

A detailed map showing a residential area with various streets and green spaces. A prominent feature is a large, irregularly shaped area shaded in solid black, representing a park or large green space. Several streets are highlighted with dashed lines: one set is orange and another is blue. A horizontal band with a diagonal hatching pattern is overlaid on the map, containing the title text. The map also shows property lines, building footprints, and utility lines in thin red and grey lines.

Buckhorn Streetscape & Greenspace Master Plan

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Introduction

The Municipality of Trent Lakes (MTL) retained Skelton Brumwell & Associates Inc. (SBA) to conduct a streetscape and greenspace master plan for the community of Buckhorn. The scope of this project included the analysis of public lands within the recently created Buckhorn CIP area (community improvement plan area) with the intent of creating a master plan tying these spaces together. Municipal lands within the Buckhorn CIP area include several rights-of-way, the Tourist Information and Welcome Centre Building, the Buckhorn Library, new parkland on Lakehurst Road adjacent to John Street, and the Buckhorn Buck area. Other public lands considered in this project included the right-of-way for Peterborough County Road 37, and the Federally held Lock 31 property.

Through consultation with agencies, municipal staff, Buckhorn residents and visitors, and Curve Lake First Nation, three guiding principles were developed. These principles directed an inventory and analysis of the project site which culminated in the development of several opportunities and constraints. An iterative design process was utilised to address these opportunities and constraints to arrive at several recommendations for the community of Buckhorn. Drafts were presented to MTL staff and the Economic Development Committee (EDC) and the resulting suggestions have been incorporated into the final designs.

Phasing has been considered in order to coordinate the fundamental elements of the master plan. This approach prioritises connectivity first, since walking safety was the predominant public concern and connectivity of walking space was identified as being critical to all three guiding principles.

This master plan is presented as a guidebook to developing an engaging and healthy Buckhorn. After a brief methodology and engagement discussion, the guiding principles are presented, followed by the opportunities and constraints and the recommendations in report format. Finally, the design concepts are presented graphically.

Methodology

To most effectively utilize resources and deliver the highest quality design possible, a nested design approach was utilised. In this type of approach, more detailed site design considerations are inset within a master plan design process. The process of contextualizing the functionality of each site and the understanding of their connections fundamentally creates a master plan. Concerns at both the site and community scale can be addressed at once with this approach, and the investment in the public realm can be maximized.

Phase 1: Project Planning

Review of the Buckhorn Hamlet Design Guidelines

To meet municipal design standards and policy requirements identified within the Official Plan, the Buckhorn Hamlet Design Guidelines were reviewed to identify key design principles used to maintain and accentuate Buckhorn's character and appeal.

The Site Design Guidelines (Section 4) were considered for greenspace features including gardens, walkways, and natural enhancements to public infrastructure pertaining to:

- Site plantings;
- Decorative fences and walls;
- Parking areas;
- Site lighting, utility, and service areas;
- Sidewalk amenity areas;
- Ground signs; and
- Portable signs.

The Street Design Guidelines (Section 3) were considered for all possible features included in the public walkway/trail including:

- Physical street construction (roadway, crosswalk, curb extensions, side walks and boulevards);
- Gardens (street trees and ground plantings); and

- Decorative and wayfinding features (street lighting, street furnishings, entrance features, way finding signage, and public art).

Review of the Community Improvement Plan

To coordinate greenspace development and land improvement projects, the goals and objectives within the Community Improvement Plan (CIP) for the Hamlet of Buckhorn were reviewed by SBA planning staff.

To create comprehensive improvements to community infrastructure, such as the Buckhorn Library, and tourist information center, landscaping guidelines for Gateways, Walkways and Pathways within the CIP were examined.

Initial Site Visit and Kick-Off Meeting

The SBA project team conducted a project kick-off meeting at the Municipality of Trent Lakes offices with senior Municipal staff. Following the conclusion of this meeting, the project team conducted a site visit to establish initial observations of the project site.

Phase 2: Consultation

Public Survey

The SBA project team facilitated an online survey that was distributed by MTL staff. The survey was hosted starting on February 21st 2018, and ending on April 1st 2018. During this period 130 responses were submitted.



Municipal and Agency Consultation

Initial consultations were initiated between SBA and municipal staff as well as representatives from the Economic Development Committee. Conversations with representatives from these organizations were used to:

- Assess current greenspace and streetscape conditions present at community infrastructure of the municipality owned properties and the walkway/trail;
- Tally interests or recommendations of greenspace and streetscape requirements from each organization;
- Review any pending greenspace or streetscape improvements to coordinate greenspace and streetscape improvements with initiatives occurring elsewhere in Buckhorn;
- Review applicable engineering (and similar) standards;
- Identify existing greenspace features and their associated costs;
- Develop preliminary budget restraints per property/project; and
- Enquire about additional infrastructure features (such as lighting and play equipment) that is desired in greenspace design plans.

Public Information Session

The SBA project team and the Economic Development Committee jointly hosted a public information session at St. Matthew - St. Aidan's Anglican Church in Buckhorn on March 7th 2018. This session utilised several presentation boards and interactive actives to generate conversations and ideas from attendees. The session was also used to advertise for the survey, which was made available in paper copy format at the session.

First Nations Engagement

The SBA project team met with representatives from Curve Lake First Nation on March 7th 2018. The intent and scope of the project was discussed and a briefing was submitted by the SBA project team to be considered by Chief and Council.

Summarize Findings

A summary report was provided to MTL staff and the EDC on May 11th 2018. This report presented draft ideas, summarised the initial work that had been completed, and summarised the remaining work.

Phase 3: Design Development

Draft Design Concepts

Using feedback collected during the planning and consultation phases, SBA staff proceeded with the development of draft master plan drawings. All proposed alternative plans meet design requirements of the CIP and Buckhorn Hamlet Design Guidelines.

Activities conducted during the development of draft master plans included:

- Performing additional site visits and meetings with residents;
- Considering ecologically and culturally appropriate plant communities;
- Creating conceptual design drawings that describe the programmed elements for each site and their spatial relationships;
- Creating illustrative diagrams to describe the design intent; and
- Engaging in additional consultation with municipal representatives, as well as external organizations.

Develop Comprehensive Budgets

SBA staff completed budget estimates for master plan implementation. The budget estimates identify approximate materials and labour costs, and permitting costs (where applicable).

Design Concepts

Design concepts were released in draft to municipal staff and the Economic Development Committee during the design development phase. These concepts were accepted with minor revisions and additions. Drawings and more detailed descriptions were then presented to the Economic Development Committee for additional

feedback on May 17th 2018. Several additions to the new parkland master plan were added as a result of this consultation including a washroom facility, accessible canoe/kayak launch, and natural playground.

Present Final Design Concepts to Municipal Council

SBA staff will present the resulting conceptual master plans and comprehensive budget to the MTL Council on June 5th 2018.

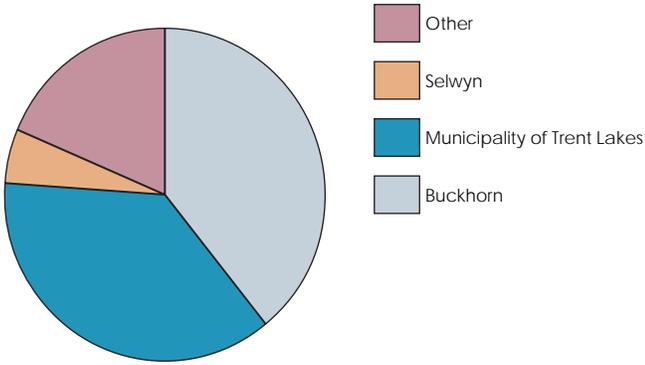
Engagement

Survey Results

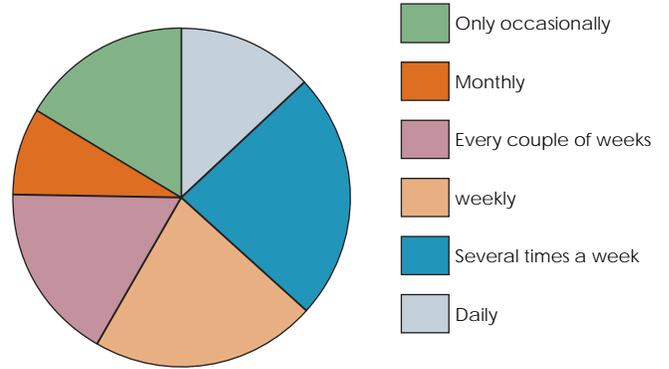
The survey results show that most age groups within the community were adequately sampled considering their actual proportion of the community. As is typical with surveys, the youngest and oldest age groups were underrepresented. However, the respondents' family composition closely resembles the 2016 Canadian Census data so the project team is satisfied with the representativeness of the response regarding age.

Importantly, a large proportion of the respondents are residents of either the community of Buckhorn itself or residents of MTL, and these respondents show a high utilisation of the downtown Buckhorn area. The survey data identifies clear public priorities for which areas to focus efforts on, and which physical amenities are most desirable. A very strong majority of 72% of respondents indicated that Lakehurst Road and the new parkland should be the primary focus of development efforts. Clear direction was also indicated in terms of investment in amenities as 31% of funds were directed at walking trails and sidewalks, 26% was directed at streetscape improvements and 20% was directed at waterfront amenities.

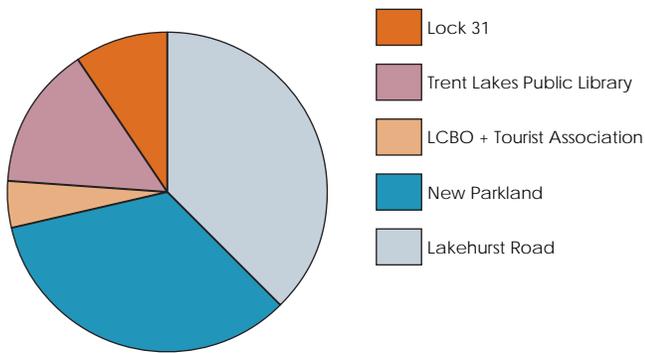
Place of Residence



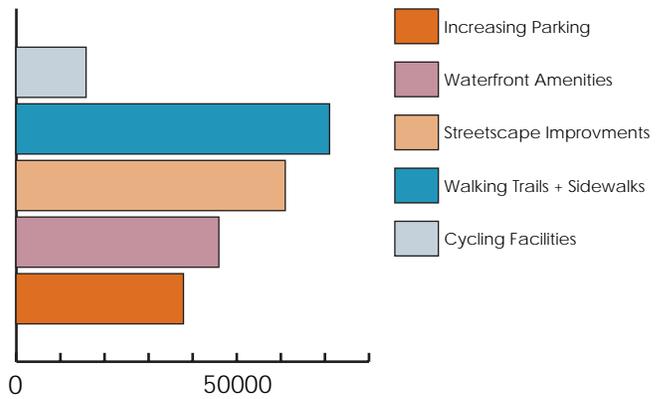
Frequency of Visits to Downtown Buckhorn



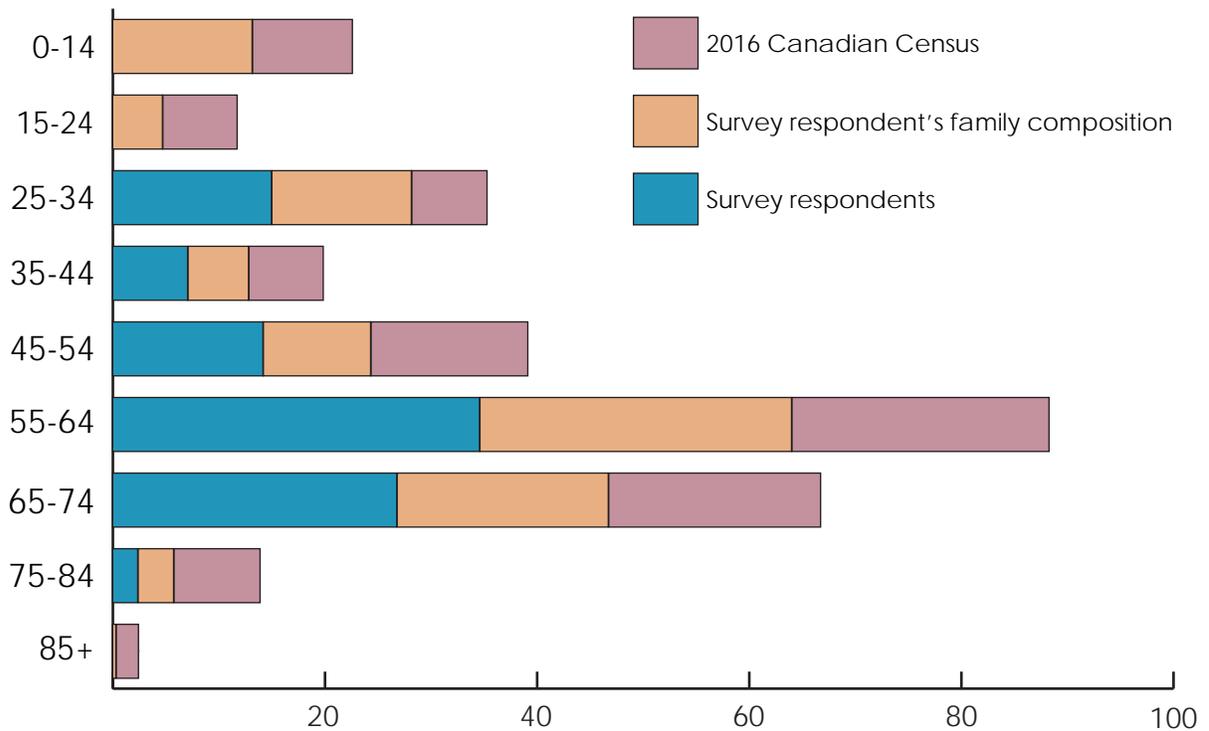
Design Priority Hierarchy



Where Money Should Be Spent



Demographics: Percent Composition of Age Groups



Guiding Principles

The SBA project team developed three guiding principles to inform the master planning exercise. These three principles are based primarily on public feedback but also partially on preliminary site observations, and partially on the understanding of the larger planning, design, and recreation issues of today. These principles inform the design process by providing a framework to critically evaluate the existing conditions and determine the opportunities and constraints that are unique to the project site.

1. Promote Health Through Design

Research from across the world shows that the public realm has a significant impact on the health of communities. Building healthy spaces makes a healthier, happier, and more prosperous community possible. The following nine principles are the backbone of healthy public spaces.

Connectivity

A comprehensive network of trails, walkways, sidewalks, and roads should allow all residents equitable opportunities to access community amenities. Frequent, visible, and safe points of access to this network are required.

Safety

The transportation network must feel safe to all users to be considered functional. This includes providing clear sightlines, addressing potential conflicts between modes of transportation, and ensuring that the trails and sidewalks encourage use in groups.

Inclusive Access

Equity matters – adequate physical access throughout the network, regardless of user ability, is a priority in streetscape and greenspace development. The Accessibility for Ontarians with Disabilities (AODA) standards and recommendations should be exceeded wherever possible and residents should be involved in the planning process.

Create Multi-Functional Spaces

Diversity of uses promotes diversity of users. Provision of facilities which can accommodate a range of different functions will support increased usage of public spaces, while also improving accessibility and social cohesion. Prioritize ideas that make public spaces interesting and engaging year-round and throughout the day.

Promote Physical Activity

Prioritize physical activity to the extent possible by integrating all public open spaces within the active transportation networks and incorporating varying levels of challenge within facilities.

Social Cohesion

Public spaces should provide opportunities for public gatherings and function as social destinations. This includes providing adequate accessibility as well as site elements that facilitate community events and gatherings. Public spaces should have a built form that encourages a sense of place and forges a cohesive community identity.

Promote Mental Health

Parks and trails are critical for helping people relax and recharge, which can support the mental wellbeing of the community and its visitors. Providing socially cohesive areas where it is possible to interact with and observe other people will have an uplifting effect, as will the adequate provision of areas with access to natural vegetation, wildlife, and waterfront amenities.

Promote Education

Providing educational opportunities within parks and trails system diversifies the potential uses of a space and engages users in their community. Local history is an ideal starting point for facilitating learning in public spaces.

2. Build a Foundation

As the community of Buckhorn grows it is important that its public spaces continue to evolve and drive this process. The increased use of public open spaces in the downtown area make the area more appealing to businesses and can help develop economic diversity. This growth creates new opportunities to engage residents and visitors in the parks system and creates a positive feedback cycle.

3. Engage Residents and Visitors

Conscious decisions must be made to assign a variety of uses or programmes to each open space and trail/walkway segment. These programmatic elements should be coordinated at the community level to maximise diversity of uses in order to provide the highest level of engagement. Passive spaces such as seating areas play an important part in this engagement because they can substantially increase the overall amount of time spent in public spaces. Providing opportunities for unique experiences is also an important factor, where the physical site features are exceptional.

Opportunities and Constraints

The opportunities and constraints that a site presents are analysed through the lens of the guiding principles. Opportunities pull project development along and it is the responsibility of the project team to maximize these opportunities. Constraints often push project development to explore alternatives and create innovative solutions. Both provide solid, logical foundations for design decisions later in the design process.

+ Site Location

Downtown Buckhorn is located at the confluence of several transportation networks. The intersection of two major County of

Peterborough roads is directly adjacent to the downtown/CIP area, and both of these major roads are designated as active transportation corridors by the County. Lock 31 of the Trent Severn Waterway is located in the heart of the downtown area, making the area a boating hub. Additionally, there are several recreational assets including a warm-water fishery popular with kayak anglers, as well as access to the second largest Ontario Provincial Park in southern Ontario (Kawartha Highlands), and a water access Provincial Park (Wolf Island) within a short canoe or kayak of the downtown.

+ Site Scale

Downtown Buckhorn is very compact. The primary corridor from Adam and Eve Road to the Buckhorn Tourist Information and Welcome Centre building is less than a kilometre in length. This is an excellent size for building a walkable community with equitable access for all and an engaging community core.

+ Existing Activity

Both Lock 31 and Buckhorn Lake are activity hubs through the summer months and the Buckhorn downtown area has a unique opportunity to capitalise on this activity, given its proximity to the waterfront. The presence of existing activities is vital in the ongoing development of engaging spaces because they allow spaces to retain people for longer, which in turn attracts more people.

+ Waterfront Parkland

The newly acquired waterfront parkland in the heart of the downtown area will be invaluable as the focal point of Buckhorn. This parkland is large, has interesting existing features, and is in an ideal location that can sustain high activity levels from the water/shoreline area and from the land.

+ Natural and Cultural Heritage

Buckhorn has some interesting natural heritage features that can be emphasized to great effect including the topography and resulting viewsheds, various exposed bedrock locations, and the Adam and Eve formation. Culturally, the area also has

regional significance as a part of the historic Trent-Severn Waterway and as an important location for the Anishinaabe people.

Narrow Corridor

The interesting topography and bedrock outcroppings have resulted in County Road 37 having a relatively narrow corridor. A road diet regime where traveled lane sizes are reduced to increase pedestrian safety is not feasible because the traveled lanes are already relatively narrow with little opportunity to undergo further narrowing. The available right of way also has several pinch points and deep ditches which make the provision of accessible sidewalks difficult.

Limited Background Information

Limited technical information, such as a parking needs study, is currently available for decision making. This makes it difficult to project the appropriate allocation of some site elements. This emphasizes the need for a flexible implementation approach.

Accessibility

The interesting topography and bedrock outcroppings present significant challenges for providing equitable access. While meeting the minimum standards of the AODA is important, its recommendations often need to be exceeded to create safe, high-quality public spaces and support social cohesion.

Land Ownership

Although the Municipality owns the key piece of waterfront property, considerable works will be focused on the County owned right-of-way and the Federally held Lock 31 property. Although these agencies are engaged partners, the Municipality does sacrifice some implementation controls due to these land ownership circumstances.

Recommendations

The recommendations described within this section are meant to be reviewed in conjunction with the large drawing panels included within this document.

Implement a shared roadway along Lakehurst Road from the Buckhorn Community Centre (BCC) to the intersection of County Roads 36 and 23.

The County of Peterborough Active Transportation Management Plan (ATMP) identifies Lakehurst Road and both County Roads 23 and 36 as future active transportation corridors with paved shoulder facilities. This type of facility is typically used where there is a large speed differential between vehicle and cycling speeds and the number of cyclist does not warrant a separated lane. The ATMP also notes that local improvements are anticipated in Downtown Buckhorn. As the BCC is an important recreation hub for the community it is a logical endpoint for the shared roadway. Additionally, the BCC is directly opposite the Buckhorn Public School, another important hub for an active transportation network. Utilising the facility selection tool in MTO Traffic Manual Book 18, it is determined that a shared roadway is the appropriate facility type for downtown Buckhorn. The key determining factors are:

- Once the speed limit is reduced through Buckhorn, the speed differential is within the recommended range for a shared roadway;
- The annual average daily traffic (AADT) recorded by the County of Peterborough are within the recommended range for a shared roadway;
- The traveled lanes are too narrow to facilitate separate lanes; and
- The pinch points in the right-of-way through Buckhorn do not leave room for separated facilities once dedicated pedestrian space is planned.

Design Considerations:

This type of facility should be designed according to Provincial Standards to ensure safety with special attention paid to the transition area from paved shoulder to shared roadway. The effective

implementation of a shared roadway and traffic calming streetscape elements will help to reduce vehicle speed through Buckhorn and increase pedestrian safety.

2. Implement an accessible sidewalk from the intersection of Adam and Eve Road to Fulton Lane on the lakeward side of Lakehurst Road and from William Street to the Cody Inn driveway on the opposite side of Lakehurst Road.

This section of Lakehurst Road currently has a paved sidewalk that is unmaintained in the winter. While this sidewalk is minimally acceptable under the AODA regulations, it is not conducive to walking in groups and the vehicular speeds have been noted to be dangerous by residents and visitors. There is no separation distance under the current design and limited use is seen because the space is not comfortable. This problem is compounded when this sidewalk is used as on-street parking during busy times. The proposed design with curbing and street tree plantings will calm traffic, create separation between the pedestrians and the motorists, provide shade, and offer places to rest.

The Lakehurst Road corridor from Adam and Eve Road to Fulton Drive represents the commercial heart of Buckhorn and provides access to key institutions such as the Trent Lakes Library as well as the new parkland. This section of the Lakehurst Road corridor also has fewer land ownership and physical restrictions than the remaining portions.

Design Considerations:

Several access and egress points are currently existing on both sides of the road that will need to be better defined in order to organise the streetscape. To effectively manage this, and considering the irregular property lines in some areas, the streetscape may need to have several configurations over its length.

3. Implement an accessible walkway from Fulton Drive to the Buckhorn District Tourist Association building along the lakeward side of Lakehurst Road.

This section of Lakehurst road is currently flanked by unpaved shoulders and is not accessible, although it sees many users throughout the year.

To avoid the pinch point adjacent to the large bedrock outcropping by the LCBO building, many people walk through the ditch and over the outcropping. Large stretches of this route are accessible by average linear grade, however cross slopes are only minimally acceptable to unacceptable. The recommended route diverges from Lakehurst Road and flows the hardened waterfront area of Lock 31 before passing the Buckhorn Buck and Pavilion and traversing the bedrock outcropping.

Design Considerations:

With the limited use of boardwalks at either end of the rock outcropping it is possible to convert this path into an AODA compliant walkway. This option is preferred to a roadside sidewalk due to the limited space, the avoidance of several hydraulic issues, and the infrastructure that would be required to facilitate stormwater flows under the sidewalk adjacent to the rock outcropping.

4. Formalize the parking on County property in front of St Matthew – St Aidan’s Anglican Church.

There is potential for a significant development of parking in the right-of-way in front of the church on County of Peterborough lands. The Municipality should consider reaching an agreement with the Church and County to consolidate and formalise all parking as available on both properties. Such an agreement would maximize the use of the space and minimize design and user conflicts. This parking lot would be connected to the sidewalk network on that side of Lakehurst Road.

5. Implement pedestrian crosswalks across Lakehurst Road at William Street, John Street, and Fulton Lane.

Providing frequent pedestrian crossings are critical to pedestrian safety because they reduce mid-block crossing attempts. These three approximately equidistant crossings will facilitate crossing at both ends of the sidewalk system as well as in the middle.

6.

Implement a parking needs study.

There is little existing information on parking requirements to base decisions on, and parking is both financially and spatially costly. Therefore, it is important to have a solid understanding of the issue before designing and building additional parking. The proposed parking at the church and the new parkland are not included in this recommendation as these are considered to be essential for promoting accessibility and for replacing on-street parking.

Design Considerations:

This study should consider existing municipal parking available within the downtown area as well as private lots. Assuming there is no on-street parking along Lakehurst Road from William Street to County Road 36, the need for parking should be determined. Since special events can temporarily increase parking demand in the immediate area of the event, the study should look at temporary on-street parallel parking options within the core pedestrian realm. Areas in closest proximity to the new parkland should be prioritised. Options for exploration include John Street, Main Street, Fulton Lane, George Street, William Street, and Adam and Eve Road.

7.

Promote lake stewardship and education along the new parkland shoreline.

The Municipality needs to strike a balance in the management of the shoreline between several uses. Direct contact with the water should be provided through a section of the shoreline in the form of a shallow water access point. This is currently existing in the form of the locally known John Street Beach. However, this beach area is not appropriate for intensive use as it is relatively small, has rocks that can pose hazards, and is in close proximity to boat traffic to Lock 31. Use of this area should not be prohibited, however it should not be designed or promoted for intensive activity. Additional activities that require water access should also be focused in this location, such as a potential canoe/kayak launching facility.

At the other end of the new parkland, the shoreline has been armored as a part of the Lock 31 system and this area is appropriate for indirect water

contact. This means interacting with the shoreline by being physically close without touching the water and through utilisation of strong viewsheds. This will be achieved through the implementation of a viewing platform. Refer to the drawing panels for additional details.

This leaves the majority of the shoreline on the new parkland property to be naturalised. There is a strong desire among the people of Curve Lake First Nation that a portion of the shoreline be rehabilitated with native plant communities. This will offer protection from shoreline erosion as well as offer an important educational opportunity.

Design Considerations:

It is important for the use of the parkland and the adjacent businesses that strong viewsheds be maintained to the water. Therefore, the naturalisation should focus primarily on attractive, low growing woody and herbaceous species that do not interrupt the viewsheds. Periodic inclusion of trees should be considered to frame views and accent certain features. Diversity of plant species should be prioritised to maximize the educational and ecological value of the restoration. Interaction with the restoration should be considered through the use of an integrated platform that allows passive use and indirect water access. The integration of a raised platform would achieve the boardwalk type experience that has been considered without conflicting with the lock system, being significantly better ecologically, educationally, and economically. It would also allow for the creation of shaded communities.

8.

Combine creative design and community to community relations to build an engaging showpiece on the new parkland.

The new parkland needs to be the most diversely programmed space and establish itself as a social destination to maximize its positive impact on Buckhorn. The location and size of this site are conducive to programming for special events such as music in the park and farmers' markets. These types of events can increase the awareness of the park and help to generate more use in the future. Refer to the drawing panels for additional details.

Design Considerations:

The primary programmatic elements of the site should include:

- A variety of seating areas that relate to on-site and off-site functions. The amount of seating options directly impacts the amount of time a person will spend in a public place. Seating options should be diverse including formal options such as benches and informal options such as raised ledges.
- A small but interesting natural playground area is another element that can increase the amount of time spent in public spaces. A playground also increases the appeal of special events such as farmers' markets for young families and grandparent caretakers.
- A central plaza and path network to facilitate special events should be connected to a parking lot with an accessible walkway.
- One large, or several small gardens should be integrated with the plaza. These gardens should contain a variety of species that are locally and culturally significant. Many locally native species are very culturally significant to the Anishinaabe people of the area. However, many of these species occur across the northern hemisphere and have a distinct cultural value to people descended from northern Eurasian ancestors. These cultural bridge species should be featured with an educational component in collaboration with Curve Lake First Nation. The shape of the entire arrangement of plaza and gardens could be an abstract representation or symbol of cultural or local significance as well.
- A viewing and seating platform should be integrated with the shoreline to facilitate sitting and watching lock and lake activity without conflicting with lock traffic.
- A seating area should be provided adjacent to the General Store, on the surface of the large bedrock outcropping. The area should be accessible from the store as well as the sidewalk. The area should be covered with a unique canopy that is an abstract representation of white pine. This seating area would integrate well with the functionality of the store as well as provide a view of the plaza and cultural gardens and lock area.

9.

Integrate Buckhorn with regional networks.

One of the opportunities that was identified in the inventory and analysis phase was the positioning of Buckhorn in regional networks for both land and water travel. The implementation of the shared roadway and the sidewalk/walkway infrastructure will establish Buckhorn within the County active transportation network. Buckhorn is also well poised to take advantage of the blue trails movement in recreation planning. The Municipality should consider partnering with Curve Lake First Nation, adjacent municipalities and the County to plan for a blue trails network. A small amount of infrastructure can go a long way to promote a blue trails network. One approach would be the construction of a small canoe lock-up at the base of John St. for canoe and kayakers to leave their crafts while they park their vehicle at a designated long-term/overflow parking area.

10.

Improve connectivity to Selwyn Township.

Buckhorn is administratively divided into two municipalities with the Lock 31 system forming the boundary. The bridge connecting the two halves of Buckhorn has an accessible sidewalk, however, the functionality of this sidewalk is extremely limited due to the lack of integration at either end of the bridge. Access to the bridge on the MTL side is limited to a 3-flight staircase. This staircase should be replaced, or supplemented with an AODA compliant ramp system. A partnership with Selwyn should be established to ensure consistency in access points is achieved in both jurisdictions.

11.

Implement a recreational trail from the Buckhorn Community Centre to downtown Buckhorn.

The Buckhorn Community Centre (BCC) is an important element in the Buckhorn recreational system. Additionally, this facility has a large overflow car park that could be used as day parking for kayak anglers, canoeist, kayakers, cyclists, and other recreational visitors. An informal pathway currently connects this car park with the Adam & Eve Stones, which are an important cultural feature of the area. From the stones, it is roughly a 200m walk to the proposed sidewalk corridor on Lakehurst Road.

Implementation

The recommendations of this master plan have been strategically devised in such a way that they can be implemented as modules as funding becomes available. The implementation plan outlined in this section is flexible, however emphasis should be placed on improving end-to-end walkability within the Downtown area. Solidifying this walkable corridor is fundamental to the success of the downtown area and has also been identified as the most important need through the public consultation process.

With the understanding that funding timing can be unpredictable, and that funds can be tied to specific activities, opportunities must be seized as they occur. However, efforts should be made to synchronize the implementation of the master plan as efficiency can be increased in by completing comprehensive background work where it will inform many recommendations. A diagram detailing the main requirements of implementing each recommendation has been provided on the following pages.

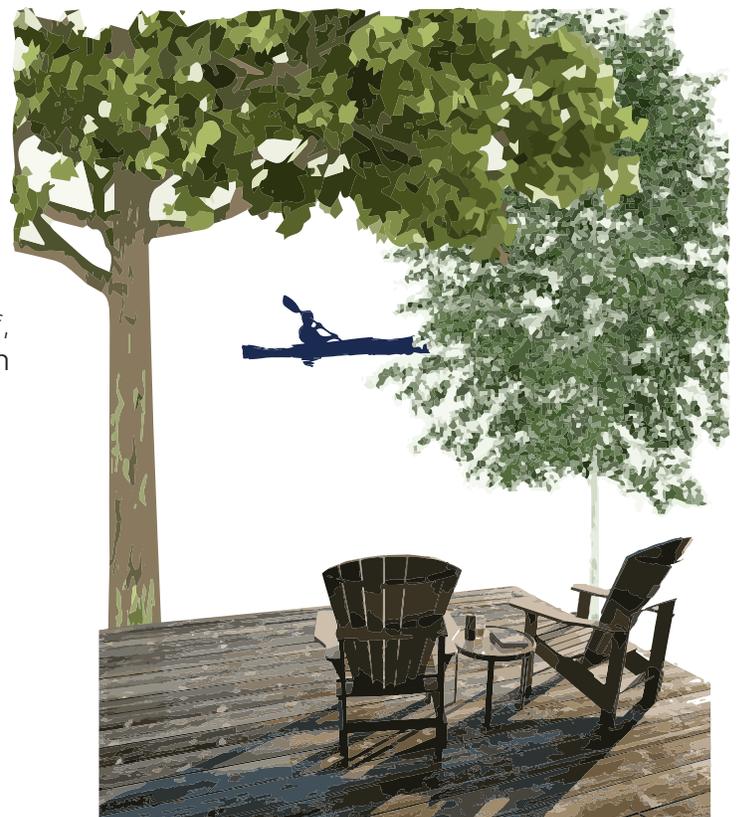
Preliminary cost calculations have been included for each of the recommendations. These prices have been included as approximate estimates because the final designs will evolve throughout the process and the costs will change as a result. However, best efforts have been made to approximate the costs and to include a list of subcomponents of each recommendation, where appropriate. Cost estimates are available in Appendix A.

The SBA project team would like to thank MTL staff, the EDC, the MTL public, and Curve Lake First Nation for their input during this project.

Sincerely,



Landon Black, OALA
Landscape Architect



Recommendation

1

Implement a shared roadway along Lakehurst Road from the Buckhorn Community Centre (BCC) to the Intersection of County Roads 36 and 23.

2

Implement an accessible sidewalk from the intersection of Adam and Eve Road to Fulton Lane on the lake-ward side of Lakehurst Road and from William Street to the Cody Inn driveway on the opposite side of Lakehurst Road.

3

Implement an accessible walkway from Fulton Drive to the Buckhorn District Tourist Association building along the lake-ward side of Lakehurst Road.

4

Formalise the parking on County property in front of St Matthew – St. Aidan’s Anglican Church.

Background Reports

→ TIS Traffic Impact Study

→ TIS Traffic Impact Study

→ TOPO Topographic Survey

→ DR Drainage Review

→ GEO Geotechnical Report

→ TOPO Topographic Survey

→ DR Drainage Review

→ GEO Geotechnical Report

→ TIS Traffic Impact Study

→ TOPO Topographic Survey

→ DR Drainage Review

→ GEO Geotechnical Report

Design

→ LA Landscape Architect

→ CE Civil Engineer

→ LA Landscape Architect

→ CE Civil Engineer

→ LA Landscape Architect

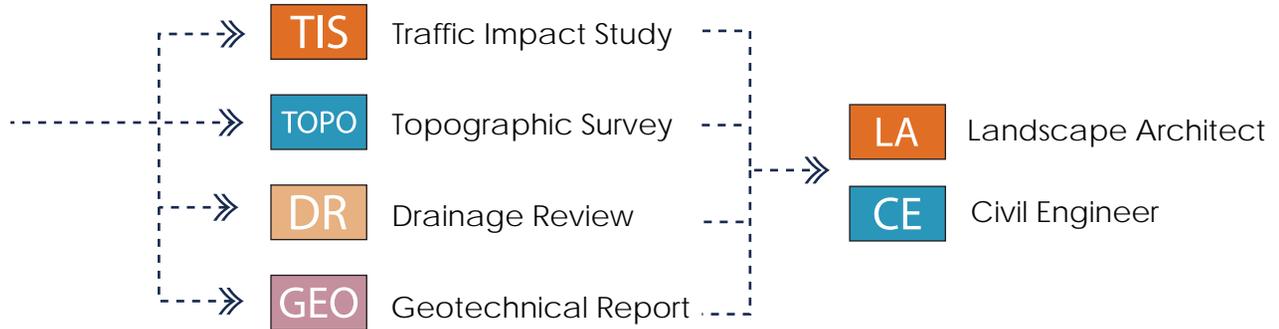
→ CE Civil Engineer

Recommendation

Background Reports

Design

5 Implement pedestrian crosswalks across Lakehurst Road at William Street, John Street, and Fulton Lane.



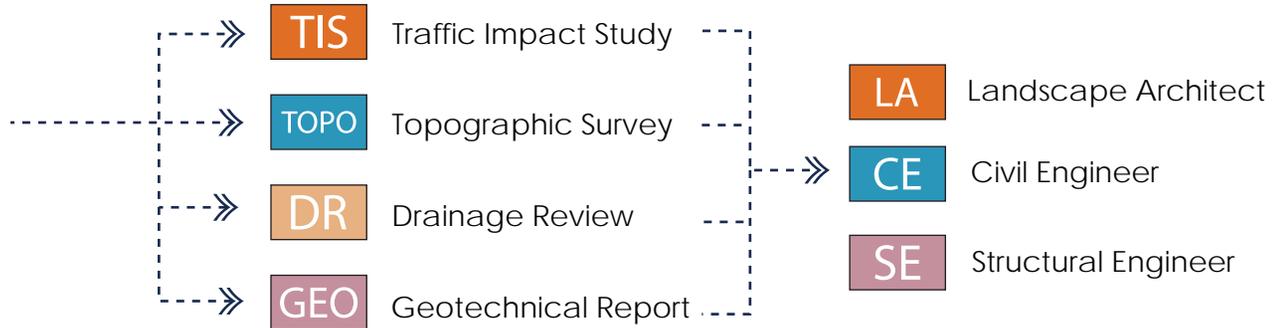
6 Implement a parking needs study.



7 Promote lake stewardship and education along the new parkland shoreline.



8 Combine creative design and community to community relations to build an engaging showpiece on the new parkland.



9 Integrate Buckhorn with regional networks.



10 Improve connectivity to Selwyn Township.



11 Implement a recreational trail from the Buckhorn Community Centre to downtown Buckhorn.



Buckhorn Connections



Peterborough County Road 36 has been identified in the County of Peterborough Active Transportation Master Plan as a route to be designed with a fully paved shoulder to facilitate cycling.

The Mississauga River water trail is one of the primary access points to Kawartha Highlands Provincial Park, the second largest Provincial Park in southern Ontario. The 20km route connects Lower Buckhorn Lake with Mississauga Lake.

Peterborough County Road 37 has been identified in the County of Peterborough Active Transportation Master Plan as a route to be designed with a fully paved shoulder to facilitate cycling.

Peterborough County Road 23 has been identified in the County of Peterborough Active Transportation Master Plan as a route to be designed with a fully paved shoulder to facilitate cycling.

Wolf Island Provincial Park is a popular destination to boat or canoe to as it is a water access only park. The southeastern tip of the island is home to Lock 30, the rest of the island has prime fishing and swimming.

Lock 31 of the Trent-Severn Waterway National Historical Site is located within Buckhorn. The Waterway remains a prominent transportation corridor with Locks 30 and 28 also located in close proximity to Buckhorn.

Public Engagement

Place of Residence

- Other
- Selwyn
- Municipality of Trent Lakes
- Buckhorn

Where Money Should Be Spent

- Increasing Parking
- Waterfront Amenities
- Streetscape Improvements
- Walking Trails + Sidewalks
- Cycling Facilities

Frequency of Visits to Downtown Buckhorn

- Only occasionally
- Monthly
- Every couple of weeks
- weekly
- Several times a week
- Daily



Design Priority Hierarchy

- Lock 31
- Trent Lakes Public Library
- LCBO + Tourist Association
- New Parkland
- Lakehurst Road

Demographics: Percent Composition of Age Groups

- 0-14
- 15-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75-84
- 85+

- 2016 Canadian Census
- Survey respondent's family composition
- Survey respondents



Master Plan

1 Promote health through design.

2 Build a foundation.

3 Engage residents and visitors.

Key Recommendations

1 Implement a shared roadway along Lakehurst Road from the Buckhorn Community Centre (BCC) to the intersection of County Roads 36 and 23.

2 Implement an accessible sidewalk from the intersection of Adam and Eve Road to Fulton Lane on the lake-ward side of Lakehurst Road and from William Street to the Cody Inn driveway on the opposite side of Lakehurst Road.

3 Implement an accessible walkway from Fulton Drive to the Buckhorn District Tourist Association building along the lake-ward side of Lakehurst Road.

4 Formalise the parking on County property in front of St Matthew – St Aidan’s Anglican Church.

5 Implement pedestrian crosswalks across Lakehurst Road at William Street, John Street, and Fulton Lane.

6 Implement a parking needs study.

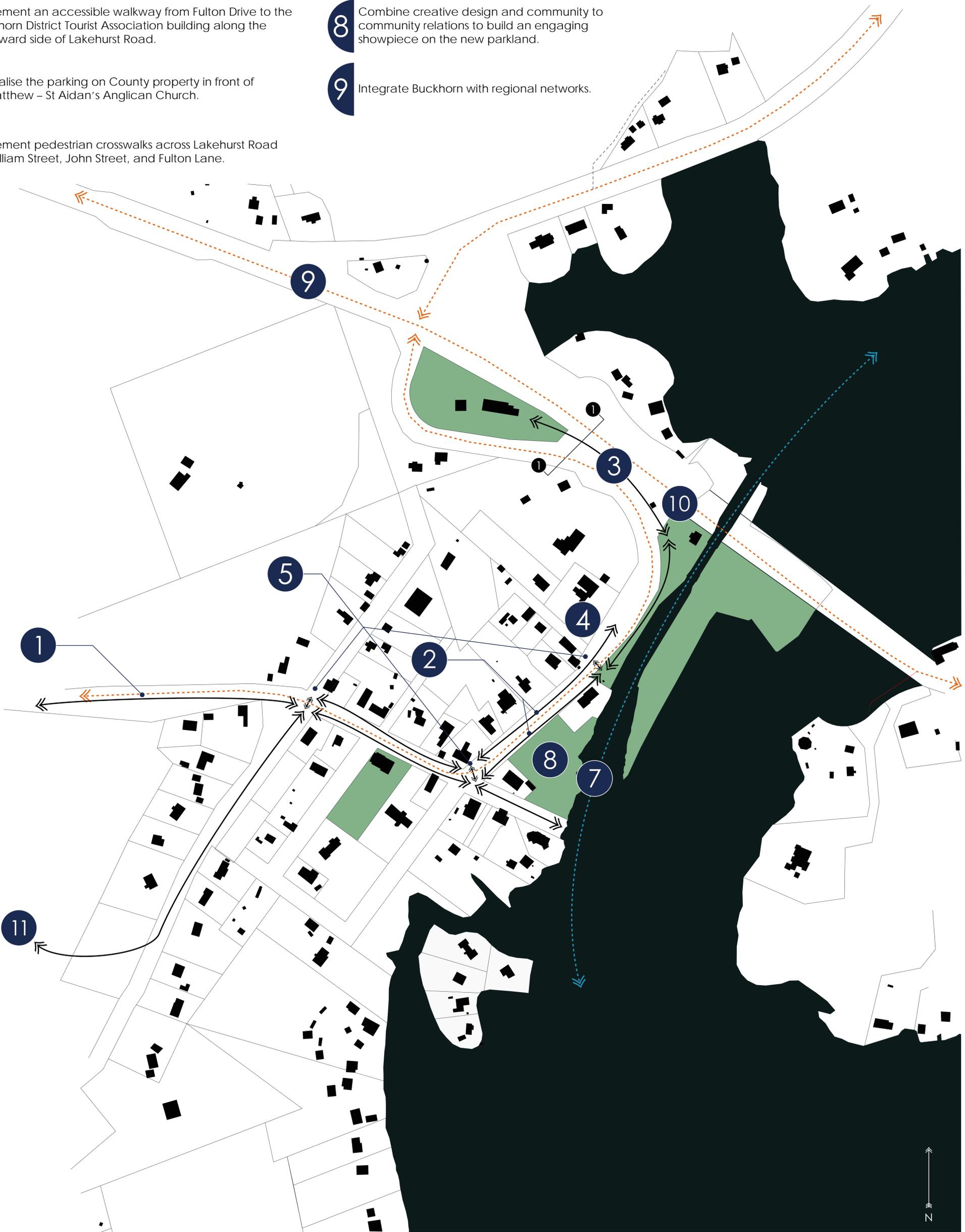
7 Promote lake stewardship and education along the new parkland shoreline.

8 Combine creative design and community to community relations to build an engaging showpiece on the new parkland.

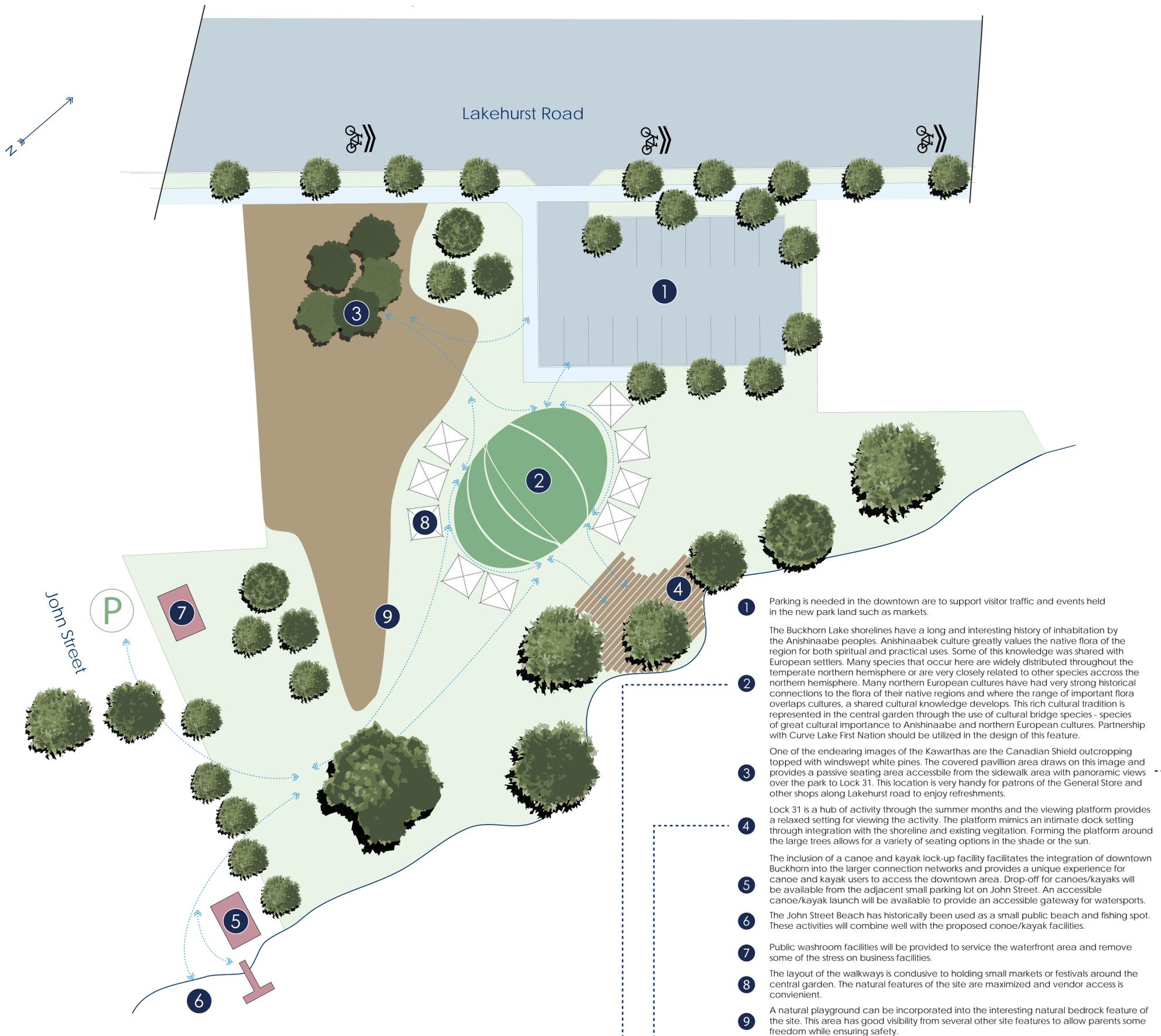
9 Integrate Buckhorn with regional networks.

10 Improve connectivity to Selwyn Township.

11 Implement a recreational trail from the Buckhorn Community Centre to downtown Buckhorn.



New Parkland Concept Plan



- 1 Parking is needed in the downtown area to support visitor traffic and events held in the new park land such as markets.
- 2 The Buckhorn Lake shorelines have a long and interesting history of inhabitation by the Anishinaabe peoples. Anishinaabek culture greatly values the native flora of the region for both spiritual and practical uses. Some of this knowledge was shared with European settlers. Many species that occur here are widely distributed throughout the temperate northern hemisphere or are very closely related to other species across the northern hemisphere. Many northern European cultures have had very strong historical connections to the flora of their native regions and where the range of important flora overlaps cultures, a shared cultural knowledge develops. This rich cultural tradition is represented in the central garden through the use of cultural bridge species - species of great cultural importance to Anishinaabe and northern European cultures. Partnership with Curve Lake First Nation should be utilized in the design of this feature.
- 3 One of the endearing images of the Kowarthis are the Canadian Shield outcropping topped with windswept white pines. The covered pavillion area draws on this image and provides a passive seating area accessible from the sidewalk area with panoramic views over the park to Lock 31. This location is very handy for patrons of the General Store and other shops along Lakehurst road to enjoy refreshments.
- 4 Lock 31 is a hub of activity through the summer months and the viewing platform provides a relaxed setting for viewing the activity. The platform mimics an intimate dock setting through integration with the shoreline and existing vegetation. Forming the platform around the large trees allows for a variety of seating options in the shade or the sun.
- 5 The inclusion of a canoe and kayak lock-up facility facilitates the integration of downtown Buckhorn into the larger connection networks and provides a unique experience for canoe and kayak users to access the downtown area. Drop-off for canoes/kayaks will be available from the adjacent small parking lot on John Street. An accessible canoe/kayak launch will be available to provide an accessible gateway for watersports.
- 6 The John Street Beach has historically been used as a small public beach and fishing spot. These activities will combine well with the proposed canoe/kayak facilities.
- 7 Public washroom facilities will be provided to service the waterfront area and remove some of the stress on business facilities.
- 8 The layout of the walkways is conducive to holding small markets or festivals around the central garden. The natural features of the site are maximized and vendor access is convenient.
- 9 A natural playground can be incorporated into the interesting natural bedrock feature of the site. This area has good visibility from several other site features to allow parents some freedom while ensuring safety.

Cultural Bridge Flora

Betulaceae



The birch family is made up of 6 genera including birches (*Betula*), alders (*Alnus*), and hazels (*Corylus*). This family is widely distributed across the northern hemisphere and has very diverse cultural and practical uses across its distribution. The white birch has famously been used by First Nations people to craft canoes, Scandinavian cultures refine the sap of birches to make syrup and birches are an extremely important cultural symbol in Russia. In fact, the birches are noted in the oldest medical texts in Russia and the leaves are spread on the hot *banya* stones to prepare the air of the famous Russian steam baths.

Pinaceae



The pine family is the most diverse conifer family in terms of species diversity and the second most widely distributed geographically. This family has been medicinally revered in many parts of the world as well as used as a food source, resins, tools, and for construction of dwellings and boats. Both Highland Scots and the Sami people have been recorded to make a flour from the inner bark of pines. In the highlands smoke from Scots pine boughs were used to dispel evil spirits, cones were believed to increase vigour and the pine still serves as the plant badge for many important Highland Clans of Siol Alpin.

Fagaceae

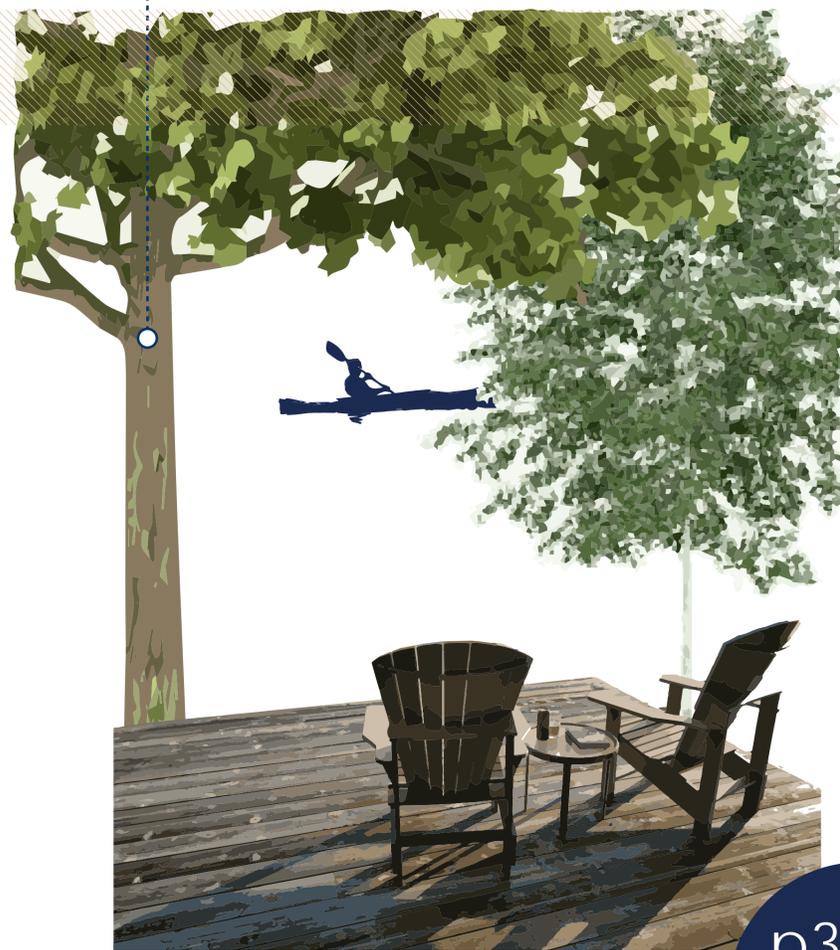


The beech family contains the oaks which may be the most culturally celebrated tree in the northern hemisphere. Both Zeus and Jupiter were symbolized as mighty oaks in Greek and Roman mythology respectively. German cultures revered the oak as did the Norse whose god Thor was also represented by oak trees. Some have even suggested that the great mythical tree which binds the nine worlds of Norse cosmology (*Yggdrasil*) is a giant oak. Oaks are also highly symbolic and often protected in Romania. Oaks are a very important food source for some fauna of North America and their wide distribution has made them an important group of plants in many First Nations cultures.

Ericaceae



The heath family is of central importance to all cultures in the acidic lands of the northern hemisphere, especially to those with reduced populations of trees due to latitude, elevation, or other environmental factors. The heath family is exceptionally diverse and includes some of the most important food, medicinal, and cultural symbol plants to many cultures. This family includes: cranberries, blueberries, huckleberries, heaths, and heathers. The uses of these plants are equally diverse and include: medicines for a variety of conditions, food, thatching, wall construction, bedding, insulation, rope, and even compressed into floor tiles.



Concept Illustrations

Key Streetscape Concepts

Sidewalks are critical to promoting health and economic growth of communities when they function as effective corridors for people, goods, and commerce. Good sidewalks have a positive effect on land values and, although they represent a significant investment, can have a long lifespan. The minimum standards for sidewalks and other exterior paths of travel are described in the AODA.

The improvement of the pedestrian realm in Buckhorn requires the retrofitting of the existing Lakehurst Road corridor. The travelled lanes of Lakehurst Road are not centred within the right-of-way so the streetscape must be modified as it moves through the downtown area.

- 1 All sidewalks should meet, or preferably exceed, the standards outlined in the AODA. Design according to the AODA principles ensures equitable access, but can also increase use by all user groups.
- 2 All sidewalks should provide amenities that increase use and make pedestrians comfortable. This is especially important in areas with higher traffic speeds and volumes where pedestrians may feel uncomfortable. Typical amenities include horticulture features, benches, street trees, and different paving materials.
- 3 The provision of sidewalk amenities also tends to reduce through traffic speed which increases pedestrian safety and makes the pedestrian realm more comfortable - a critical factor in increasing sidewalk use.
- 4 Integrate the streetscape design into the community fabric. In areas where store facades front onto the sidewalk area, it can be beneficial to widen the sidewalk to provide amenities that transition the sidewalk area into the facade without interrupting the pedestrian through zone of the sidewalk.

- 5 Always ensure there are plenty of comfortable areas to sit. This includes providing a mix of seating types, providing areas that are stimulating such as people watching or some type of activity, and providing a mix of sun and shade.
- 6 Street trees are an integral part of a community as they increase pedestrian comfort more than any other single feature of a streetscape.
- 7 Wherever possible, provide a physical separation from the traveled lanes of Lakehurst Road and the sidewalk. This is important to pedestrian safety and comfort.

Preferred Streetscape Section

- 1 Adequate space is provided for families and small groups to walk and socialize comfortably.
- 2 Street trees provide a buffer from the road, provide shade, and increase pedestrian comfort, encouraging longer stays.
- 3 Separation from the road increases pedestrian comfort and safety while providing adequate space for street trees to grow.
- 4 The opportunity to integrate the facade area of storefronts with the sidewalk area is maximized.



Alternative Streetscape Section 1

- 1 Adequate space is provided for families and small groups to walk and socialize comfortably. Sidewalk width should be increased because of the lack of a buffer between the cars and pedestrians. The street trees have been moved to accommodate necessary sidewalk design considerations such as reducing grade. In this scenario, the trees do not provide a buffer from the road. This configuration is also sometimes used at crossings where it is necessary to increase the visibility of pedestrians.
- 2 Adequate space for street trees to grow.
- 3 The opportunity to integrate the facade area of storefronts with the sidewalk area is still available but the view of these areas may be intermittently blocked.



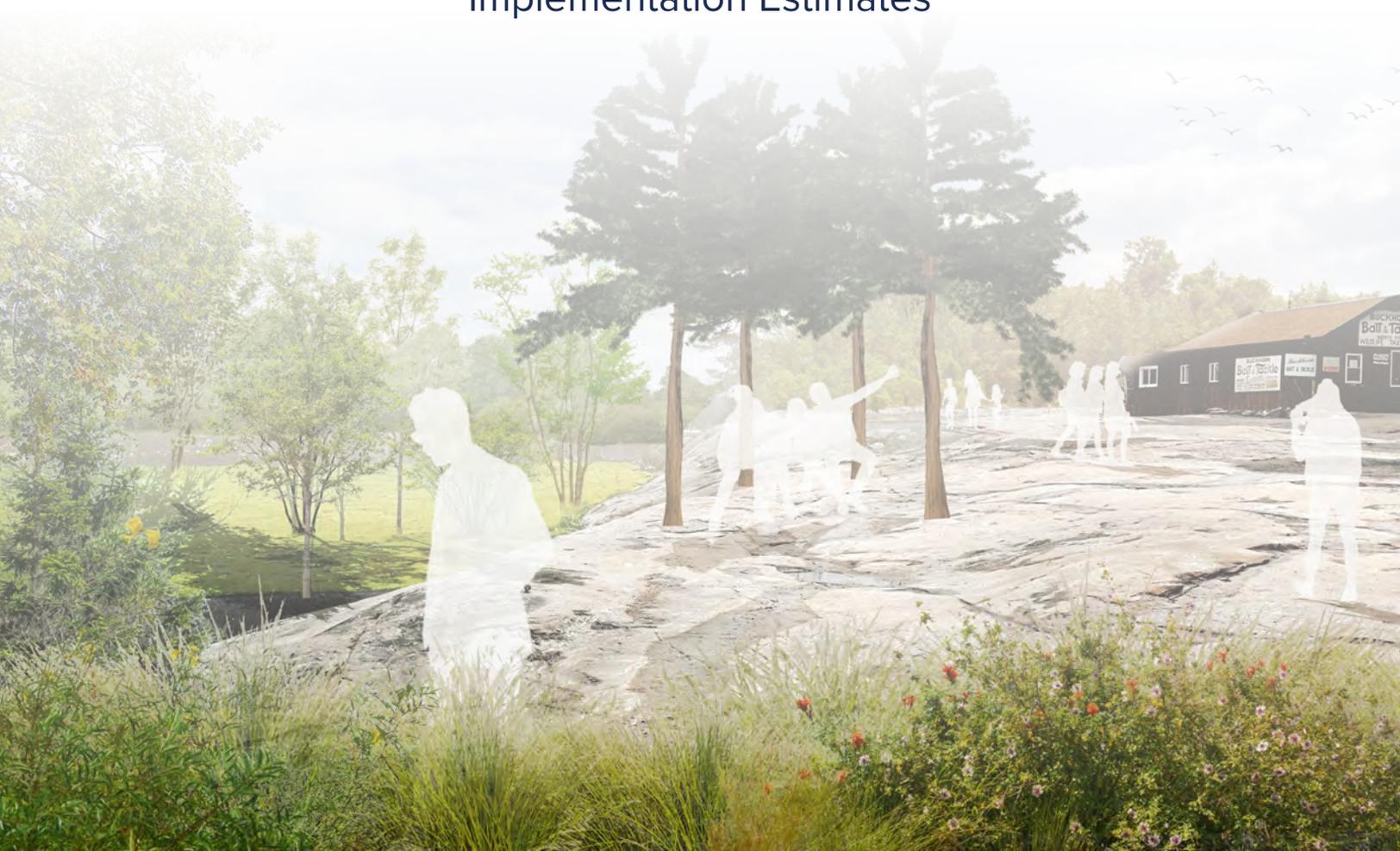
Alternative Streetscape Section 2

- 1 Adequate space is provided for families and small groups to walk and socialize comfortably. Sidewalk width may vary slightly to accommodate right-of-way constraints.
- 2 To accommodate extremely tight right-of-way constraints, the use of street trees is not possible due to the narrow available planting space. In this case the buffer should be planted with hardy grasses and forbs to provide interest.



Appendix A

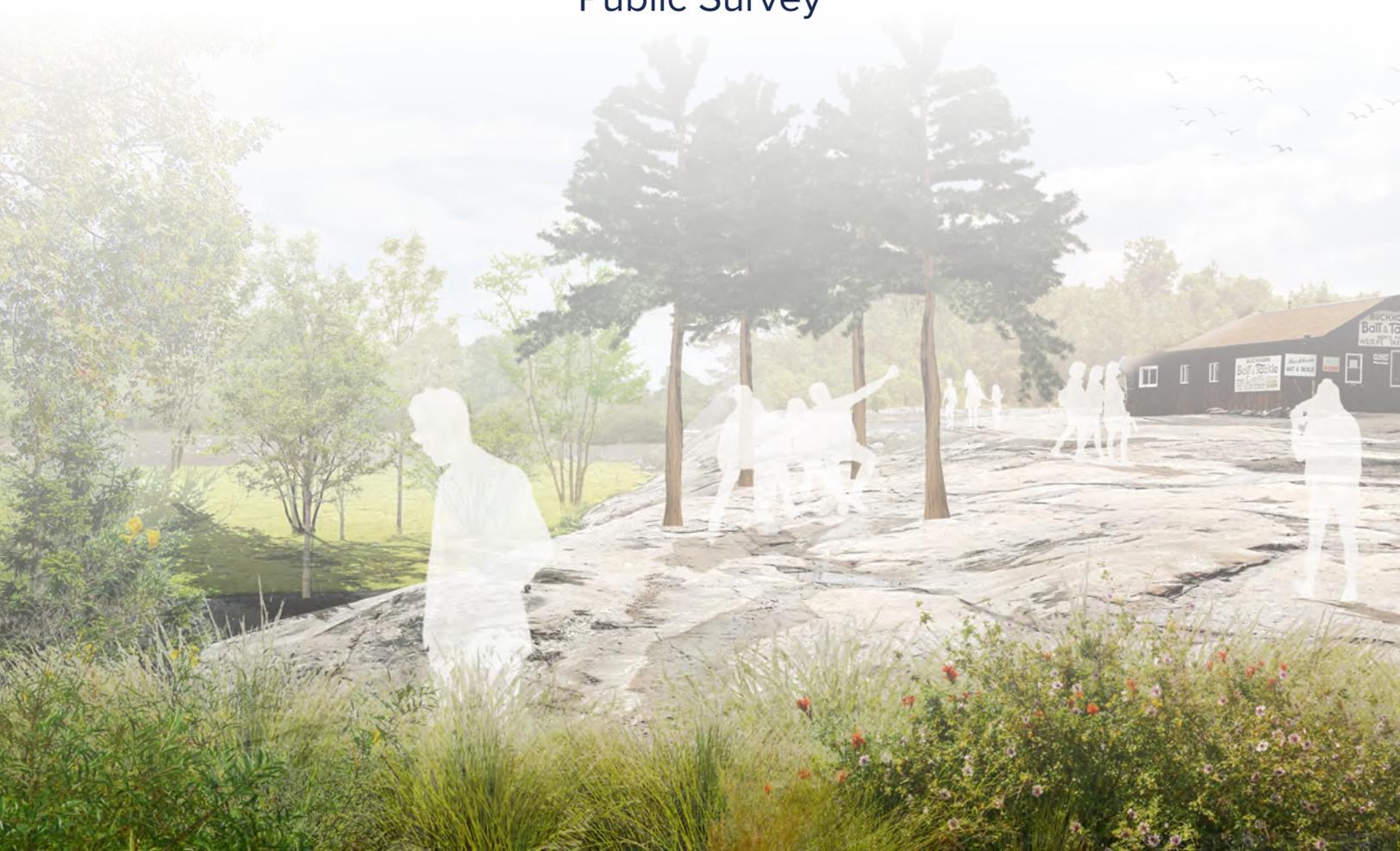
Implementation Estimates



Group		Background reports				Design			Construction		
Task		Topographic survey	Drainage review	Geotechnical report	Traffic impact study	Parking needs study	Civil design	Landscape architectural design	Structural design	Construction	
No.	Recommendation										
1	Implement a shared roadway along Lakehurst Road from the Buckhorn Community Centre (BCC) to the Intersection of County Roads 36 and 23.				X					\$3,000.00	
2	Implement an accessible sidewalk from the intersection of Adam and Eve Road to Fulton Lane on the lakeward side of Lakehurst Road and from William Street to the Cody Inn driveway on the opposite side of Lakehurst Road.	X	X	X	X		X	X		\$120,000.00	
3	Implement an accessible walkway from Fulton Drive to the Buckhorn District Tourist Association building along the lakeward side of Lakehurst Road.	X	X	X			X	X		\$45,000.00	
4	Formalise the parking on municipal property in front of St Matthew – St Aidan’s Anglican Church.	X	X	X	X		X	X		\$128,250.00	
5	Implement pedestrian crosswalks across Lakehurst Road at William Street, John Street, and Fulton Lane.	X	X	X	X		X	X		included in sidewalk design	
6	Implement a parking needs study.					X				N/A	
7	Promote lake stewardship and education along the new parkland shoreline.							X		\$40,000.00	
8	Combine creative design and community to community relations to build an engaging showpiece on the new parkland.	X	X	X	X		X	X	X	\$180,000.00	
9	Integrate Buckhorn with regional networks.							X		\$7,500.00	
10	Improve connectivity to Selwyn Township.	X		X					X	\$15,000.00	
11	Implement a recreational trail from the Buckhorn Community Centre to downtown Buckhorn.							X		\$40,000.00	
Subtotal		\$7,500.00	\$5,000.00	\$25,000.00	\$7,500.00	\$5,000.00	\$35,000.00	\$25,000.00	\$15,000.00	\$578,750.00	
										Total	\$703,750.00

Appendix B

Public Survey



Buckhorn Streetscape & Greenspace Improvements

The Municipality of Trent Lakes is undertaking an exciting project to revitalize the downtown area of Buckhorn. The objectives of the project are to: create a master plan for downtown Buckhorn, identify opportunities for individual greenspaces and streetscapes, and improve the quality of the Buckhorn experience for residents and visitors alike. This short survey is just one opportunity to provide your feedback.

The project team will be holding a public information session Wednesday March 7th from 7:00pm to 9:00pm at Hartley Hall at St. Matthews Church, 1937 Lakehurst Road, Buckhorn. Please come out and share your ideas!

* Required

1. Where is your primary residence? *

Mark only one oval.

- Buckhorn
- Municipality of Trent Lakes (other than Buckhorn)
- Selwyn Township
- Other: _____

2. What age class are you in? *

Mark only one oval.

- 0-14
- 15-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75-84
- 85+

3. How many persons of each age group are in your household? Leave box blank to indicate zero.

Check all that apply.

	1	2	3	4
0-14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15-24	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25-34	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35-44	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45-54	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55-64	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65-74	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
75-84	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How often do you use the downtown area of Buckhorn?

Mark only one oval.

- Daily
- Several times a week
- Weekly
- Every Couple of weeks
- Monthly
- Only occasionally

5. Which greenspace or streetscape should be the highest priority for improvements? *

Mark only one oval.

- Lakehurst Road (the downtown portion)
- New parkland beside the Buckhorn General Store
- LCBO / Buckhorn District Tourist Association building
- Trent Lakes Public Library
- Lock 31 and the Buckhorn Buck area

6. If you had \$1,000 to spend on the downtown area, what would you spend it on? Select multiple items to divide your funds between them. *

Check all that apply.

- Cycling facilities (on-road or separated)
- Walking trails and sidewalks
- Streetscape improvements
- Waterfront amenities
- Increasing parking

7. What activity do you wish you could do downtown that you can't do now?

8. Thank you from the project team! If you have any creative ideas or other comments, please feel free to submit them below .

