



THE JUNCTION:

A PLAN FOR THE REVITALIZATION OF THE OLD INDUSTRIAL AREA

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Executive Summary

This report presents a revitalization plan for the so-called Old Industrial Area in Kingston, Ontario. Entitled “The Junction”, the development of this plan was guided by the following vision statement:

Our vision is to revitalize the Old Industrial Area so that is sustainable, innovative and livable, while at the same time respecting the area’s existing heritage and identity.

It was also guided by the following six objectives:

1. Foster internal cohesion and connection within the site by creating more pedestrian and vehicular routes across the open space that constitutes the former Grand Trunk Railway tracks.
2. Preserve as much of this open space in as naturalized a state as possible, while at the same time introducing small enhancements that diversify its benefit to the local community.
3. Address Kingston’s need for housing by providing opportunities for the creation of both affordable and market-rent housing units on the site.
4. Maintain the existing industrial facilities as much as possible, while at the same time encouraging more

institutional/training opportunities to be located in conjunction with these to foster community resilience.

5. Ensure social/community services remain in the community, and enhance access to these so that residents who do not have regular access to a car can benefit from them.

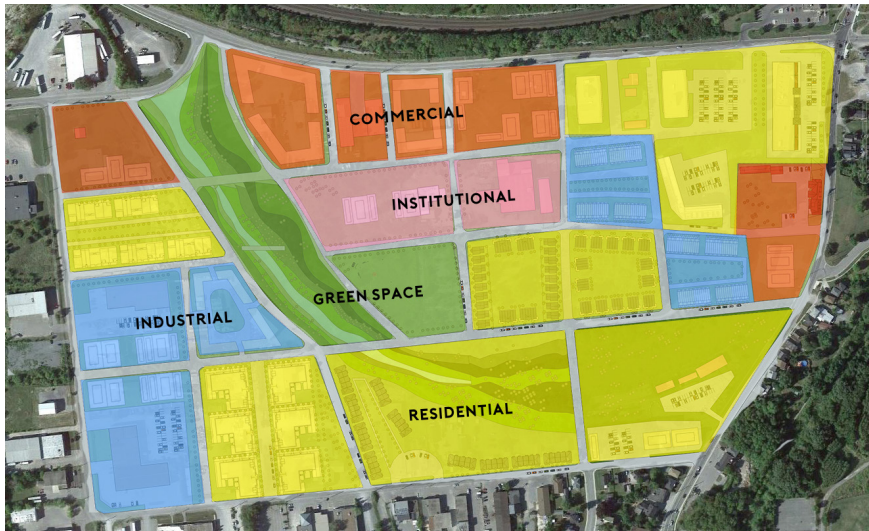
6. Preserve the site’s heritage resources - most importantly the ruins of the former Outer Train Station. Develop ways to enhance public enjoyment of these resources, so that the identity of this community will be easily recognizable into the future.



A 3-D rendering of the proposed “The Junction” plan.

Chapter 4 of this report outlines the final proposed design for this plan in its entirety. Some highlights include the following:

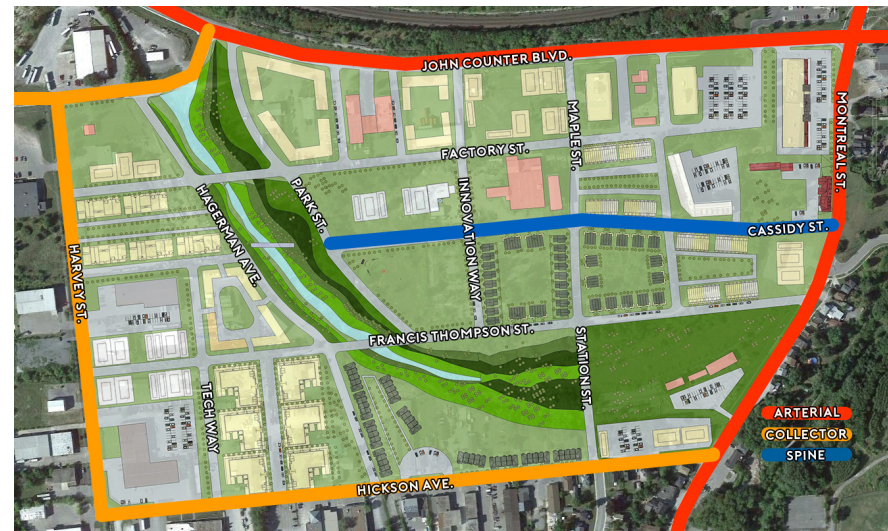
- The current land uses on the site are almost entirely industrial, with a little bit of institutional and residential uses mixed in. This isn't exactly conducive for creating a cohesive community, so more land uses will be added to the site including institutional, industrial, residential, green space and commercial uses. By distributing these uses throughout the area, we will be able to make various amenities more accessible within walking distance for local residents.
- A street network was developed that connects the site to the surrounding area and creates connections internally.



Proposed land uses.

John Counter Boulevard and Montreal Street will be higher volume arterials that border the site, with Harvey Street and Hickson Avenue functioning as collectors. Within The Junction all streets will be considered local roads. This should minimize traffic volumes. Maple Street will be the spine of the neighbourhood. All of the major uses will be found along this street – residential, commercial, mixed use, and institutional. It will end at the natural grassland corridor – creating a nice scenic view – and then turn into a pedestrian crossing to the residential and employment areas on the other side of this corridor.

- The streetscape will represent The Junction's use of the Kingston Design Guidelines. Roadways will be designed to reduce the amount of pavement used, slow traffic, and



Proposed street network.

bridge connectivity. By using several design options, one with parking on both sides and one with parking on only one side of the street, we will be able to accommodate a variety of uses and building types.

- The Junction design uses a mix of housing, types, tenures, and costs to accommodate a mix of lifestyles that people have.
- As much as possible of the existing green space on the site will be maintained. As well, small enhancements will be made to it. These include a trail network, stormwater management features, urban gardens, and a centrally located open field.
- The old Grand Trunk train station will be maintained as a ruin, paying tribute to the importance of the site in decades



Rendering of greenspace and community facilities.

past. The green space surrounding the train station will be set up so that it can be used for active and passive uses, and can also be adapted to the needs of the community as it grows. There are opportunities to integrate public art, heritage tours, or perhaps even a small flexible space with an amphitheater for small plays, or acoustic shows, here.



Rendering of housing on the site.

Table of Contents

1. Introduction	1	4. The Junction Plan	31
1.1 Plan Vision	2	4.1 Density Overview	34
1.2 Plan Objectives	3	4.2 Transit, Street Network and Parking	34
1.3 Design Team	4	4.3 Streetscape	37
1.4 Report Overview	5	4.4 Cultural Heritage Resources	40
2. Site Context	6	4.5 Open Spaces, Parks, and Trails	42
2.1 Policy Considerations	6	4.6 Stormwater Features	49
2.2 Design Guidelines	11	4.7 Housing	52
2.3 Current Built Form	12	4.8 Industry	56
2.4 Current Land Uses	16	4.9 Mixed-Use Development	58
2.5 Socio-Demographics	17	4.10 Social and Community Services	59
2.6 Conclusion	19	4.11 Required Policy Changes	62
3. Plan Development	20	5. Conclusion	64
3.1 Site Analysis	21	5.1 Plan Feasibility	64
3.2 Plan Objectives	22	5.2 Plan Suitability	66
3.3 Preliminary Design Process	25	5.3 Next Steps	67
3.4 Plan Evaluation	28	6. Epilogue	68
3.5 Conclusion	30	6.1 Final Reflective Notes	69

List of Figures & Tables

1. Introduction	1
Figure 1.2: Abandoned/runied Outer Train Station, with informal walking/cycling path beside it	2
2. Site Context	6
Figure 2.1: Land use designations	6
Figure 2.2: Site specific policies	7
Figure 2.3: Zoning designations in the study area	8
Figure 2.4: Original Proposed Route for the Wellington Street Extension	10
Figure 2.5: Figure ground map of site	14
Figure 2.6: (Top Image) Kingston's outer station prior to its abandonment. (Bottom Image) Kingston's Outer Station Today.	15
Figure 2.7: Grand Trunk Terrace, 1-5 Cassidy Street	15
Figure 2.8: 730 John Counter Boulevard	16
Figure 2.9: 294 Elliot Avenue	16
3. Plan Development	20
Table 3.1: Results of SEE (Social, Ecological, Economic) Exercise	21
Figure 3.1: Brainstorming the list of improvements and attaching the secondary plan objectives to them	22
Table 3.2: Potential site improvements and associated secondary plan objectives.	23
Figure 3.2: Preliminary Site Design Exercises	25
Figure 3.3: Preliminary Site Plan with most of the current built landscape removed	26
Figure 3.4: General layout map of the site designed to facilitate creation of design guidelines/specifications	27
Figure 3.5: Bubble diagrams depicting the urban design principles discussed by von Hausen in relation to this plan	29
4. The Junction Plan	31
Figure 4.1: Final proposed site plan for The Junction	32
Figure 4.2: Key map. Features of the plan and their associated page numbers are indicated.	33
Figure 4.3: Cross sections of proposed site plan	34
Figure 4.4: Proposed street network	36
Figure 4.5: Sketch of possible streetscape	38
Figure 4.6: Proposed cross sections of typical local roadways in the plan area	39
Figure 4.7: Rendering of a semi-detached streetscape in the plan area	40

Figure 4.8: Hermitage ruins in Hamilton, Ontario prior to stabilization	41
Figure 4.9: Sketch of train station ruins	42
Figure 4.10: Concept sketch of plaza in front of train station ruins	43
Figure 4.11: Upper Fort Garry Heritage Site	44
Figure 4.12: Examples of outdoor amphitheaters	45
Figure 4.13: Public art in Toronto's Regent Park	45
Figure 4.14: Concept sketch of park layout	46
Figure 4.15: Section of the Dakota Rail Regional Trail	47
Figure 4.16: Rendering of trail bridge across stormwater drainage feature	47
Figure 4.17: Trail cross section (Image courtesy of Austin Norrie, 2016).	47
Figure 4.18: Raised garden planter	48
Figure 4.19: Rendering of proposed park and dry pond on the site	49
Figure 4.20: Rainwater garden designs	50
Figure 4.21: Dry pond in Kitchener	51
Figure 4.22: Housing types on site with images	52
Figure 4.23: Rendering of semi-detached dwellings	53
Figure 4.24: Rendering of townhouse dwellings	54
Figure 4.25: Concept sketch of apartment facades	55
Figure 4.26: Grow homes in Montreal	56
Figure 4.27: A container home	56
Figure 4.28: Co-housing	56
Figure 4.29: Proposed industrial buildings and uses	57
Figure 4.30: Rendering of industrial training facility	58
Figure 4.31: Mixed-use structure with commercial at street level and residential above	58
Figure 4.32: Community and social services within and immediately adjacent to the site	60
Figure 4.33: Library, school and community centre, baseball diamond and park, and industrial training centre	61
Figure 4.34: Rendering of baseball diamond	62
Figure 4.35: Rendering of library, school and community centre, baseball diamond and park, and industrial training centre	62
Figure 4.36: Current land use designations, per Schedule 3-A of the City of Kingston Official Plan	63
Figure 4.37: Proposed land use designation	63
5. Conclusion	64
Figure 5.1: Old Industrial Area today (top image) versus proposed "The Junction" site plan (bottom image)	65

1. Introduction

This report outlines a plan for the redevelopment of Kingston's so-called "Old Industrial Area". Located in the eastern end of the city, just over halfway between the city's downtown core and Highway 401, and adjacent to the Cataraqui River, this area is bordered by Montreal Street to the east, Hickson Avenue to the south, Harvey Street to the west, and John Counter Boulevard to the

north (Figure 1.1).

As will be discussed further in Chapter 2 of this report, this area's current built form and land uses are highly varied. Industrial facilities are intermixed with both single-detached and multi-story residential buildings, as well as the odd commercial/retail and social service establishment.



Figure 1.1: Site boundaries (Image courtesy of the City of Kingston, 2013).

This area also features a number of heritage resources, the most notable of which is the ruins of Kingston's former Outer Train Station, long abandoned by CN Rail, but protected under federal, provincial, and municipal heritage legislation (Figure 1.2).

The remnants of the tracks that used to lead to and from this train station provide the site with arguably its biggest design challenge and opportunity: The old tracks have resulted in a large, oddly-shaped span of open green space that is frequently used informally by local residents to transverse the site on foot or bike. However, the existence of this plot of land has forced buildings in the area to face outwards rather than inwards, and, consequently, there is little connection within



Figure 1.2: Abandoned/runied Outer Train Station, with informal walking/cycling path beside it (Image courtesy of Ben Morin, 2016).

the area; it is decidedly outward-oriented. This provides a significant challenge to anyone attempting to create any sort of neighbourhood cohesion within the site. Connections across the open green space need to be fostered before anything else in this regard can be accomplished.

1.1 Plan Vision

The City of Kingston is currently in the process of developing a secondary plan for the “North King’s Town” district. The area that is the focus of this plan is a part of this district. The City views North King’s Town as being significantly underutilized and prime for redevelopment and revitalization. They hope that the secondary plan will assist in this process.

The design team has approached the plan presented in this report as if it were an extension of this forthcoming secondary plan. We have made every attempt to respect the vision the City has provided for the secondary plan. Most notably, as will be discussed further in Chapter 3 of this report, the five objectives the City has identified to drive the secondary plan’s development - that it be exceptional, forward-thinking, livable, green and innovative - were at the forefront of all preliminary conceptual design decisions made for this plan.

In addition to the secondary plan, the design team strove to put forth a plan that complied as much as possible with the City’s Design Guidelines for Communities. The City intends to use these guidelines to evaluate all neighbourhood-level

development applications they receive. Therefore, complying with them was integral to ensuring we put forth a plan that was feasible. Additionally, we wanted to test drive these design guidelines. Being new, they have largely been untried up to this point in time, and we wanted to see what kind of plan they would result in.

This plan does not include the Wellington Street Extension in any form. The team was aware that many residents in the area oppose this roadway, and we wanted to put forth a plan that respected these opinions. As well, as planners, we were cognizant of the various social and environmental problems that may result from its eventual construction, and consequently did not feel it was appropriate to include it in our plan. Unfortunately, this choice means that if the City does decide to go through with the roadway, this plan will have to be significantly altered in several ways.

Finally, and most importantly, when developing this plan, the design team strove to respect the current identity of this area as much as possible. While some would see this area as being run-down and long-forgotten, this is decidedly not the case. While much of it is significantly underutilized, it is still home to a number of industrial facilities that provide valuable economic benefits to the community. As well, many lower income residents live in the area, and rely on several community/social services found within its borders for their everyday needs. To disrupt these would be calamitous.

Furthermore, respecting this area's existing identity was crucial

because of its important connection to Kingston's past. For over a century, it was the centre of a thriving industrial sector in the city. To remove the remaining traces of this history would not only run counter to the City's claim to be the place where "history and innovation thrive", but would be disastrous to the City's overall cultural identity.

Taking these goals into account, the design team developed the following vision statement to guide the development of our plan:

Our vision is to revitalize the Old Industrial Area so that is sustainable, innovative and livable, while at the same time respecting the area's existing heritage and identity.

1.2 Plan Objectives

The design team also formulated the following six objectives for our plan:

1. Foster internal cohesion and connection within the site by creating more pedestrian and vehicular routes across the open space that constitutes the former Grand Trunk Railway tracks.
2. Preserve as much of this open space in as naturalized a state as possible, while at the

same time introducing small enhancements that diversify its benefit to the local community.

3. Address Kingston's need for housing by providing opportunities for the creation of both affordable and market-rent housing units on the site.

4. Maintain the existing industrial facilities as much as possible, while at the same time encouraging more institutional/training opportunities to be located in conjunction with these to foster community resilience.

5. Ensure social/community services remain in the community, and enhance access to these so that residents who do not have regular access to a car can benefit from them.

6. Preserve the site's heritage resources - most importantly the ruins of the former Outer Train Station. Develop ways to enhance public enjoyment of these resources, so that the identity of this community will be easily recognizable into the future.

The reasoning for the inclusion of each of these particular objectives is discussed in Chapter 3. All are addressed in some way in our final plan for the site.

1.3 Design Team

The design team consisted of seven students from the School of Urban and Regional Planning at Queen's University. They are listed below, in addition to their primary responsibilities for this project.

JAMES AVRAM: James wrote the transit, transportation and street network section of Chapter 4. He was also one of the presenters for the final presentation.

PAUL BELL: Paul wrote the greenspace/parks, mixed-use commercial, and the co-housing sections of Chapter 4. He was also one of the presenters for the final presentation.

ALI MEGHANI: Ali assisted Sarvdeep with the AutoCAD images included in later sections of this report.

AUSTIN NORRIE: Austin wrote the housing and streetscape sections of Chapter 4.

SARVDEEP SANGWAN: Sarvdeep was responsible for the entirety of the plan images included in later sections of this report. His AutoCAD, SketchUp, and design skills were instrumental in the creation of this plan.

AMY SHANKS: In addition to formatting and editing this report, Amy wrote Chapters 1 to 3, as well as Chapter 5.

ASHLEY TAYLOR: Ashley wrote the heritage, stormwater management, community/social services, industrial, and planning sections of Chapter 4. She also helped edit the final

report.

Design Guidelines for Communities.

1.4 Report Overview

This report consists of six chapters. The opening chapter has provided an introduction to the report, including the project vision, objectives, scope, and context.

CHAPTER 2 discusses the land use planning policies applicable to the site, as well as its current built form, land uses, and socio-demographic character. The information presented in this chapter informs the work presented in the later chapters of the report.

CHAPTER 3 discusses how the design team developed our plan for the site.

CHAPTER 4 presents our final proposed design plan. Included in this discussion is an overview of the design precedents for each proposed feature of the plan, as well as its connection back to the City of Kingston's Design Guidelines for Communities.

CHAPTER 5 concludes the report, summarizing the strengths of our final proposed design plan, and explaining why we feel it should be implemented.

CHAPTER 6 acts as an epilogue. It presents our reflections on the design process, as well as the insights we now have into the development of the forthcoming secondary plan for North King's Town, as well as the overall usefulness of the City's

2. Site Context

This chapter discusses the land use planning policies applicable to the site, as well as its current built form, land uses, and socio-demographic character. The information presented in this chapter will inform the work presented in later chapters of this report.

2.1 Policy Considerations¹

Schedule 3-A of Kingston's Official Plan (OP) delineates the site primarily as "General Industrial". There are also small pockets designated as "Residential" and "Institution". These are located at the corner of John Counter Boulevard and Montreal Street, and Hickson Avenue and Montreal Street (see Figure 2.1). The permitted uses in each of these designations can be seen in Appendix A.

"General Industrial" lands are considered to be "areas of employment" in the OP. Any proposal made to redesignate these lands for uses other than those permitted in areas of employment must comply with an exhaustive list of

requirements before being approved by Council. The full description of this process can be seen in s. 3.6.5 of the OP. Generally, it requires applicants to prove definitively that the land is not required for employment area uses over the long term, and that there is a clear need for the re-designation to be approved.

The OP speaks a great deal about the desire the City has to support the development of housing that is affordable for low and moderate income households. Most notably, in s. 3.3.10 of the OP, it is stated that the City will place a high priority on the provision of affordable housing as a condition for height



Figure 2.1: Land use designations, per Schedule 3-A of the City of Kingston Official Plan (Image Courtesy of the City of Kingston, 2015).

¹ Taken from a report compiled by Andrew Carr, Nicolas Church, Emilie Coyle, Ben Goodge, Amy Shanks, and Ashley Taylor.

and/or density bonusing. This policy may have ramifications for any proposal to intensify existing residential land uses on the site.

s. 4.6.46 of the OP states that the City “supports the acquisition of abandoned rail rights-of-way for public uses, including pedestrian and cycling pathways or roads”. This is particularly significant for the site, since the old, abandoned Grand Trunk Railway runs directly through it.

Site Specific Policies

There are two site specific policies within the site, as noted on Schedule 3-D - Site Specific Policies. These are SSP 44 and SSP 50 (see Figure 2.2).

SSP 44 applies to 722, 730 & 766 John Counter Boulevard. This site specific policy allows for an existing limestone building at the 730 address to be used as a commercial school.

SSP 50 applies to 824 John Counter Boulevard. This site specific policy allows office uses to be located here, in addition to those uses permitted in the “General Industrial” designation.

2.1.1 Zoning By-Law

The site contains a variety of different zones under the City of Kingston’s Zoning By-Law No. 8499 (see Figure 2.3). For the most part, these zones are industrial (M2, M6, or M7, with some site-specific zoning). The eastern portions of the site,



Figure 2.2: Site specific policies (labelled in red) in the study area (labelled in blue), per Schedule 3-D of the City of Kingston Official Plan (Image courtesy of the City of Kingston, 2015).

however, contain some residential and commercial zoning, especially around the intersection between John Counter Boulevard and Montreal Street.

Uses

The types of residential zoning that are permitted in the study area range in density from one- and two-family dwelling units (“A” along Montreal Street; and “A5” just outside of the study area, in the Day Street area) to multiple family dwelling units, such as apartments, row houses, and senior citizens’ homes, that can be of a density of up to 69 dwelling units per

hectare (“B1” in the Zoning By-Law). These residential zones also permit the inclusion of some institutional uses, such as museums, libraries, churches, and schools.

Interestingly, the industrial zoning on the site allows for dwelling units to be included as accessory uses; for instance, watchman’s quarters are permitted. A commercial property designated as “C1” (neighbourhood commercial) also allows for residential use within a commercial structure. The opportunity to mix dwelling units with commercial and industrial uses within the same building is a tremendous opportunity to create a mixed-use landscape on the site.

The industrial zoning is dominated by three different

designations: M2, M6, and M7. While M2 zoning also allows for agricultural and horticultural uses, M2 and M6 primarily permit light industrial uses in which operations are completely done indoors and do not emit any noxious fumes. Examples of this include catering, production of drugs and cosmetics, manufacturing of furniture, storage space, and distribution plants. M7 uses appear to be roughly similar to those offered in the other industrial zones on-site, though they do appear to allow for chemical industries that may emit dangerous fumes. A variety of other odd uses can also be found in the District’s industrial zoning, such as animal hospitals, taxi dispatch services, auto repair garages, and even restaurants.

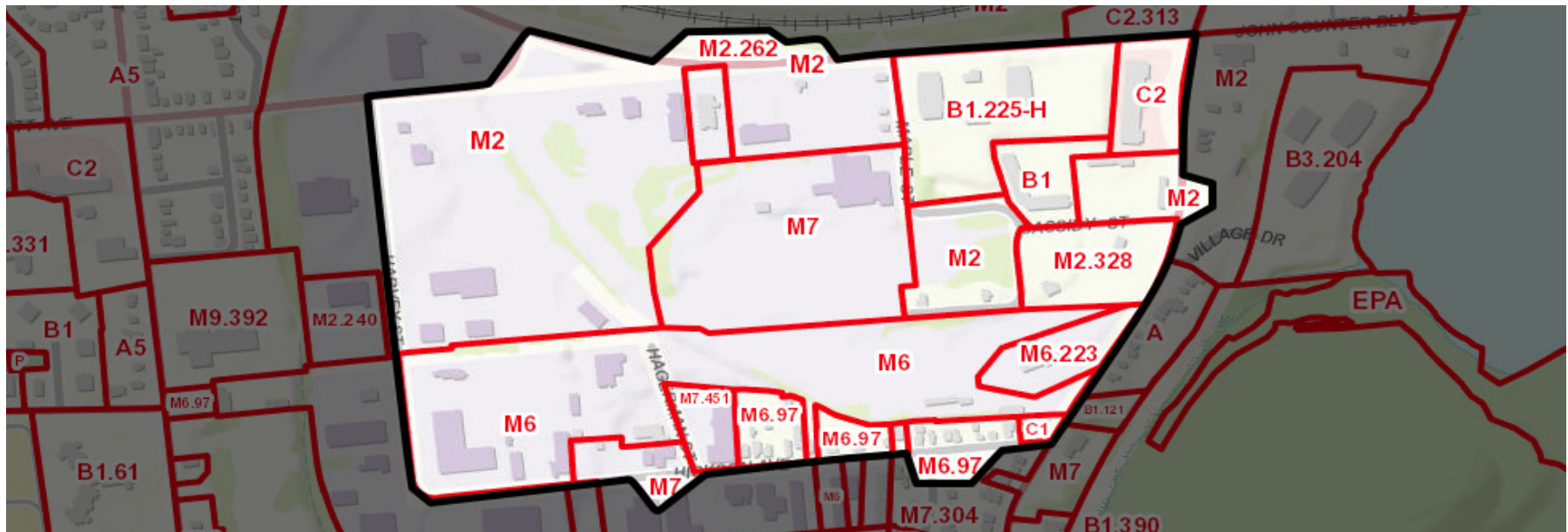


Figure 2.3: Zoning designations in the study area (Image courtesy of the City of Kingston, 2015).

Commercial zoning within the site is, once again, fairly constrained to the intersection of John Counter Boulevard and Montreal Street, where land is zoned as arterial commercial (“C2”), while a small property designated as neighbourhood commercial (“C1”) is located further south along Montreal Street). Permitted arterial commercial uses include motels, restaurants, retail, limited office spaces, theatres, banks, and shopping centres. These provisions are slightly denser and more commercially oriented than neighbourhood commercial zoning, which allows for a mix of institutional and residential uses with commercial uses.

Building Envelopes

By and large, the residential zoning featured on the site requires reasonable setbacks, such as a minimum 7.5m front yard setback, and quite low side yard setbacks. For instance, residential buildings in the “B1” designation only need to allow for a side yard setback of 3.0m. Combined with the minimum property width of only 18m, the residential areas could feature a relatively dense urban fabric in the future. The residential zoning is also fairly vague in that it does not specify a maximum building height; instead, one of the zones features maximum densities depending on the types of dwelling units, while the other limits development by stipulating a maximum floor space index of 1.0. In any case, this permits some added flexibility regarding the shape of eventual buildings.

Commercial buildings, meanwhile, can generally be up to

13.7m high and feature somewhat reasonable side yard restrictions (3.0m, though this number spikes to 9m should the zone abut on an open space or residential zone). Arterial commercial zoned buildings must, however, have large front yard (15.0m) setbacks, and are restricted to a maximum lot occupancy of 50% of the lot area.

The building envelope in the industrial zoning in the area varies greatly; for instance, one industrial zone (M6) restricts lot occupancy to a maximum of 35%, while another zone (M7) appears to allow for 100% lot coverage in certain cases. The maximum height for some of the zones is 13.7m, while the M7 industrial zone instead measures the maximum building height as no more than twice the distance between the centre of the street on which the building is fronting to front wall of said building. The industrial zoning is also characterized by large front yard setbacks (15.0m for M2 and M6 zones).

2.1.2 Proposed Wellington Street Extension

The 2004 Kingston Transportation Master Plan [KTMP] calls for the City to extend Wellington Street 2.6 km from Bay Street to John Counter Boulevard. Portions of the site are included in this proposed stretch of roadway (see Figure 2.4).

According to a 2006 Environmental Assessment completed by the City, the roadway will be an urban arterial ‘parkway’ with a posted speed of 50km/h. It will have bike lanes, a sidewalk on its west side, and a pathway on the east side that



Figure 2.4: Original Proposed Route for the Wellington Street Extension (Image Courtesy of the City of Kingston, 2006).

will ultimately connect to the K&P Trail Network.

2.1.3 Future North King's Town Secondary Plan

The City of Kingston is currently in the process of creating a secondary plan for “North King’s Town”, of which the site is a part of. A secondary plan can be considered a second layer of the Official Plan. It provides specific policies and directives for areas where more detailed direction is needed beyond the

general framework provided by the Official Plan.

The purpose of the North King’s Town Secondary Plan will be to support the revitalization and redevelopment of this part of the city. The City has directed the secondary plan to be “exceptional, forward-thinking, livable, green and innovative”.

Thus far, the City has only put forth a Request for Proposal (RFP) for a Community Vision Exercise and Preliminary Market Analysis for the secondary plan. Per this document, the City is looking for someone to complete the following tasks:

- An assessment of existing conditions to identify challenges and opportunities that may affect the future development of the area.
- A preliminary market analysis which identifies Kingston’s key features, differentiators and competitive advantages, and includes macro strategies to maximize the financial viability of key investment considerations for the development of the study area (e.g., infrastructure improvements, node and district enhancements, incentive program opportunities, facility construction, strategic land acquisition, etc.). It is anticipated that this preliminary analysis will provide guidance for a more detailed market assessment which will be completed as part of a subsequent secondary planning exercise. The more detailed assessment will be used to substantiate the demand for specific land uses within the study area.
- A key vision statement, key goals, and guiding principles

for the North King's Secondary Plan which acknowledge the unique history of the area.

- Engagement with a wide selection of the community in developing the vision and guiding (development) principles for the North King's Town Secondary Plan, and to ensure that area residents and business owners, as well as the wider community, have the opportunity to provide meaningful input.
- Finalization of study area boundaries for the North King's Town Secondary Plan.
- Development of a new name and identity for the Old Industrial Area.

These activities will inform subsequent phases of the secondary plan's development. It is therefore unknown at this point what specifically the secondary plan will entail.

2.2 Design Guidelines

The City of Kingston's Design Guidelines for Communities outlines the design standards the City uses to evaluate development applications at the neighbourhood level. The design guidelines include eight so-called "guiding principles". They are as follows:

- Foster attractive communities and a sense of place;
- Create compact, walkable, mixed-use communities;

- Provide a variety of housing types;
- Provide access and visibility to open spaces;
- Create a sustainable natural heritage and open space system;
- Encourage environmentally sustainable development;
- Create a street network for active transportation including walking, cycling, and transit; and
- Integrate and highlight cultural heritage resources.

Other important considerations detailed in these design guidelines include the following:

Community Centres

ENCOURAGES:

- Placing community amenities, such as schools, libraries, public facilities and shopping areas, in a central area of the community that is a maximum five to ten minute walk from major parks and most local residents;
- Situating higher densities near these so-called "community centres".

Stormwater Management

ENCOURAGES:

- Bioswales on public streets and parking areas;
- Stormwater management features treated as community attributes and connected to public open spaces and trail

networks;

- Dense plantings of native, non-invasive species along the edges of storm water features to filter and hold water, and act as a wildlife habitat.

DISCOURAGES:

- Fencing storm water management features, unless where absolutely necessary for public safety purposes.

Streets and parking

ENCOURAGES:

- Buildings oriented towards the street;
- Street trees;
- Grid or modified grid street networks;
- Orientation of streets to maximize passive solar gain;
- Through-block pedestrian walkways;
- Rear lane ways with garages;
- Narrowest reasonable street widths;
- On-street parking (wherever possible);
- Continuous pedestrian walkways through parking lots.

DISCOURAGES:

- Blocks less than 200m, or greater than 250m in length;
- Large areas of uninterrupted parking - parking lots should be no more than 30 spaces in length.

Parks and green spaces

ENCOURAGES:

- Connecting parks and open spaces with green pathways;
- Bordering parks and green spaces with streets and/or open space to enhance awareness and access.

These are just some of the considerations outlined in the design guidelines put forth by the City. There are many other that are not highlighted here. A checklist is provided in Appendix B which delineates how the final design proposal addresses each one. Discussion on this topic is also included in later chapters.

2.3 Current Built Form²

The site's current built form is highly varied. For the most part, the lot sizes, building footprints and building exteriors differ considerably from one another.

In the middle of the site is a large, crescent-shaped green space. It is approximately 700m long and 200m wide. Naturally vegetated, an informal pedestrian pathway runs through its centre, connecting the top north-west corner of the site to the bottom south-east corner of the site. This pathway is approximately the location of an old railway track that was

² Taken from a report compiled by Jim Avram, Paul Bell, Aidan Kennedy, Ben Morin, and Austin Norrie.

relocated slightly more north in the early 1970s. It ends at the site of the ruined former Kingston Outer Station (see more below).

Traveling west along Hickson Avenue from the train station the built form is fairly homogeneous, consisting of single detached dwellings and the odd commercial or industrial building of similar dimensions and characteristics to the residential buildings. At the corner of Harvey Street and Hickson Avenue, and extending north along Harvey Street, the built form changes to larger, plain, 1-2 storey industrial buildings. These buildings are more spaced out than the buildings along Hickson Avenue, with large surface parking lots in between many of them. At the corner of Hickson Avenue and Elliot Avenue there is a large expanse of open space used for storage of concrete slabs. There are also two small buildings located on this corner.

On the western portion of the site's northern boundary (John Counter Boulevard) there are 1-2 storey industrial buildings of varying size. Towards the corner of John Counter Boulevard and Montreal Street the built form changes to a mix of large 10-12 storey apartment complexes, open space, parking lots and a strip mall. The strip mall is designed in a manner that vaguely resembles a train station. The current built form in this portion of the site is the result of a community improvement plan for the area in the mid 1970's.

Between the industrial buildings and the taller apartment complexes on John Counter Boulevard, Maple Street cuts

into the centre of the study area, later becoming Cassidy Street. Cassidy Street, which penetrates deep into the heavily vegetated internal portion of the site, has very peculiar characteristics and feel. Heavy woods border this street in most areas, as it winds its way to a dead end. There are a few single detached dwellings on this portion of Cassidy Street as well as a 3.5 storey apartment complex and large industrial building with a large yard. All of these buildings are in very good condition but the street has a very rural feel due to the high, heavy vegetation and great deal of distance between buildings.

Figure 2.5 displays a figure ground map of the site. The varied building envelopes and plethora of open, unused space is highly evident from this image.

2.3.1 Heritage Properties³

Kingston Outer Station: 810 Montreal Street (Designated)

Built in 1856 for the Grand Trunk Railway, this stone station has round arched windows along the main storey, and arched dormer windows on each side of the roof. It was destroyed by a fire in 1996, and The City of Kingston seeks to restore it as a heritage building. However, the Canadian National

³ Taken from a report compiled by Ben Segal-Daley, David Nanton, Ali Meghani, Graham Rathwell, and Sarvdeep Sangwan.

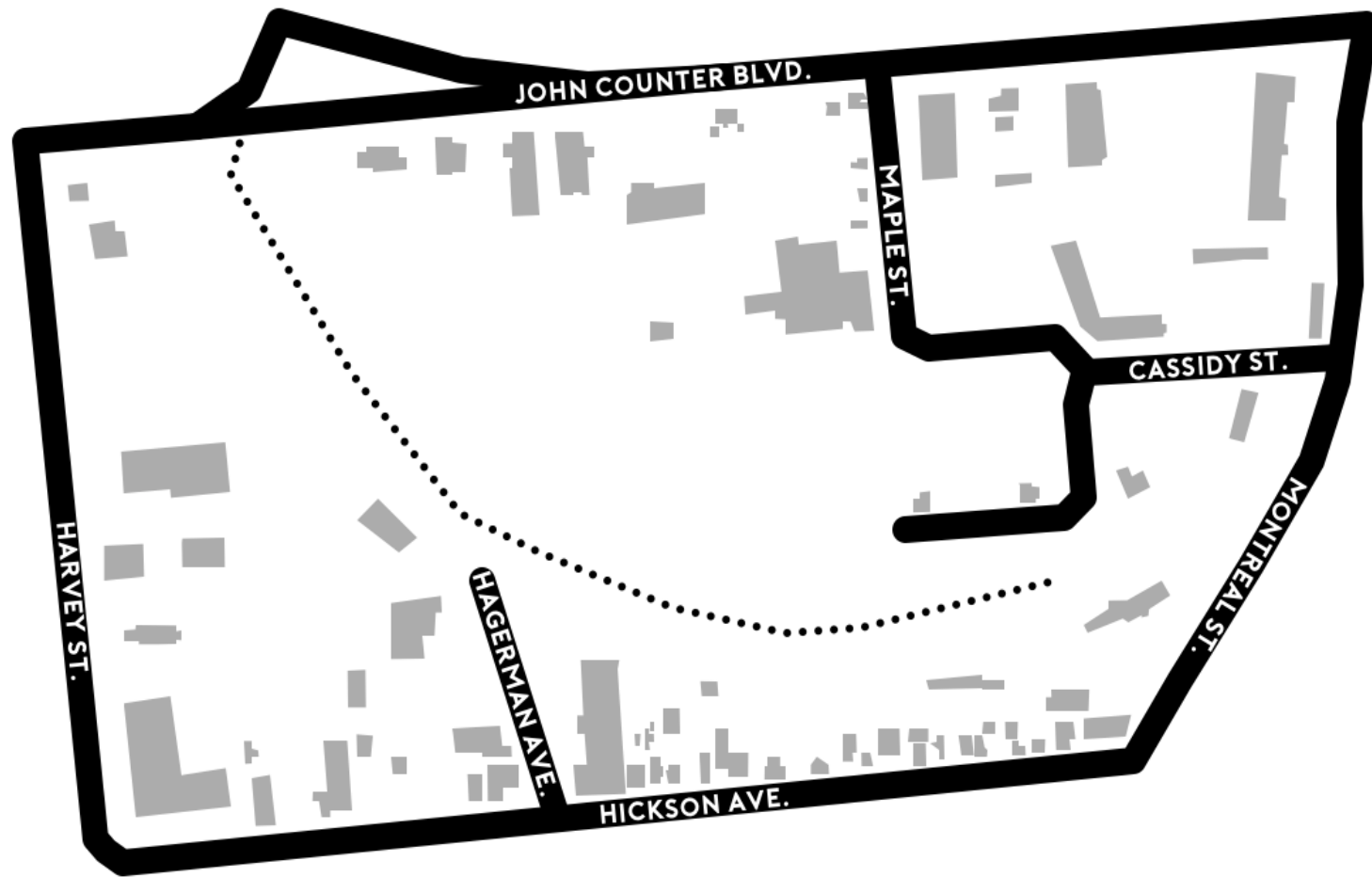


Figure 2.5: Figure ground map of site (Image courtesy of Amy Shanks, 2016).

Railway (CN) which has owned the station since 1923, is against its restoration. CN argues that the building is just “four old abandoned walls” and any effort to replace the roof may actually lead to more harm to the existing structure. Currently this property is lying in state of ruins (Figure 2.6).

Grand Trunk Terrace: 1-5 Cassidy Street
(Designated)

Constructed in 1854, this property is located just north of the Outer Station on Montreal Street. The two-storey structure



Figure 2.6: (Top Image) Kingston's outer station prior to its abandonment. (Bottom Image) Kingston's Outer Station Today. (Images courtesy of CYGK, 2012).

was originally built for railway employees and their families (Figure 2.7).

730 John Counter Boulevard (Listed)

Built in 1859, this one and a half storey dwelling holds cultural heritage value and interest because of its scale and massing; design and construction features. The dwelling is an excellent example of a typical Ontario cottage. As seen in Figure 2.8, above the arch of the main entrance is a medium pitched gable roof with a decorative, round-arched window opening. Additionally, limestone chimneys are inset at each end of the roof.



Figure 2.7: Grand Trunk Terrace, 1-5 Cassidy Street (Image Courtesy of Google Maps, 2015).



Figure 2.8: 730 John Counter Boulevard (Image Courtesy of Google Maps, 2015).



Figure 2.9: 294 Elliot Avenue (Image Courtesy of Google Maps, 2015).

294 Elliot Avenue (Listed)

Built in 1854, this small limestone cottage is of cultural heritage value and interest because of its design features. The low pitched gable roof has inset chimneys at each end (Figure 2.9).

2.4 Current Land Uses⁴

The site is home to an eclectic mix of businesses and services. Table 2.1 provides an overview of these.

The site is dominated by construction and trades businesses. This category contains a wide range of companies including plumbers, electricians, welders, and roofers. Auto service businesses and community/social services are also common. Community/social services include the Kingston Food Bank, Restart (Employment Ontario), The Katarokwi Native Friendship Centre, the John Howard Society, and the Queen Elizabeth Community Education Centre.

In terms of commercial uses, most are concentrated at the corner of John Counter Boulevard and Montreal Street in a strip mall plaza. The Tim Hortons on the opposite corner of John Counter Boulevard appears to draw people to this plaza. Businesses in this plaza include the Community Spirit Bingo Centre, which serves as the strips anchor, Re-Start – Employment Agency, Sun Convenience, First Choice Haircut and Kingston Community Health Centre. The Country Style Coffee shop, which has been located in the plaza for some time, has been closed down.

⁴ Taken from a report compiled by Ben Segal-Daley, David Nanton, Ali Meghani, Graham Rathwell, and Sarvdeep Sangwan.

Description	Count	Percentage
Construction/Trades	20	27%
Auto Service	14	17%
Community/Social Services	12	14%
Manufacturing/Fabrication	8	10%
Grocer/Hospitality	5	6%
Services	3	4%
Real Estate/Development	2	2%
Entertainment	1	1%
Courier	1	1%
Retail	1	1%
Distributor	1	1%
Railway	1	1%
Vacant	14	17%
TOTAL	83	100%

Table 2.1: Current Business Profile of the Site (Data Courtesy of Segal-Daley et al.)

2.5 Socio-Demographics⁵

The site is located entirely within census tract (CT) 5120011.01. There are also several other neighbourhoods

⁵ Taken from a report compiled by Asia Pineau, Dominik Matusik, Lesley Mushet, Rabiya Khalid, and Jonathan Byrd.

included in this census tract, most notably the Rideau Heights community.

2.5.1 Population and Age

The population of CT 5120011.01 was 6,859 individuals as of 2011 with a positive 3.7% growth rate over 2006 (almost comparable to the Kingston CMA rate of 4.7%). The CT's age characteristics are not particularly divergent from those of the Kingston CMA, although a few dissimilarities should be noted. Within the CT, the age cohort of 0-9 years shows a larger population percentage than in Kingston. Children make up 14.4% of the CT population, whereas they are 9.8% of the Kingston CMA population. The age group as a percentage of overall population of those aged 30-39 years is slightly higher in this CT; 13.1% compared to 11.9%. From this, it can be inferred that there are slightly more young families in the area and a higher proportion of children, as the average number of children is 1.1 compared to 0.9 in the Kingston.

Another notable difference is the presence of older adults. There is a lower percentage of those aged 70 or higher in the study area than in Kingston. Overall, 8.2% of the population in the CT area is aged 70 or older, while only 11.4% of the population in greater Kingston falls within this grouping. A similar trend is seen in the age groups categorized as 50-59 years, and 60-69 years, with the difference increasing with age.

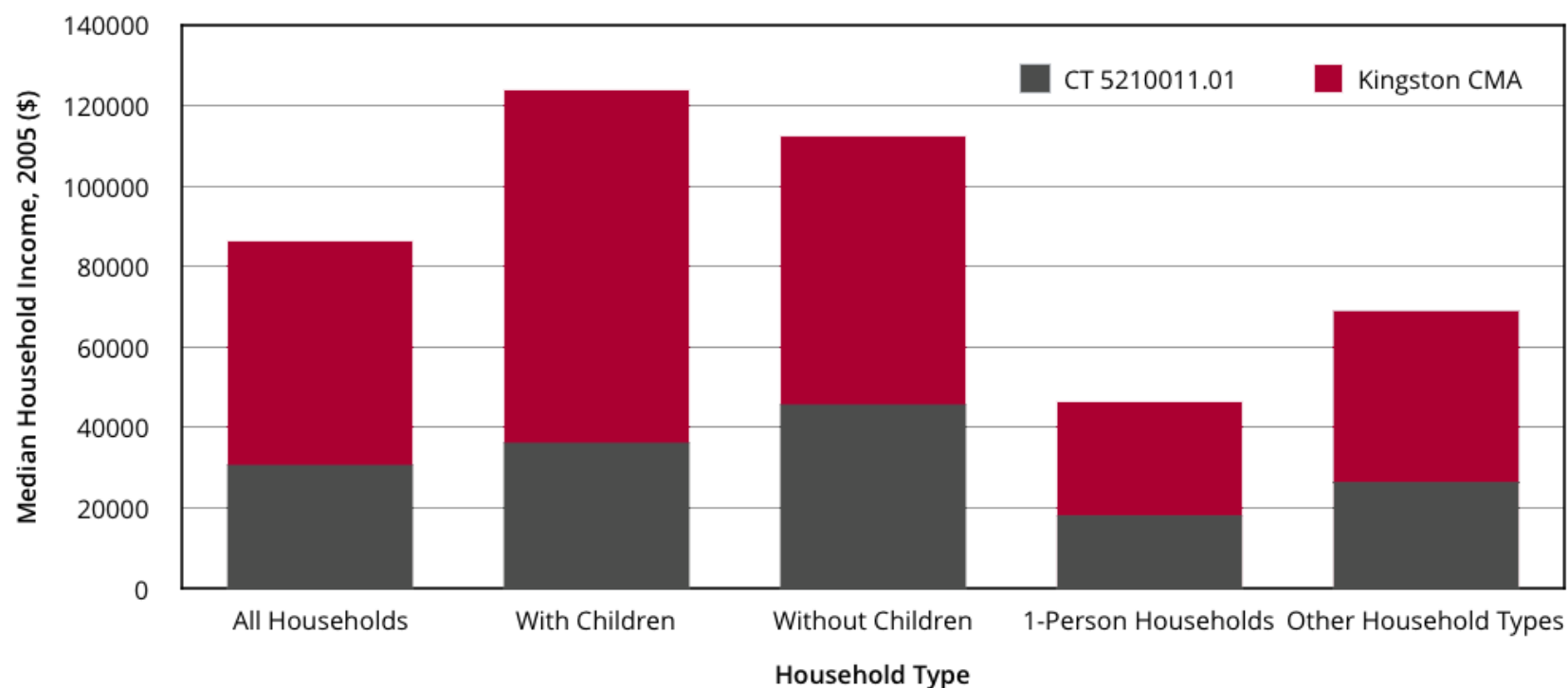


Figure 2.10: Median Household income by household type, 2005 (Data Courtesy of Statistics Canada).

2.5.2 Income

Figure 2.10 compares median income in the CT to that of the Kingston CMA as a whole in 2005. In every single household category, the CT has a much lower median income than the CMA.

2.5.3 Ethnicity and Language

Based on the 2006 Census (the last year this data was available), 6.7% of the population in the CT identifies as a

‘visible minority’. The CT has a greater proportion of visible minorities in comparison to the Kingston CMA (5.8%). The most prevalent ethnicities in the CT include Chinese, Black, Latin American, Southeast Asian, Korean and Japanese.

Based on the 2011 Census, the CT is largely made up of English speakers (90.9%). 2.3% speak French, and 5.9% speak a non-official language, including Aboriginal languages, Arabic, Bengali, Cantonese, Dutch, German, Gujrati, Italian, Polish, Portuguese, Spanish and Pilipino. Portuguese was the

highest reported non-official language in the CT.

2.5.4 Housing Tenure

Two-thirds of residents rent and one-third of residents own their homes in the CT. This is exactly opposite of the Kingston CMA, where one-third of residents rent and two-thirds of residents own.

2.6 Conclusion

The information presented in this chapter informs the rest of this report. Of particular importance is the influence this information has on what is presented in the following chapter - the design team used it to undertake a thorough analysis of the site's challenges and opportunities in order to develop our final conceptual plan for the site.

3. Plan Development

Once the information presented in the previous chapter was collected, the design team set out to develop a plan for the site. This process was comprehensive and multi-faceted; we wanted to ensure that what we came up with was appropriate and achieved our initial vision for the plan. To reiterate, this vision was as follows:

Our vision is to revitalize the Old Industrial Area so that is sustainable, innovative and livable, while at the same time respecting the area's existing heritage and identity.

While there are countless strategies for plan development and design found within the literature, the team used Michael von Hausen's book *Dynamic Urban Design: A Handbook for Creating Sustainable Communities Worldwide* as our guide for the development of this plan. Unfortunately, due to time and resource constraints, we had to forgo several of his suggestions (most notably, we were unable to involve local residents, business owners and other stakeholders in the plan's development). However, when possible, every attempt

Vision Statement Development:

As discussed in Chapter 1, we arrived at our vision statement by considering the following four specifications we had for our plan:

- That it serve as an extension of the City's forthcoming secondary plan development for the North King's Town District - most notably, that it meet the five objectives the City has identified to drive this process (exceptional, forward-thinking, livable, green, and innovative);
- That it comply as much as possible with the City's Design Guidelines for Communities;
- That it not include the Wellington Street Extension in any form; and
- That it respect the current identity and heritage of this area as much as possible.

Unfortunately, due to time and resource constraints, we were unable to include members of the community in this visioning exercise. As with all other aspects of this plan, it is our recommendation that this consultation be undertaken prior to implementation.

was made to replicate what he recommended. This chapter will overview this process, providing justification for the final proposed design plan for the site (presented in Chapter 4).

3.1 Site Analysis

Von Hausen speaks at length about the importance of site analysis to the overall design process. Unfortunately however, many of the necessary inputs he lists (such as legal surveys, geological/soil condition reports, slope analysis',

wildlife inventories, and archaeological surveys) were unavailable to us, and we had to make do with what we had.

As von Hausen recommends, our primary site analysis technique was a SEE exercise, in which we charted the social, ecological and economic elements of the site as it currently exists. The results of this exercise are shown in Table 3.1 below. Due to the limited information available to us at the time, some of these are assumptions rather than confirmed facts, and are identified as such in the table.

Social	Ecological	Economic	Urban Design Plan
<ul style="list-style-type: none"> • Food Bank • Native Friendship Centre • Bingo Centre • St. Lawrence Youth Centre • Lion's Club • Nearby Church • Kingston Community Health Centre (Nearby) • Legion (Nearby) • Food Desert • Job Opportunities • Low Income 	<ul style="list-style-type: none"> • K&P Trail • Contaminated Soil (Possible) • Natural Vegetation • Seasonal Pond • Wildlife Corridor (Possible) • Limited Biodiversity 	<ul style="list-style-type: none"> • Low-income • Industries • Tim Horton's • Employment Agency • Convenience Store • Small Businesses • Warehouses • Heritage Value • Real Estate Potential • Lack of Employment Diversity 	<ul style="list-style-type: none"> • Old Train Station • Pathways • Heritage Buildings • Deteriorating Industrial Buildings • Underutilized Site • Varied Density • New Urbanist Development Nearby • Incongruent Urban Fabric • Lack of Safety/Poor Lighting • Lack of Connectivity/ Street Network

Table 3.1: Results of SEE (Social, Ecological, Economic) Exercise.

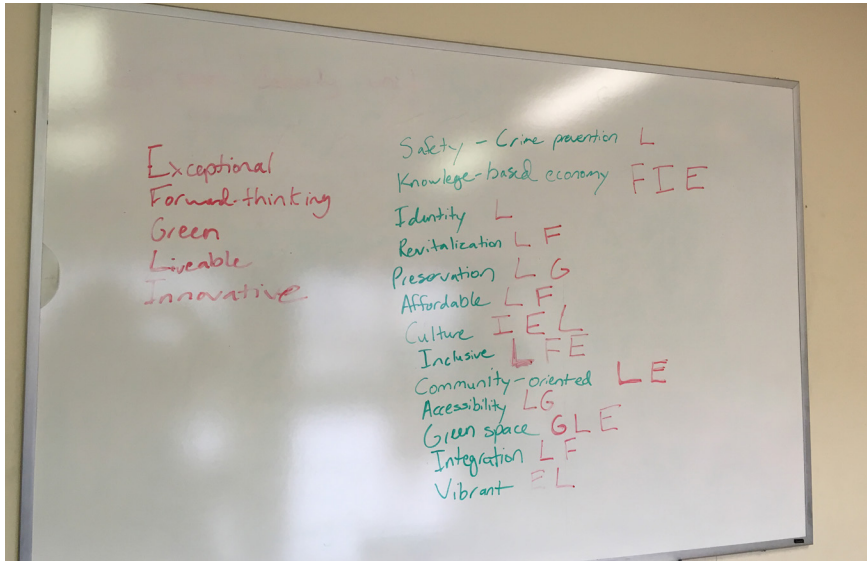


Figure 3.1: Brainstorming the list of improvements and attaching the secondary plan objectives to them (Image Courtesy of Amy Shanks, 2016).

3.2 Plan Objectives

Using the information from our SEE exercise, we then brainstormed a list of improvements we could potentially make to the site. In keeping with our vision statement, we matched each of these potential improvements to the five objectives the City has identified to drive the development of their secondary plan for the North King's Town District (Figure 3.1). We felt this would ensure they all were incorporated in some way into our final plan. The full list of improvements (and their associated secondary plan objectives) is shown in Table 3.2.

From this list, further refinements were made. Using design principles gleaned from von Hausen's text, as well as other sources, the potential improvements were modified to create a total of six plan objectives. Each is listed below, in addition to a brief overview of why we felt it was important to address them in our plan.

Objective #1: Foster internal cohesion and connection within the site by creating more pedestrian and vehicular routes across the open space that constitutes the former Grand Trunk Railway tracks.

This objective was necessitated by the site's current external orientation. The open green space that exists in the middle of the site essentially forces the community to be outward-oriented rather than inward-oriented, and, therefore, if we want to foster internal cohesion within the community ("community-oriented") there needs to be more connections across this area.

It is important that these connections are also pedestrianized, since we want to encourage development that is not only sustainable, but also equitable for those who don't have regular access to a car.

Objective #2: Preserve as much of this open space in as naturalized a state as possible, while at the same time introducing small enhancements that

	Exceptional	Foward-Thinking	Green	Livable	Innovative
Safety				•	
Knowledge-Based Economy	•	•			•
Identity				•	
Revitalization		•		•	
Preservation			•	•	•
Affordable		•		•	
Culture	•			•	•
Inclusive	•	•		•	
Community-Oriented	•			•	
Accessibility			•	•	
Green Space	•		•	•	
Integration		•		•	
Vibrancy	•			•	

Table 3.2: Potential site improvements and associated secondary plan objectives.

diversify its benefit to the local community.

While this open green space currently detracts from the community's cohesiveness, it is not wholly problematic; its naturalized, almost rural-like character is a major benefit to the site. We need to do everything possible to preserve this character if we want to further sustainability ("green") and livability on the site.

This is not to say that improvements cannot be made to this asset however. Early site visits suggested there may

be some storm water drainage issues on the site, and this green space may be an appropriate location to place storm water management features designed to alleviate these. Additionally, small improvements can be made to improve how local residents interact with this neighbourhood asset. There is potentially enough room for playgrounds, recreational fields, and other amenities to be placed that would benefit the local community significantly.

Objective #3: Address Kingston's need for housing

by providing opportunities for the creation of both affordable and market-rent housing units on the site.

Kingston has a documented housing shortage¹, and this site has enough empty/under-utilized land to support many more housing units. Care must be taken though to ensure this new housing does not encroach on the area's identity as an industrial hub. Additionally, intermixing housing with industrial facilities can be problematic. Design strategies will need to be investigated to ensure proper distance/separation between the two uses is maintained ("livable").

Objective #4: Maintain the existing industrial facilities as much as possible, while at the same time encouraging more institutional/training opportunities to be located in conjunction with these to foster community resilience.

Although industrial activity has declined significantly in this area since the 1970s, it is still very much a part of its overall character. Additionally, industrial activity in this part of the city represents an important connection to Kingston's past and therefore should be maintained as much as possible.

We realize this may be difficult due to continually changing

1 Canadian Mortgage and Housing Corporation (2013). Rental Market Report, Kingston CMA: http://www.cmhc-schl.gc.ca/odpub/esub/64671/64671_2013_A01.pdf.

economic patterns, both nationally and locally. Additionally, as mentioned above, intermixing industrial facilities with residential and commercial uses can be problematic.

In order to combat these difficulties, we will recommend that the remaining industrial facilities on the site complement their production tasks with workplace training. Kingston is home to several post-secondary institutions and there therefore should be the existing knowledge infrastructure needed to support these efforts. Additionally, this transition to a more institutional role would greatly support the local community which appears to currently have some issues with employment constraints.

Objective #5: Ensure social/community services remain in the community, and enhance access to these so that residents who do not have regular access to a car can benefit from them.

There are currently at least 12 community/social services located on the site, including the Kingston Food Bank, Restart (Employment Ontario), The Katarokwi Native Friendship Centre, the John Howard Society, and the Queen Elizabeth Community Education Centre. It is reasonable to conclude that many local residents rely on these services for their everyday needs, and thus disrupting them in any way could have significant ramifications on the community's overall well-being. With that being said, one thing we realized during early site visits was how difficult it could potentially be to transverse from one service to another without a car. Therefore, in our

plan we need to work to improve access to these services for local residents so that this component of their daily life is not a burden to them.

Objective #6: Preserve the site's heritage resources; most importantly the ruins of the former Outer Train Station. Develop ways to enhance public enjoyment of these resources, so that the identity of this community will be easily recognizable into the future.

While it is unfortunate that the Outer Train Station has been left to fall into disrepair, to remove it would have a calamitous impact on both this community's, and Kingston's, connection to its past. It therefore needs to be preserved in some way, and have attention drawn back on it. It is our opinion that it is a fantastic resource for the neighbourhood, and one that could really make this particular plan work socially, economically and culturally.

3.3 Preliminary Design Process

While we were settling on these final plan objectives, we began to make preliminary designs for the site. At first, these designs were rather rudimentary and were more or less exercises designed to get us more familiar with the site, and

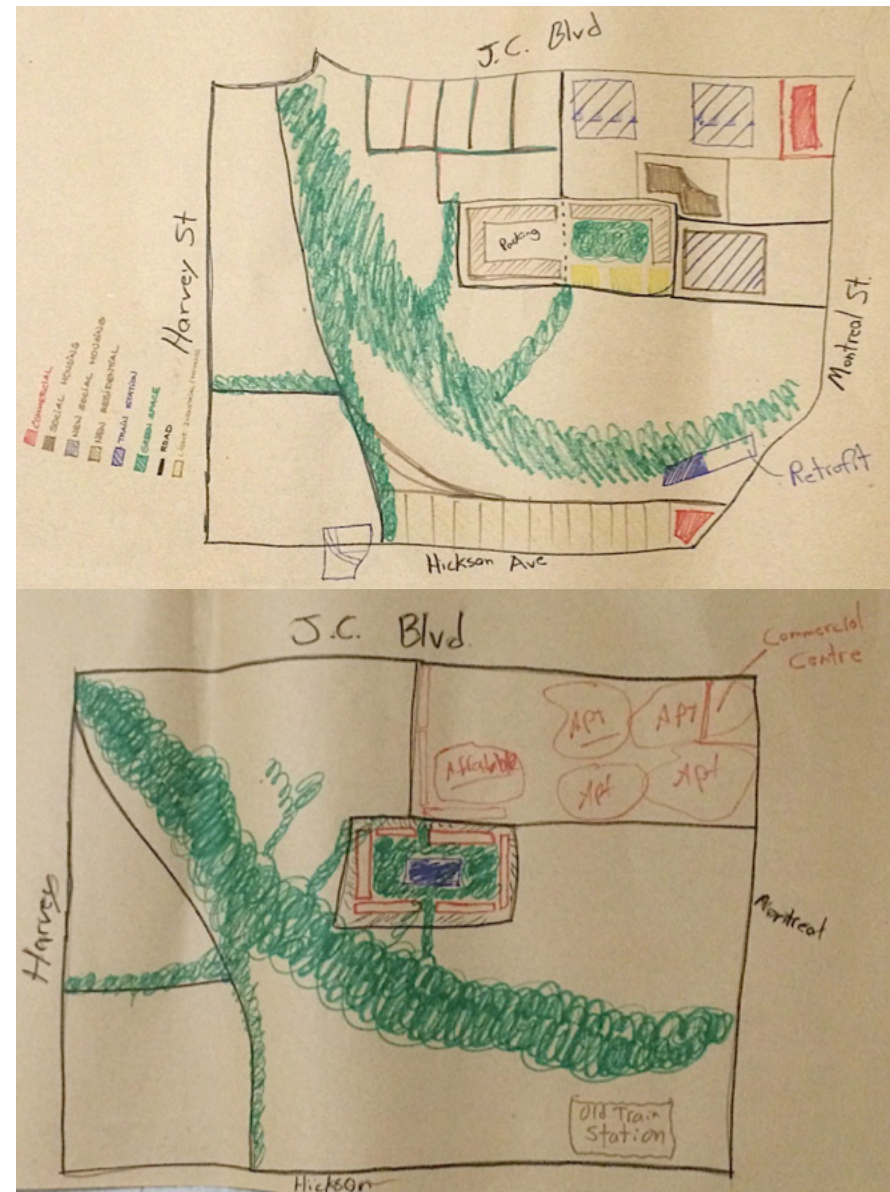


Figure 3.2: Preliminary Site Design Exercises (Image Courtesy of Ashley Taylor, 2016).

hone in on what we wanted to do with it. Some examples of these sketches can be seen in Figure 3.2.

From these exercises, we began to create more robust plans for the site. Our most complete one of these is shown in Figure 3.3. Something we struggled with greatly at this point in time was maintaining the area's existing identity, and, by extension, its current built framework. We were drawn to the allure of a

completely blank slate to work with it, and therefore proposed the outright removal of much of what is there currently. It was only after we stepped back and reevaluated our vision and objectives that we realized this was not an appropriate approach to take, and that we had to work at fitting what we wanted to do with what was there already.

Once this, and some other small refinements were made to



Figure 3.3: Preliminary Site Plan with most of the current built landscape removed (Image Courtesy of Sarvdeep Sangwan, 2016).

our plan, a general layout map of the site was produced using computer software (Figure 3.4). Each member of the design team was then assigned a particular aspect of the plan (i.e. storm water management, open spaces, street network/parking, heritage etc.), and told to compile a collection of design specifications/guidelines for this aspect, using the City's Design Guidelines for Communities as their guide.

Additionally, each member found precedents for each of their specification/guidelines to further show how we intend for these to work on the site, as well as support why they should be implemented as such. Each of these design specifications/guidelines are presented in Chapter 4 of this report.

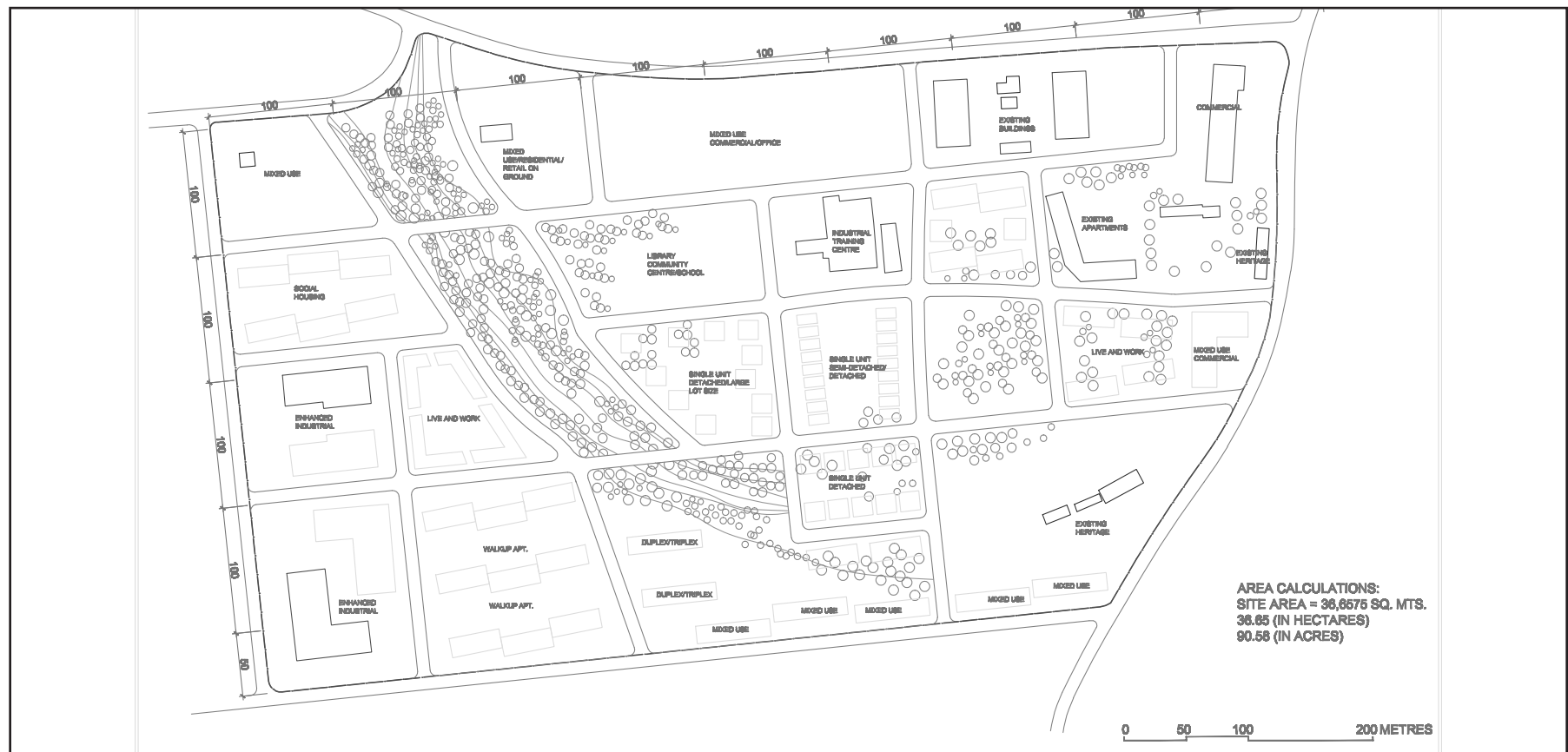


Figure 3.4: General layout map of the site designed to facilitate creation of design guidelines/specifications (Image Courtesy of Sarvdeep Sangwan, 2016).

3.4 Plan Evaluation

In his book, von Hausen presents ten key principles of urban design². We used these principles to evaluate whether our plan was appropriate or not before moving too far along into the final design process. The results of this evaluation are presented in the discussion below.

Principle #1: Context determines site form

The context of the project area determines the site form, as we are not proposing to dismantle any existing street infrastructure. In fact, we intend to utilize and extend the existing street infrastructure. We also propose preserving the Outer Train Station and its associated green space area.

Principle #2: Design should save and celebrate the place

We are proposing to save the Outer Train Station and celebrate it as a ruin. The purpose of saving the Outer Train Station as a ruin is to celebrate the history and culture that it reflects. The project team is also proposing to save the station's associated green space area to celebrate the nature it brings to the site. The project team is also proposing to save the industrial buildings and convert them to industrial training

centres. The purpose of this conversion is to celebrate the history of industrial activity in the area.

Principle #3: Design recognizes natural features as critical form-makers

We are proposing to work with the existing topography and green space that exists on the site. We recognize that this green space was created via the railway industry, and will preserve this area, as it is a significant component of the site.

Principle #4: The design needs to fit the scale and location

We recognize that the site is an area in transition. We are proposing to create a block size that is similar to that of Rideau Heights, which is located immediately north of the site. The block sizes are smaller than suggested in the City's design guidelines in order to create a more walkable community. We are also proposing that most of the buildings on site will be within human scale. We intend to create outdoor rooms where possible.

Principle #5: Movement systems should move people, not cars

We intend to make the site as pedestrian friendly as possible. We are proposing block sizes that are smaller than suggested in the City's design guidelines in order to create a more walkable community. We are proposing to install sidewalks on

² von Hausen, M. (2013). Dynamic Urban Design: A Handbook for Creating Sustainable Communities Worldwide, pg. 85-89.

both sides of all of the streets on the site. We are proposing to create dedicated, signalized pedestrian walkways elsewhere. We also intend to link the site to the surrounding areas, including Rideau Heights.

Principle #6: Multiple, flex, and mixed uses are keystones to sustainability

We recognize that the site is just one community in the City of Kingston. We are proposing that the core area of the site is lower density, while the rim is higher density. We are also proposing that existing buildings be transitioned to mix use. Additionally, we are proposing live-work areas. We have created a central spine throughout the site where many of the mixed use and institutional land uses will exist. We are also proposing that specialized community services be located throughout the site, and be located in mixed-use buildings.

Principle #7: Diversity needs to be planned for

We are planning for diversity by proposing a mixture of housing types and land uses. We are also planning for diversity by maintaining the existing industrial land uses where appropriate.

Principle #8: The public realm should be incorporated as a central component

We are proposing that the public realm be incorporated through the large open green space, streetscapes, sidewalks,

pocket parks and sun traps.

Principle #9: The urban form should be compact and safe

We are proposing to create a compact and safe community by creating short streets and blocks, which will calm traffic. We are also proposing to install sidewalks on both sides of the street. As such, we are proposing to create an excellent pedestrian network, which will also include pedestrian walkways. We are proposing designs that ensure that there are “eyes on the street”. We will also ensure that there are no back lots on the large open green space in the middle of the site, and that there are parks within it to ensure there is activity there.

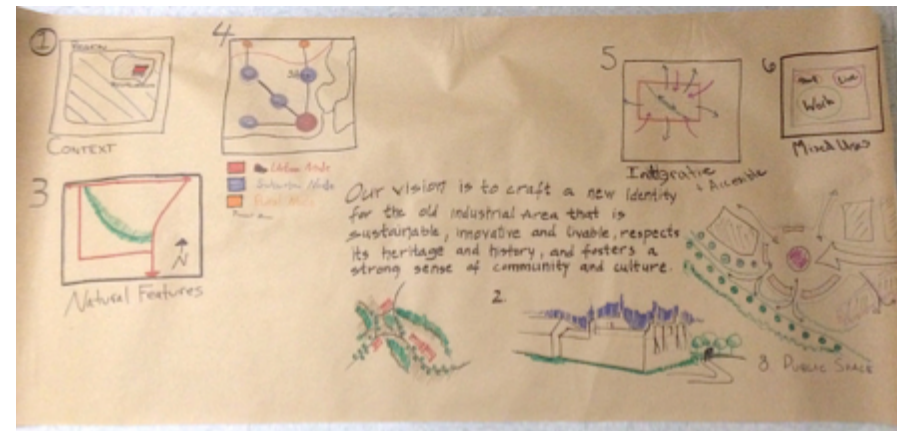


Figure 3.5: Bubble Diagrams depicting the urban design principles discussed by von Hausen in relation to our plan for the site (Image Courtesy of Ashley Taylor, 2016).

Principle #10: Community building is an integral part of the urban design process

Unfortunately, due to time and resource constraints we could not consult with the community on this plan. However, we will be using the lessons we have learned over the course of this process to inform how the City's secondary plan consultation should occur. This discussion is presented in the epilogue (Chapter 6) of this report.

3.5 Conclusion

The discussion in the chapter above was meant to demonstrate the careful consideration and planning that went into creating our plan for this site. It is by no means an exhaustive account of this process, but should provide some clarity for why we made the decisions we did. The next chapter will overview our final design plan for the site.

4. The Junction Plan

The following sections outline the proposal for the new community in the area currently referred to as “The Old Industrial Area”. This new community will be named “The Junction”, recognizing the history of these lands. After the outer train station was completed in 1856, a small community away from Kingston’s downtown core quickly developed. This community was known as the “Kingston Station Hamlet”, as well as the “Kingston Junction”. The Kingston Junction was in many ways, a complete community, as it included housing for employees, places for passengers to stay, and a school for the children of those employed in the area¹. In the years that followed, various industrial operations set up close to the station, providing additional employment in the area.

The plan being proposed provides a modern version of the Kingston Junction in a way, as it is a complete community that provides employment and services for those who will live there, as well as in other areas of the city.

The details of the proposal are broken down into the following

sections:

- Transit, street network and parking;
- Streetscape;
- Cultural heritage resources;
- Open spaces, parks and trails;
- Stormwater management;
- Housing;
- Industry;
- Mixed-use development; and
- Social and community services.

Figure 4.1 displays the final proposed site plan for The Junction community. Figure 4.2 is a key map, distinguishing where each feature of the proposal is located on the site, as well as indicating in which part of this chapter the guidelines and precedents for this feature of the plan are discussed. This discussion will follow a brief overview of the proposed density for this plan.

¹ McKendry, J. (2015). A brief history based on mapping, of the area bounded by John Counter Boulevard, Montreal Street, Hickson Avenue & Harvey Street.



Figure 4.1: Final proposed site plan for The Junction (Image courtesy of Sarvdeep Sangwan, 2016).



Figure 4.2: Key map. Features of the plan and their associated page numbers are indicated. (Image courtesy of Sarvdeep Sangwan, 2016).

4.1 Density Overview

Overall, this plan proposes to institute low to medium densities throughout the site. As can be seen in the cross sections displayed in Figure 4.3, the tallest buildings on the site will remain the multi-story residential towers at the corner of John Counter Boulevard and Montreal Street.

The design team believes this site can support these somewhat higher densities. However, it is our recommendation that further traffic, environmental, and economic studies be completed in order to ensure that this is in fact the case, and that unintended consequences will not be realized following construction.

4.2 Transit, Street Network and Parking

4.2.1 Transit

Currently the site is not well served by transit. The east end of the site is serviced by Kingston Transit Route 1, which runs along Montreal Street. There are no current transit routes along John Counter Boulevard, but the sizeable increase in residential density being proposed within the site should warrant future service along this arterial road, as well as routes that penetrate into the site's future neighbourhood. The most feasible and effective route for early transit penetration into the future neighbourhood would be a route connecting John Counter Boulevard to Montreal Street via the future Park Street and future Railway Street. This route would cut through

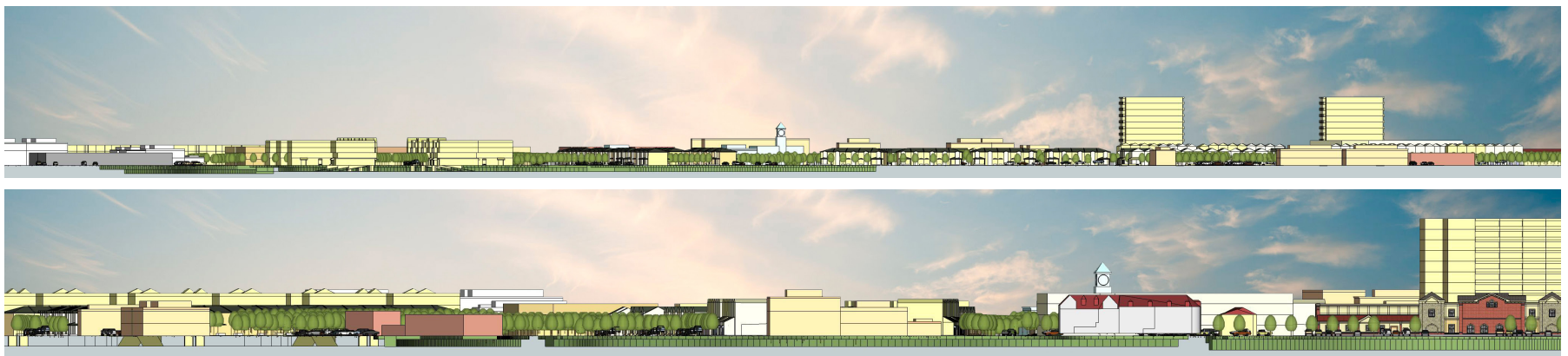


Figure 4.3: Cross sections of proposed site plan (Image courtesy of Sarvdeep Sangwan, 2016).

the centre of the neighbourhood, providing easy access to a mix of land uses and higher residential densities as directed by section 4.4(e) of the City of Kingston's Design Guidelines for Communities.

As the majority of blocks on the site will not exceed 100 metres in size, a central transit route through the site should allow for all residences and places of employment to be within a 400 metre walk of a transit stop. Locations that are farther than 400 metres away from a transit stop on the internal route should be within this distance to a route on the exterior of the site, along either John Counter Boulevard or Montreal Street. This central transit route, along with the design of the neighbourhood will work to discourage auto-dependence, link active transportation networks to transit and achieve multiple other results that are recommended within section 4.4 of the City's Design Guidelines.

4.2.2 Block and Street Network Design

The proposed street network will build off the current internal streets (Hagerman Avenue, Maple Street and Cassidy Street) in order to form a nearly linear grid network (see Figure 4.4). Hagerman Avenue will be extended to Elliot Avenue and a second north-south through route will be constructed roughly two-thirds of the way towards the east (Montreal Street) end of the site. Railway Street will connect Harvey Street to Montreal Street to form the site's one east-west through route. In total the site will have two north-south through routes and one

east-west through route. The other streets will be less heavily travelled, often ending at an open space area. The proposed Factory Street and Railway Street will break the continuity of the internal green space, however these locations will feature signalized pedestrian crosswalks. Several opportunities exist to connect the site and its future neighbourhood to the Rideau Heights neighbourhood to the north; at the northern end of the active transportation network through the crescent shaped greenspace area, where the proposed eastern north-south thoroughfare meets John Counter Boulevard and at the north-eastern corner of the site near the existing high-rise residential buildings. While pedestrian access is the priority, opportunities to provide at least one automobile-supportive connection across John Counter Boulevard and above the railway tracks should be considered. As well, safe and prominent pedestrian access to Belle Island Park (to the east) and to the Hickson Avenue baseball diamond (to the south) should be built into the site. The best location for access to Belle Island Park would be at the intersection of Montreal Street and Hickson Avenue. The most suitable location for accessing the baseball diamond would be in the vicinity of where Hagerman Street intersects with Hickson Avenue.

The only major deviations from a 90-degree grid pattern on the site will occur where Hagerman Avenue and the proposed Park Street will run parallel to the preserved existing internal greenspace in the northeast portion of the site.

The proposed street network follows what is recommended in

section 4.2 of the City's Design Guidelines. Block length will vary to a degree and generally does not exceed 100 metres. Pedestrian crossings will be incorporated across streets at

every opportunity, and the width of any right-of-way within the site will not exceed 66 feet.

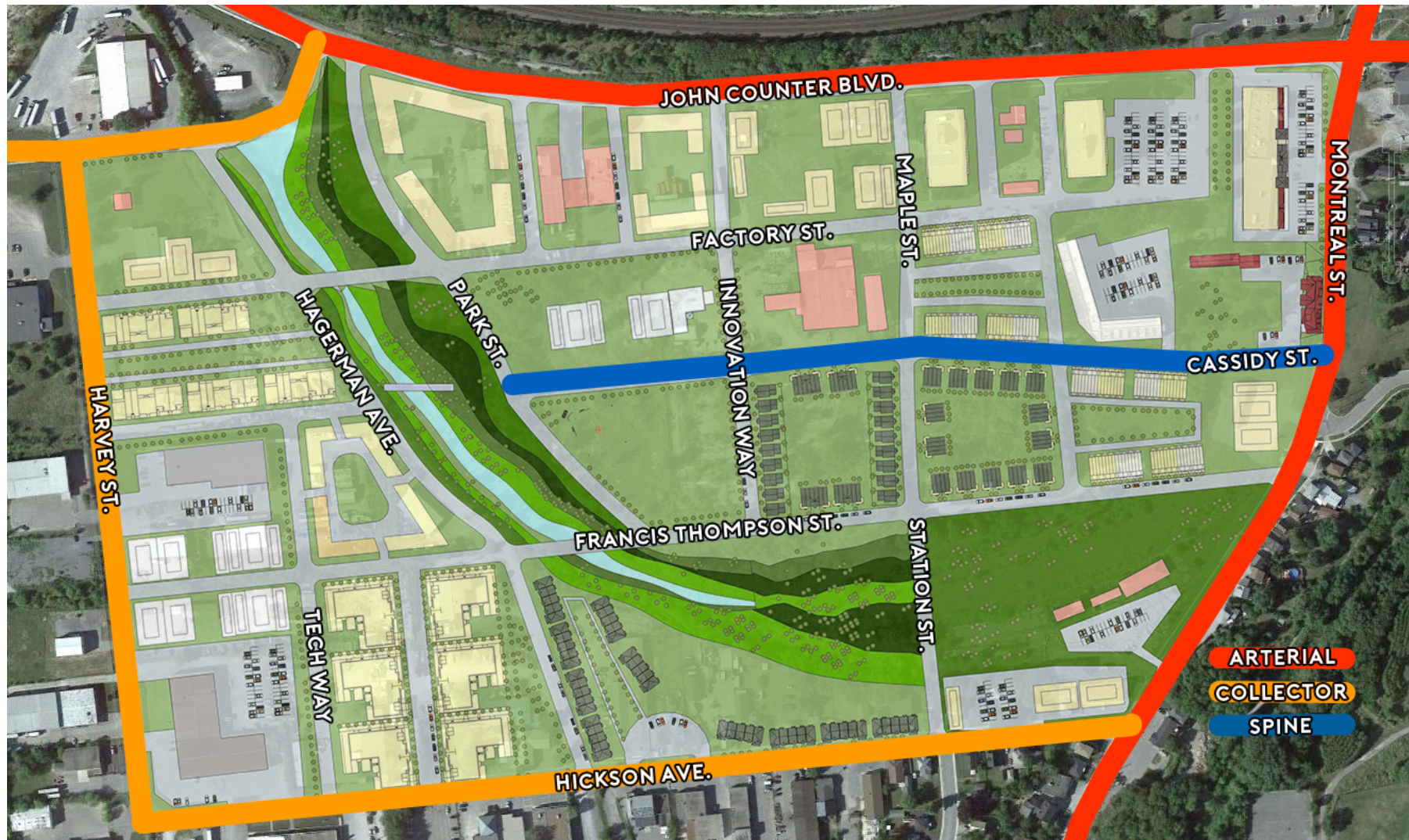


Figure 4.4: Proposed street network (Image courtesy of Sarvdeep Sangwan, 2016).

4.2.3 Parking

The street network, block structure and land use characteristics of the site allow parking to be incorporated into the area in a manner that follows what is presented in the City's Design Guidelines. Off-street surface parking will largely be located in areas that reduce their visibility from roadways. Such locations for surface parking lots will largely be where they are surrounded by buildings on multiple sides or behind buildings, possibly fronting on to less traveled roads (see Figure 4.4). This follows what is recommended in section 6.3(a) of the City's Design Guidelines. These areas will be designed and located in such a manner that will not compromise the safety or accessibility of surface parking areas. The block size and street network layout of the site will prevent large areas of continuous surface parking from being developed.

The 66 foot right-of-way will provide space for on-street parking around many of the non-residential buildings on the site.

4.3 Streetscape

The City of Kingston aims for quality streets to help build community aesthetics and construct community relationships within neighborhoods. To achieve community cohesion there needs to be a strong visually appealing physical space outside of residential dwellings, which will be

open and attractive for citizens to use. It will be essential to implement a road design that contains landscaped features, lighting and on-street parking to give the street comfort. The types of materials in the design of the streetscape should be durable in order to reduce future maintenance costs and also be resistant to various weather conditions. All streets will need to support active transportation by offering enough physical space for pedestrians and cyclists. Building a strong pedestrian oriented community will be essential for generating community cohesion, therefore street features need to be integrated into the built form of the streetscape. As seen in the sketch in Figure 4.5, the pedestrian corridors will be filled with amenities to make the street attractive. Such street amenities will include lamps, benches, greenspace, utility features and bike racks. Certain road utilities that are visually unappealing should be placed out of sight and hidden from view. Existing viewpoints should be capitalized on and sightlines should be preserved in order to enhance safety and comfort within the community.

4.3.1 Street Design

The cross section in Figure 4.6 is the new design layout for a typical local roadway within the site area. Under Kingston's Design Guidelines, local roads are to have driving lanes between 3.25-3.5 metres in width. Driving lanes were chosen to be 3.25 metres in order to decrease the width of the roadway in order to support a compact built form. The City of

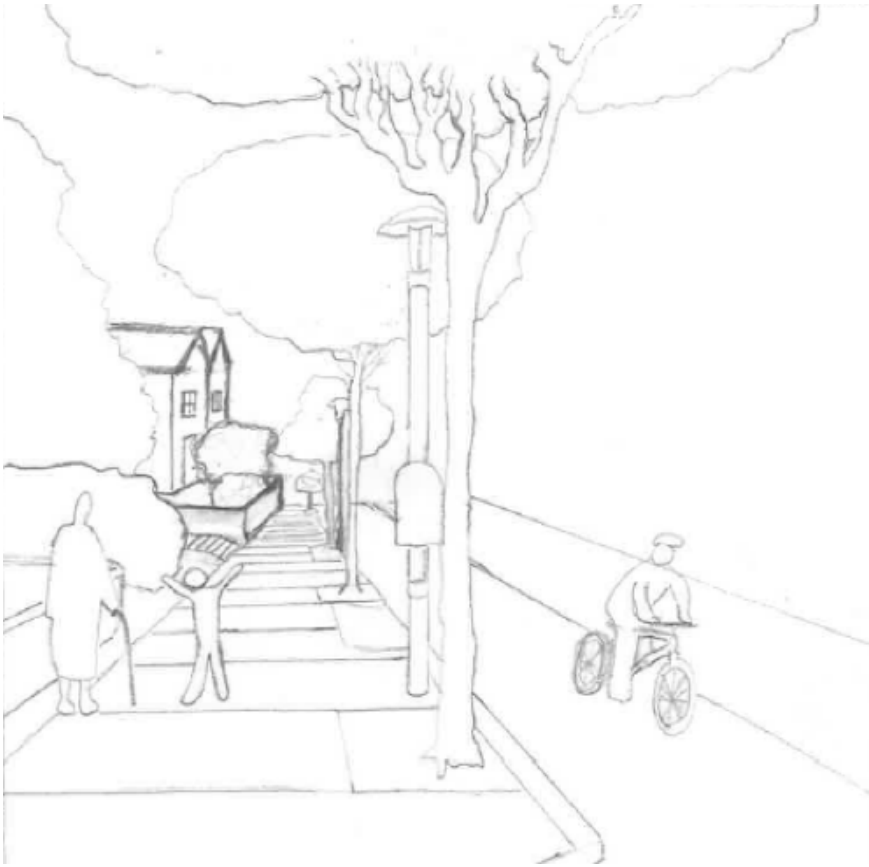


Figure 4.5: Sketch of possible streetscape (Image courtesy of Austin Norrie, 2016).

Kingston seeks to reduce the amount of road surface by having narrow roadways. The emphasis behind this design is to limit the amount of asphalt and help bridge greater connectivity between neighbors. Narrower road widths will also make commuters slow down as they travel through residential sections of the site. Parking lanes are to be provided on

each side of the street, which will each consume 2.8 metres of roadway space. The proposal is to have local roads be a total of 4 lanes, thus roadways will be a total of 12.1 metres in width. A 2.5 metre buffer of greenspace will be provided to further separate the road from pedestrians. A total of 1.8 metres of sidewalk space will be offered on each side of the street, which is consistent with the objectives of Kingston's Design Guidelines. In order to achieve a compact built form along roadways, housing should be situated in proximity to the sidewalk. It is the greenspace between the sidewalk and the parking lanes where rain gardens will be provided. These rain gardens can be various sizes within the greenspace and will be necessary to capture surface runoff, which will help the drainage of water within the site area.

The road width on certain local roads can be reduced to 9.3 metres. To achieve this one of the parking lanes can be removed as seen in Figure 4.6.

Throughout the site area there are opportunities to integrate apartments. Parking for these sites will be integrated on the property and be hidden from the view from the street. It is unnecessary for a parking lane for these develops along the street. There is an effort to reduce the amount of parking lots and asphalt space along roadways, because it can be seen as an eye sore. Within this design housing can be placed away from the street in order to have greenspace in front of residential houses and apartments. When following this design it should be ensured that spacing follows the human scale

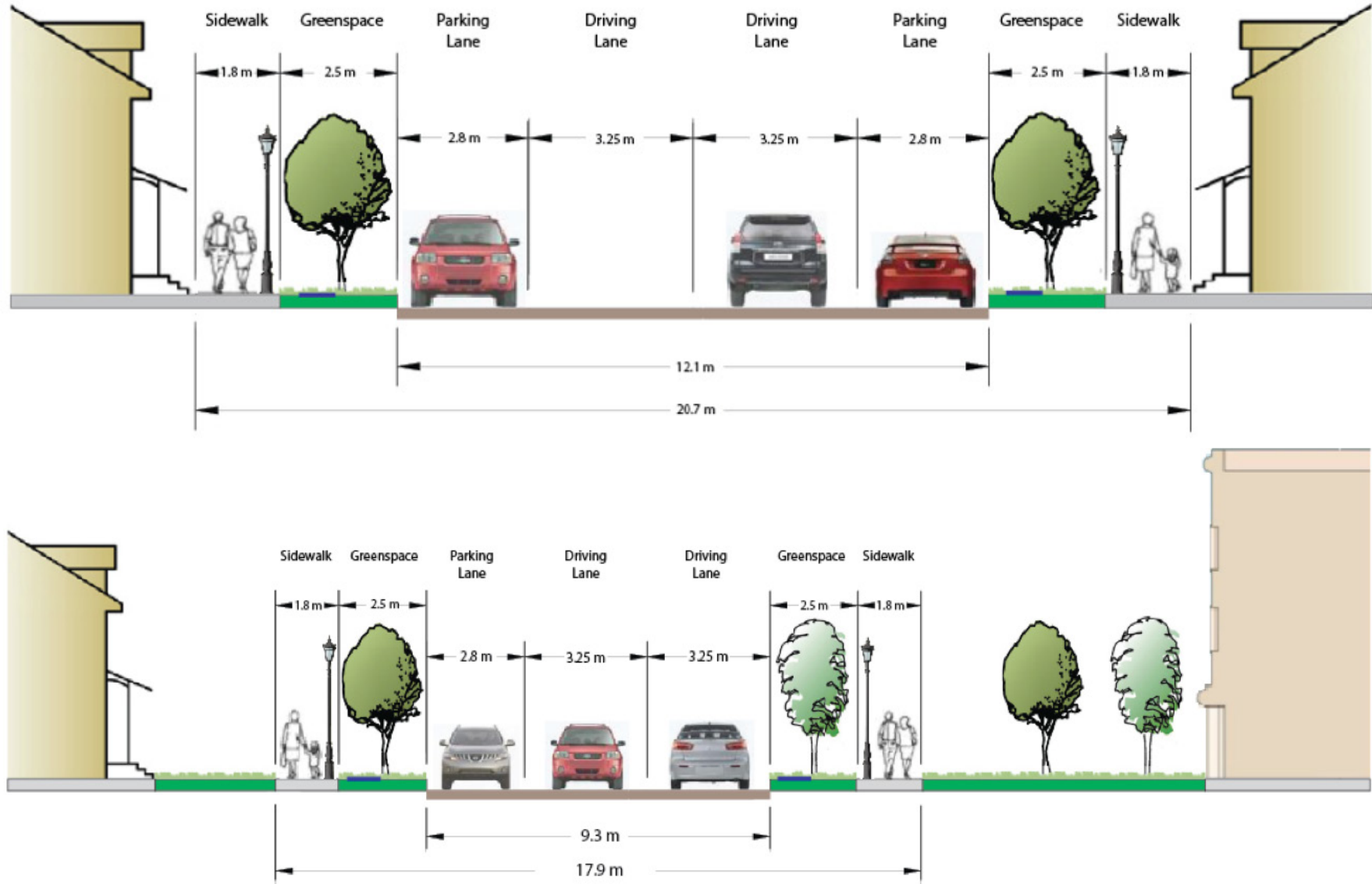


Figure 4.6: Proposed cross sections of typical local roadways in the plan area (Image courtesy of Austin Norrie, 2016).

and housing is not placed too far apart from one another. This design follows the City of Kingston's Design Guidelines for residential streets where three lanes can be permitted.

The image in Figure 4.7 demonstrates what a typical street will look like within an area of semi-detached homes. Street widths can be reduced significantly to add more space for pedestrians. The goal of this design is to achieve an open area that is pleasant for pedestrians to walk through. It will contain essential lighting, grass, trees and landscaped features to make sure the space is inviting, attractive and comfortable for all citizens.

4.4 Cultural Heritage Resources

The only heritage resource that will be discussed in this section is the Old Grand Trunk Railway Station because, unlike the other cultural heritage resources located on the site, the design team must choose one of two options in preserving the outer station. The two options include preserving it as a ruin or restoring it to its original state. It is the design team's intent to preserve the outer station as a ruin.

4.4.1 The Old Grand Trunk Railway Station

The Old Grand Trunk Railway Station, also known as “the



Figure 4.7: Rendering of a semi-detached streetscape in the plan area (Image courtesy of Sarvdeep Sangwan, 2016).

outer station”, was built in 1856 of grey limestone and was the City of Kingston's first train station. Until closure in 1974, the outer station was an important mid-way stopping point along the Grand Trunk Railway, now the Canadian National Railway, which connected the City of Montreal and City of Toronto. The outer station is also of importance to the City of Kingston because it became the centre of Kingston Junction, a new sub-community, while in operation. In 1986, the City of Kingston designated the outer station under the Ontario Heritage Act and in 1994 the site was designated under the federal Heritage Railway Stations Protection Act. The outer station has remained vacant and abandoned since 1992 and endured a fire in 1996².

2 National Trust for Canada. n.d. The Old Grand Trunk Railway Station. Retrieved from <https://www.nationaltrustcanada.ca/issues-campaigns/top-ten-endangered/explore-past-listings/ontario/old-grand-trunk-railway-station>

As stated above, it is the design team's intent is to preserve the outer station as a ruin. The design team seeks to preserve the station as a ruin in order to comply with principle 8 "integrate and highlight cultural heritage resources" of the City of Kingston's Design Guidelines for Communities. The design team also seeks to preserve the outer station in its current state to reflect the vivid heritage, history and character of the area. As a ruin, the outer station will act as an anchor and magnet for the area. The design team is dedicated to telling the story of this vital landmark by leaving it as a ruin with the hope that it will promote tourism, educational opportunities, and ensure that the City's rich history will remain alive for generations to come. The design team has proposed a park and/or formal open space be located around the outer station, and that a restaurant be located in the old Pig and Whistle.

The design team will draw on the estate known as "The Hermitage" for inspiration in preserving the outer station as a ruin. The mansion and outbuildings were constructed in 1855 for George Leith³. The Hermitage has been owned by the Hamilton Conservation Authority since 1972 and is located in Hamilton, Ontario⁴. It exists on a 120 acres parcel of land and

3 City of Hamilton. June 2005. Hamilton's Heritage Volume 5. Retrieved from <https://www.hamilton.ca/sites/default/files/media/browser/2014-12-16/hamiltons-heritage-volume-5.pdf>

4 Hamilton Conservation Authority. n.d. Heritage Gatehouse. Retrieved from <https://conservationhamilton.ca/hermitage-gatehouse/>



Figure 4.8: Hermitage ruins in Hamilton, Ontario prior to stabilization (Image courtesy of the Hamilton Spectator, 2015).

includes a stone house and outbuildings, which now only exist as ruins. Similar to the outer station, The Hermitage suffered a fire in 1942. The Hermitage is one of the locations of the Haunted Hamilton tours. As stated above, the design team is hopeful that if the outer station is left as a ruin, it will promote tourism and educational opportunities.

Further, the Hermitage is designated under the Ontario Heritage Act. The Hermitage was designated because the ruins "...are of considerable historical and architectural value and interest"⁵. The ruins of the mansion have also been subject to

5 City of Hamilton, 2005. Hamilton's Heritage Volume 5.

various stabilization efforts over the years⁶. In fact, a \$460,000 restoration project to further stabilize the ruins began in July 2015. The site is to reopen in May or June 2016 – with no braces on the walls or fences around the site⁷. The design team intends to stabilize the outer station to ensure structural stability and safety. However, any stabilization measures must be completed in accordance with heritage regulations and must ensure authenticity of the original structure.



Figure 4.9: Sketch of train station ruins (Image courtesy of Austin Norrie, 2016).

6 City of Hamilton. March 19, 2015. Heritage Permit Application HP2015-006, under Part IV of the Ontario Heritage Act, for the Disassembly, Storage and Reconstruction of the Heritage Ruins at 739 Sulphur Springs Road, Ancaster (PED15041) (Ward 12). Retrieved from <https://www.hamilton.ca/sites/default/files/media/browser/2015-07-17/ped15041-hmhc-agenda-2015-03-19.pdf>

7 McNeil, n.d. The Hamilton Spectator. Rebuild of Ancaster's Hermitage ruins to start in July. Retrieved from <http://www.thespec.com/news-story/5655313-rebuild-of-ancaster-s-hermitage-ruins-to-start-in-july/>

4.5 Open Spaces, Parks, and Trails

Presently, the redevelopment area is almost entirely open space that has mostly grown in with wild grass and trees. By using Kingston's Design Guidelines, a sustainable, accessible, and dynamic network of parks and open spaces can be created. This network is designed to be accessible by multiple modes of transportation, focusing on active modes, and is highly visible from the surrounding residences and streets in order to enhance safety.

Incorporating a high volume of open space into the redevelopment plan is a high priority in order to maintain how residents have adapted the site to their needs. The existing trail through the old train tracks will be maintained as a natural grassland corridor, and augmented with some new amenities. The area around the ruins will be developed as a park with a high amount of open space for a variety of activities. Several playgrounds and smaller open spaces will be strategically placed for ease of accessibility.

The ultimate goal is to create places that draw people in, and create opportunities for social interaction to strengthen the community and foster a sense of place. By incorporating and complimenting the already existing aspects of the area, a dynamic and welcoming network of spaces can be created.

4.5.1 Train Station Ruin and Surrounding Open Space

The ruins of the Grand Trunk Railway Station are an important part of the redevelopment project. The train station ruin is easily accessible from Montreal St. and is connected to the rest of the area through the street and trail networks. This kind of connectivity creates a pull to the park area surrounding the train station, making it a high-profile space, enhancing its safety, and allowing the ruins themselves to act as a beacon to the area. It is important to create a publicly accessible space surrounding the ruins that includes various points of interests that people can engage with. This will help establish and reinforce a sense of community for the area, while simultaneously creating attractions to pull in those from outside the community.

Train Station Ruin

The train station ruin stands out amongst the landscape, and it is important to accentuate this. Making the station a central point provides people with a place to start from, and then explore the rest of the surrounding area.

Third Space In Front of Ruin

A plaza in front of the ruin creates a third space where people can enjoy the sight of the ruin, as well as some of the features nearby. By creating an enclosed plaza with some additional

new structures an intimate room can be created, where people can sit on patios and enjoy food and drinks. The space is modeled after Piazza Della Rotunda in Rome, which is enclosed on one side by the Pantheon. While the train station ruin is not of the same grandeur as the Pantheon, the feeling created is the same – a sense of mystique, maybe even awe, at what was once an important piece of history for Kingston.

Open/Green Space with Seating and Shade

Open space with greenery compliments the old train station, and allows it to stand out amongst the backdrop of modern



Figure 4.10: Concept sketch of plaza in front of train station ruins (Image courtesy of Paul Bell, 2016).

development. The Upper Fort Garry Heritage Site in Winnipeg, Manitoba (see Figure 4.11) is an excellent example of how to successfully accomplish this. The ruins of the fort were used to create a gateway into a new park, with ample seating for people to sit and enjoy the openness of the area. The size of the available open green space allows for both active and passive uses, accommodating the diverse needs of the community. Trees throughout the park will provide much needed shade for people to escape to during a hot day, and buildings with overhangs will generate shade for those using the patios.

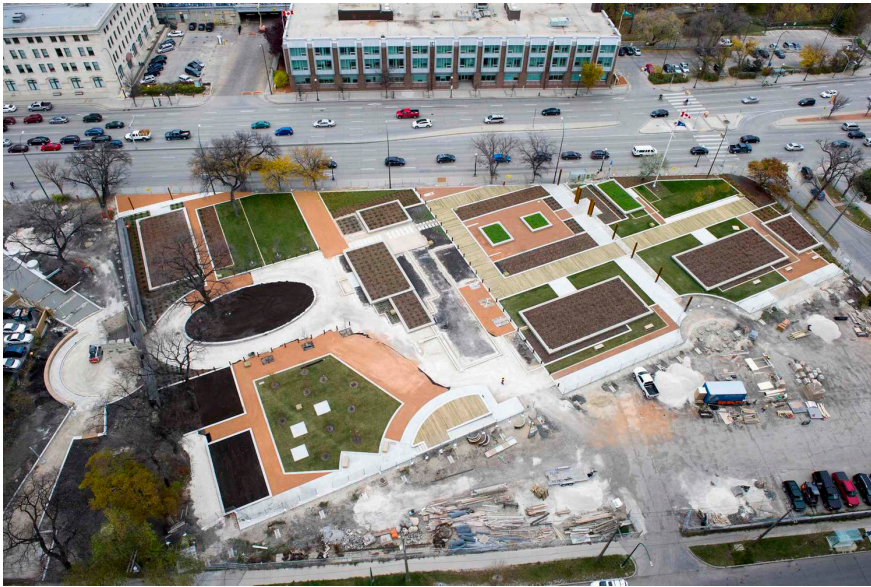


Figure 4.11: Upper Fort Garry Heritage Site (Image courtesy of the Winnipeg Free Press, 2014).

Amphitheater

This can be a unique aspect to the redevelopment of the

area, and provide entertainment as well as a gathering point. The amphitheater can be used by small theatre companies, acoustic/acapella groups, or even to play movies in the park. By keeping the amphitheater small, the need for large sound amplification is negated, reducing the noise pollution on the surrounding area. Surrounding the amphitheater with trees provides natural wind protection and sound barriers. The natural enclosure also creates a sense of discovery for those who have gone out on a Sunday night and stumble upon the stage without knowing it was there.

Public Art

Public art installations are essential to complimenting any open public space. Art that focuses on the history of the area, the people, and the culture of Kingston is something that people from the community and surrounding areas will be able to relate to. Including plaques, guided walking tours, and other historical references throughout the area will contribute to the development of The Junction's identity.

Programming

Programming is essential to creating a dynamic place. By ensuring there is continually new things coming through, and making sure that community favourites don't disappear, the area maintains a sense of novelty and freshness. This keeps both those from the community and those outside the community returning to rediscover the site by finding out what

is new and exciting.

Access

Maintaining easy access to the area is vital to its success. Parking in front of the former Pig and Whistle restaurant provides access for people who visit from outside the

community. Trails (ex: The K&P Trail), sidewalks, and street parking create easy access to the park and all of its features. Pathways throughout the park are highly visible, and accommodate use by a diverse group of people, including those with mobility challenges. While the site plan includes a trail and path network, these paths should not be formalized



Figure 4.12: Examples of outdoor amphitheaters. (Left image) Marta Pan Amphitheatre Kroller Moller Museum, Netherlands; (Right Image) Browning Amphitheatre, Columbus Ohio (Images courtesy of Krollermuller.nl & The Cultural Landscapes Foundation).



Figure 4.13: Public art in Toronto's Regent Park (Image Courtesy of Urban Toronto, 2014).

immediately. Rather, paths should only be finalized once it can be determined how people wish to use the site. This can be determined by looking for 'desire lines,' which are the worn down pathways that become visible when high volumes of traffic travel over a certain area.



Figure 4.14: Concept sketch of park layout (Image courtesy of Paul Bell, 2016).

4.5.2 Natural Grassland Corridor

A large part of the redevelopment project is the old railway corridor that has become grown in with natural forage over the years and makes up an informal portion of the K&P trail. Preserving the grassland corridor enhances the area's connection to the natural environment, helps with biodiversity,

and maintains a well-used trail that could be extended to the trail network of Belle Island.

Rails to Trails

The former rail corridor through Kingston's Old Industrial Area, which is already being informally used as a pedestrian and cyclist trail, is very suitable for a more formal conversion. Across Canada and the United States there are many notable examples of rail-to-trail conversions. The Northeast Pioneer's Greenway in Winnipeg was formerly a 6.7 kilometre long section of a Canadian Pacific Railway line, but now it is an extremely popular active transportation corridor featuring a paved path, various amenities and historical information signs⁸. In Minnesota, the Dakota Rail Regional Trail stretches 42.6 kilometres through several communities, and many remnants of the corridor's past use can be seen from the path, including an engine house. Land acquisition and contamination remain as obstacles to rail-to-trail conversions, but with appropriate foresight and policies Kingston can maximize the railway trail on the redevelopment site, and extend it as part of the K&P Trail and into the Belle Island Trail network.

Figure 4.17 displays a proposed cross section of this trail.

Accessibility

Although the goal is to keep the area as natural as possible,

⁸ Winnipeg Trails Association, 2015. "Northeast Pioneer's Greenway Trail".



Figure 4.15: Section of the Dakota Rail Regional Trail (Image courtesy of SRF Consulting Group, 2016).

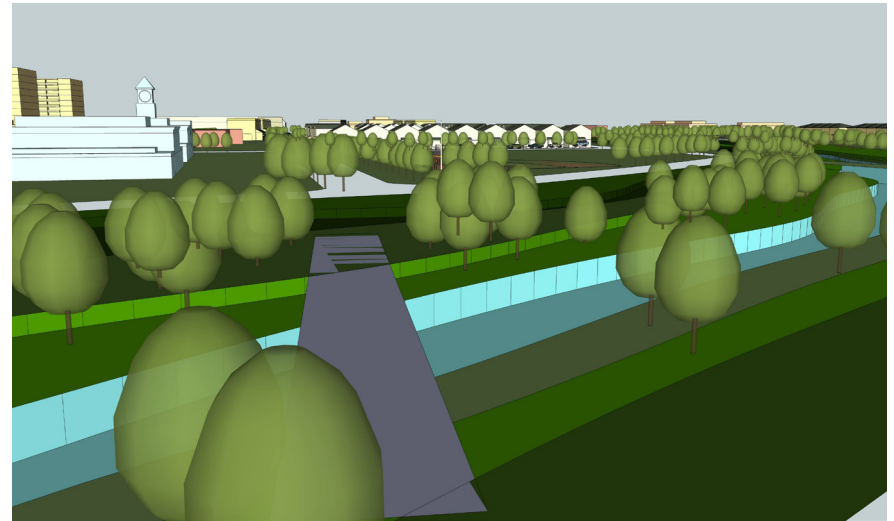


Figure 4.16: Rendering of trail bridge across stormwater drainage feature (Image courtesy of Sarvdeep Sangwan, 2016).

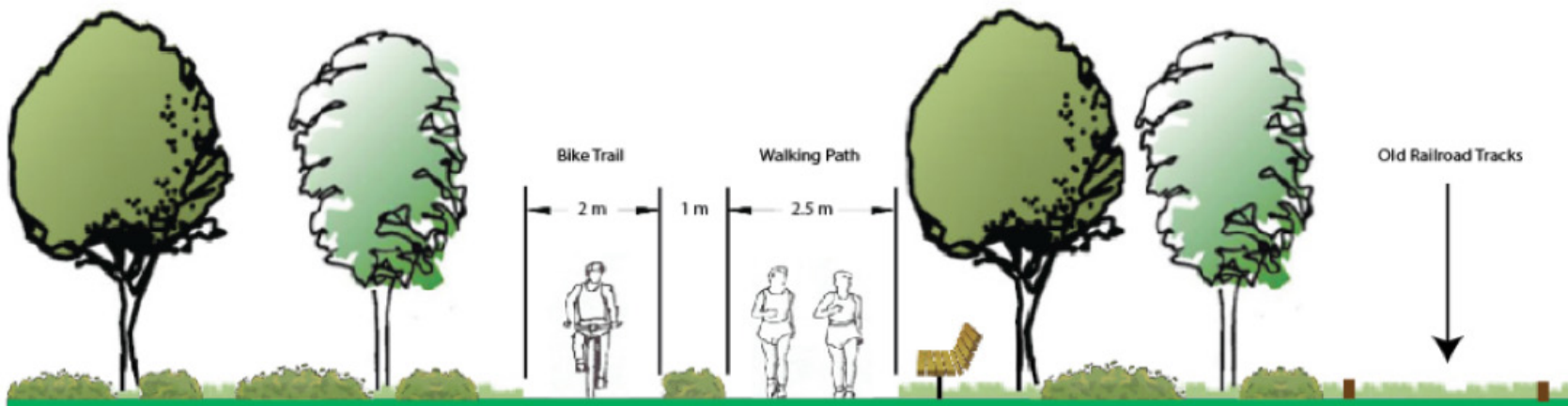


Figure 4.17: Trail cross section (Image courtesy of Austin Norrie, 2016).

to maintain the rustic nature of the corridor, it is important to accommodate a diverse range of mobility. Therefore, the pathways shall also include paved pathways that are better suited to older adults and those with mobility challenges or mobility aids. By maintaining the original paths in addition to this, those who do wish to enjoy a more rugged natural experience may do so.

Urban Gardens

Despite being a designated brownfield, there is potential to implement urban gardening in patches along the corridor. The City of Kingston's Urban Garden Guidelines details that it will pay for testing to see if the ground is suitable for gardening, or if remediation is necessary. Depending on contaminants found, partial or complete remediation may need to occur. While a complete remediation of the soil may be cost prohibitive, there is potential to use garden planters (which are isolated from the ground) or raised urban gardening as an alternative. Raised gardens also improve accessibility issues for those who struggle bending over for long periods of time and should be considered as part of the urban gardens regardless of the soil testing results. If gardening is determined to be possible, there is an opportunity to revitalize the Kingston Prison Farms through Project SOIL.

4.5.3 Playgrounds

There are two potential locations for playgrounds: part of the

Library and Community Centre/School, and the block north of the train station ruin park. Each site offers high access and high visibility from the surrounding area. The separation of each playground from the large open spaces allows for the creation of a walkable network of parks throughout the community, improving opportunities for people to engage in active transportation. The location of the two playgrounds ensures that most residents in the community will be less than a ten minute walk from a playground.



Figure 4.18: Raised garden planter (Image courtesy of Hayneedle.com, 2013).

4.6 Stormwater Features

The design team will incorporate stormwater management features into the site design. However, it is the design team's understanding that stormwater will not increase significantly as a result of the proposed design, as there are several green spaces (i.e. the green corridor, green boulevards and formal green spaces) still present on the site that can absorb the stormwater. The streetscape will also incorporate stormwater

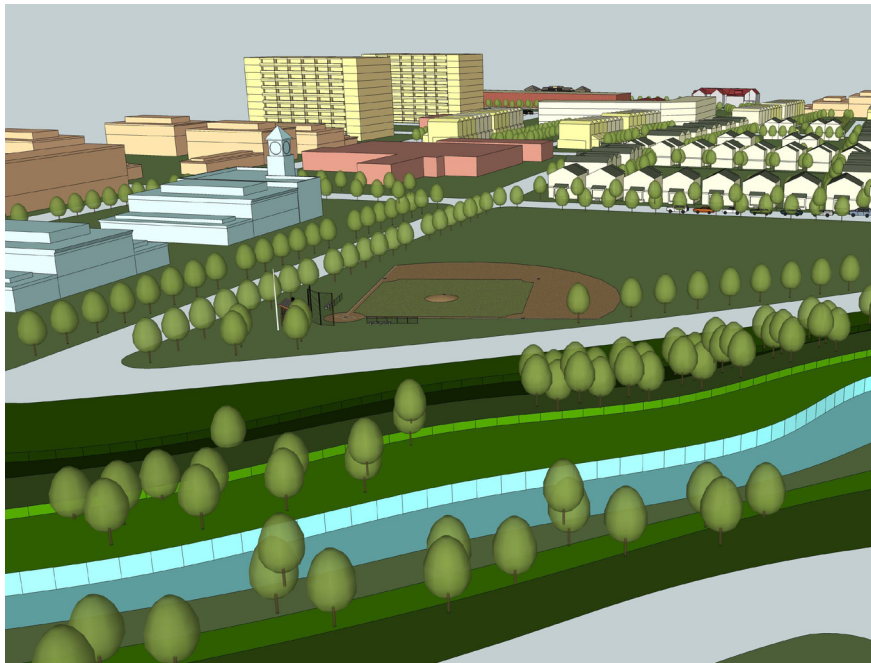


Figure 4.19: Rendering of proposed park and dry pond on the site (Image courtesy of Sarvdeep Sangwan, 2016).

management features, which will be discussed later in this section. The purpose of the stormwater management features that the design team proposes is to absorb excess stormwater management and to increase the quality of the stormwater before it enters sensitive environments and/or treatment facilities.

Stormwater is rain and melted snow and ice. Stormwater management involves the storing and directing of stormwater runoff in urbanized areas to control flooding, erosion and water quality. Stormwater management is a necessity in urbanized areas because stormwater runoff cannot infiltrate surfaces such as roofs and driveways. Urban stormwater runoff also includes increased contaminants such as road salt and oil which can enter water bodies. As such, stormwater management protects communities, municipal infrastructure and local waterways. The design team intends to incorporate stormwater management into the site design to protect the roads, sidewalks and trails and to slow the release of stormwater runoff into natural systems.

The design team is proposing stormwater management features that comply with section 3.2 of the City of Kingston Design Guidelines for Communities. The Design Guidelines state that stormwater management should:

1. Maintain natural drainage networks and preserve environmentally sensitive areas;
2. Integrate stormwater facilities as community features; and

3. Establish strong public exposure for stormwater facilities.

4.6.2 Environmentally Sensitive Areas

To comply with section 3.2 a. of the Design Guidelines, the design team intends to preserve the natural crescent shaped greenspace on the site. Preserving the environmentally sensitive areas will reduce runoff and provide for the natural filtration of stormwater. Preserving this area will reduce the amount of water diverted into engineered ponds and sewers.

4.6.3 Natural Vegetation and Rainwater Gardens

The design team is proposing to incorporate natural vegetation and rainwater gardens into the streetscape, between the sidewalks and the roads. A rain garden is a planted or stone-covered bed that is designed to receive stormwater and allow it to infiltrate into the soil⁹. The rain gardens also filter pollutants and slow stormwater runoff before it enters another stormwater system or water body. Rainwater gardens simulate natural processes and provide a habitat for fauna such as birds and butterflies.

The proposed rainwater gardens comply with section 3.2 b. of the Design Guidelines because they will maximize ecological,

⁹ Canada Mortgage and Housing Corporation (CMHC). 2016. Rain Gardens: Improve Stormwater Management in Your Yard. Retrieved from http://www.cmhc-schl.gc.ca/en/co/grho/grho_007.cfm

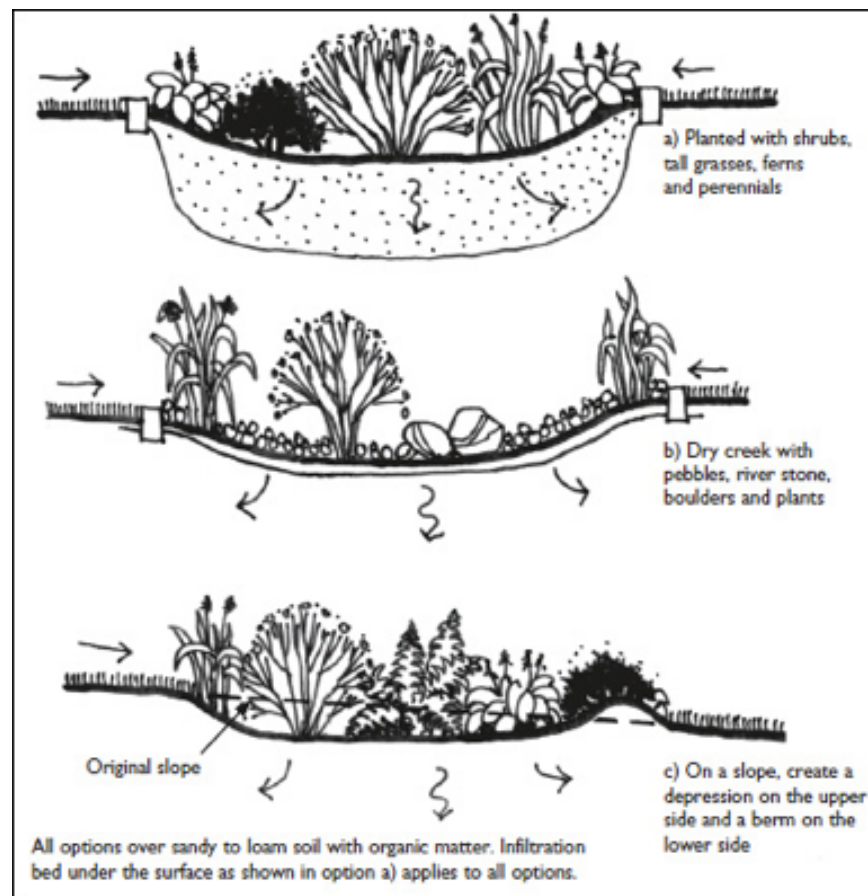


Figure 4.20: Rainwater garden designs (Image courtesy of CMHC, 2016).

aesthetic and safety objectives. Also, they will be located adjacent to sidewalk and neighbourhoods.

The design team is proposing rainwater garden designs that are economically feasible for the area. The design team recognizes that rainwater gardens that are planted with natural vegetation or pebbles are more cost effective than designs

that include concrete street channels. However, if the site warrants more creative and expensive designs, the design team will incorporate such.

4.6.4 Stormwater Management Pond

The design team is proposing to incorporate a dry pond into the landscape in the green corridor. Dry ponds act as catch basins for excess stormwater runoff during heavy precipitation events or snow melt, and are otherwise empty. The dry pond works such that the basin holds the water temporarily until the precipitation event has passed. The stormwater is then slowly released into another stormwater system. The design team is proposing a dry pond be installed because the design team does not think that there will be enough runoff to warrant a wet pond. Further, the design team is proposing to install a grate into the middle of the dry pond, which will empty into a storm sewer and will subsequently be removed from the site. Many municipalities in Canada encourage dry ponds as a method for stormwater management.

The dry pond will be located at the southern most portion of the green corridor. The dry pond will comply with section 3.2 b. and c. of the Design Guidelines. The dry pond complies with section b. because it will maximize ecological, aesthetics and safety objectives. In fact, the dry pond will remain as a manicured area within the green corridor until it is needed during a heavy precipitation event. The dry pond will also comply because it will be connected to open spaces, the trail

network and surrounding neighbourhoods.

The dry pond will also comply with section c. because shallow slopes. Although there will not be defined edges at public gathering points, signage will be used to define the edges of the dry pond.

4.6.5 Other Considerations

The design team recognizes that there are other stormwater management techniques. The design team may also encourage developers and residents to make use of green roofs, naturalized yards and gardens, and rain barrels.



Figure 4.21: Dry pond in Kitchener (Image courtesy of the City of Kitchener, 2016).

4.7 Housing

The guiding principles for residential dwellings is to ensure that new residential development are integrated, while still protecting and preserving the existing character to Kingston's neighborhoods. To achieve this development must follow the guidelines for context appropriate structures that fit or add to the existing sense of place within a community. Emphasis is placed on dwellings to be a variety of housing types in order to achieve a mixed price point for land tenures. Residential housing should be established through compact urban form where structures are in proximity to each other to achieve a walkable community. Environmentally sustainable development and the integration of existing culture and heritage facades should also be considered in housing design. Dwellings should be a mix of different façade designs to give unique aesthetic qualities to each structure, while still having continuous flow and consistency to existing neighborhood character.

Materials for residential structures should be durable enough to be long lasting and be suited for all types of weather conditions. Residential housing is to be of low density consisting of semi-detached dwelling units within the centre of the site area. These dwellings are situated on local roads that do not receive high volumes of automotive traffic. Higher density townhouses or duplexes, as well as multi-storey apartments will be located closer to the edges of the site area.

These higher density residential structures will be adjacent to arterial roadways and will receive greater traffic volume on average. While the main housing types will be semi-detached, townhouses and apartments, other housing styles will be considered. Housing types that will be permitted include grow homes, row houses, co-housing, container homes, work homes and studio apartments. These types of housing will all be considered in order to give a mix of different housing options within the community, thus encourage a diverse population to be attracted to the area. The following images are a series of examples to the types of housing designs that the site will incorporate, while still keeping to the context of providing semi-detached, townhouses and apartments.



Figure 4.22: Housing types on site with images (Image courtesy of Austin Norrie, 2016).

4.7.1 Semi-Detached Housing

The proposal for the site consists of semi-detached family units. These residential dwellings will be located within the centre of the site along local roadways and away from busier arterial roads. All residential housing units will be oriented to face the adjacent street with windows facing outwards. No rear lanes will be provided to have access to semi-detached structures, which means access and servicing will have to occur from the front of dwelling units. This is due to the fact that greenspace will be provided at the rear, which will be for their individual private use. For those semi-detached homes that are considered co-housing, public greenspace at the rear of structures will be shared between tenants. The rendering in Figure 4.23 outlines a block of semi-detached homes. These structures will be situated a fair distance from the sidewalk to allow front yards to contain greenspace. This greenspace should be provided on lots in order to allow for children and families to use front and rear yards for leisure, which will help support neighborly attitudes and community cohesion. A parking lane will be provided along all roadways adjacent to semi-detached dwellings to give a buffer for pedestrians from roadways. The City of Kingston's guidelines for homes seeks to have clear delineations between what is private space and what is public space. This can be achieved through garden landscaping and fences, however such features should not be implemented if they block views or create unsafe hiding places. Crime Prevention Through Environmental Design

(CPTED) should be focused on achieving greater visibility, lighting and openness rather than creating physical barriers that limit sightlines or extensively guard access points.

4.7.2 Townhouses

Townhouses and duplexes will be integrated into the site area in order to provide compact urban form through higher density housing options. Townhouses will be located along Maple Street and Cassidy Street. Townhouses will be a variation in style, but will follow a continuous uniformity along the street as seen in Figure 4.24. Front yard setbacks will be reduced substantially to have proximity to the sidewalk. Some greenspace can be provided to delineate between public and private space. Fencing will be used to show the delineation



Figure 4.23: Rendering of semi-detached dwellings (Image courtesy of Sarvdeep Sangwan, 2016).

between the public and private sphere in order to add comfort through clear boundaries. The key to this design is to have multi-unit residential opportunities, which can achieve a diverse housing stock. This diverse housing stock will ensure that there is a mix of price points are provided to allow for a mix of different occupants. The siting of townhouses and duplexes will be oriented toward the roadway and a parking lane will be offered to have servicing access. All townhouses should be adjacent to each other and not have side yard setbacks. Each structure will be between 2-4 storeys in height, which is consistent to Kingston's design guidelines for townhouses.

4.7.3 Apartments

The development of apartments will be mainly located within



Figure 4.24: Rendering of townhouse dwellings (Image courtesy of Sarvdeep Sangwan, 2016).

the western portion of the site. Apartments will also be located within mixed use developments along John Counter Blvd and Montreal Street. The massing and setbacks of apartments shall be appropriate to provide a sense of enclosure and suitable scale. All apartment structures will be no more than three storeys in height to stay consistent with the density within the surrounding area. Two large residential apartment towers currently exist along John Counter Blvd., however the plan aims to have the height and size of new apartments reduced in order to keep development to a lower density that fits the human scale. The sketch in Figure 4.25 outlines the type of street design and massing for apartments by having large setbacks from the sidewalk. This will provide views and a greater aesthetic for greenspace. Under the City of Kingston's Design Guidelines each multi-unit building should be unique, but respect the density and heritage of the surrounding community context. Informal surveillance measures should be sought for to enhance safety within the public realm. These structures will require appropriate setbacks to ensure the reduction of shadows and improve sightlines. There needs to be a sense of comfort and safety by making sure larger residential structures don't block viewpoints. It will be essential to have quality materials, unique architectural facades, sufficient windows and appropriate setbacks in order to ensure the success of any newly integrated apartment buildings.



Figure 4.25: Concept sketch of apartment facades (Image courtesy of Austin Norrie, 2016).

4.7.4 Public Versus Private Sphere

Under Kingston's Design Guidelines for Communities the incorporation of Crime Prevention Through Environmental Design (CPTED) should be implemented to define entry points and increase the ability to achieve good sightlines. Adequate buffers can be created through fencing and landscaped features to create a sense of ownership and safety within the

private realm, while not taking away from the public sphere. Public spaces should be inviting and be integrated with good sidewalks, lighting and landscaping, which will consists of greenspace that will be well-maintained. Grass and hedges should be trimmed and maintained regularly. General upkeep from the accumulation of liter will need to be considered. To ensure safety between the public and private sphere the entrances of main buildings should be open and inviting. Parking lots should have clear entry and exit points, as well as lighting during the evening and nighttime. All building should be oriented to face the street in order to enhance natural surveillance, which will contribute to a sense of safety and promote the principles of "eyes on the street" within the community. These community aesthetics along with grassroots efforts from local citizens to promote safety will ensure the community remains vibrant, healthy and attractive.

4.7.5 Housing Alternatives

It is the design team's recommendation that affordable housing options be spread throughout the entirety of the site. This will reduce the stigmatization that sometimes is associated with living in social housing developments. It should also help to create an effective social mix within the entirety of the site.

The design team also recommends some unique housing alternatives that should be considered for The Junction. Recognizing the social needs of the area, and Kingston's sustainability goals, these options provide some innovative

solutions to challenges facing the area.

Grow homes (Figure 4.26) are modular in design, and allow for owners to build and expand them as they have the financial resources to do so.

Container homes (Figure 4.27) may seem a bit out of Kingston's character, but they offer an affordable option that can be surprisingly stylish with a little bit of ingenuity.

Lastly, co-housing arrangements (Figure 4.28) offer people an opportunity to create a community within a community while creating arrangements that are socially, environmentally and economically sustainable.

4.8 Industry

The design team has proposed to retain some of the industrial buildings that exist along Harvey Street and one industrial building that exists in the middle of the site (see Figure 4.29). The retention of these buildings is considered good planning practice, and does not warrant justification. It is not the design team's intention to actively push current industrial uses into another location. The design team is sensitive to this, and, as such, has proposed that a portion of the site be dedicated to industrial activity. However, it is the design team's understanding that the current industrial uses will likely migrate from this site as revitalization occurs, because they require cheap rent, space and the ability to create noise. As such, they are likely to choose to migrate from this site, potentially to an industrial park such as the one



Figure 4.26: Grow homes in Montreal (Image courtesy of The Tyee, 2011).



Figure 4.27: A container home (Image courtesy of Decoist.com, 2012).



Figure 4.28: Co-housing (Image courtesy of the Canadian Co-Housing Network, n.d.).

near the Sir John A MacDonald entrance to Highway 401. However, the design team is proposing incremental change as opportunities arise; these industrial uses may remain until the site begins to significantly develop.

Further, the retention of the industrial buildings that front onto Harvey Street will ensure that the industrial identity of the site

remains. The retention of these buildings will also present the opportunity for enhancement of industrial use in the area, as the current buildings are in poor condition and are space intensive (i.e. low density). It is the design team's intention that these existing and proposed industrial buildings are used for industrial, flex and warehouse purposes.



Figure 4.29: Proposed industrial buildings and uses (Image courtesy of Sarvdeep Sangwan, 2016).

The design team realizes that while creating land use conflicts such that industry chooses to leave its present location is not a good planning practice, the design team also recognizes that the meaning of “industry” has changed since the industrial revolution, and the present economy for large manufacturing is on the decline in Canada. In fact, industry today does not refer solely to large manufacturing, but many types of activities such as small tech firms. As such, new, lighter industry does not have the same requirements (for example, space requirements) is more appropriate for this area.

Also, the design team has also proposed to convert the existing industrial building, which is located in the middle of the site, into an industrial training centre. The design team has proposed this use because there are industrial employment opportunities in the surrounding area and this industrial training centre will provide accessible training to current and

future residents. This conversion will also preserve the legacy of and pay homage to the industrial era of this site.

4.9 Mixed-Use Development

Mixed-use buildings help to facilitate a pedestrian oriented lifestyle by grouping together complimentary uses. Live-work residential units cater to home-based and self-employed Kingstonians, and provide an affordable option to live and work in the same place. These options allow for people to live, shop, work, play, and access services within a close proximity without the excessive need for motorized vehicles. This type of use also makes it easier for visitors from other neighbourhoods to access a variety of these aspects at a single destination, and retains them longer in the area creating a more robust economy.



Figure 4.30: Rendering of industrial training facility (Image courtesy of Sarvdeep Sangwan, 2016).

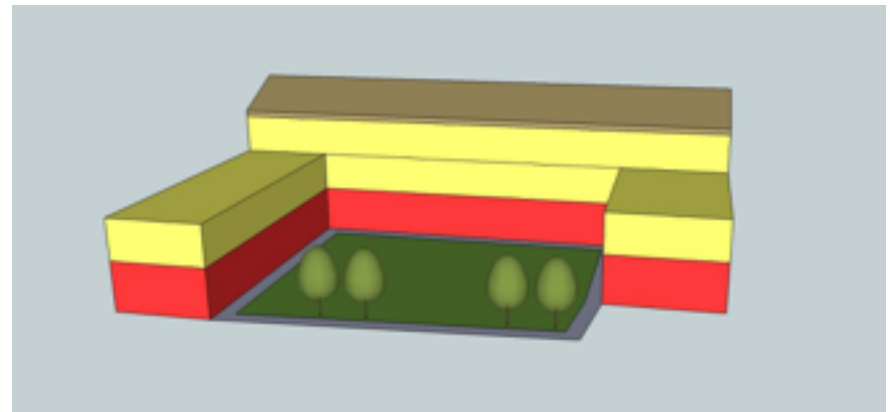


Figure 4.31: Mixed-use structure with commercial at street level and residential above (Image courtesy of Sarvdeep Sangwan, 2016).

Building types for mixed use can take on a variety of forms, most commonly with publicly accessible uses on the street level (ex: coffee shop, retail), and private uses on the upper levels (ex: residential, private offices). Princess St. in Kingston is made up of mostly mixed-use buildings, with commercial retail at the street level and residences on the upper levels. Mixed-use may also refer to multiple uses on the same block, with some buildings being commercial or retail, and others being residential. In this context, the goal is to make the block as walkable as possible.

4.10 Social and Community Services

Although the site is underutilized and dominated by construction and trades businesses, Figure 4.32 shows that there are many community and social services currently located both within and immediately adjacent to the site. The following services are located within the site: The Lions Club, The Beauty Academy, ReStart (Employment Ontario), and Better Beginnings for Kingston Children.

It is the design team's intention to relocate these services within the site, as these services are important to local residents. As the design team is proposing to simply enhance (revitalize) the area, it is important to the design team that the current residents do not lose any of their services. As such,

the design team has proposed mixed use, commercial and retail land uses and structures on the site to encourage these service providers to occupy some of these proposed spaces. The design team will work with these service providers to encourage relocation within the site. The design team is mindful and will discourage a one-stop-shop for these services. Although relocating them within one building may be convenient for the users, the design team will encourage these services to be spread out on the site because this will reduce stigmatization of users. By encouraging these uses to relocate around the site and within buildings that are home to other businesses, such as coffee shops, grocery stores and retail stores, one will not know if a person is traveling to a social service provider or to another business. Also, users can grab a coffee or other items or grocery shop while waiting for their appointment. Potential spaces for relocation include the proposed mixed use, commercial and retail structures along John Counter Boulevard, the existing retail and commercial structures along Montreal Street and the proposed retail and commercial structures along Hickson Avenue.

The design team is hopeful that more needed services will move into this areas, and that it will become a destination for specialty community and social services. Further, the services that are located immediately adjacent to the site include: The John Howard Society, The Native Friendship Centre-Katarokwi, Partners in Mission Food Bank, Kingston Police Force, Family and Children Services of Frontenac, Lennox



Figure 4.32: Community and social services within and immediately adjacent to the site (Image courtesy of Ashley Taylor, 2016).

and Addington, and Second Chance Community Education Centre. The design team hopes that these services will not relocate in the future as a result of its proposed community design. In fact, the design team is hopeful that by encouraging service providers to locate and relocate within the site, the services immediately adjacent to the site will be stable in the

long-term.

Additionally, the design team is proposing new community facilities and amenities for the area. These include: a grocery store, a library, a community centre, a school, a playground, a baseball diamond, and an industrial training centre (see Figure 4.33, 4.34 and 4.35). The design team has proposed that a

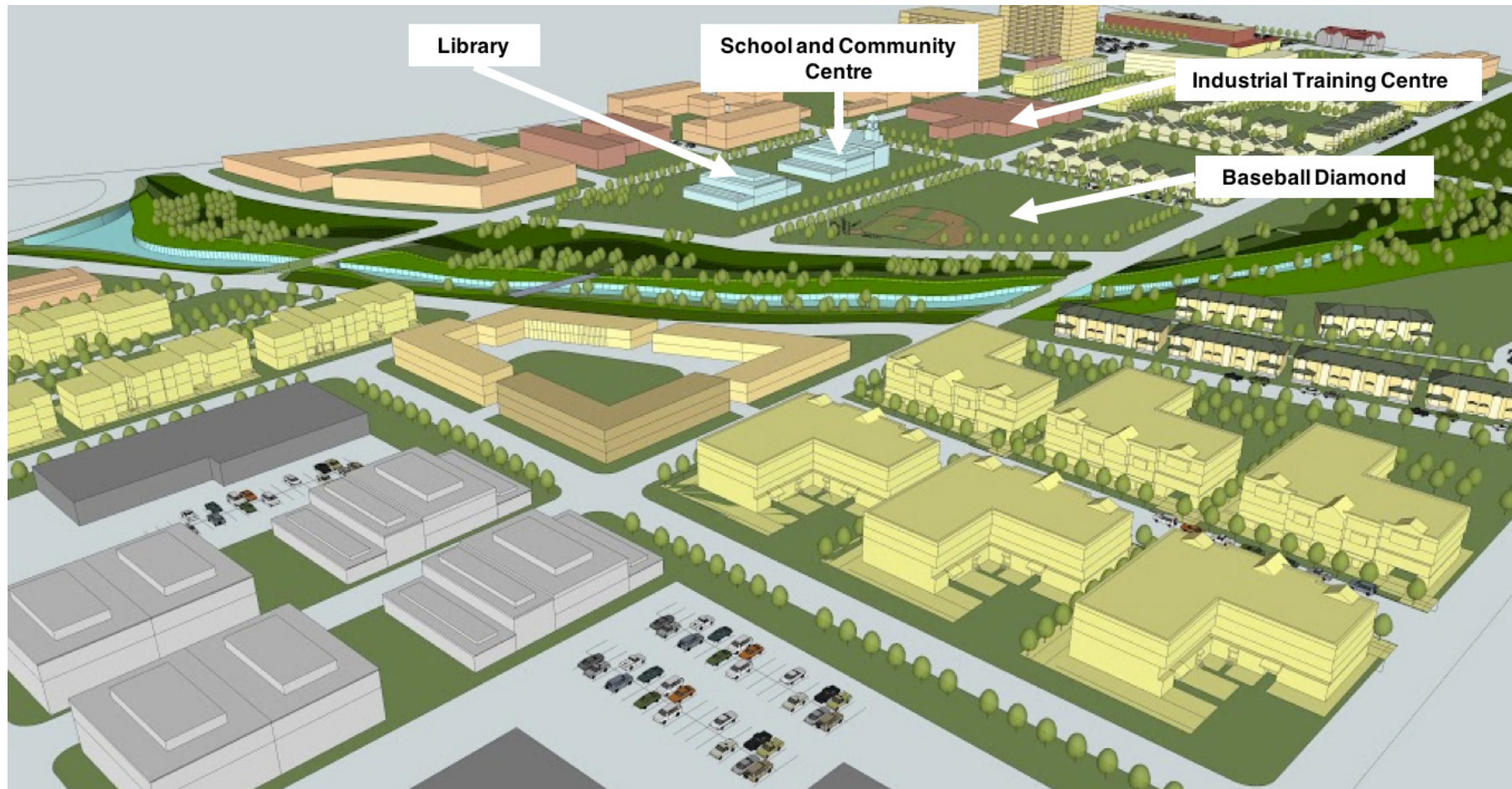


Figure 4.33: Library, school and community centre, baseball diamond and park, and industrial training centre (Image courtesy of Sarvdeep Sangwan, 2016).

grocery store be developed on the site because the design team recognizes that the site is currently a food desert. The design team has proposed that the grocery be located along John Counter Boulevard. The design team has also proposed a library, community centre and school, which is to be located

on one block in the center of the site, along Factory Street. A playground and baseball diamond has been proposed to the south of this block. Further, to the east of the school, the design team has proposed that an existing industrial building be converted into an industrial training centre. The design

team has proposed this use because there are industrial employment opportunities in the surrounding area and this industrial training centre will provide accessible training to current and future residents. It will also preserve the legacy of and pay homage to the industrial era of this site.

The design team has proposed these community facilities and amenities be located within the site such that they comply with the City of Kingston Design Guidelines. These proposals comply with 2.2 “Steps for New Communities” Step 3 “Provide Centres and amenities for the community” because the design team has located these services within the centre of the site, which is highly accessible to local residents. The proposal for the siting of the school also complies with 3.4 f. “Parks” because the design team has located a park immediately south of the school, which will encourage shared use of outdoor facilities. These proposals also comply with 4.5 a and b “Community Facilities and Non-Residential Uses” because the design team has incorporated these facilities and amenities as focal points and has sited compatible community buildings nearby and in the same facility.

4.11 Required Policy Changes

As a result of the development proposal, the new parcels of land that the design team has proposed will need to

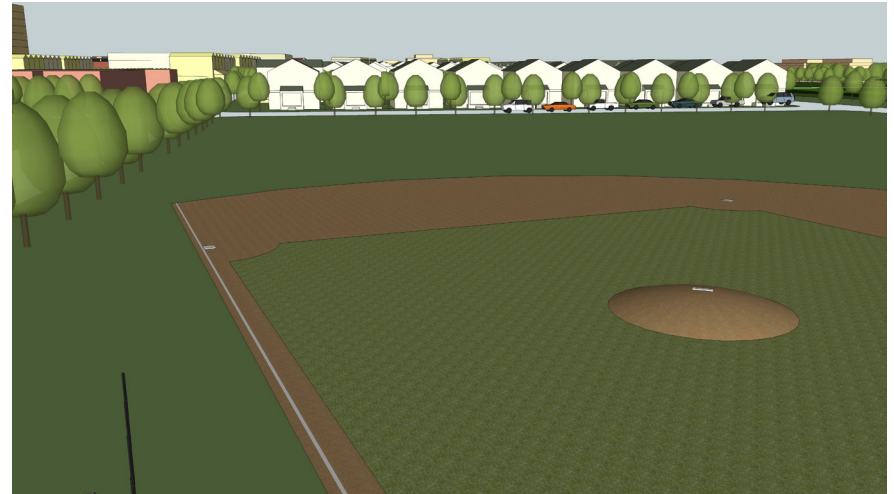


Figure 4.34: Rendering of baseball diamond (Image courtesy of Sarvdeep Sangwan, 2016).



Figure 4.35: Rendering of library, school and community centre, baseball diamond and park, and industrial training centre (Image courtesy of Sarvdeep Sangwan, 2016).

be re-designated and rezoned to ensure that they comply with the City of Kingston Official Plan and the applicable zoning by-law. Figure 4.36 below illustrates the current land use designations on the site. As illustrated in this Figure, there are only three land use designations on the site, which include general industrial, residential and institutional. The primary land use is general industrial.

Further, the process for creating a secondary plan for this area has very recently been initiated by the City of Kingston. Once this plan has been finalized, an official plan amendment will be required to recognize this secondary plan within the City of Kingston Official Plan. The site will also require a zoning by-law amendment to bring the proposed land uses into conformity with the secondary plan. As Figure 4.37 illustrates, the design team has proposed the site include the following land use designations: commercial, institutional, greenspace, residential and industrial. The figure also illustrates that the land uses on the site are much more diversified.

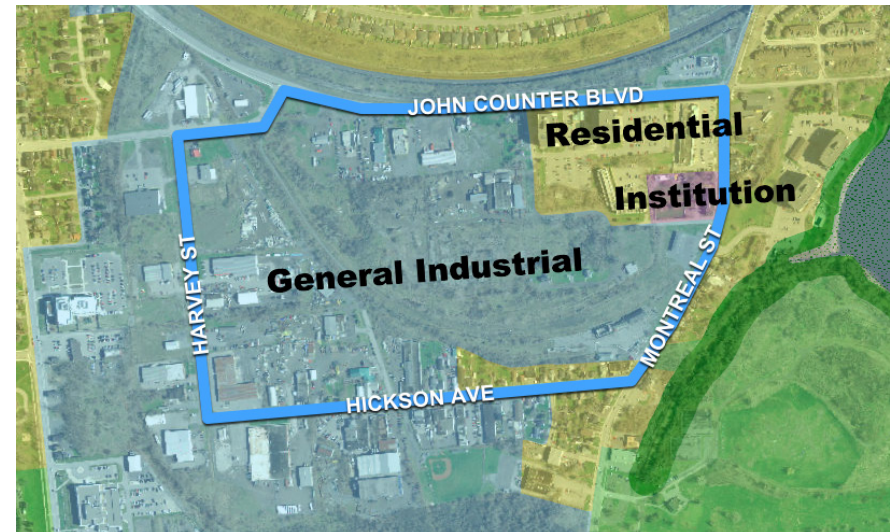


Figure 4.36: Current land use designations, per Schedule 3-A of the City of Kingston Official Plan (Image courtesy of the City of Kingston, 2015).

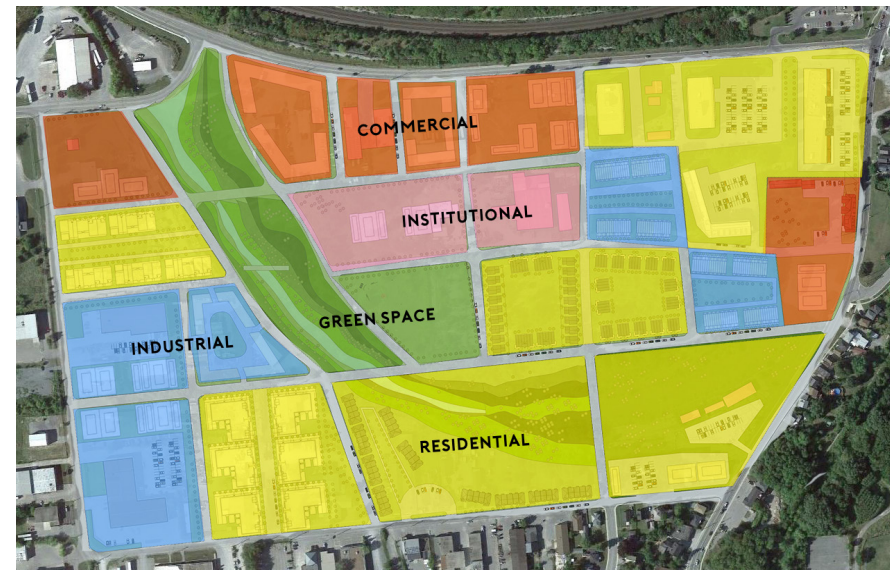


Figure 4.37: Proposed land use designation (Image courtesy of Amy Shanks, 2016).

5. Conclusion

Before concluding this report, it is important to note that the plan presented in the previous chapter is decidedly long-term in its focus. The design team is not advocating for the overnight redevelopment of the Old Industrial Area. Instead, in order to result in as little disruption as possible for existing residents and businesses, we envision the implementation to take several decades. Ideally, only small portions will be put into place gradually over time as opportunities for new development arise. Therefore, the speed at which this plan will be implemented is highly dependent on local market forces.

However, in regards to the green spaces and parks advocated for in this plan, we suggest that the City begin work on these immediately. Most of the land assigned for these features is already vacant, and therefore little disruption should result from their construction. As well, we believe these parks and green spaces will add immense value to the surrounding community, and will begin to create the impetus needed for the implementation of the remainder of this plan. These green spaces and parks will also benefit local residents significantly, improving their quality of life and their overall everyday enjoyment of their community.

5.1 Plan Feasibility

As discussed previously, the implementation of this plan is tied directly to the demands of the local market. In terms of the housing, we are relatively confident that the demand required for its construction will exist over the period of several decades. The area is advantageously located, being close to both the City's downtown core, as well as Highway 401, and, if it is ever constructed, the so-called "Third Crossing" across Kingston's Inner Harbour. As well, as previously mentioned in an earlier chapter of this report, the demand for new housing in the Kingston area has historically remained relatively high, and developers should have little problems filling any units.

However, the same positivity cannot be implied for the industrial uses we have placed on the site. It is highly unlikely that the current industries in the area will want to remain as more housing and other land uses are built adjacent to them. These industries need a lot of space to store materials, as well as to be noisy. We hope that new, more high-tech industries will take their place, however this is highly dependent on the local market supporting this. We have advocated for the creation of industrial training opportunities to exist in conjunction



Figure 5.1: Old Industrial Area today (top image) versus proposed “The Junction” site plan (bottom image) (Images courtesy of the City of Kingston, 2015 and Sarvdeep Sangwan, 2016).

with these sites in order to bolster their chances of success. However, only time will tell if this ends up succeeding.

It also should be noted that the number of newly proposed roads on the site may be unfeasible due to the high costs that would be associated with their construction. These roads were required under the City's Design Guidelines¹, and may be scaled back if other appropriate solutions can be developed in consultation with the City's Planning Department.

5.2 Plan Suitability

To some, this insistence on keeping industrial uses on the site even though the market may not support it would seem like a fool's errand. However, as has been discussed continually throughout this report, we considered this action to be integral to this plan's overall suitability. Industrial activity is so ingrained in this area's history and character that to remove it would be very wrong.

We also feel our plan is highly suitable for the area because of the emphasis it places on preserving and enhancing the integral social and community services that currently exist here. This will hopefully ensure revitalization occurs in this area without causing too much disruption to existing local

residents.

There are bound to be many who question the need for revitalization to begin with. If preserving the area's identity and character is so important, why bother doing anything? Answering this question is admittedly not easy. As planners, we are distinctly aware of how precarious revitalization efforts often can be for existing communities. Even the most well-intentioned plans can result in gentrification, moving those individuals and groups the plan was so carefully designed to assist completely out of its reach.

There is no way to say with any certainty that this will not happen with this plan as well. The new amenities we have designed for the site may very well draw new residents to the area and force out those who have called it home for so long. However, it is worth noting that this may happen regardless of this plan being put in place. Gentrification has been happening at a rapid pace just south of area, in and around McBurney Park. It is not unreasonable to assume that it will, in the near future, move further north, especially if the lands in this area remain underutilized and prime for a large redevelopment effort. We therefore feel our plan should be implemented to ensure this redevelopment does not unduly harm existing local residents.

In terms of design, what makes our plan suitable is how closely it follows the City's Design Guidelines for New Communities. As can be seen in the checklist provided in Appendix B, this plan can be said to follow almost every stipulation the City has

¹ Notably in s. 3.4 ("Locate parks so they can be open to a minimum of two sides of the public street"); s. 4.2 ("Do not use long block lengths"); and s. 5.7 ("Use shortened block lengths").

put forth in these guidelines. In addition to avoiding regulatory roadblocks, this compliance should hopefully allow this area to become a more complete, walkable, and sustainable community.

5.3 Next Steps

Due to time and resource constraints, this plan was developed without any input from local residents. Before proceeding any further with its implementation, it is our recommendation that the City undertake an extensive public consultation process, collecting input not only from local residents and business owners, but also Kingston residents at large, as well as members of the local development community. If done effectively, this consultation should ensure this plan effectively addresses the needs of this community.

6. Epilogue

On April 11, 2016, we presented our final design to a panel consisting of Queen's School of Urban and Regional Planning students and faculty, members of the press, city planning staff, and community members. Following this presentation, our entire team fielded questions regarding various components of our proposed plan. The following concerns were addressed in this discussion:

Site Remediation

The entire site is a brownfield which potentially makes it less attractive to developers due to the cost of remediation. However, in the future, the site may still be more valuable and desirable than greenfield areas, as it is within Kingston's serviced area and in a very desirable location between downtown and Highway 401.

Density

Questions were asked about specific density values, however this was beyond the scope of this project. We proposed a low to medium density design as it allows for the preservation of the area's current characteristics.

Industrial Revitalization

All groups were asked why industry was not largely incorporated into the new design proposals. Our response to this was that the current industry on site will not be in high demand in the future, rather new types of industry will be in higher demand and can be housed in many of the institutional and industrial facilities we have proposed. As well, many industries currently on site are not compatible land uses with the residential development being proposed.

Gentrification

Any development in this area of Kingston has the potential to cause gentrification. The group stressed that since we are proposing a long-term plan, that is to be implemented in multiple phases, careful planning will hopefully prevent such unintended results.

Park Area Near Train Station

The group has recognized that there are limitations with this aspect of the proposal since the old train station is designated as a National Historic Site.

Roads

City planning staff commented that the amount of roads being proposed are not feasible, in part due to the lack of density or development all together along certain parts of the street network. We acknowledged this possibility and the need for alterations to the street network or greater density in some areas. We did follow the City of Kingston's Design Guidelines, so this highlights a need for potential improvements to these Guidelines.

6.1 Final Reflective Notes

Our creative process may have been restricted by the fact that we focused heavily on heritage and environmental preservation. Some preservation may have been carried out, while further exploiting the heritage preservation of the site.

Reflecting on the conversations and questions brought up during the entire presentation process, we have been left with some thoughts about the future of planning. Concerns over the retention of industry in the area are valid, but likely reflect a poor understanding of what industry means in the 21st century. Industry is no longer predominately large manufacturing plants, it is small shared office spaces where people make apps for iPhones and iPads. As a profession, planning must start reconsidering what industrial means, and recognize that a single land-use or zoning designation cannot

include all types of industry. As discussion of knowledge economies increases, it is important to note that this too is not all encompassing. Knowledge based industries vary in type, size, and needs, which our zoning, land-use plans, and community designs must accommodate for. A small tech firm that develops independent video games, or software for power management systems, can easily integrate into a small neighbourhood, but in many instances falls under the same classification as a big manufacturing plant. Zoning by-laws alone are not enough to accommodate these industries.

As well, the concern of feasibility and economics came up several times. It seems to be a blind spot within our profession, and tends to be glossed over in the classroom. Developing plans without consideration for the economic factors such as residential markets, commercial markets, or greater trends in the economic and world markets, will only end in folly. By siloing economics as a separate discipline, a set of tasks to be performed by another department, we are left with plans that don't consider the implications of our work on people and communities. Regent Park is an example of this. The built form has been altered greatly, and includes a variety of new services in an attempt create a complete community, but economic aspects such as job creation rarely come up when discussing the development itself. By including perspectives from institutional economics, which examines how formal and informal institutions affect the development of a society, can greatly enrich our profession.

Looking towards the future of planning, both professionally and as an academic pursuit, it is important to reflect and evaluate how we may progress. To consider where are focuses should be as our society changes. Many parts of our profession are based on ideas from decades past, and their relevancy is being overshadowed by a quickly evolving world. New technologies are not just changing our people interact with each other, they are changing the way we need to organize the cities and towns where we live out our lives. Planning can no longer function as a separate entity, but must consider holistic approaches to our development plans that includes social, economic, and environmental perspectives at a level that goes beyond basic tokenism.

Appendix A: Official Plan Permitted Uses*

General Industrial	Residential	Institution
Municipal work yards (s. 3.2.7)	Various forms of housing (s. 3.3.1)	Private elementary schools* (s. 3.2.1)
Manufacturing, assembling, fabricating, and processing operations (s. 3.6.B.1)	Senior citizen buildings (s. 3.3.D.1)	Government and religious administration offices (s. 3.2.6 & s. 3.5.1)
Construction and transportation activities and facilities (s. 3.6.B.1)	Care facilities (i.e. community homes, residential care facilities, housing crisis shelters, detoxification centres, recovery homes, corrections residences, community support houses)* (s. 3.3.D.3)	Post-secondary institutions (s. 3.5.1)
Storage, warehousing, and wholesale trade activities (s. 3.6.B.1)	Bed and breakfast operations* (s. 3.3.D.9)	Hospitals and care facilities (s. 3.5.1)
Communications facilities and utilities (s. 3.6.B.1)	Publicly-funded elementary schools* (s. 3.2.1)	Extended care complexes (s. 3.5.1)
Automotive, heavy equipment, and truck repair facilities, and towing compounds (s. 3.6.B.1)	Small-scale convenience commercial uses within apartment buildings or on a site specific basis on low or medium density residential sites* (s. 3.3.2)	Corrections facilities (s. 3.5.1)
		Military Establishments (s. 3.5.1)
Institutional uses with General Industrial characteristics* (s. 3.6.B.1)	Publicly-funded and private secondary schools* (s. 3.2.2)	
	Centres providing care during the day for infants and children, as well as adults with special needs (medium and high density zones only) (s. 3.2.3)	
Municipal works yards and water treatment and sewage treatment facilities* (s. 3.6.B.1)	Places of worship* (s. 3.2.4)	
	Libraries, museums, and small-scale community centres or other social or cultural centres (s. 3.2.5)	
Municipal infrastructure, stormwater management facilities, small-scale electrical power transmission facilities, oil and natural gas pipelines, and energy transmission and distribution infrastructure* (s. 3.1.1)		
Parks (s. 3.1.5)		
Emergency response uses such as fire halls, police stations, ambulance stations, and similar public response uses (s. 3.1.6)		
Home occupations* (s. 3.1.7)		
Community-based initiatives such as community gardens, other forms of urban agriculture, and tree planting projects (subject to site by site evaluation) (s. 3.2.8)		
Other “complimentary” uses* (s. 3.6.B.1)	*Denotes that some conditions exist, see applicable OP policy for more information.	

* Source: City of Kingston Official Plan (2015 Update, Draft #2)

Appendix B: Design Guidelines Checklist*

Section 3: The Natural Environment, Parks and Open Space

3.1 Environmentally Sensitive Areas and Natural Hazards

- a. Identify and preserve environmentally sensitive areas
- b. Maintain, restore, or where possible, improve the health and quality of environmentally sensitive areas, as well as connections between them
- c. Design new communities with strong visual and physical links to open spaces and natural areas
- d. Avoid floodplains and steep slopes and locate development safely away from natural hazards
- e. Connect communities to adjacent natural areas, where appropriate
- f. Explore opportunities to develop appropriately designed higher density buildings near natural areas

Yes **No** **Not applicable**

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3.2 Stormwater Management

- a. Maintain natural drainage networks and preserve environmentally sensitive areas
- b. Integrate stormwater facilities as community features
- c. Establish strong public exposure for stormwater facilities

Yes **No** **Not applicable**

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3.3 Open Space

- a. Create a linked network of open spaces
- b. Distribute green space throughout the neighbourhood
- c. Incorporate existing environmentally sensitive areas into neighbourhoods, where appropriate
- d. Provide buffers to ensure environmentally sensitive areas are not damaged by development
- e. Provide significant open frontage on public roads for all parks and open space
- f. Provide shade in resting areas, gathering spots and recreational areas

Yes **No** **Not applicable**

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3.4 Parks

- a. Locate parkland at the earliest stages of community design
- b. Configure parkland to support the diverse amenity needs of the community
- c. Design parks to be sized according to a park hierarchy
- d. Preserve and integrate, where appropriate, natural features such as woodlands and watercourses adjacent to parks

Yes **No** **Not applicable**

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* Source: City of Kingston (2015). "Design Guidelines for New Communities", pg. 59-70.

3.4 Parks (Continued)

- e. Locate parks along major streets
- f. Locate parks adjacent to school sites
- g. Design parks to provide a social focus
- h. Connect a network of parks through communities
- i. Link major park amenities using highly visible connections
- j. Buffer disruptive parts of active recreation parks
- k. Locate parks so they can be open to a minimum of two sides of the public street

Yes **No** **Not applicable**

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3.5 Multi-use Pathways

- a. Provide a well-connected pathway network
- b. Connect new recreational pathways to existing trail networks, streets, parks and open spaces
- c. Link paths to destinations
- d. Design recreation pathways to reflect the function and nature of the type of open space it occupies
- e. Access points for pathways should accommodate a variety of users
- f. Design multi-use pathways to distinguish between walking and cycling
- g. Include adequate pathway amenities
- h. Provide opportunities for shade along pathways

Yes **No** **Not applicable**

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Section 4: Community Design

4.1 Community Structure

- a. Create communities that are distinct and identifiable
- b. Incorporate sustainable characteristics into the community
- c. Create a neighbourhood that is walkable from centre to edge
- d. Create identifiable neighbourhood centres and corridors
- e. Locate higher density development close to neighbourhood centres and corridors
- g. Use single-loaded streets to face the perimeter of parks and other public open spaces
- h. Provide the appropriate separation distance where a new community abuts a utility easement or railway right-of-way
- i. Design the neighbourhood such that perimeter fences and sound attenuation walls are not included

Yes **No** **Not applicable**

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4.2 Block and Street Network

- a. Create well-connected blocks and streets
- b. Connect streets in new development to adjacent existing communities

Yes **No** **Not applicable**

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4.2 Block and Street Network (Continued)

- c. Base streets on a grid or modified grid pattern
- d. Use cul-de-sacs only where the topography or small size of a site constrains grid-based block development
- e. Provide pedestrian connections at the end of streets or cul-de-sacs
- f. Assign adequate space for the dedication of future roadway and pathway connections
- g. Maximize opportunities for passive solar gain
- h. Organize new transit routes around a network of through streets
- i. Provide variation in block sizes
- j. Do not use long block lengths
- k. Provide a through-block pedestrian walkway
- l. Consider incorporating rear lanes to eliminate the need for street facing garages
- m. Orient buildings to face the road
- n. Minimize pavement widths in the road right-of-way

Yes **No** **Not applicable**

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4.3 Lot Size and Variety

- a. Provide a variety of lot sizes
- b. Make lot shapes simple and rectilinear so as not to limit design and siting options
- c. Ensure corner lots have adequate width
- d. Increase residential density for lots adjacent to appropriate locations
- e. Establish buildings with a compact built form
- f. Provide a diversity of housing options
- g. Provide a variety of housing types on each street or block
- h. Locate higher density buildings at corners

Yes **No** **Not applicable**

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4.4 Transit Supportive Design

- a. Treat transit as a central function of new communities
- b. Place compact, higher density development close to transit facilities
- c. Locate transit facilities where they are convenient to use
- d. Ensure neighbourhood transit stops are located at a short walking distance
- e. Provide a mix of land uses and higher residential densities at key locations
- f. Discourage auto-dependent uses at the community centre
- g. Provide accessible transit stops and amenities
- h. Link cycle and pedestrian paths to transit facilities

Yes **No** **Not applicable**

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4.5 Community Facilities and Non-Residential Uses

	Yes	No	Not applicable
a. Incorporate community facilities as focal points	•		
b. Site compatible community buildings nearby or in the same facility	•		
c. Design community facilities using the highest standards in environmental sustainability	•		
d. Create opportunities for neighbourhood commercial and mixed use buildings	•		
e. Place buildings in neighbourhood centres and on main streets near the front lot line	•		
f. Locate transit stops immediately adjacent to civic and commercial facilities	•		
g. Encourage community gardens	•		
h. Provide appropriate pedestrian-oriented lighting and clear views	•		

Section 5: Streets

5.1 General Form

	Yes	No	Not applicable
a. Create strong visual and physical links	•		
b. Provide a streetscape design that best meets a high standard of functional and aesthetic considerations	•		
c. Accommodate active transportation	•		
d. Select the narrowest reasonable street width	•		
e. Give primary consideration to the City's requirements for maintenance and snow clearing	•		
f. Locate above-grade utilities out of sight	•		

5.2 Collector Roads

	Yes	No	Not applicable
a. Design collector roads to reflect their role as community connectors and pedestrian destinations	•		
b. Permit on-street parking on both sides of collector roads	•		
c. Place sidewalks on both sides of the street, where possible	•		
d. Provide bicycle infrastructure on both sides of the street	•		
e. Use narrow travel lane widths	•		
f. Use barrier curbs for all Collector Roads	•		
g. Reduce the number of curb cuts along the street	•		

5.2 Local Roads

	Yes	No	Not applicable
a. Design Local Roads to reflect their role as community streets and social gathering places	•		
b. Design Local Roads with a narrow pavement width	•		
c. Place sidewalks on both sides of the street in higher density areas and near community facilities	•		
d. Use mountable curbs for Local Roads	•		
e. Consider bicycle movement a normal part of Local Road traffic movement	•		
f. Use pavement widths that are cycling-friendly	•		

5.4 Lanes

- a. Design lanes to function as public streets
- b. Consider using lanes for access
- c. Orient the main building face and ground-level access to the street
- d. Consider attaching rear lane single car garages
- e. Identify snow storage locations
- f. Incorporate permeable materials
- g. Provide additional lane access points in a central location
- h. Apply a small minimum setback between the garage and the edge of the rear lane

Yes

No

Not
applicable

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5.5 Driveways

- a. Minimize curb cuts along the street
- b. Design driveway widths and driveway curb cuts to be no wider than the width of the garage
- c. Provide driveway access for corner lots from the minor street
- d. Consider using permeable surfaces for driveways

Yes

No

Not
applicable

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5.6 Boulevards and Sidewalks

- a. Create boulevards that combine safe, unobstructed pedestrian travel routes with places to stop and socialize
- b. Design boulevards to reflect their adjacent land use
- c. Locate the street furniture and landscaping between the sidewalk and vehicle traffic, where possible
- d. Create sidewalks that are dedicated to the movement of pedestrians
- e. Provide a transition zone located between the sidewalk and the building or property line
- f. Construct continuous sidewalks of textured concrete
- g. Consider limited use of feature paving bands
- h. Plant street trees
- i. Provide continuous sidewalks on both sides of streets, where possible
- j. Separate sidewalks from the street edge by using landscaped strips
- k. Expand sidewalk widths where pedestrian activity is concentrated
- l. Provide adequate lighting
- m. Provide seating in shaded areas for social interaction, casual surveillance, and to support accessibility

Yes

No

Not
applicable

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5.7 Traffic Calming

- a. Streets in new communities should be designed so that traffic calming elements are built into the design of the roads
- b. Use the narrowest reasonable street width
- c. Install curb extensions at intersections

Yes

No

Not
applicable

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5.7 Traffic Calming (Continued)

- d. Incorporate treed bump-outs in combination with on-street parking
- e. Create minor variation in road alignment
- f. Use shortened block lengths
- g. Consider vertical traffic calming only after other elements have produced no effect

5.8 Crosswalks

- a. Ensure crosswalks are continuous and connected to adjacent sidewalks
- b. Clearly designate crosswalks for safety
- c. Consider additional mid-block pedestrian signals and courtesy crossings
- d. Time traffic signals so pedestrians have adequate time to clear the crossing

5.9 Street Trees

- a. Plant street trees at regular intervals
- b. Locate street trees within the street furniture and landscape zone
- c. Provide adequate soil volume for trees
- d. Preserve existing street trees wherever possible
- e. Use trees to create canopy and shade
- f. Consider the type and location of trees to avoid interference issues
- g. Incorporate a variety of native tree species

5.10 Street Furniture

- a. Incorporate consistent, carefully located street furniture
- b. Develop street furnishings within an overall concept
- c. Avoid obstructing pedestrian or vehicular circulation

5.11 Transit Amenities

- a. Include transit stops with a shelter for weather protection and seating
- b. Add basic amenities to transit shelters
- c. Connect sidewalks directly to transit shelters
- d. Design transit stops for barrier-free access
- e. Link cycle and pedestrian paths to transit facilities

5.12 Lighting and Wayfinding Signage

- a. Use well-placed lights and signage
- b. Consider sustainability and the impacts of light pollution when choosing and locating lighting

Yes	No	Not applicable
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Yes	No	Not applicable
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Yes	No	Not applicable
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Yes	No	Not applicable
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Yes	No	Not applicable
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5.12 Lighting and Wayfinding Signage (Continued)

- c. Provide additional downcast pedestrian-scale lighting
- d. Minimize outdoor light pollution
- e. Use clear, legible signs
- f. Place signs and building or property numbers in readily visible locations

5.13 Utilities

- a. Enhance the streetscape by hiding and combining utilities
- b. Bury utilities below grade in urban residential communities
- c. Group above-grade utilities in single locations
- d. Incorporate utilities into multi-unit building design
- e. Explore new and innovative solutions for integrated utility services

Section 6: Parking

6.1 On-Street Parking

- a. Provide on-street parking wherever possible
- b. Integrate parallel on-street parking
- c. Locate on-street parking within curb extensions
- d. Landscape curb extensions with street trees

6.2 Structured Parking

- a. Integrate structured parking seamlessly into the surrounding community
- b. Integrate an active at-grade use
- c. Consider a vertical mix of parking and residential/office above
- d. Locate vehicular access to parking structures at the rear and/or side of buildings
- e. Locate pedestrian entrances for parking structures in highly visible locations
- f. Screen parking within a structure from view

6.3 Surface Parking

- a. Design parking areas to reduce their visibility
- b. Plan for the long-term redevelopment of surface parking
- c. Avoid constructing large areas of uninterrupted parking
- d. Minimize the total amount of parking
- e. Preserve sight lines to surface parking areas and primary building façade
- f. Provide adequate buffers between parked vehicles and the sidewalk

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Yes	No	Not applicable
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Yes	No	Not applicable
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Yes	No	Not applicable
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6.3 Surface Parking (Continued)

- g. Clearly define boundaries
- h. Provide landscaping that is proportionate to the overall parking lot size
- i. Locate pedestrian entry paths adjacent to entry drives
- j. Provide a continuous, clearly marked walkway
- k. Provide pedestrian-scaled lighting
- l. Provide preferential parking for bicycles, energy-efficient vehicles and car shares
- m. Consider permeable paving to promote drainage

Yes

No

Not
applicable

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