

DOWNTOWN PARIS

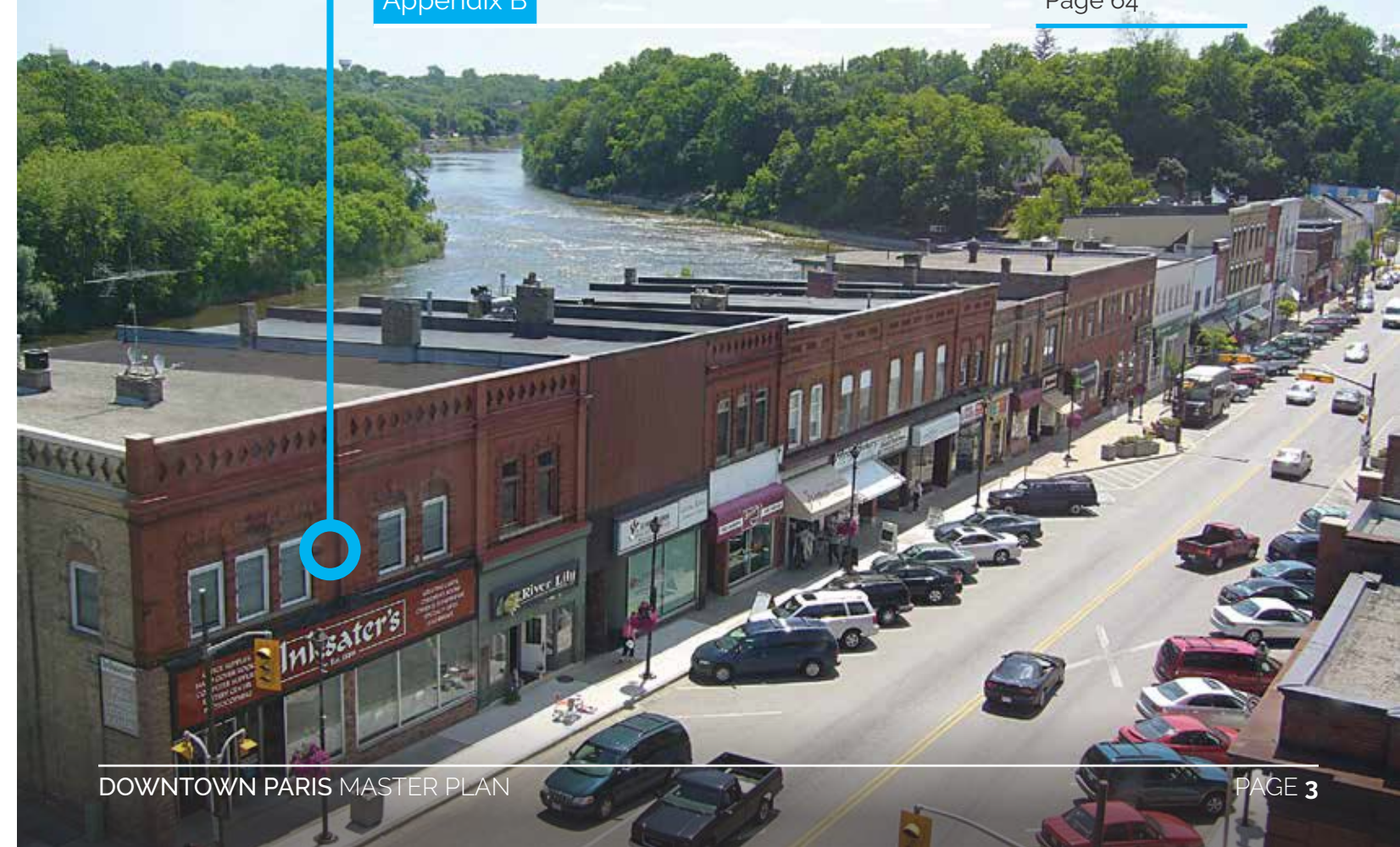
MASTER PLAN REPORT



DOWNTOWN PARIS

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Introduction

Objective:

To be a vibrant downtown core that reflects prosperity in the County of Brant. To be a place that is designed and built to be truly inclusive for people of all ages and abilities while protecting its unique historic and charming character.

As the Town of Paris looks to the future, urban design is a powerful tool that will help shape the physical setting of the downtown.

At its heart, urban design incorporates a "people first" design philosophy. This design approach promotes healthy and socially interactive neighbourhoods that contribute to the economic success of the entire area. Using the principles from urban design protects the qualities of this charming community and deters us from becoming just another suburb.

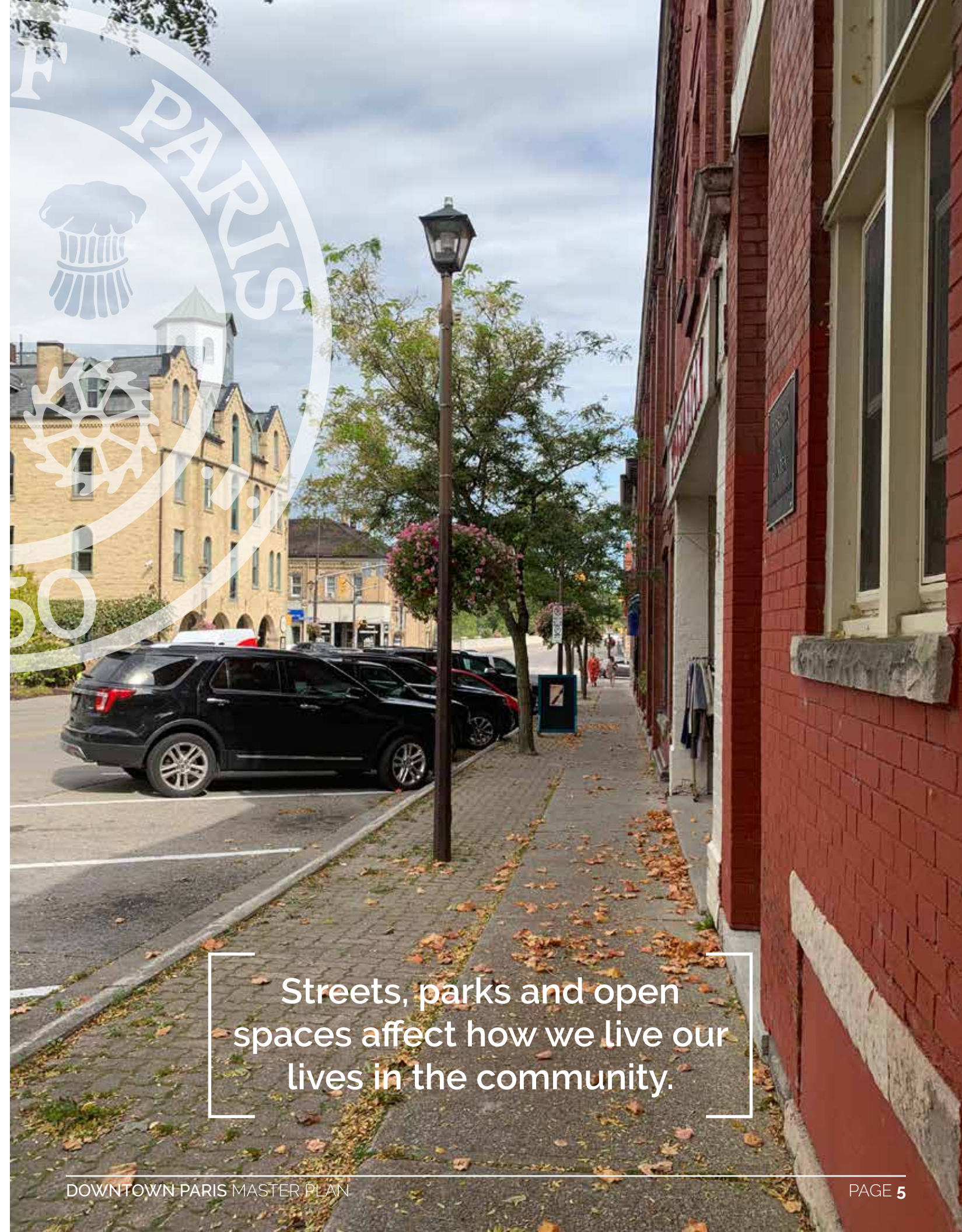
Public areas such as streets, parks and open spaces influence the type of environment we create for residents which has a profound affect on how we live our lives in the community.

The Downtown Paris Master Plan describes how enacting the urban design philosophy and principles will extend Paris' downtown into a true district between the two rivers. This is accomplished through consistent design and the addition of many new amenities.

Public spaces, at their best, are designed to be enjoyed by all members of the community, regardless of age and abilities. This Plan is rooted in a person-centered approach that was crafted from the important feedback provided by the community.



“Public spaces, at their best, are designed to be enjoyed by all members of the community, regardless of age and/or abilities.”



Streets, parks and open spaces affect how we live our lives in the community.

Framework Plan

Paris' downtown core is set in a spectacular natural environment. The land is positioned in a valley, surrounded on three sides by the Nith River and Grand River. This unique positioning demonstrates the importance the rivers played through history in the town's development. From a different perspective, the peninsular setting comes with physical constraints, leaving the area somewhat isolated in terms of access and prone to direct impacts from the rivers' potential flooding.

Access and Gateways

The downtown core can be accessed by West River, Broadway and Grand River Streets. As well, there are two bridges connecting the downtown core - William Street from the east and a foot bridge from Lion's Park from the west.

All these access points have been identified as main gateways into the downtown core. As they relate to the Master Plan, these gateways are recommended to have distinctive sidewalk paving or landscaping treatments to create a sense of arrival.

To honour and acknowledge the former Mill Race¹, decorative elements will be traced along the route to create a historical walking trail.

¹A "Mill Race" is the current of water that turns a water wheel and was a significant socio-cultural landmark in the late 1900's.



Anchors

In terms of existing key attractions in the area, there are a series of unique buildings, cultural heritage treasures and natural heritage destination points that constitute the anchors and provide a strong structure to the Master Plan. The rich cultural heritage is well distributed throughout the downtown core, but the most prominent ones in terms of size and scale are located at the intersections of Broadway and William Streets and Broadway and Mechanic Streets.

Due to the topography of the lands, there is a limited number of accessible river access areas that have not changed much over time.

Given the outstanding heritage value of these properties and by extension of the overall Heritage Areas as identified in the Official Plan, further studies will be carried out for the implementation of an Arts and Culture Strategy and a Heritage Master Plan.



Public Consultation

Over the study period, three (3) Public Open Houses and several stakeholder consultations were held to gain feedback. **Note: Numbers in these charts represent number of respondents.*



- Vacant or unattractive storefronts (32)
- Site furnishings (benches, waste receptacles, bicycle parking) that are outdated or inadequate (30)
- Lack of opportunities to access the river (30)
- Gaps in trail in sidewalk connections to destinations
- Not enough public washrooms
- Lack of signage and wayfinding to important destinations
- Not enough to do in the evening
- Not enough parks and plazas
- Aging or damaged sidewalks
- Street trees and plantings
- Loss of or not enough civic spaces (libraries, community centres, churches, etc.)
- Not enough things to do in all seasons (winter/fall/spring activities)
- Not enough parking



- Downtown traffic (44)
- Vacant or unattractive storefronts (39)
- Keep the library downtown (28)
- Downtown parking
- Street trees and plantings
- Sidewalks and trails
- Opportunities to access the river
- Access to public washrooms
- Accessibility/disabilities/barrier-free access
- Outdated/inadequate site furnishings
- Not enough to do in the evening
- Inadequate transit
- Accessible/all ages community
- Direct pedestrian traffic south of Mechanic Street to remaining businesses



- Future developments should match/compliment existing and heritage character (56)
- More/improved opportunities to access the river (34)
- Improved traffic downtown (34)
- Sidewalk and trail improvements (connections and conditions) (32)
- Flower baskets, banners and other streetscape amenities (26)
- Infrastructure improvements such as lighting and street furniture (20)
- Accessibility/disabilities/barrier-free access (12)
- Improved parking downtown (12)
- Additional/improved street trees and plantings (10)



- Improving vacant or unattractive storefronts (71)
- Sidewalk and trail improvements (connections and conditions) (63)
- Access the river (57)
- Traffic (34)
- Not enough to do in the evening (23)
- Site furnishings (benches, waste receptacles, bicycling parking) that are outdated or inadequate (23)
- Inadequate transit (23)
- Lack of signage and wayfinding to important destinations (23)
- Parking (20)
- Not enough parks and plazas (20)
- Accessibility/disabilities/barrier-free access (20)
- Loss of or not enough civic spaces (libraries, community centres, churches, etc.) (20)
- Accessible/all ages community (20)
- Not enough things to do in all seasons (winter/fall/spring activities) (20)
- Direct pedestrian traffic south of Mechanic Street to remaining businesses (20)



- Improving vacant or unattractive storefronts (11)
- History / character (9)
- Infrastructure improvements such as lighting and street furniture (9)
- Flower baskets, banners and other streetscape amenities (6)
- Pedestrianisation make Grand River car free in downtown (6)
- Access the river (5)
- Improve view of back of buildings along Grand River (boardwalk) (5)
- Sidewalk patios and parkettes (3)
- Not enough things to do in all seasons (winter/fall/spring activities) (2)
- Not enough to do in the evening (2)
- Not enough parking (2)

Grand River Street

-The Retail Corridor-

Review of Existing Conditions

Viewed as the main street within Paris' downtown core, Grand River Street has a charming character with tightly-knit, predominantly two-story buildings. Hosting a variety of small businesses, administrative buildings, cafes and restaurants, the east side backs directly onto the shores of the Grand River offering incredible views over the valley. This unique relationship with the river is one of the key attractions for locals and visitors alike.

The posted speed limits are 50km/h. There is angled parking on both sides of the street and a mid-block crosswalk, with a sidewalk bump-out, which is intended to calm traffic.

In terms of street furniture, the existing black powder coated light fixtures are equipped with banners and decorative flower baskets. There is a mix of concrete with timber and black powder coated metal benches, bicycle parking, concrete planters at the sidewalk bump-outs, and minimal trees.

Functionally, the street is facing a few key challenges as noted in previous studies, voiced at public meetings, and observed by our technical team through site walks.

Grand River Street

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Some of the challenges of the current streetscape:

- Intense vehicular traffic with significant congestion at peak commuting hours.
- The entire length of the street within the study area is within the flood plain.
- Angled parking can cause safety and traffic concerns as noted by the consultant's traffic engineers and local Ontario Provincial Police (OPP) incident reporting.
- Narrow pedestrian throughway encroached by furnishings and utility boxes.
- Insufficient space for additional street furnishings and/or streetscape enhancements.
- Inconsistent paving materials and treatment.
- Dated, uncoordinated street furniture.
- Numerous business entrances are not compliant with the Accessibility for Ontarians Disability Act (AODA).
- The sidewalks and sidewalk ramps at pedestrian crossings are not equipped with accessible features.
- Lack of permanent landscape elements and minimal trees.

Design Recommendations

Grand River Street is the primary corridor in the downtown. The intent of these design recommendations are to sustain and enhance its vibrancy and functionality. Through this design, the downtown will be enhanced as an economically thriving, attractive space that celebrates the history, cultural heritage and unique relationship with the rivers.

Design challenges are rooted in pedestrian and traffic congestion and inefficient use of public space. During public consultation, the type of parking (angled versus parallel) was highly debated. This resulted in two options being proposed. Additional consultation will be conducted throughout the detailed design process to finalize the most appropriate option.

Mini-Roundabout

As part of the traffic calming measures and intersection improvement solutions at Grand River Street and Mechanic Street, a mini-roundabout has been contemplated to allow for a safe left turn movement from Mechanic Street, to provide a safer crossing for pedestrians and cyclists and to provide an alternative solution treatment for an uncontrolled intersection. The intersection does not require widening to accommodate the mini-roundabout. Mini-roundabouts have been shown to increase safety at intersections. Crosswalks would be marked to clarify where pedestrians will cross and that they have priority.



Proposed Overall Streetscape Plan and Key Map



Option One

Option one suggests **maintaining the existing angled parking spaces** along the street.

The traffic lanes, angled parking and the sidewalks will be resurfaced but will remain the same width.

The crosswalks are reconfigured with bump-outs to allow for tree planting with tree grates, bicycle parking, and/or extra street furnishings.

Rationale and Expectations

Overall, this option **will maintain the existing number of parking spots**, accommodate planting for eight (8) trees, utilize permeable pavers at the bump-outs and add accessible tactile ramps at crosswalks. Coordinated street furniture will replace the old fixtures including benches, bicycle parking, garbage receptacles, planter boxes, pedestrian light fixtures and wayfinding posts.

Option one causes less disruption than option two during the implementation and construction phase.

It's important to note that this option offers considerably less opportunities to assist businesses in meeting accessibility compliance than option two, due to the challenges of implementing entry ramps without impeding pedestrian flow. In this option, there are minimal opportunities for street trees and to add rest areas.

As noted by the consultant's traffic engineers and the Ontario Provincial Police (OPP) incident reports, angled parking remains a safety concern for both pedestrians and motorists. Wider streets generally encourage more aggressive driving behaviour.

Implementation Strategy

The reconstruction of Grand River Street would occur in the midterm horizon (5-10 years) in Phase 2b after the construction of the parking structure and the reconstruction of Broadway Street and Mechanic Street.

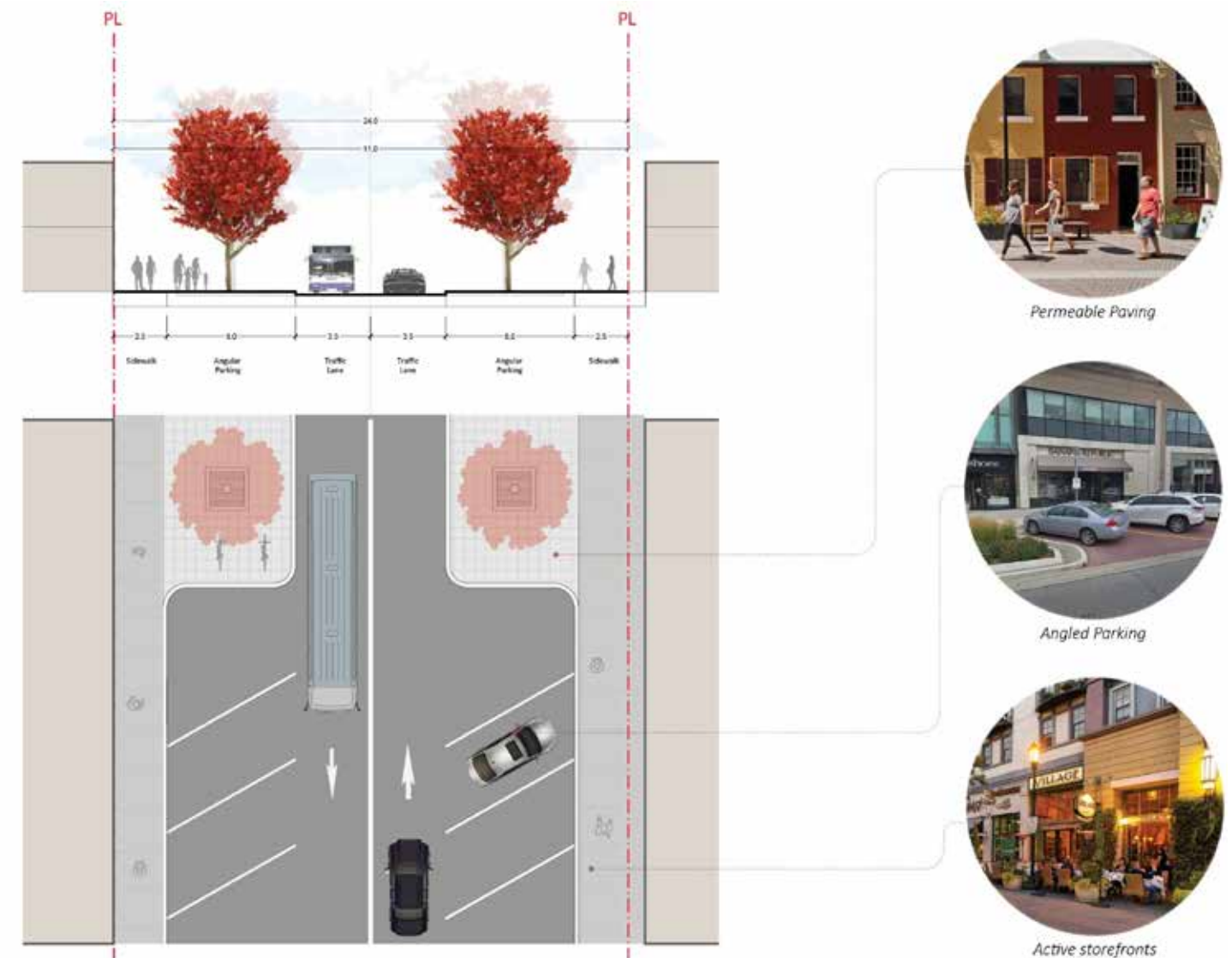
Cost

It is estimated that the cost per linear meter would be ~ \$600 CAD or a total of ~ 120,000 CAD for the entire length of the street (~ 200m). (2019 estimates)

Expected Maintenance Requirements

The maintenance for this street will be fairly low and require seasonal pruning of the trees, seasonal planting of the planter boxes and hanging baskets, regular irrigation and watering during the warmer months, annual checking and clearing of catch basins and snow removal.

OPTION 1 - Proposed Streetscape Plan, Cross Section and Key Elements



Option Two

This option provides solutions and responds to all the key considerations (as listed on page 10) including identified **safety** concerns and the design recommendations for **wider sidewalks**.

As such, the traffic lanes are narrower, the parking lanes are reoriented as lay-by parking (parallel to the curb) and the curbs are moved out increasing the pedestrian space by nearly tripling its current width (from 2.5m to 6.1m).

Rationale and Expectations

This option will completely reconfigure the street geometry and curb alignment resulting in a reduction of traffic speed and generally improve the interaction between the pedestrians and motorists. This will switch the focus to the pedestrian space.

With the wider public space, continuous soil trenches can accommodate 23 new street trees aligned along the curb providing a buffer for pedestrians, adding shade and new green vibrancy to the streetscape. This, along with permeable pavers, also provides a natural solution for stormwater mitigation. The addition of trees lowers surface and air temperatures (heat-island effect reduction).

Sidewalk bump-outs are reconfigured at the two ends of the street and mid-block, providing shorter crossing times, space for gateway or public art installation, and accessible tactile ramps at the crosswalks.

Ample pedestrian sidewalks provide adequate space for rest areas and accessible ramps to storefronts. Both of these features can easily be accommodated together with the proposed sidewalk width.

Coordinated street furniture will replace the old fixtures including benches, bicycle parking, garbage receptacles, planter boxes, pedestrian light fixtures and wayfinding posts.

This option will require major reconstruction efforts and stakeholder and community buy-in for reduced on-street parking and higher construction costs.

This design is a forward thinking solution for pedestrian comfort and accessibility to ensure everyone can participate within the community (predictable rest areas, space for mobility devices, space for accessibility ramps into businesses etc.) It also prepares the town for climate challenges (from heat to droughts to major storms) by selecting specific streetscape elements to help mitigate these concerns.

Implementation Strategy

The reconstruction of Grand River Street would occur in the midterm horizon (5 - 10 years) after the construction of the parking structure and the reconstruction of Broadway Street.

Cost

It is estimated that the cost per linear meter would be ~ \$2,300 CAD or a total of ~ \$460,000 CAD for the entire length of the street (~ 200m). (2019 estimates)

Expected Maintenance Requirements

The maintenance for this street will be average and require seasonal pruning of the trees, seasonal planting of the planter boxes and hanging baskets, regular checking of the soil cell assembly and built-in irrigation systems, annual checking and clearing of catch basins, trench drains, and snow removal.

OPTION 2 - Proposed Streetscape Plan, Cross Section and Key Elements



Key Precedents:
Main Street, Unionville,
Markham, ON

Mechanic

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Mechanic Street

-The Community Corridor-

Review of Existing Conditions

Running east to west between Grand River and West River Streets, Mechanic Street backs onto the shores of the Nith River.

The street has an incredible history, representing the town's manufacturing past through the location of the Wincey Mills building, located centrally on the south side of the street. We have identified Wincey Mills as a key anchor in our framework plan.

Overall, the north side of the street is well established with mainly retail and administrative uses towards the east and some residential parcels towards the west. The south side is currently dominated by large parking lots and mainly retail uses around Wincey Mills, with incredible potential for redevelopment along the entire length.



Some of the challenges of the current streetscape:

- Extra wide vehicular lanes for traffic and lay-by (parallel) parking on both sides.
- Low traffic volume.
- No bike lanes or cycling facilities despite the street being well-frequented by cyclists.
- The entire length of the street within the study area is within the flood plain.
- Insufficient space for additional street furnishings and/or streetscape enhancements.
- Numerous business entrances are not compliant with the Accessibility for Ontarians Disability Act (AODA).
- The sidewalks and sidewalk ramps at pedestrian crossings are not equipped with accessible features.
- Lack of permanent landscape elements and minimal trees.
- Lack of wayfinding to indicate that the street is connecting Lion's Park to the downtown core.

Design Recommendations

The vision for Mechanic Street is to redefine its physical layout and embrace its unique potential. The new design will allow for it to continue its current function while changing its focus onto the public space.

The design is recommending the conversion into a shared street, with textured or pervious pavements that are flush with the curb that reinforce the pedestrian-priority operation of the street. It would be designed to operate intuitively as shared space but signage would serve to educate the public in the early stages of a conversion.

Drainage channels would be at either the center of the street or along the flush curb, depending on existing conditions and the overall street width.

Street furniture, including bollards, benches, planters, and bicycle parking, will help define the shared space, subtly delineating the traveled way from the pedestrian-only space. A shared street sign would be used at the intersection of Broadway Street and Grand River Street. The street may also be closed to through traffic for specific events such as community celebrations, street festivals or farmers' markets. This can be achieved by using movable planters and time-of-day restrictions to regulate the shared space, providing tactile warning strips at the entrances.

Through enhanced wayfinding and distinct paving, connection to Lion's Park will be greatly improved for pedestrians.

Proposed Overall Streetscape Plan and Key Map



Rationale and Expectations

This option will increase the existing number of parking spaces from 18 to 31 and can accommodate planting for 15 trees. It will provide shared public space with permeable pavers, vehicular lanes with permeable pavers, bollards, planter boxes, trench drains and contrasting tactile pavers, separating the vehicular and pedestrian movements.

The streetscape will be enhanced through coordinated street furniture including benches, bicycle parking, garbage receptacles, planter boxes, pedestrian light fixtures and wayfinding posts. Most importantly, due to its location in the lowest elevation of the downtown core with high flood risks, there is an incredible opportunity to incorporate a street-wide stormwater facility under the vehicular portion of the street through the design of a new stormwater retention vault.

The creation of a new social, community corridor, through its multifunctional character, will have a positive impact on the downtown core. It will encourage public use and support new development while celebrating the town's rich, cultural and historical past.

Implementation Strategy

The reconstruction of Mechanic Street would occur in the midterm horizon (5 - 10 years) in Phase 2a, after the construction of the parking structure and the reconstruction of Broadway Street.

Cost

It is estimated that the cost per linear meter would be ~ \$3,800 CAD or a total of ~ 988,000 CAD for the entire length of the street (~ 260m). (2019 estimates)

Expected Maintenance Requirements

The maintenance for this street will be average and require seasonal pruning of the trees, seasonal planting of the planter boxes and hanging baskets, regular checking of the soil cell assembly and built-in irrigation systems, annual checking and clearing of catch basins, trench drains, and snow removal.

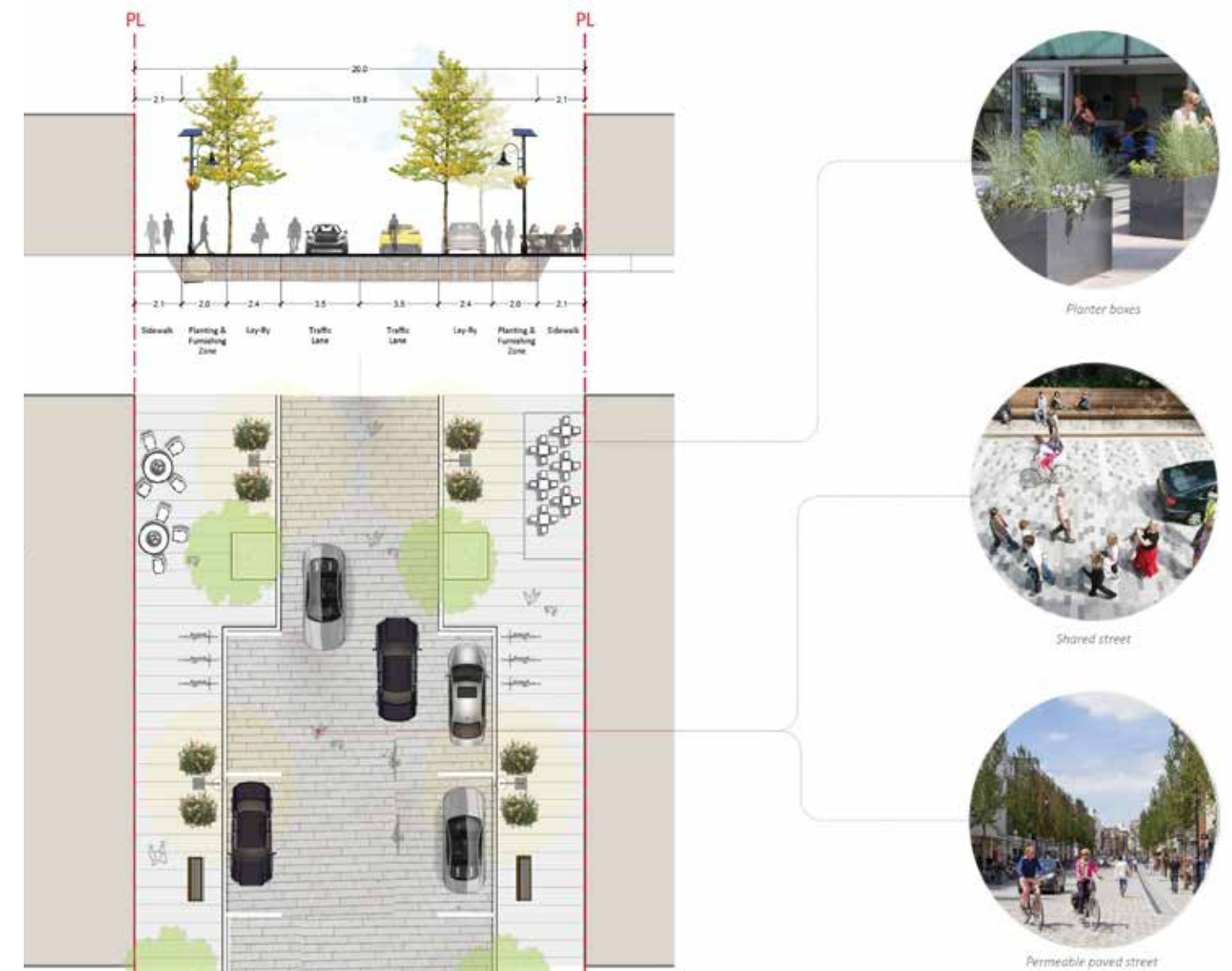
Precedents



Argyle Street, Chicago: Shared Street



Proposed Streetscape Plan, Cross Section and Key Elements



Broadway Street West

-The Cultural Corridor-

Review of Existing Conditions

Running north-south, parallel to the Nith River, Broadway Street West has some important landmarks and heritage buildings which can help define its future as the cultural corridor of the downtown core.

Currently, the street's right-of-way is vehicle focused. It appears heavily paved, lacks buildings fronting onto it, and has angled parking on a short segment at the south end. There are a few trees along the north-east end, sidewalks on both sides of the street, but without bike lanes or street furniture.

Broadway Street

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Some of the challenges of the current streetscape:

- Moderate to high vehicular traffic leading mainly into the two large municipal surface parking lots at the south end.
- Most of the street within the study area is within the flood plain.
- Well-utilized by cyclists due to its relative central location and good connectivity to residential neighbourhoods.
- Sidewalks are narrow, unprotected, fragmented by numerous driveways and parking entrances.
- Undefined public space.
- Both sidewalk paving and roadway paving are in poor condition.
- Insufficient space for additional street furnishings and/or streetscape enhancements.
- No building frontages.
- The sidewalks, sidewalk ramps at pedestrian crossings are not equipped with accessible features such as tactile warning plates.
- Lack of permanent landscape elements and minimal trees.

Design Recommendations

With the lands to the north containing three heritage properties - the current public library, a church and a cobblestone house - it is envisioned that the street will continue to be enhanced as a cultural corridor. The design celebrates this character by applying a special hardscape treatment to the area that was once the mill race run¹, accommodating all modes of traffic and access, enhancing public space, and encouraging heritage-sensitive built form and development.

The proposed design responds to one of the key considerations raised by the community regarding access to the river. As such, it is envisioned that the celebratory hardscape treatment over the former mill race route and widened boulevard will be carried across Mechanic Street and aligned and connected to an enhanced river front access on the northern shores of the Nith River.

The existing angled parking is removed, the traffic lane widths narrowed, the sidewalks and boulevards enhanced and new separated bicycle lanes are added. The enhanced public space at the south will tie into Mechanic Street, the reconfigured shared street. Tree plantings, currently held in tree grates, would be transitioned into open planters. Opportunities for public art, new bicycle parking and extra furnishings will prove to be enticing for future development.

Proposed Overall Streetscape Plan and Key Map



¹A "Mill Race" is the current of water that turns a water wheel and was a significant socio-cultural landmark in the late 1900's.

Rationale and Expectations

Overall, this design assumes that all eight (8) existing parking spots, will be relocated in the future parking structure on the east side of the street. This will allow for a safe, buffered, on-street bicycle lane, planting and furnishing zone along repaved sidewalks, 25 new trees and structural soil trenches doubling as stormwater storage, and accessible tactile ramps at crosswalks. Coordinated street furniture will be added including benches, bicycle parking, garbage receptacles, planter boxes, pedestrian light fixtures and wayfinding posts.

This design allows for a fairly quick implementation requiring community buy-in for the re-allocated street parking. The transformation will provide a completely different, more animated, greener and fluent streetscape. Pedestrians will experience accessible public spaces which will attract and support greater community engagement.

Due to the heritage component of Broadway Street West, the new public library is a perfect fit on this cultural corridor and could be located on a redevelopment site or within the new parking structure at grade level.

The transformed Broadway Street West will attract new cultural and complimentary developments, enhancing community amenities and life.

Implementation Strategy

The reconstruction of Broadway Street West would occur in Phase 1b in the immediate term (0 - 5years) after the construction of the Parking Structure.

Cost

It is estimated that the cost per linear meter would be ~ \$3,000CAD or a total of ~ 480,000 CAD for the entire length of the street (~ 160m). (2019 estimates)

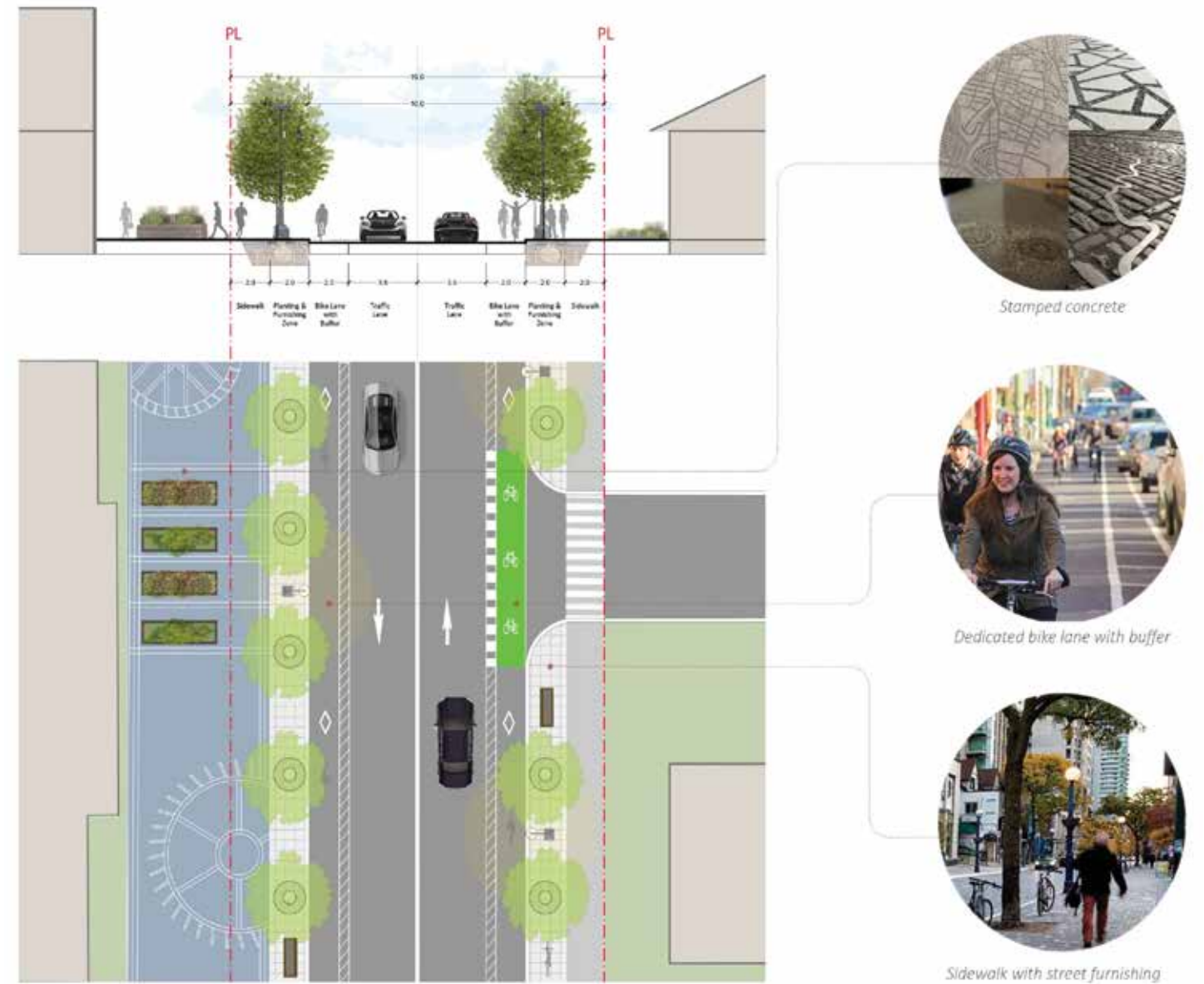
Expected Maintenance Requirements

The maintenance for this street will be fairly low and require seasonal pruning of the trees, seasonal planting of the planter boxes and hanging baskets, regular irrigation and watering during the warmer months, annual checking and clearing of catch basins and snow removal.



Bike Lane: Shared Street

Proposed Streetscape Plan, Cross Section and Key Elements



William Street

-The Connector Corridor-

Review of Existing Conditions

William Street is a main gateway into the downtown core from across the Grand River. It has an urban presence between Broadway Street West and Grand River Street. To the west, it has a residential, quieter character.

In terms of street furniture, the existing black powder coated light fixtures are equipped with decorative flower baskets. There are a few trees on the south side of the street and no street furnishings.

William Street

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PARIS



Some of the challenges of the current streetscape:

- Moderate vehicular traffic with some congestion at peak commuting hours.
- A small portion of the street within the study area is within the flood plain.
- Angled parking often causes safety and traffic concerns.
- Narrow pedestrian sidewalks.
- Insufficient space for additional street furnishings and/or streetscape enhancements.
- Inconsistent paving in terms of materiality and treatment.
- Numerous business entrances are not compliant with the Accessibility for Ontarians Disability Act (AODA).
- The sidewalks, sidewalk ramps at pedestrian crossings are not equipped with accessible features such as tactile warning plates.

Design Recommendations

The vision for William Street is that of a connecting, functional, walkable, barrier-free street with attractive public space.

The design recommendations for this street have focused on widening the public space, converting the angled parking into lay-by parking (parallel to the curb) and providing ample space for street furnishings. The intent is to maintain the existing trees through reconfiguration and using large, seasonal planter boxes for additional softscaping and beautification.

The design is focused on the urban character of the streets eastern half, on enhancing the usable, functional public space and supporting the retail and commercial uses along this stretch.

Proposed Overall Streetscape Plan and Key Map



Rationale and Expectations

The reconstruction of William Street will accommodate bicycle shared lanes, bicycle parking, provide continuous concrete sidewalks, permeable pavers and accessible tactile ramps at crosswalks. Coordinated street furniture will be added including benches, bicycle parking, garbage receptacles, planter boxes, pedestrian light fixtures and wayfinding posts.

The reconstruction will also provide adequate public space widening for pedestrians and street furnishings, accommodate accessible entry ramps to store fronts, and enhance connectivity through the district.

Implementation Strategy

The reconstruction of William Street would occur in the long-term horizon (10 - 15 years) in Phase 3a after the construction of the parking structure and the reconstruction of Broadway, Mechanic and Grand River Streets.

Cost

It is estimated that the cost per linear meter would be ~ \$1,500 CAD or a total of ~ \$390,000 CAD for the entire length of the street (~ 260m).

Expected Maintenance Requirements

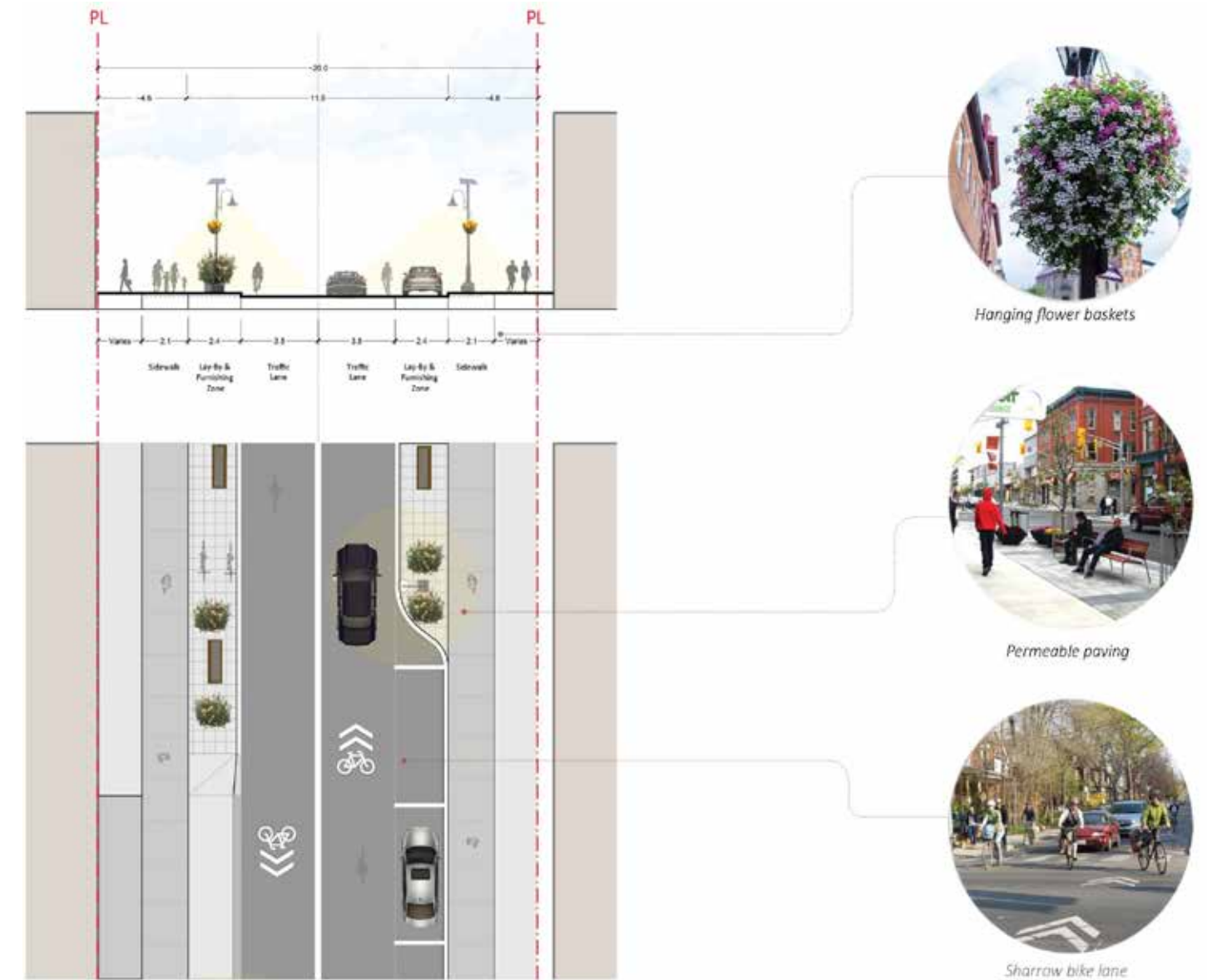
The maintenance for this street will be fairly low and require seasonal planting of the planter boxes and hanging baskets, regular irrigation and watering during the warmer months, annual checking and clearing of catch basins and snow removal.

Precedents



Bike Lane, Roscoe Street, Chicago

Proposed Streetscape Plan, Cross Section and Key Elements



West River Street

-The Quiet Corridor-

Review of Existing Conditions

West River Street is the only street within the downtown core that could be classified as pure residential.

The street runs parallel to the Nith River from the southern tip of the downtown core all the way to the rail line to the north, providing beautiful views of the river, key northerly connections and safe linkages for cyclists.

There are no street furnishings and inconsistent pedestrian lighting.

West River Street

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Some of the challenges of the current streetscape:

- Vehicular traffic is mainly attributed to accessing the public parking lot on the east side.
- The majority of the street within the study area is within the flood plain.
- Numerous driveways and curb-cuts.
- Narrow, discontinuous sidewalks, completely missing south of Mechanic Street.
- Inconsistent paving in terms of materiality and treatment.
- No street furniture.
- The sidewalks, sidewalk ramps at pedestrian crossings are not equipped with accessible features such as tactile warning plates.

Design Recommendations

The vision for West River Street is enhanced streetscaping, wider sidewalks and sharrow bike lanes.

The design recommendations for this street are minimal, mainly relating to stormwater management and improving cycling and pedestrian flow. As well, improving parking, wayfinding and lighting are suggested.

A public look-out point at the Nith River could be a consideration through future redevelopment, should the opportunity arise.

Proposed Overall Streetscape Plan and Key Map



Rationale and Expectations

Overall, this design adds eight (8) new parking spots, accommodate shared bike lanes and bicycle parking, provide continuous concrete sidewalks, provide bio-swales for mitigating stormwater run-off and accessible tactile ramps at crosswalks. This design also includes coordinated street furnishings, pedestrian lighting and wayfinding posts.

This option allows for a quick implementation with minimum construction impacts. The reconstruction will also provide an enhanced public space through bio-swales and wider sidewalks.

Implementation Strategy

The reconstruction of West River Street occurs last in the long-term horizon (10-15 years) in Phase 3b after the construction of the parking structure and the reconstruction of Broadway, Mechanic, Grand River and William Streets.

Cost

It is estimated that the cost per linear meter would be ~ \$1,200 CAD or a total of ~ \$300,000 CAD for the entire length of the street (~ 250m).

Expected Maintenance Requirements

The maintenance for this street will be fairly low and require checking and clearing bio-swales and its internal filtration and drainage elements on an annual basis, checking and clearing catch basins, and snow removal.

Precedents



Bio-swales during storm event, Seattle, WA



Proposed Streetscape Plan, Cross Section and Key Elements



Implementation and Phasing

In terms of phasing the Master Plan, it is important to note that key factors such as alignment with current infrastructure and utility upgrading plans, review of underutilized properties and development applications, as well as, community priorities have been taken in consideration. As well, parking needs have been considered to ensure local businesses will remain serviced while the construction improvements are taking place.

Phase 1: Immediate term (0-5 years)

Total Cost ~ \$6,720,000 CAD

Phase 1a:	A new parking structure will be built to ensure future phases will have parking alternatives during construction.
Cost	\$6,240,000 CAD
Phase 1b:	Reconstruction of Broadway Street West will take place following the construction of the parking structure.
Cost	\$480,000 CAD

Phase 2: Medium term (5-10 years)

Total Cost ~\$1,448,000 CAD

Phase 2a:	Reconstruction of Mechanic Street with the option to build an extensive underground stormwater facility.
Cost	\$988,000 CAD
Phase 2b:	Reconstruction of Grand River Street with structural soil trenches doubling as stormwater management.
Cost	\$460,000 CAD

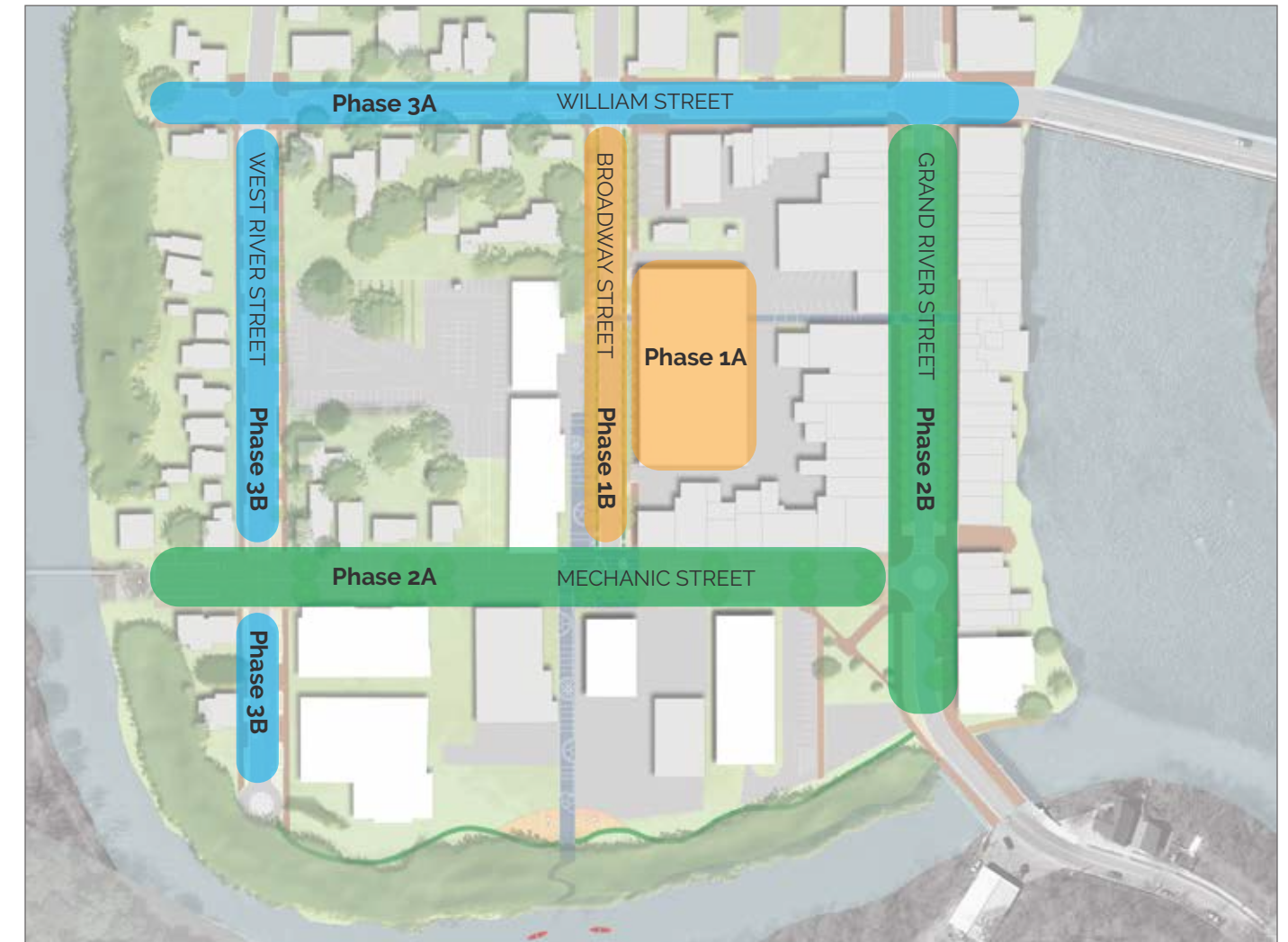
Phase 3: Long Term (10-15 years)

Total Cost ~ \$690,000 CAD

Phase 3a:	Reconstruction of William Street.
Cost	\$390,000 CAD
Phase 3b:	Reconstruction of West River Street with the implementation of the first bio-swales.
Cost	\$300,000 CAD

These cost estimates were provided by the consultants. It is expected costs will vary depending on the timing of the implementation, inflation and quality of selected streetscape elements.

Phasing Plan



- Phase 1: 0-5 years
- Phase 2: 5-10 years
- Phase 3: 10+ years

Streetscape Elements

Paving



Planters and Tree Grates



Bio-swales



For additional streetscape elements, see Appendix A.

Trees



Bike Lanes



Public space is one of the most important components of any town or neighborhood. As such, the built form and streetscape treatments should provide an attractive, safe and comfortable pedestrian environment, while maintaining the overall visual cohesiveness of the area. This can be achieved through a variety of design responses, which include, but are not limited to, carefully selected hardscape materials (pavers, poured textured concrete, permeable pavers etc.) permanent planters and planter boxes for trees and other plantings, bio-swales and tree grates, bicycle parking, benches, garbage receptacles and street lighting fixtures.

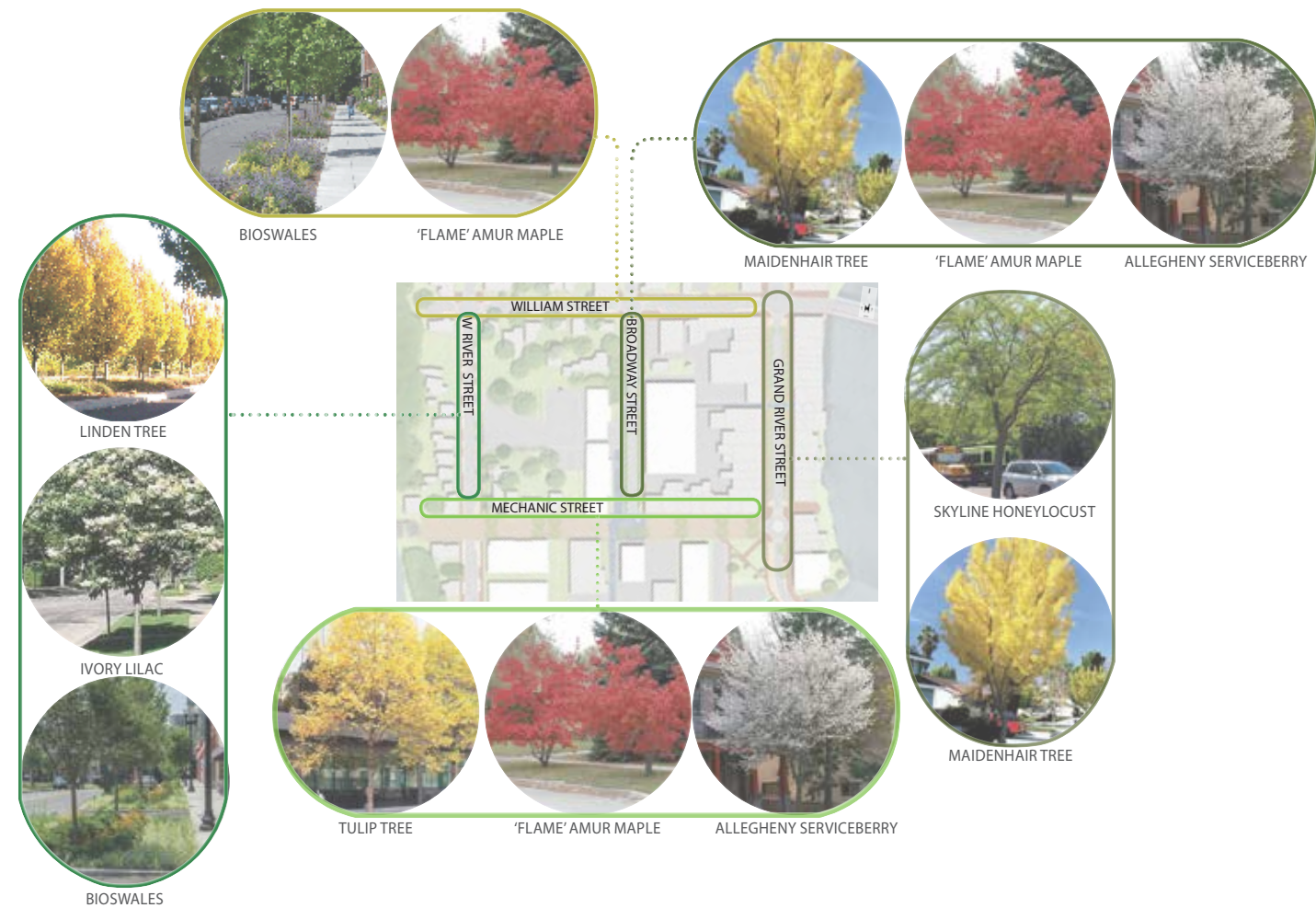
The street elements provide predictability and functionality to the space. It allows for consistent rest areas, noise buffering, and space for people with strollers, assistive devices and service animals to navigate and enjoy their community's downtown.

Street Furniture



Recommended Trees

Street trees provide plenty of benefits in terms of urban planning and environmental wellness, such as shade from heat and relief from humidity, making streets more walkable and bikable and lowering the average electricity bills of surrounding businesses. They also lower the average driving speed, making roadways safer for pedestrians and drivers alike. Evidence suggests that trees improve the health of nearby residents, lowers crime rates, and drastically, increases property values in an area.



For additional information about recommended trees, see Appendix B.



One well established tree can have the effect of 10 room sized air conditioners.

Parking Structure

Review of Existing Conditions

The community has stated, in various public meetings, that finding an open parking space during peak times is a source of frustration for many in the downtown. The concept of a parking structure and its suggested size were arrived at in context of current restraints, future development/redevelopment and population projections.

Building the parking structure dramatically increases the number of parking spaces while disguising an unattractive parking lot and protecting public space that the community can use and enjoy.

Design Recommendations

The parking structure design recommendations would supply additional parking and also reconfigure the streetscape. It is recommended that a new parking structure be built on top of the large municipal surface parking lot in the centre of the downtown core. The new structure will be built fronting and framing Broadway Street West. It would complement and comply with the height, scale, façade treatment and materiality with the adjacent built form. The façade of the side and back elevations of the structure will have a neutral treatment such as a green living wall. As well, it would have active retail and commercial uses, at grade, to maintain street animation and contribute to the public space. Commercial entrances will be fronting Broadway Street West while the vehicular entrance will be through a laneway wrapping around the back of the building and servicing other business owners.



Plan View of the Proposed Parking Structure

Rationale and Expectations

The new building will provide up to three (3) times more parking spaces, will add new uses and animate the public space fronting Broadway Street West. It will provide sheltered parking conditions while demonstrating a higher and better land utilization.

The expectations are that the new parking structure will be conducive to new development, will attract new business and will offset parking needs during the reconstruction of the adjacent streets.

Depending on the final structure type and materials used, it is estimated that a four (4) level parking structure with 300 - 350 spaces can be accommodated on the existing municipal parking lot, east of Broadway Street West. Given its location on the proposed cultural corridor of the downtown, this could be a consideration for the location of the new public library or other public use. Additional uses and consideration will be explored through the upcoming Arts and Culture Strategy. This structure also allows for the integration of charging stations for electric vehicles, bicycle lockers and other public amenities as identified through consultation.

Implementation Strategy

The construction of the parking structure would occur in the immediate term (0 - 15 years) in Phase 1a before any new road reconfiguration /construction.

Cost

It is estimated that the cost could vary between \$50 - \$100 CAD/sqf (based on the 2018 Cost Guide by Altus Group) or a total of ~ 6 million dollars CAD for the entire structure accommodating approximately 300 - 350 parking spaces.

The cost of the parking structure may change as the use of commercial space is further refined by studies and consultations. Public and private partnerships would also be explored for financing and the ongoing maintenance of this project.

Expected Maintenance Requirements

The required maintenance would be similar to other municipal buildings with the caveat that a paid parking system would cover some of the maintenance and upkeep costs. Maintenance requirements may change depending on the financing and ownership model.



Examples of green covered parking garages.



Parking Structure

Existing Surface Parking Lot (Looking North in front of Wincey Mills)



Proposed Parking Structure (Looking North in front of Wincey Mills)



Existing Public Parking



Potential Future Parking



Low Impact Development

Review of Existing Conditions

A high-level review of the hydrogeological and topographical settings of the downtown core as well as recent flood mapping, indicate that there is a serious concern regarding flood mitigation and future resiliency.

As Grand River Conservation Authority (GRCA) mapping indicates, most of the downtown core sits within the flood plain and as such, all future development including streetscaping efforts must be approached with careful consideration. Studies suggest that the low-lying downtown core is not only receiving downstream flow flooding and runoff from the impervious land surfaces but there is also an upstream effect that further constrains these lands and access across the two rivers.

Design Recommendations

Low Impact Development (LID) involves the use of landscape features to manage rainfall at the source and protect and enhance water quality by replicating the function of natural watersheds. They play a critical role in improving water retention and should be designed to protect the quality of the Town's groundwater and watersheds. They can also be designed to enhance the streetscape, protect animal habitats and provide additional landscaped space in the boulevard that is both functional and aesthetic. When LIDs are implemented in the road right-of-way, other municipalities generally experience reduced operations and maintenance costs when compared with traditional storm water management systems.

Some Low Impact Development (LID) features to be considered:

- Bio-retention planters, units or curb extensions
- Bio-swales or drainage swales
- Permeable paving
- Soil cells
- Perforated pipe systems

While further studies must be conducted to offer precise flood mitigation measures throughout the study area, there are a few low impact development techniques widely used in contemporary streetscape reconstructions throughout Ontario that could be considered for downtown Paris.

Grand River, Broadway and Mechanic Streets are sitting completely within the flood plain while William and West River streets are partially within the flood plain. For Grand River Street and Broadway Street, they are naturally sloping towards the south, a two-deck, 2 - 4 meter wide soil trench with structural soil cells doubling as stormwater storage and filtration is recommended as mitigation measure. Additionally, trench drains can be set strategically to capture run-off across the slopes. Trees can be planted at 6 - 8 meter intervals to assist with the water absorption.

All recommendations are to be further explored and refined within the context of the Paris Flood Risk Mitigation Class EA, detailed engineering design and consultation with GRCA.

For Mechanic Street, a more complex below-grade stormwater facility is proposed, one that would be stretching across the width and length of the street. The exact size and location will need to be designed and carefully measured through detailed engineering studies. In principle, the facility would be located in the lowest portion of the site, completely hidden, within public right-of-way meaning ease of access for maintenance and monitoring.

For William Street and West River Street, bio-swale planters would provide stormwater mitigation.



Example of a Silva Cell drainage system.

Rationale

The ultimate goal of stormwater management is to maintain the health of streams, lakes and aquatic life. As well, stormwater management provides opportunities for human uses of water by mitigating the effects of urban development.

To achieve this goal, stormwater management strives to maintain the natural hydrologic cycle, prevent an increased risk of flooding, prevent undesirable stream erosion, and protect water quality.

Maintain the natural hydrologic cycle:

A decrease in infiltration reduces soil moisture replenishment and groundwater recharge. Soil moisture is required to sustain vegetation. Loss of groundwater recharge can reduce stream base flow, the flow that continues between storms and sustains aquatic life. It can also reduce the quantity of groundwater available for domestic and agricultural water supplies.

Prevent an increased risk of flooding:

Floods are more common in urban areas because of the increased runoff from hard surfaces and the presence of systems that carry this runoff to streams quickly. Flooding can lead to risk of injury and property damage.

Prevent undesirable stream erosion:

Erosion is a normal part of stream behaviour. Stormwater is managed to prevent excessive erosion that may prohibit a stream from fulfilling its normal function of conveying water and sediment. As a consequence of urbanization, there is an increase in the volume and rate at which sediment and water are delivered to streams. This causes an increase in the erosive forces on stream banks and beds that dislodge and transport particles and, over time, damage the natural form of streams. Streams change shape and enlarge, the size distribution of stream bed sediments changes, and meander patterns may also be affected. Degradation of stream habitat leads to a decline in plant and animal diversity.

Expectations

The proposed approach for each streetscape (as described in Chapter 2) should provide a fast, measurable solution for low impact development implementation.

However, the transformation will require significant up-front investment by the municipality and buy-in from the community.

Implementation Strategy

There are a few well-established suppliers, local manufacturers and designers working with municipalities. The scale, sizing and phasing of these low impact development measures can be further adjusted across the implementation plan as funds are made available.

Cost

It is estimated that the cost per cubic meter of installed soil cells is ~ \$500 CAD. (2019 estimates)

Expected Maintenance Requirements

Requires training of staff for monitoring and repairs as well as a maintenance manual.

Stormwater run-off into a soil trench system below grade





Benefits of Silva Cells

A study performed by the Credit Valley Association of Canada found hydrologic and hydraulic benefits using Silva Cells which are consistent with other green infrastructure installations. A summary of these benefits is provided below (DeepRoot and Credit Valley Conservation, 2016):

- Average runoff reduction for all eight hydrologic events observed was 97%.
- Storm events with depths less than 25 millimeters made up 63% of the total events.
- These events had a 98% volume reduction.
- Peak flow was reduced by 96% on average.
- The average lag time for events that produced outflow was 35 minutes.

A study conducted in Manchester, United Kingdom also demonstrated hydrologic and hydraulic benefits. Provisional results from that study are provided below:

- 70% average storm peak reduction.
- 60% average water volume retention by the Silva Cell system.
- Up to 2 hours (average 90 minute) delay (i.e., attenuation) in stormwater entering the system.

The Silva Cell is a modular building block for containing unlimited amounts of healthy soil beneath paving while supporting traffic loads and accommodating surrounding utilities.

The Silva Cell is filled with high-quality, uncompacted soil to grow trees and manage the rate, quality and volume of stormwater.



DOWNTOWN
PARIS

Next Steps

The implementation of the Downtown Paris Master Plan will be a complex process that will require careful coordination between internal departments and external stakeholders.

Considerations include:

Detailed Design

The Master Plan presents a preferred concept for the downtown study area including public amenities and streetscaping. The detailed design exercise will translate the concepts into functional layouts prior to implementation and refine capital requirements.

Accessibility

During detailed design, special attention will be given to the Accessibility for Ontarians with Disabilities Act (AODA) and the Accessibility Standards for the Design of Public Spaces (DoPS).

Phasing and Integration

As findings from current and pending studies become available, prioritization of phases and design elements will be reviewed in that context.

Mitigation Strategy

It is recognized that reconstruction in the downtown core will have a significant impact on local businesses. A coordinated strategy with the Downtown Paris BIA will be prepared for approval by Council prior to any phase of construction commencing.

Utility Providers

Wherever possible, infrastructure in the right of way must be renewed, if necessary, concurrent with street reconstruction to minimize disruption to the public. Early planning with utility providers will ensure that construction efforts are coordinated and efficient.

Maintenance and Operations

The design recommendations in the Master Plan will require increased maintenance and operations commitments to protect the investment. It is recommended that comprehensive maintenance requirements and schedule be prepared as part of detailed design in cooperation with County of Brant staff.

Communications

Throughout detailed design and implementation, it will be crucial to educate the public on the benefits of each recommendation. Communications will be prepared and disseminated through various channels on issues such as:

- Accessibility and the rationale behind the design
- How to use flexible streets such as Mechanic Street (as a pedestrian, cyclist and motorist)
- Sustainable features

Financing

Opportunities for federal and/or provincial funding will be reviewed through each step of the planning and implementation of the Master Plan. Detailed design will provide refined cost estimates to be presented for consideration by Council in the County's capital forecast.



Additional Streetscape Elements

Shared Streets



Bike Lanes



Sidewalks / Amenity Areas



Tree Planting



Shrubs / Grass / Perennials



Open Planters



Boulevard



Tree Grates



Decorative Planter Boxes



Individual Planters



Bench



CR-12
VICTOR STANLEY



FMS-324
VICTOR STANLEY



PARC VUE BENCH
LANDSCAPE FORMS

Waste



EP 3700-AC
EQUIPARC



MLWR250-32
MAGLIN



CHASE PARK
LANDSCAPE FORMS

Bike Rack



MRB150
MAGLIN



MBR-200
MAGLIN



BOLA
LANDSCAPE FORMS

Bollard



EP-7070-AG
EQUIPARC



MTB-650
MAGLIN



SCTB 1600
MAGLIN

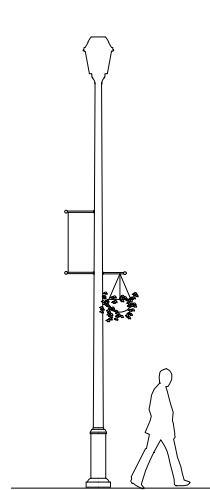
Concrete Paving



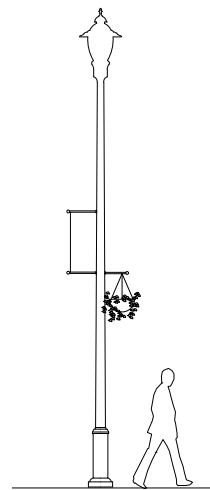
Concrete + Pavers



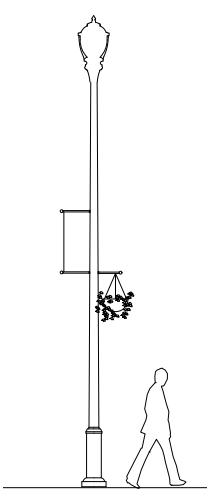
Street Lighting



K611 BALMORAL
KING LUMINAIRE



K329 RAINIER
KING LUMINAIRE



K135 FORT ERIE
KING LUMINAIRE

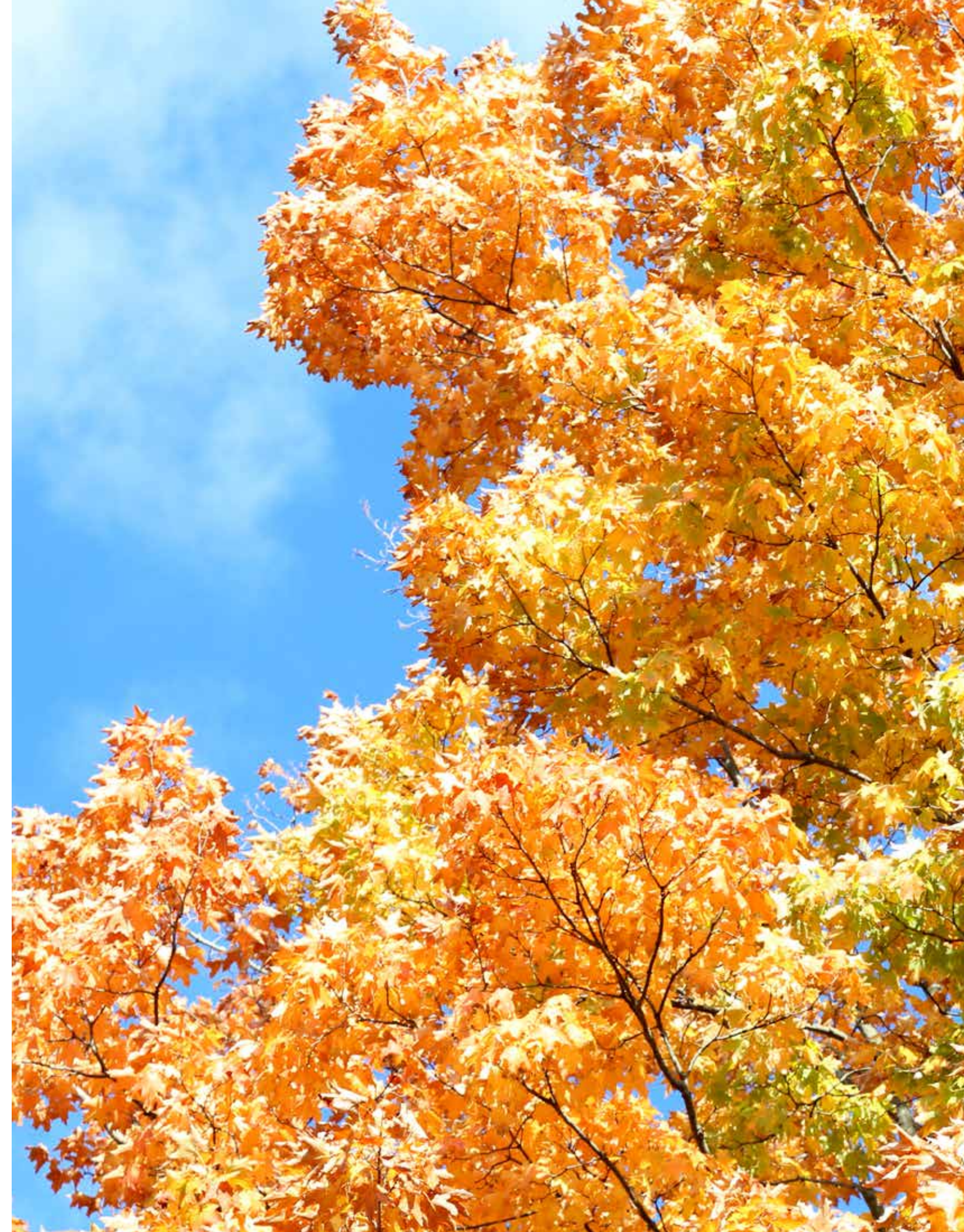


County of Brant Planning Division

Recommended Boulevard Trees

July 2010

Common Name	Scientific Name	Tolerance
Tulip Tree	Liriodendron tulipifera	Very Tolerant
Red Oak	Quercus rubra L.	Very Tolerant
English Oak	Quercus robur	Very Tolerant
Skyline Honey-locust	Gleditsia triacanthos inermis "Skyline"	Very Tolerant
Ginkgo (male only)	Ginkgo biloba	Very Tolerant
Ivory Silk Tree Lilac	Syringa reticulata Japonica 'Ivory silk'	Tolerant
White Oak	Quercus alba	Tolerant
Bur Oak	Quercus macrocarpa Michx.	Tolerant
Maidenhair Tree	Ginkgo biloba	Tolerant
Catalpa	Catalpa speciosa Warder.	Moderate
Amur Maple	Acer ginnala	Moderate
Kentucky Coffee Tree	Gymnocladus dioicus	Moderate
Glenleven Linden	Tilia cordata glenleven	Moderate
Silver Maple, Soft Maple, White Maple, River Maple	Acer saccharinum	Moderate
Allegheny Serviceberry	Amelanchier laevis Wieg.	Moderate
Hackberry	Celtis occidentalis	Moderate
Red Maple	Acer rubrum	Moderate
Sugar Maple	Acer saccharum	Moderate
Northern Catalpa	Catalpa speciosa	Moderate
London Plane-Tree	Platanus acerifolia	Moderate
Littleleaf Linden	Tilia cordata	Moderate



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