	Trail Segment Cost (\$100/m)	Implementation Year	Priority Within Implementation Year	Aggregated Cost per Year
403661	1919	Bayshire Woods Park Walk	37	62	\$6,197	2019	1	
402991	2978	Sheldon Creek Park Walk	335	37	\$33,492	2019	1	
401658	1187	Trafalgar Park Walk	35	36	\$3,578	2019	1	
403834	2332	Creek Path Woods Trail	156	34	\$15,577	2019	1	
402520	2216	Maple Valley Park Walk	72	33	\$7,171	2019	1	
402915	2643	Waterfront Heritage Trail West	275	32	\$27,454	2019	1	
401936	1857	Sheldon Creek Trail North Side	66	30	\$6,586	2019	1	
403063	94	Morrison Valley North Trail East Bank	109	31	\$10,944	2019	2	
402903	2542	Ridgeview Park Walk	185	31	\$18,507	2019	2	
403837	2401	Sheldon Creek Park Walk	83	31	\$8,282	2019	2	
403988	2791	Waterfront Heritage Trail West	42	31	\$4,196	2019	2	
402200	2471	Beechnut Forest Park Walk	99	30	\$9,868	2019	2	
402239	2625	Creek Path Woods Trail	144	30	\$14,421	2019	2	
402950	909	Morrison Valley North Trail West Bank	49	30	\$4,942	2019	2	
403728	2034	Old Abbey Trail	52	30	\$5,234	2019	2	
402387	1800	River Glen Park Walk	38	30	\$3,814	2019	2	
402990	946	Shannon Creek Trail West Side	125	30	\$12,492	2019	2	
402395	1808	River Oaks Park Walk	35	29	\$3,472	2019	2	
404062	2848	East Fourteen Mile Creek Trail West Bank	21	29	\$2,070	2019	2	
401609	21193	Sixteen Mile Creek Heritage Trail East Bank	19	28	\$1,879	2019	2	
405915	1655	Shell Park Walk	180	30	\$17,986	2020	1	
403989	22970	Brook Valley Park Walk	88	29	\$8,752	2020	1	
401769	1475	Bayshire Woods Park Walk	222	28	\$22,242	2020	1	
404016	2810	Crescove Heritage Trail	136	28	\$13,641	2020	1	
403274	550	Morrison Valley South Trail West Bank	197	28	\$19,688	2020	1	
402863	2702	Sheldon Creek Trail North Side	186	28	\$18,591	2020	1	
403265	544	Trafalgar Park Walk	89	28	\$8,923	2020	2	
405113	2005	White Oaks Secondary School Trail	283	28	\$28,311	2020	2	
402706	2164	Crescove Heritage Trail	400	27	\$40,023	2020	2	
403368	670	Interprovincial Pipeline Trail	272	27	\$27,198	2020	2	
402779	2533	Crescove Heritage Trail East Side	366	27	\$36,578	2021	1	
401325	2890	Joshua Creek Trail	330	27	\$32,959	2021	1	
403770	2187	Merchants Trail	298	27	\$29,829	2021	1	
405067	21638	Sixteen Mile Creek Heritage Trail West Bank	10	27	\$973	2021	2	
403786	2193	Maple Valley Park accessway	35	27	\$3,547	2021	2	
401502	3197	Morrison Valley North Trail West Bank	104	27	\$10,381	2021	2	
403462	608	Mum's Creek Trail East Bank	223	27	\$22,286	2021	2	
400372	1759	Sheridan Hills Park Walk	15	27	\$1,472	2021	2	
402920	2947	Waterfront Heritage Trail West	181	27	\$18,120	2021	2	
403856	2416	Waterfront Heritage Trail West Access	25	27	\$2,459	2021	2	
403468	813	East Fourteen Mile Creek Trail West Bank	346	26	\$34,560	2021	2	
403566	1499	Forster Park Walk	68	26	\$6,775	2021	2	
402615	1890	Lawson Park Walk	45	26	\$4,549	2021	2	
403961	2662	Leash Free Walkway	88	26	\$8,800	2022	1	
403961	2662	Leash Free Walkway	88	26	\$8,800	2022	1	
402948	907	McCraney Creek Trail East Side	333	26	\$33,331	2022	1	
400243	1286	Morrison Valley South Trail East Bank	126	26	\$12,627	2022	1	
402665	2070	Morrison Valley South Trail East Bank	282	26	\$28,156	2022	1	
404827	581	Nena Woods Park Trail	6	26	\$643	2022	1	
401785	1489	Shannon Creek Trail	57	26	\$5,679	2022	1	
403315	565	Sheridan Hills Park Walk	29	26	\$2,901	2022	1	
400381	1767	Sheridan Valley Park Access	51	26	\$5,083	2022	2	
401592	1060	Willwoods Park Trail	407	26	\$40,655	2022	2	
402052	1159	Arbourview Trail	40	25	\$3,987	2022	2	
401942	21990	Bronte Creek Heritage Trail	414	25	\$41,448	2022	2	
403990	2676	Normandy Park Path	37	25	\$3,690	2022	2	
401125	2345	Pine Glen Park Trail	50	25	\$4,961	2022	2	
402861	2789	Sheldon Creek Trail North Side	17	25	\$1,690	2022	2	
403830	2296	Creek Path Woods Trail	197	25	\$19,683	2023	1	
404030	2820	Fourteen Mile Creek Inner Valley	210	25	\$20,983	2023	1	
402064	1168	Glenayr Gate Trail	197	25	\$19,683	2023	1	
401807	21765	Millbank Park Walk	140	25	\$13,999	2023	1	
403409	694	Morrison Valley North Trail East Bank	230	25	\$23,000	2023	1	
403877	2433	Pearson Park Walk	102	25	\$10,171	2023	1*	
401950	1866	Donovan Bailey Park Walk	579	25	\$57,893	2023	2	
402780	2594	Ontario Hydro Winston Park Walk	403	25	\$40,273	2023	2	
401928	1849	Sixteen Mile Creek Heritage Trail East Bank	51	25	\$5,131	2023	2	
402331	2617	Shell Park Walk	155	25	\$15,527	2024	1	
403908	2561	Waterfront Heritage Trail Centre	44	25	\$4,449	2024	1	
404436	134	Creek Path Woods Trail	4	24	\$370	2024	1	
403491	20936	Dunvegan Park Walk	170	24	\$17,015	2024	1	
400410	1978	Fourteen Mile West Bank	260	24	\$25,985	2024	1	
401121	2341	Glenayr Gate Trail	42	24	\$4,213	2024	1	
400533	2103	Hemford Pond Trail	37	24	\$3,730	2024	1	
403455	803	Inquois Shoreline Woods Park Trail	189	24	\$18,886	2024	1	
402582	1687	Jennings Park Walk	62	24	\$6,192	2024	1	
402449	1961	North Ridge Park Walk	41	24	\$4,050	2024	1	

401651	1182 Queen Elizabeth Park Walk	136	24	\$13,557	2024	2	\$202,945
402257	713 Queen Elizabeth Park Walk	57	24	\$5,692	2024	2	
400357	1621 Sheridan Hills Park Walk	49	24	\$4,931	2024	2	
400359	1623 Sheridan Hills Park Walk	33	24	\$3,322	2024	2	
402667	2072 Sheridan Hills Park Walk	109	24	\$10,903	2024	2	
401966	3257 Sixteen Mile Creek Heritage Trail East Bank	17	24	\$1,656	2024	2	
403869	2426 Sixteen Mile Creek Heritage Trail East Bank	7	24	\$745	2024	2	
404006	2603 Sixteen Mile Creek Heritage Trail East Bank	4	24	\$353	2024	2	
401754	1463 Sixteen Mile Creek Heritage Trail West Bank	244	24	\$24,407	2024	2	
402700	2158 Sixteen Mile Creek Heritage Trail West Bank	160	24	\$15,991	2024	2	
404700	351 Trafalgar Park Walk	81	24	\$430	2024	2	
401958	1870 Waterfront Heritage Trail West	125	24	\$8,086	2024	2	
404116	3135 Waterfront Heritage Trail West	110	24	\$12,454	2024	2	
403314	524 Munn's Creek Trail West Bank	110	24	\$10,985	2025	1	
403916	2566 Nautical Park walk	122	24	\$12,153	2025	1	
402736	2315 Nipigon Trail North Bank	205	24	\$20,527	2025	1	
404186	955 Westwood Trail	46	24	\$4,617	2025	1	
404191	960 Westwood Trail	10	24	\$975	2025	1	
404197	21078 Westwood Trail	38	24	\$3,808	2025	1	
404200	968 Westwood Trail	18	24	\$1,786	2025	1	
404202	21083 Westwood Trail	9	24	\$924	2025	1	
403447	797 Avonhead Ridge Trail	442	24	\$44,207	2025	1	
405118	26 Kingsridge Parkette	25	24	\$2,548	2025	2	
401554	1041 Sheridan Valley Park Walk North Side	27	24	\$2,719	2025	2	
404514	174 Algrove Park Walk	38	23	\$3,755	2025	2	
401909	1634 Birchtree Trail	315	23	\$31,473	2025	2	
403426	775 Birchtree Trail	250	23	\$24,960	2025	2	
403853	2414 Bronte Athletic Park Walk	132	23	\$13,208	2025	2	
401546	3234 Clearview Park Walk	105	23	\$10,457	2025	2	
403448	798 Clearview Woods Trail	98	23	\$9,843	2025	2	
401660	1189 Echless Estate Trail	20	23	\$1,984	2025	2	
405165	3091 Cornwall Road Sports Park Walk	45	23	\$4,491	2026	1	
405166	3092 Cornwall Road Sports Park Walk	90	23	\$9,031	2026	1	
405167	3095 Cornwall Road Sports Park Walk	213	23	\$21,255	2026	1	
405168	3281 Cornwall Road Sports Park Walk	136	23	\$13,635	2026	1	
405168	3093 Cornwall Road Sports Park Walk	124	23	\$12,382	2026	1	
405168	3093 Cornwall Road Sports Park Walk	124	23	\$12,382	2026	1	
403238	433 Creek Path Woods Trail	107	23	\$10,695	2026	1	
404103	23327 Fairmount Parkette Walk	27	23	\$2,689	2026	1	
404106	3132 Fairmount Parkette Walk	41	23	\$4,055	2026	1	
404457	143 Fairmount Parkette Walk	21	23	\$2,085	2026	1	
404604	244 Fairmount Parkette Walk	10	23	\$1,008	2026	1	
404605	245 Fairmount Parkette Walk	7	23	\$704	2026	1	
404941	719 Garloch Gardens Trail	26	23	\$2,592	2026	1	
402924	2850 Hopevale Park Walk	90	23	\$8,993	2026	1	
401569	1051 Glen Abbey Trail East Side	513	23	\$51,312	2026	1	
403762	2181 Glen Abbey Trail West Side	532	23	\$53,179	2026	2	
400210	21251 Indian Ridge Trail	46	23	\$4,591	2027	1	
401604	1072 Indian Ridge Trail	43	23	\$4,321	2027	1	
402755	2326 Indian Ridge Trail	633	23	\$63,322	2027	1	
402757	2328 Indian Ridge Trail	47	23	\$4,674	2027	1	
402772	2526 Indian Ridge Trail	19	23	\$1,933	2027	1	
402773	2527 Indian Ridge Trail	14	23	\$1,419	2027	1	
403100	258 Indian Ridge Trail	35	23	\$3,550	2027	1	
403117	270 Indian Ridge Trail	19	23	\$1,870	2027	1	
403215	416 Indian Ridge Trail	95	23	\$9,456	2027	1	
403424	773 Indian Ridge Trail	62	23	\$6,195	2027	1	
403424	773 Indian Ridge Trail	62	23	\$6,195	2027	1	
404498	20263 Indian Ridge Trail	9	23	\$870	2027	1	
403725	2032 Glen Abbey Trail	109	23	\$10,854	2027	2	
401837	1660 Oak Creek Trail	165	23	\$16,477	2027	2	
401354	2861 Interprovincial Pipeline Trail	44	23	\$4,432	2027	2	
401868	1685 Interprovincial Pipeline Trail	370	23	\$36,951	2027	2	
403397	685 Interprovincial Pipeline Trail	210	23	\$20,982	2027	2	
402410	1936 Interprovincial Pipeline Trail Access	48	23	\$4,776	2027	2	
405119	25 Kingsridge Parkette	8	23	\$753	2027	2	
405120	20108 Kingsridge Parkette	85	23	\$8,522	2027	2	
400350	1617 Lancaster Woods Trail North Side	4	23	\$353	2028	1	
40354	1618 Lancaster Woods Trail South Side	41	23	\$4,119	2028	1	
400354	1618 Lancaster Woods Trail South Side	41	23	\$4,119	2028	1	
402535	2226 Leewood Parkette Trail	43	23	\$4,329	2028	1	
403203	404 Leewood Parkette Trail	54	23	\$5,446	2028	1	
404881	20716 Leewood Parkette Trail	168	23	\$16,836	2028	1	
405174	3098 Linbrook Woods Walk	2	23	\$208	2028	1	
403804	2274 Lindsay Park Walk	81	23	\$8,086	2028	1	
402833	2706 McCraney Creek Trail	83	23	\$8,265	2028	1	
402174	2396 McCraney Creek Trail West Side	171	23	\$17,096	2028	1	



Appendix C

Detailed Trail Improvement Implementation Maps



Recreational Trails Rehabilitation Plan (2019)

Appendix D.1

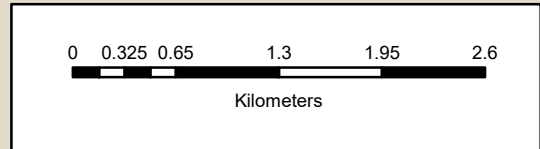
Legend

- Roads
- - - Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt
- <all other values>

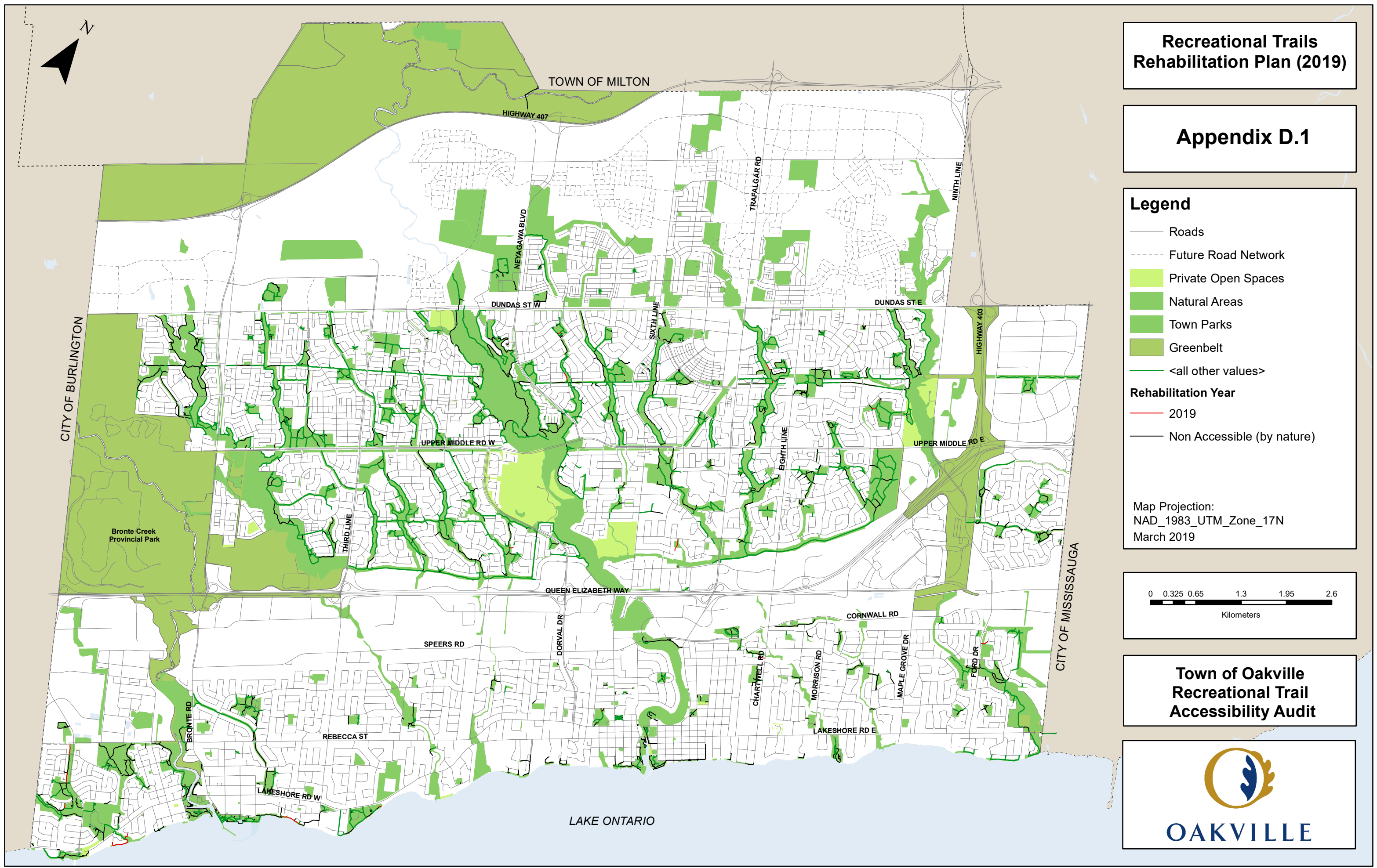
Rehabilitation Year

- 2019
- Non Accessible (by nature)

Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit





Recreational Trails Rehabilitation Plan (2020 - 2024)

Appendix D.2

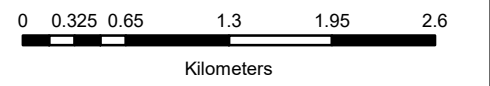
Legend

- Roads
- - - Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt

Rehabilitation Year

- 2020
- 2021
- 2022
- 2023
- 2024

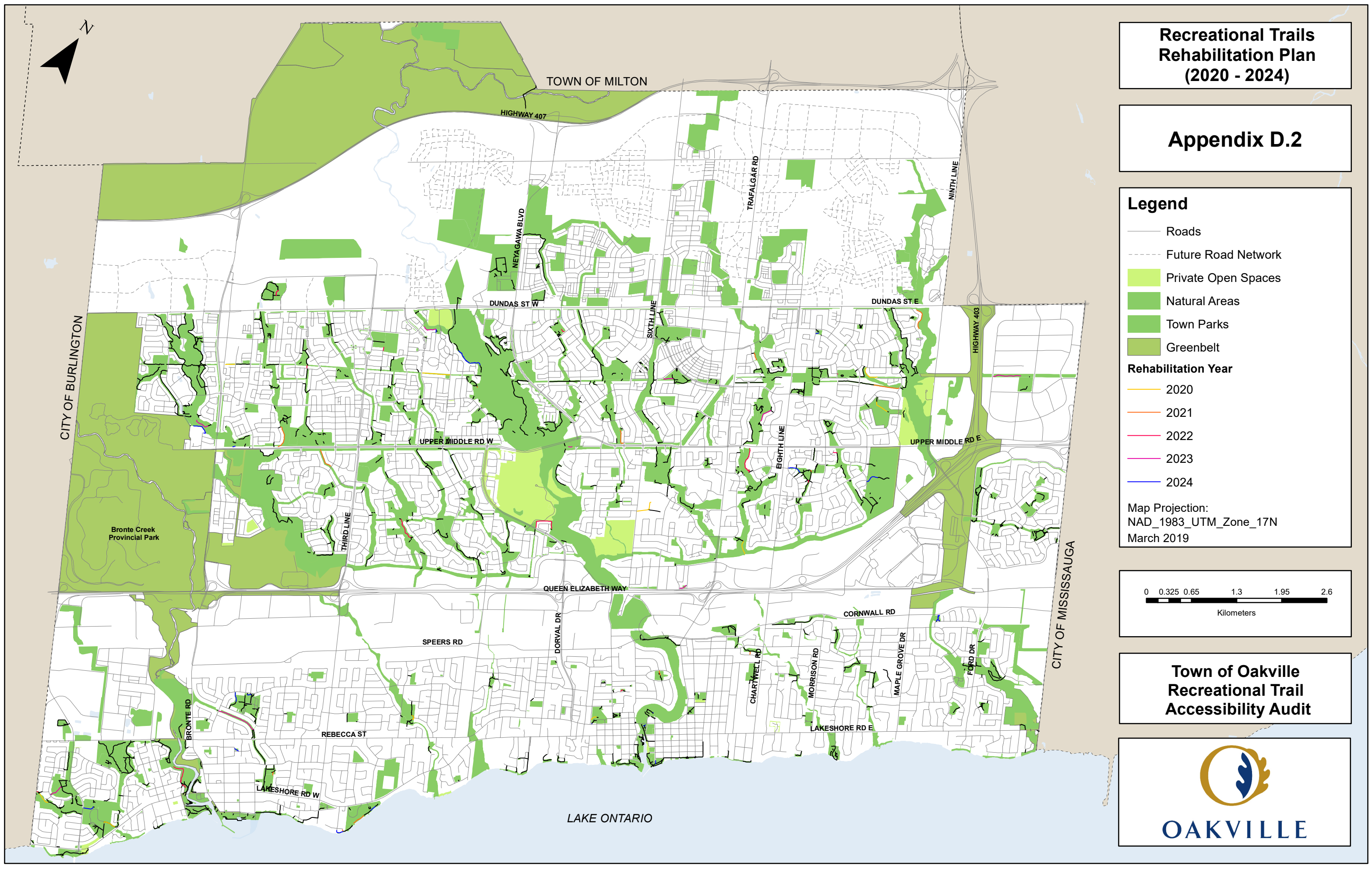
Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE





Recreational Trails Rehabilitation Plan (2025 - 2029)

Appendix D.3

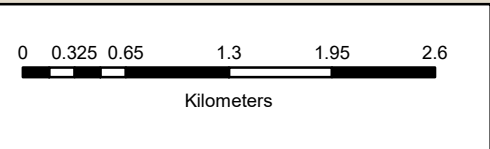
Legend

- Roads
- - - Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt

Rehabilitation Year

- 2025
- 2026
- 2027
- 2028
- 2029

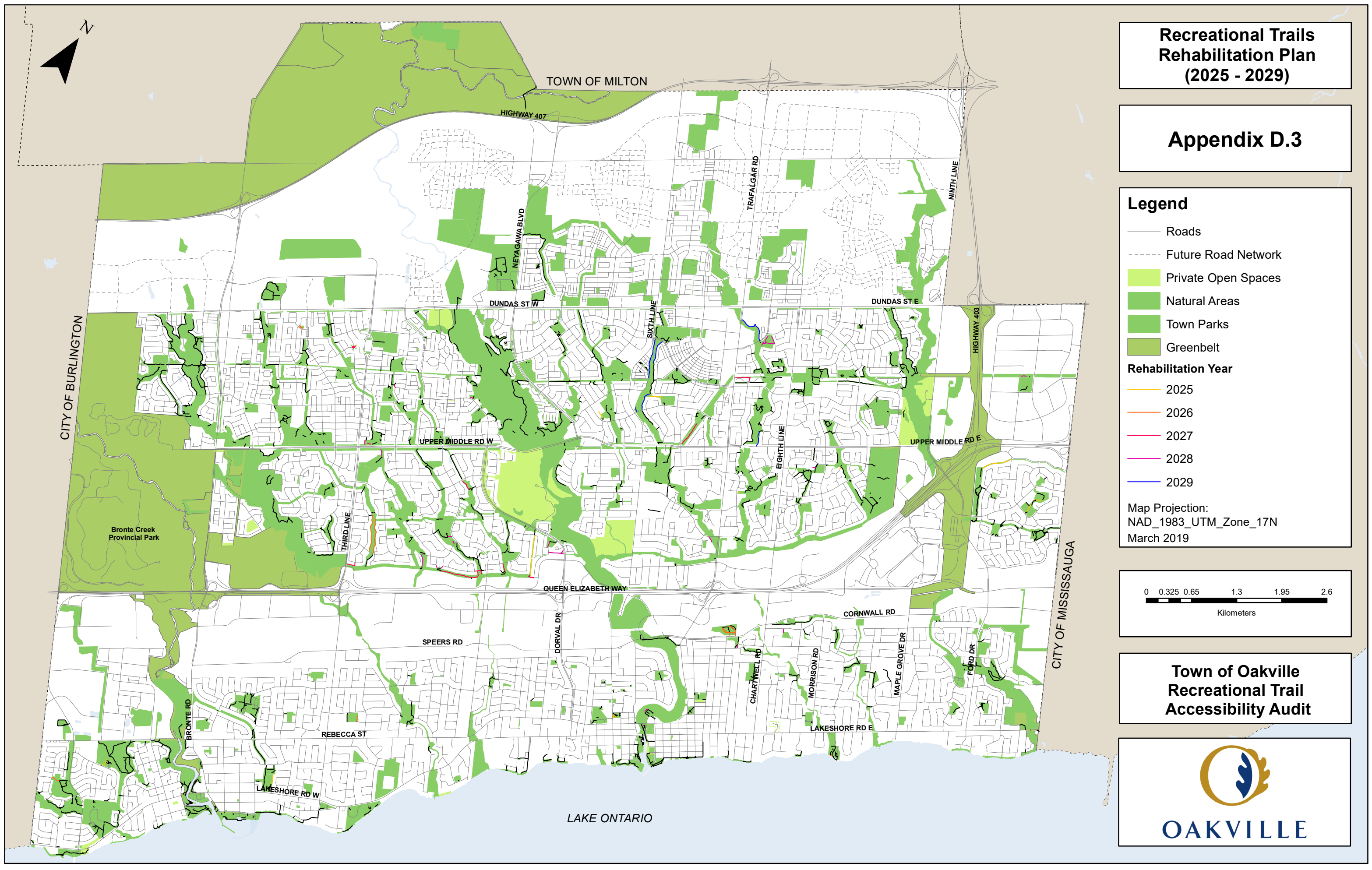
Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE





Recreational Trails Rehabilitation Plan (2030+)

Appendix D.4

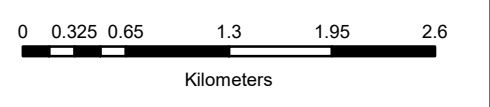
Legend

- Roads
- - - Future Road Network
- Private Open Spaces
- Natural Areas
- Town Parks
- Greenbelt

Rehabilitation Year

- 2030
- 2031+

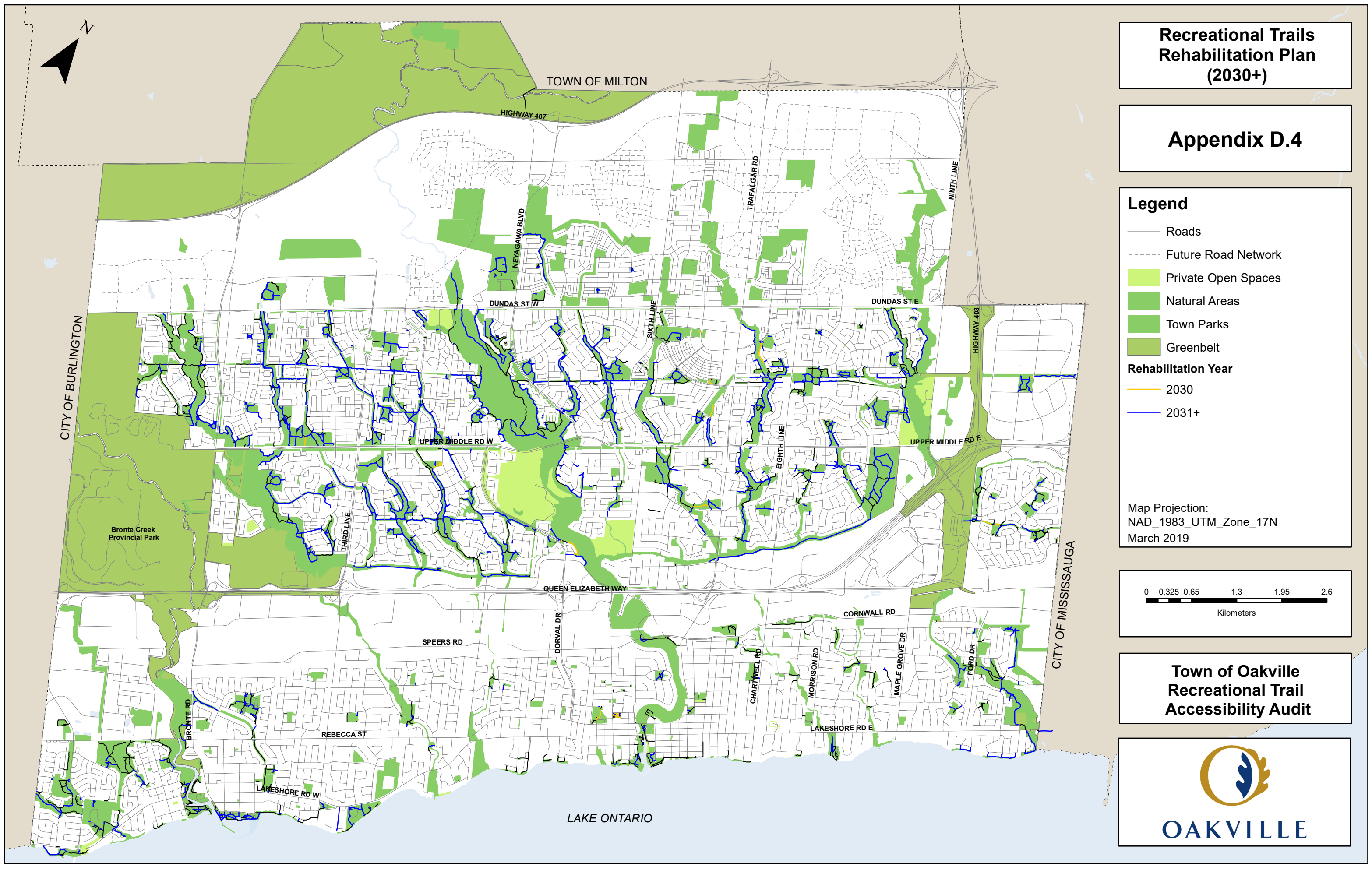
Map Projection:
NAD_1983_UTM_Zone_17N
March 2019



Town of Oakville Recreational Trail Accessibility Audit



OAKVILLE





Appendix D

Accessibility Checklist

Town of Oakville – Trails Accessibility Checklist

The **Trails Accessibility Checklist** provides guidance for the design of new and redeveloped recreational trails to ensure conformity with the Integrated Accessibility Standards (Ontario Regulation 191/11) of the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA). The checklist consists of three (3) parts:

PART 1: Identify any Exceptions to the AODA Requirements

Complete Table 1 ... Trail segments located in certain settings are not required to comply with the Integrated Accessibility Standards of the AODA per Exceptions to the Requirements for Recreational Trails and Beach Access Routes, Sections 80.14 to 80.15.

Table 1: AODA Allowable Exceptions

Criteria	Yes	No
Is the site designated or protected under the <i>Ontario Heritage Act</i> ?		
Is the site set apart as a National Historic Site of Canada under the <i>Canada National Parks Act</i> ?		
Is the site marked or commemorated under the <i>Historic Sites and Monument Act (Canada)</i> ?		
Is the site included in the United Nations Educational, Scientific and Cultural Organisation's World Heritage List of sites under the <i>Convention Concerning the Protection of World Cultural and Natural Heritage</i> ?		
Would any of the requirements adversely affect, directly or indirectly, water, fish, wildlife, plants, invertebrates, species at risk, ecological integrity, or natural heritage values of the site?		
Is it not practicable to comply with one or more requirements because existing physical or site constraints prohibit modification or addition of elements, spaces or features?		

If you answered “yes” to **any** of the criteria in **Table 1**, the segment qualifies for AODA-allowed exceptions.

If you answered “no” to **all** the criteria in **Table 1**, the segment does not qualify for any AODA-allowed exceptions.

Do(es) the trail segment(s) qualify for any AODA-allowed exceptions per Table 1?

YES _____ If YES, proceed to Part 2
NO _____ If NO, end

Town of Oakville – Trails Accessibility Checklist

PART 2: Determine Trail Function and Context

Complete Table 2 ... Trail segment(s) that do not qualify for any exceptions **and** serve an accessible function need to be designed to conform with the Integrated Accessibility Standards of the AODA.

Table 2: Trail Function and Context

Criteria	Yes	No
Are the trail segment(s) part of a major trail network as part of the Active Transportation Master Plan?		
Are the trail segment(s) within a park?		
Are the trail segment(s) new?		

If you answered “yes” to **any** of the criteria in **Table 2**, the trail segment(s) are considered to serve an accessible function.

If you answered “no” to **all** the criteria in **Table 2**, the trail segment(s) are **not** considered to serve an accessible function.

Do(es) the trail segment(s) serve an accessible function per Table 2?

YES _____ If YES, complete Table 3 (including Tables 3.A, 3.B, 3.C & 3.D)
 NO _____ If NO, end

Town of Oakville – Trails Accessibility Checklist

Table 3.A: Design Attributes for AODA Accessible Segments

Criteria	Requirements	Met?
Minimum Clear Width	1,000 mm continuously	
Minimum Vertical Clearance	2,100 mm above trail surface, continuously	
Trail Surface	Firm and stable	
Openings in Surface	<ul style="list-style-type: none"> • Must not allow passage of an object with a diameter more than 20 mm; and • Must have elongated openings oriented approximately perpendicular to the direction of travel. 	
Edge Protection (only if trail is adjacent to water, or a drop-off, and a protective barrier is not present)	<ul style="list-style-type: none"> • Must provide an elevated barrier running along the edge of the trail to prevent users from slipping over the edge; • Must extend to at least 50 mm above the trail surface; • Must not impede drainage of the trail surface; and • If a protective barrier is present along the edge of the trail, no edge protection is required. 	
Trail Entrance	Opening between 850 mm and 1,000 mm	
Signage	Must follow Town of Oakville Recreational Trail Signage Standards	
Boardwalks (as needed)	See Table 3.B	
Ramps (as needed)	See Table 3.C	

Town of Oakville – Trails Accessibility Checklist

Table 3.B: Design Attributes for AODA Accessible Boardwalks

Check if **Table 3.B** is **not** applicable (there are no boardwalks) _____

Criteria	Requirements	Met?
Minimum Clear Width	1,000 mm continuously	
Minimum Vertical Clearance	2,100 mm above boardwalk surface, continuously.	
Surface	Firm and stable	
Openings in Surface	Must not allow passage of an object with a diameter more than 20 mm.	
Edge Protection	<ul style="list-style-type: none"> • Be an elevated barrier running along the edge of the trail to prevent trail users from slipping over the edge; and • Top of the edge protection must be 50 mm above the boardwalk surface. 	
Running Slope	If greater than 1:20, must meet requirements for ramps (see Table 3.C).	

Town of Oakville – Trails Accessibility Checklist

Table 3.C: Design Attributes for AODA Accessible Ramps

Check if **Table 3.C** is **not** applicable (there are no ramps)

Criteria	Requirements	Met?
Minimum Clear Width	1,000 mm continuously	
Minimum Vertical Clearance	2,100 mm above ramp surface, continuously	
Surface	Firm and stable	
Running Slope	No greater than 1:10	
Openings in Surface	Must not allow passage of an object with a diameter more than 20 mm.	
Edge Protection	<ul style="list-style-type: none"> • Must be provided for a minimum height of 50 mm from the ramp surface, if no solid enclosure or guard is provided; and • Must be provided with railings or other barriers extending to within 50 mm of the finished ramp surface. 	
Landings	<ul style="list-style-type: none"> • Must be provided at top and bottom of ramp, where there is an abrupt change in direction with maximum horizontal intervals of nine (9) meters; • Must be a minimum of 1,670 mm by 1,670 mm; • Must be same width as ramp; and • Must have cross-slope no greater than 1:50. 	
Walls/Guards	<ul style="list-style-type: none"> • Must be provided on both sides of ramp; • Must be at least 1,070 mm in height from ramp surface; and • Must be designed so that nothing between 140 mm and 900 mm will facilitate climbing. 	
Handrails	<ul style="list-style-type: none"> • Must be provided on both sides of ramp; • Must be graspable for their entire length; • Must have a circular cross-section with a diameter between 30 mm and 40 mm, or a non-circular cross-section with a graspable perimeter between 100 mm and 155 mm; • Must be between 865 mm and 965 mm in height from ramp surface; • Must extend 300 mm beyond the top and bottom of the ramp; • Must provide a minimum clearance space of 50 mm between handrail and wall; and • Must terminate as to not obstruct pedestrian travel or create a hazard. 	

Town of Oakville – Trails Accessibility Checklist

Table 3.D: Design Attributes for Accessible Designation

Criteria	Yes	No
Entirety of the trail segment is barrier free?		
Maximum running slope less than or equal to 5%?		
Typical running slope less than or equal to 5%?		
Maximum cross slope less than or equal to 2%?		
Typical cross slope less than or equal to 2%?		

Check if **all** Accessible Designation criteria are met _____

Table 3: List of Criteria for Accessible Designation

Criteria	N/A	Yes	No
Does the trail segment meet all design attributes summarized in Table 3.A (AODA Accessible Segments)?			
Does the trail segment meet all design attributes summarized in Table 3.B (AODA Accessible Boardwalks)?			
Does the trail segment meet all design attributes summarized in Table 3.C (AODA Accessible Ramps)?			
Does the trail segment meet all design attributes summarized in Table 3.D (Accessible Designation)?			

If you answered “yes” to **all** the criteria in **Table 3**, the trail segment(s) are considered “Accessible”.

If you answered “no” to **any** of the criteria in **Table 3**, the trail segment(s) are **not** considered “Accessible”.

Is the trail segment(s) considered “Accessible” per Table 3?

YES _____ If YES, end
NO _____ If NO, proceed to **Part 3**

Town of Oakville – Trails Accessibility Checklist

PART 3: Consultation and Mitigation

For trail segment(s) that cannot conform (entirely) with the Integrated Accessibility Standards of the AODA when constructed new or reconstructed:

- Review the non-conforming trails design(s) with the Town of Oakville Accessibility Advisory Committee and/or other interested stakeholders. Based on the location and purpose of the trail segment(s), other potential stakeholders could include:
 - The Town of Oakville Accessibility Coordinator;
 - Town of Oakville Community Services Committee;
 - Canadian National Institute for the Blind (CNIB);
 - Neighbouring residents;
 - Neighbouring facilities' user groups (e.g. school boards, associations, not-for-profit organizations);
 - Walking and/or cycling advocacy groups; and
 - Advocacy groups for people with disabilities.
- Propose alternative route(s) that would still provide a means of accessible access; and
- Include mitigation measures in the design to overcome a barrier for some users, making the trail more accessible. Examples of measures include, but are not limited to:
 - Design of the trail segment(s);
 - Location of the trail segment(s);
 - Ramps in addition to or instead of stairs;
 - Switchbacks;
 - Regrading;
 - Retaining walls; or
 - An alternate route through trail segment(s) with an "Accessible" Designation.
- Document the design process for the non-conforming segment(s), addressing the items noted in **Table 4**.

Town of Oakville – Trails Accessibility Checklist

Table 4: Documentation

Item to Document	Included?
Segment(s) and/or portion(s) of segment(s) that do not meet the “Accessible” designation.	
Design attributes that are not met.	
Reasons why the design attributes are impossible or impracticable to meet.	
Any AODA-allowed exception, including all information necessary to demonstrate that the exception is permitted.	
Mitigation measure(s): <ul style="list-style-type: none"> • Included in the design; and • Considered but not included, with rationale for not including the measure(s). 	