REIMAGINING ORLÉANS TOWN CENTRE

A Vision for Implementing the 15-Minute Neighbourhood Concept

SURP 824
School of Urban &
Regional Planning

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School of Urban & Regional Planning
SURP824 – Project Course

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Executive Summary

Objective

The City of Ottawa is currently transforming the Bus Rapid Transit (BRT) route from Blair Station to Trim Station into a Light Rail Transit (LRT) running in the median of Highway 174, set to be completed by 2024. It is anticipated that the sites surrounding the new stations will become hubs for development intensification that reflect transit-oriented development (TOD) practices. Also, the City has recently approved a new Official Plan (OP) which contains policies to achieve the 15-Minute Neighbourhood concept.

This report will propose a detailed plan for the Orléans Town Centre (OTC) Study Area surrounding the new Place d'Orléans LRT Station to exemplify how the 15-Minute Neighbourhood and TOD principles can be integrated in Orléans to not only exceed the City's development targets, but create a socially, physically, economically, and environmentally sustainable neighbourhood.

Vision

Our vision for the redevelopment of the OTC Study Area is to create a healthy community with an active public realm that balances the daily needs of pedestrians, cyclists, transit users, and drivers based on the 15-Minute Neighbourhood concept.

Study Area

The Study Area for this report is defined by the 1,200m, or 15-minute, walking distance from each of the four selected nodes in and around the Town Centre: the Town Centre itself, Place d'Orléans shopping centre, the Place d'Orléans LRT Station, and the prospective ghost station between Place d'Orléans and Trim Road.

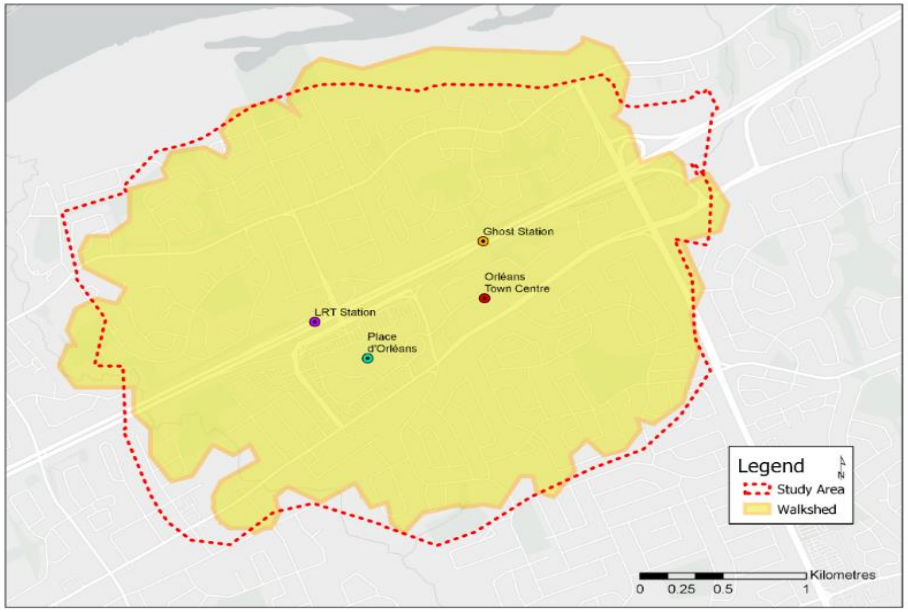


Figure 1 – Study Area defined through walkshed analysis.

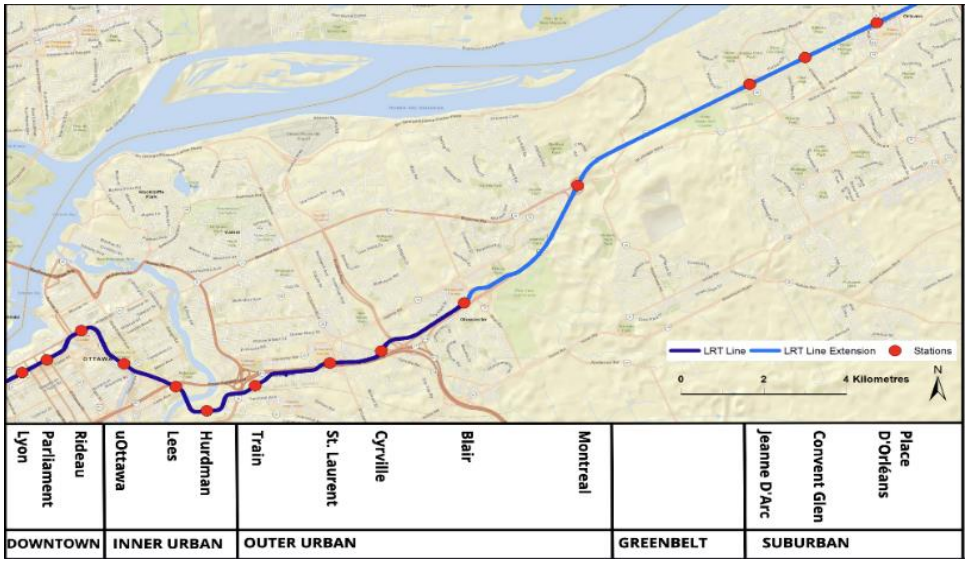


Figure 2 – Ottawa LRT Station Transect Map.

Current Site State

Following analysis and site visit to the Study Area, it is evident that the OTC and surrounding areas lack in economic activity and diversity, pedestrian and other active transit connections, vibrant public spaces, and in mixed housing type offerings. This is explained further in a completed SWOC analysis.

Strengths

- Strong connectivity to local bus transit routes
- Existing tree canopy and public green spaces
- Internal community parks and connection to waterfront trail system
- Franco-Ontarian heritage present

Weaknesses

- Car-oriented design and built form
- Poor and inconsistent active transportation infrastructure
- Underutilized OTC and single use neighbourhoods
- Unsafe roadways and lack of lighting in parks

Opportunities

- Ample unused and underutilized vacant space
- Opportunities for higher densities and pedestrian/cyclist connection
- Opportunities for expansion of local employment opportunities
- Development of strong public spaces and preservation of Franco-Ontarian heritage

Challenges/Threats

- Significant redesign of pedestrian/cyclist/and vehicular connections would require cooperation of residents
- Steep topography of existing escarpment
- Lack of existing multi-modal connection across Queensway
- Requires integration of older existing streets which lack sidewalks
- Presence of Leda clay

Guiding Principles

The following seven principles have guided the design process for the proposed OTC Study Area redevelopment, based on best research, interviews with stakeholders, site observation, and review of precedents that reflect the best examples 15-Minute Neighbourhood, TOD, and greyfield redevelopments:

- **Mobility:** Prioritize active transit and support the expansion of the LRT.
- **Place Making:** Establish a sense of place through design and heritage preservation.
- **Economic Diversity:** Support a range of commercial and office uses, reflecting the 15-minute neighbourhood concept.
- **Mixed Land Uses:** Provide a mix of land uses to create a complete community.
- **Environmental Resiliency:** Provide a range of environmental amenities and supports such as increasing the existing tree canopy, utilizing sustainable building materials, and implementing green vehicle charging networks.
- **Gender, Safety & Inclusivity:** Create safe places to support women the elderly.
- **Growth and Intensification:** Increase density near OTC and LRT station while providing a range of housing options (type, tenure, affordability).

Design Proposal

The design concept for the OTC Study Area has derived from the project vision and principles with specific focus on the 15-Minute Neighbourhood and TOD practices. To achieve the vision for the OTC, the site was first divided into three separate districts, or precincts, based on land uses, built form characteristics, and

location. Next, concepts were constructed to transverse the barriers of Highway 174 and the escarpment to the south of St. Joseph Boulevard.

These steps were used to create the final design, to be completed in two phases, which will increase connectivity, enhance the quality of the pedestrian and cycling environment, and support mixed-uses throughout the site. The final design has a gross density of 273 people and jobs per gross hectare. Most taller buildings, and subsequently higher density buildings, were located near the Orléans LRT station, on the periphery of the Place d'Orléans Shopping Centre site, and parallel to Highway 174.

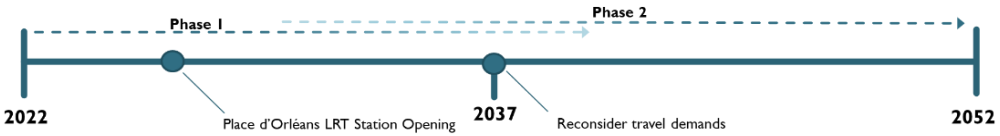
Implementation

The proposed plan adopts a two-phased approach for redevelopment over a 30-year timeframe to accommodate the gradual replacement of the Place d'Orléans Shopping Centre in Phase Two once more commercial spaces are provided. Phase One will see the bulk of development with the densest intensification on sites directly surrounding the LRT station and along St. Joseph Blvd, while retaining the mall and parking structure and expanding on active transit infrastructure. Affordable housing units are proposed to be built on city owned parcels to attract people of all backgrounds to Orléans. Phase 2 will see the replacement of Place d'Orléans Mall with a pedestrian focused public realm that hosts a range of land uses. Increased density, a public plaza, and complete streets with active transit infrastructure will characterize the OTC area.

	EXISTING	PHASE 1	PHASE 2	MIN TARGET
Dwelling Units	1,411	9,521	11,838	11,562
Net Density (dwelling units per net hectare)	18	121	151	150
Number of Residents	2,367	14,629	19,756	14,000
Dwelling Units	4,272	8,854	12,830	10,000
Gross Density (People and Jobs per gross hectare)	50	178	247	120
Large Dwellings in Intensification (%)	N/A	13%	12%	5%
New Affordable Housing Units	N/A	2,212	2,212	2,085
Coverage of Developable Land	26%	46%	42%	40%
Floor Space Index	0.53	2.07	2.77	2.00
Maximum Height	17	33	33	33

Figure 3 – Overhead view of redevelopment proposal within Phase 1.

Figure 4 – Overhead view of redevelopment proposal within Phase 2.



Recommendations and Evaluation

Land Use
- Rezoning of study area
- Review of land use designations
- Highest density near LRT station
- Access to daily & weekly amenities

Housing
- Mix of housing type & tenure
- Second residential units
- Supply affordable housing units on City owned lots

Mobility
- Focus on active transportation
- Increase pedestrian access to the site
- Improve on site public transit
- Green vehicle charging stations

Urban Design
- Complete streets
- Provide ground oriented units
- Supply open spaces and plazas scaled to the pedestrian
- Preserve sightline of church spire

Financing and Attracting Development
- Utilize IOCIP
- Support *Heart of Orléans* BIA
- Negotiate POPS when possible

Community
- Retain Franco-Ontarian heritage
- Supply new city parks and third places
- Support community events in plazas

Environmental Resiliency
- Tree canopy & permeability
- Alternative energy sources
- Sustainable building standards

Existing	Phase 1	Phase 2	Target	Criteria	Principle
○	◔	●	●	Mix of land uses	Land Use
◒	●	●	●	15-minute neighbourhood	
○	●	●	●	Complete streets	
◒	●	●	●	Mix of building type	
○	◔	●	●	Urban design on a human scale	Place Making
◒	◒	●	●	High quality public realm	
◒	●	●	●	Preservation of Franco-Ontarian history	
◒	◔	●	●	Supply of public spaces	
◒	●	●	●	Wayfinding measures	
◒	◒	◒	●	Ensure appropriate connections to abutting suburban neighbourhoods	Mobility
○	◔	●	●	Pedestrian and cycling networks	
◒	◔	◔	●	Supply of trail networks	
○	●	●	●	Active transit options	
◒	●	●	●	Connections to transit	
◒	●	●	●	Cycling lanes and infrastructure	
◒	●	●	●	Range of commercial and office uses	Economic Diversity
○	●	●	●	Number of jobs	
◒	●	●	●	Commercial at grade of mid- and high-rise buildings	
●	●	●	●	Access to childcare and healthcare facilities	Gender and Safety
○	●	●	●	8-80 principle	
◒	●	●	●	Lighting on streets, paths, and bus stops	
○	●	●	●	Pedestrian friendly sidewalks	
○	●	●	●	High Density	Growth and Intensification
○	●	●	●	Intensification near transit nodes	
○	●	●	●	Affordable housing	
○	●	●	●	Mix of housing type	
○	●	●	●	Mix of housing tenure	
◒	●	●	●	Tree canopy	Environmental Resiliency
◔	●	●	●	Green spaces	
●	●	●	●	Environmental protection	
◒	●	●	●	Permeable surfaces	

Legend
- ○ = No Conformity
- ◒ = Poor Conformity
- ◒ = Moderate Conformity
- ◔ = Good Conformity
- ● = Excellent Conformity

Résumé

Objectif

La Ville d'Ottawa est en train de transformer la route du bus à haut niveau de service (BHNS) de la station Blair à la station Trim en un train léger qui traverse au milieu de l'autoroute 174 et qui devrait être complet en 2024. Il est prévu que les sites entourant les nouvelles gares deviendront des centres pour l'intensification du développement qui reflètent les pratiques de développement axé sur le transport en commun (« transit-oriented development » ou TOD). De plus, la Ville a récemment approuvé un nouveau plan officiel (PO) qui contient des politiques pour réaliser le concept de « quartier de quart d'heure ».

Ce rapport proposera un plan détaillé pour la zone d'étude du centre-ville d'Orléans (CVO) entourant la nouvelle station de train léger à la Place d'Orléans afin d'illustrer comment les principes du « quartier de quart d'heure » et du TOD peuvent être intégrés en Orléans pour non seulement dépasser les objectifs de développement de la Ville, mais aussi pour créer un quartier socialement, physiquement, économiquement et environnementalement durable.

Vision

Notre vision pour le réaménagement de la zone d'étude du CVO est de créer une communauté saine avec un domaine public actif qui équilibre les besoins quotidiens des piétons, des cyclistes, des usagers du transport en commun et des automobilistes: tout basé sur le concept de « quartier de quart d'heure ».

Zone d'Étude

La zone d'étude pour ce rapport est définie par la distance de marche de 1 200 m ou 15 minutes de chacun des quatre nœuds sélectionnés dans et autour du CVO : le centre-ville lui-même, le centre commercial Place d'Orléans, la station du train léger Place d'Orléans et la station future « fantôme » entre la Place d'Orléans et le chemin Trim.

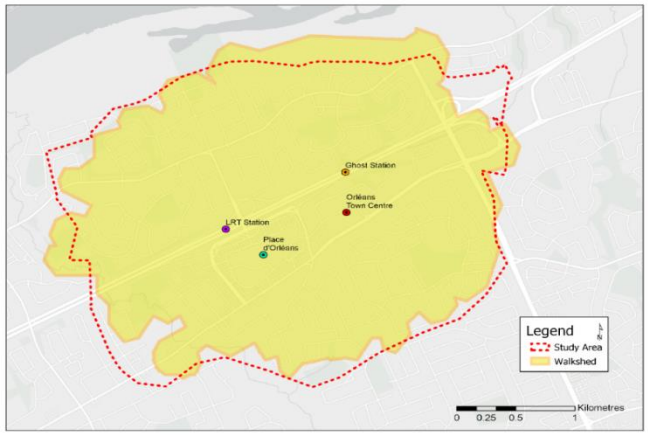


Figure 1 – Zone d'étude définie par l'analyse de la distance de marche.

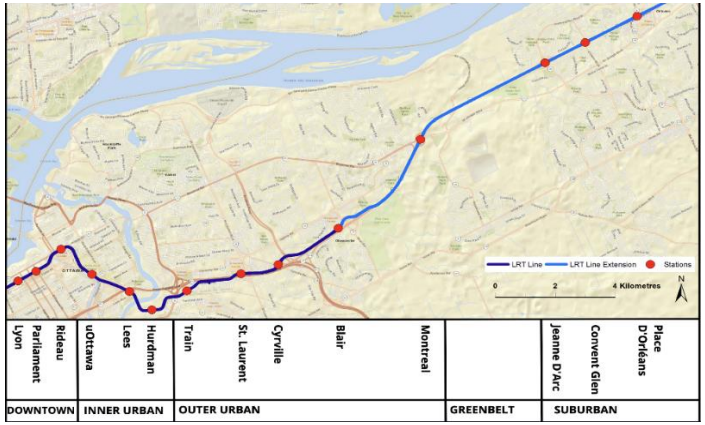


Figure 2 – Carte des transects d'Ottawa avec les stations de train léger.

État actuel du site

Après une analyse et une visite au site et à la zone d'étude, il est évident que le CVO et ses environs manquent d'activité et de diversité économiques, de connexions piétonnes et pour des autres transports actifs, d'espaces publics dynamiques et de types de logements mixtes. Ceci est expliqué plus en détail dans une analyse FFOS (forces, faiblesses, opportunités et défis).

Forces

- Forte connectivité aux routes d'autobus locaux
- Canopée d'arbres et espaces verts publics existantes
- Parcs communautaires internes et connexion au réseau de sentiers riverains
- Patrimoine franco-ontarien présent

Faiblesses

- Conception et forme bâtie axées sur la voiture
- Infrastructure de transport actif faible et inconsistant
- CVO et quartiers à usage unique sous-utilisés
- Routes dangereuses et manque de lumière dans les parcs

Opportunités

- Vaste espace inutilisé et sous-utilisé
- Opportunités pour des densités plus élevées et une connexion piéton/cycliste
- Opportunités d'expansion des opportunités d'emploi local
- Développement d'espaces publics forts et la préservation du patrimoine

Défis/Menaces

- Une refonte majeure des liaisons piétonnes/cyclistes et véhiculaires nécessiterait la coopération des résidents
- Topographie élevée de l'escarpement existant
- Manque de connexion multimodale existante à travers l'autoroute 174
- Nécessite l'intégration des anciennes rues existantes dépourvues de trottoirs
- Présence d'argile de Leda

Principes directeurs

Les sept principes suivants ont guidé le processus de conception pour le réaménagement proposé de la zone d'étude du CVO sur la base des meilleures recherches, des entretiens avec les parties prenantes, des observations du site et de l'examen des précédents qui reflètent les meilleurs exemples de réaménagements de « quartier de quart d'heure », de TOD et de zones grises:

- **Mobilité** : Prioriser le transport actif et soutenir l'expansion du train léger.
- **Création de lieu** : Établir un sentiment d'appartenance avec la conception et la préservation du patrimoine.
- **Diversité économique** : Soutenir une gamme d'usages commerciales et de bureaux, reflétant le concept de « quartier de quart d'heure ».
- **Usages mixtes** : Fournissez une combinaison d'usages pour créer une communauté complète.
- **Résilience environnementale** : Fournir une gamme d'équipements et de soutiens environnementaux tels que l'augmentation de la canopée existante, l'utilisation de matériaux de construction durables et l'addition de réseaux de recharge de véhicules électriques.
- **Genre, sécurité et inclusion**: Créer des lieux sécurisés pour soutenir les femmes et les âgées.
- **Croissance et intensification** : Augmenter la densité près du CVO et les stations de train léger tout en offrant une gamme d'options de logement (en type, mode d'occupation et abordabilité).

Proposition de concept

Le concept de la zone d'étude du CVO est dérivé de la vision et des principes du projet avec un accent particulier sur les pratiques du « quartier de quart d'heure » et du TOD. Pour réaliser la vision du CVO, le site a d'abord été divisé en trois districts distincts, ou arrondissements, en fonction des usages des terres, des caractéristiques de la forme bâtie et la géographie. Ensuite, des concepts ont été construits pour traverser les barrières de l'autoroute 174 et l'escarpement au sud du boulevard Saint-Joseph.

Ces étapes ont été utilisées pour créer la conception finale, qui sera réalisée en deux phases, ce qui augmentera la connectivité, améliorera la qualité de l'environnement piétonnier et cycliste et favorisera les usages mixtes sur l'ensemble du site. La conception finale a une densité brute de 273 personnes et emplois par hectare brut. La plupart des immeubles les plus hauts, et par la suite les immeubles à plus forte densité, étaient situés près de la station du train léger Place d'Orléans, en périphérie du site du centre commercial Place d'Orléans et parallèle à l'autoroute 174.

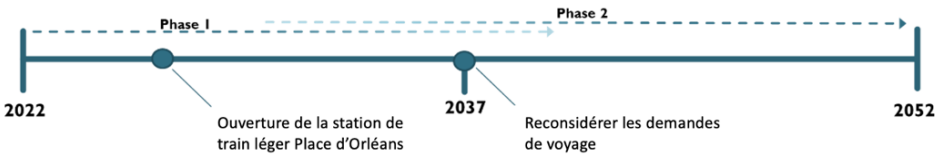
Implémentation

Le plan proposé adopte une approche de réaménagement en deux phases sur une période de 30 ans afin de permettre le remplacement progressif du centre commercial Place d'Orléans dans la phase deux une fois que de nouveaux espaces commerciaux seront fournis. La première phase verra la majorité du développement avec la densification la plus forte sur les sites entourant la station de train léger et le long du boulevard St. Joseph, tout en conservant le centre commercial et la structure de stationnement et en développant l'infrastructure de transport active. Il est proposé de construire des logements abordables sur des parcelles appartenant à la Ville pour attirer des personnes de tous origines à Orléans. La phase deux verra le remplacement du centre commercial Place d'Orléans par un domaine public visé pour les piétons qui accueille une gamme d'usages de terre. Une densité augmentée, un centre public et des rues complètes avec de l'infrastructure de transport active caractériseront la zone du CVO.

	EXISTANT	PHASE 1	PHASE 2	CIBLE MINIMALE
Unités d'habitation	1,411	9,521	11,838	11,562
Densité nette (par hectare)	18	121	151	150
Nombre de résidents	2,367	14,629	19,756	14,000
Nombre d'emplois	4,272	8,854	12,830	10,000
Densité brute (par hectare)	50	178	247	120
Nouveaux grands logements (%)	N/A	13%	12%	5%
Nouvelles unités de logement abordable	N/A	2,212	2,212	2,085
Couverture des terres aménageables	26%	46%	42%	40%
COS	0.53	2.07	2.77	2.00
Hauteur maximale	17	33	33	33

Figure 3 – Vue aérienne de la proposition de réaménagement au cours de la phase 1.

Figure 4 – Vue aérienne de la proposition de réaménagement au cours de la phase 2.



Recommandations et évaluation

Usage des terres
- Rezonage
- Examen des désignations d'utilisation des terres
- Densité la plus élevée près de la station de train léger
- Accès aux lieux quotidiennes et hebdomadaires

Logement
- Mélange de type de logement et de mode d'occupation
- Unités résidentielles secondaires
- Fournir des logements abordables sur des parcelles appartenant à la Ville

Mobilité
- Concentre sur le transport actif
- Augmenter l'accès des piétons au site
- Améliorer le transport en commun
- Stations de recharge pour les véhicules électriques

Design urbaine
- Rues complètes
- Fournir des unités orientées au sol
- Fournir des espaces ouverts et des places à l'échelle du piéton
- Conserver la ligne de mire du clocher de l'église

Financement et attirer le développement
- Utilise le PACIO
- Soutenir le ZAC *Coeur d'Orléans*
- Négocier les « espaces publics privés » quand possible

Communauté
- Conserver le patrimoine franco-ontarien
- Créer des nouveaux parcs urbains et des tiers-lieux
- Soutenir les événements communautaires aux places

Résilience environnementale
- Canopée des arbres et perméabilité
- Sources d'énergie alternatives
- Normes de construction durable

Existant	Phase 1	Phase 2	Cible	Critère	Principe
○	◔	●	●	Mélange d'usage des terres	Usage mixtes
◒	●	●	●	« Quartier à quart-heure »	
○	●	●	●	Rues complètes	
◕	●	●	●	Mélange de type de bâtiment	
○	◔	●	●	Un design urbain à l'échelle humaine	Création de lieu
◕	◒	●	●	Domaine public de haute qualité	
◒	●	●	●	Préservation de l'histoire franco-ontarienne	
◒	◔	●	●	Espaces publics	
◒	●	●	●	Mesures d'orientation	
◕	◒	◒	●	Assurer des connexions appropriées aux quartiers de banlieue adjacents	Mobilité
○	◔	●	●	Réseaux piétons et cyclables	
◒	◔	◔	●	Réseaux de sentiers	
○	●	●	●	Options de transport actif	
◕	●	●	●	Connexions avec les transports en commun	
◕	●	●	●	Voies cyclables et de l'infrastructure	
◕	●	●	●	Gamme d'utilisations commerciales et de bureaux	Diversité économique
○	●	●	●	Nombre d'emplois	
◕	●	●	●	Usages commeriaux au niveau des immeubles de moyenne et grande hauteur	
●	●	●	●	Accès aux services de santé et de garde d'enfants	Genre et sécurité
○	●	●	●	Principe « 8-80 »	
◕	●	●	●	Lumières dans les rues, les chemins et les arrêts d'autobus	
○	●	●	●	Trottoirs adaptés aux piétons	
○	●	●	●	Haute densité	Croissance et intensification
○	●	●	●	Intensification à proximité des nœuds de transport collectif	
○	●	●	●	Logement abordable	
○	●	●	●	Mélange de type de logement	
○	●	●	●	Mélange des modes d'occupation	
◒	●	●	●	Canopée des arbres	Résilience environnement-ale
◕	●	●	●	Espaces verts	
●	●	●	●	Protection environnementale	
◕	●	●	●	Surfaces perméables	

Légende
○ = Aucun conformité
◕ = Mauvaise conformité
◒ = Conformitée modéré
◔ = Bonne conformité
● = Excellente conformité

Acknowledgements, Acronyms and Definitions

Acknowledgements

The project team would like to thank David Maloney, Don Herweyer, and Natalie Pulcine at the City of Ottawa and Inge Roosendaal at Ottawa Public Health for their continued support, guidance, and overview of the project from beginning to end.

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The project team would like to acknowledge that Ottawa and Orléans are located on the un-ceded territory of the Algonquin Anishinaabe Nation, and that Queen's University is situated on traditional Anishinaabe and Haudenosaunee territory. We are grateful to be able to live, learn and play on these lands.

List of Acronyms

AT – After Tax
BIA – Business Improvement Area
BRT – Bus Rapid Transit
CIP – Community Improvement Plan
CMA – Census Metropolitan Area
CMHC – Canada Mortgage and Housing Corporation
CRU – Commercial Retail Units
FSI – Floor Space Index
GFA – Gross Floor Area
GIS – Geographic Information System
GOA - Greater Ottawa Area
HA - Hectare
IOCIP – Integrated Orléans Community Improvement Plan
LRT – Light Rail Transit
M – Metre
M^2 – Metres Squared
NCC – National Capital Commission
NCR – National Capital Region
OP – Official Plan
OC Transpo - Ottawa-Carleton Regional Transit Commission
OTC – Orléans Town Centre
PPS – Provincial Policy Statement
PTA – Primary Trade Area
RMOC – Regional Municipality of Ottawa-Carleton
ROW – Right of Way
SFOPHO – Société Franco-Ontarienne du Patrimoine et de l'Historie d'Orléans

SURP – School of Urban and Regional Planning
STA – Secondary Trade Area
SWOC – Strengths, Weaknesses, Opportunities, and Challenges
TMP – Transportation Master Plan
TOD – Transit-Oriented Development

Definitions

5 Big Moves: Five policy directions to manage and direct physical change in the *New OP*. The moves are growth, mobility, urban design, resiliency, and economy.

15-Minute Neighbourhood: A neighbourhood where residents have access to amenities and services within a 15-minute walk. This project is grounded in the idea of a 15-Minute Neighbourhood with a pedestrian friendly environment.

613 Flats: various townhome housing typologies that the City of Ottawa recommends for ground-oriented unit construction.

Floor Space Index (FSI): The ratio of gross floor area to parcel area.

Franco-Ontarian: Francophones who reside in Ontario. They are culturally distinct from the Québécois and other French Canadians.

Ghost Station: A future light rail transit station proposed for a location approximately 800 metres east of the Place d'Orléans Station.

Greyfield: Economically outdated or underused land.

Gross Density: People and jobs per gross hectare. I.e., all land including right of ways and undevelopable land in an area.

Gross Floor Area (GFA): Total amount of floor area (in square metres) inside a building.

Infill: construction on undeveloped land.

Light Rail Transit (LRT): Passenger urban rail being built in Ottawa

Net Density: Dwelling units per net hectare. I.e., units divided by the area of all privately owned land (no matter the use).

Orléans Town Centre (OTC): A small, but prominent, outdoor shopping plaza in the study and design areas.

Place d'Orléans: A large shopping mall at the centre of the project's design and Study Areas.

Place d'Orléans Station: The light rail transit station the City of Ottawa is building adjacent to Place d'Orléans.

Transit-Oriented Development (TOD): Development within 600 metres of a rapid transit station (per the City of Ottawa). TODs are meant to be compact, dense, mixed-use and provide good connectivity to the station.

Transect: A form-based planning and zoning concept that serves as an alternative to the traditional land-use based method. The City of Ottawa is moving towards the urban-rural transect model.

List of Figures and Tables

Please see **Appendix J** for List of Figures and Tables.

1.0 Introduction

1.1 Project Definition

The project team was retained by the City of Ottawa to develop a new vision and proposal for the Orléans Town Centre (OTC) and surrounding areas. The Study Area was determined through a detailed site visit and subsequent analysis. A defining concept guiding this report is the 15-Minute Neighbourhood, as outlined by the City of Ottawa's 15-Minute Neighbourhoods Baseline Report.

Through utilizing the 15-Minute Neighbourhood planning concept the specific Study Area around the OTC was determined. The City of Ottawa defines 1,200m (via pedestrian networks) as a standard distance that can be walked, including with the use of a mobility aid, in 15 minutes (City of Ottawa, 2021c). The Study Area for this report is defined by the 1,200m, or 15-minute, walking distance from each of the four selected nodes in and around the Orléans Town Centre: the Town Centre itself, Place d'Orléans shopping centre, the Place d'Orléans LRT Station, and the prospective ghost station located at OTC between Place d'Orléans and Trim Road (Figure 1a and 1b).

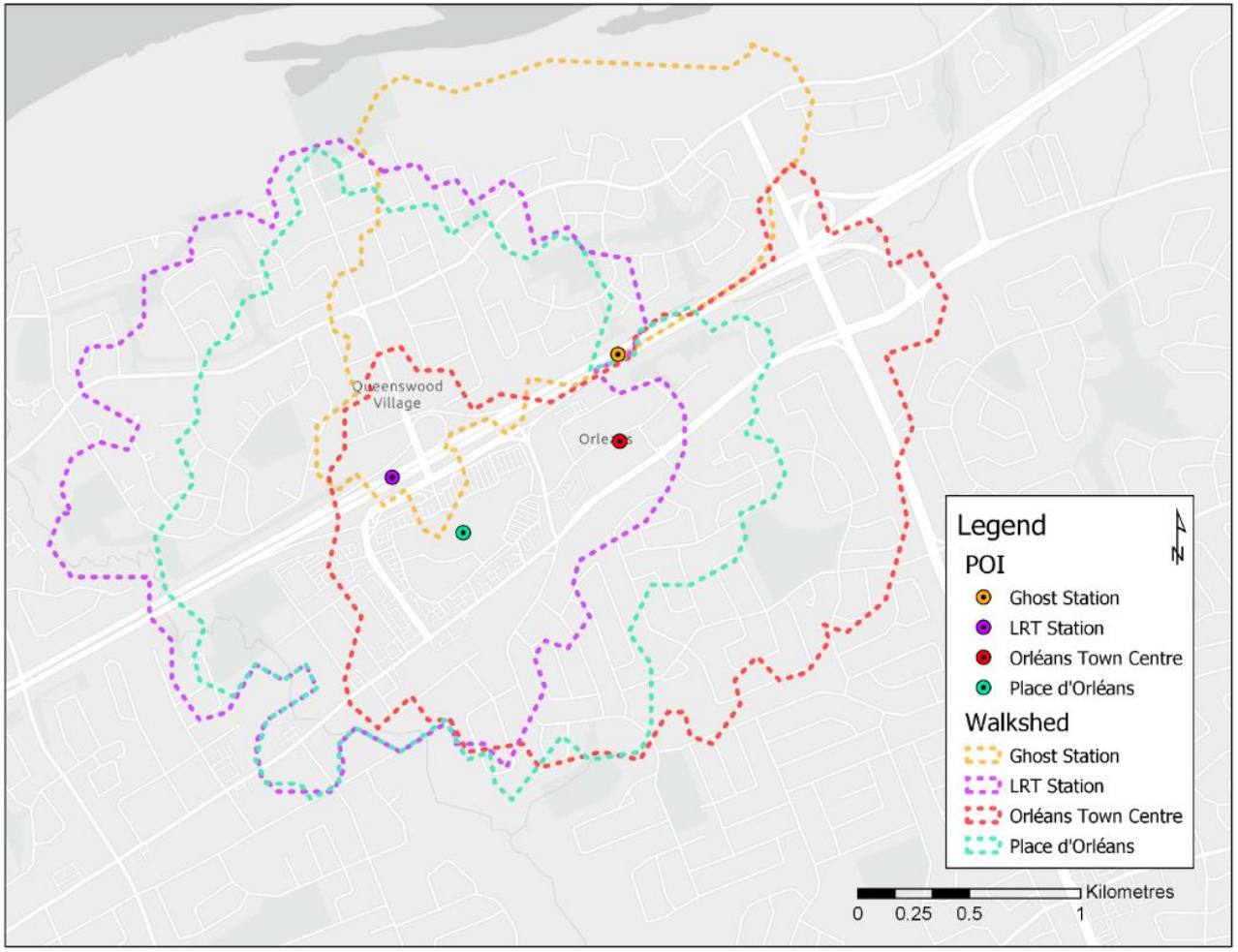


Figure 1a – Individual walksheds from each of the four selected nodes around the OTC: the Town Centre, Place d'Orléans shopping centre, the future Place d'Orléans LRT Station, and the prospective ghost station. This map was created using a GIS network analysis, utilizing City of Ottawa road centreline and path network data. The precision of this model is not measured, but rather this map can be used as a reference guide to help in defining areas within relative walking distance to the OTC.

1.2 Project Proposal

The proposal for the Study Area will incorporate goals and strategies identified within the City of Ottawa New Official Plan such as the Strategic Directions and 5 Big Moves. It will also bring in Transit-Oriented Development Guidelines and Principles, 15-Minute Neighbourhood Principles, and draw upon several dozen precedents identified throughout North America. Within the proposal, the design will be separated into two distinct phases which show potential future progression of the Study Area. Through extensive analysis and design efforts completed from September to December 2021, the project team has been able to make these suggestions with the goal of bringing a new vision to help revitalize Orléans.

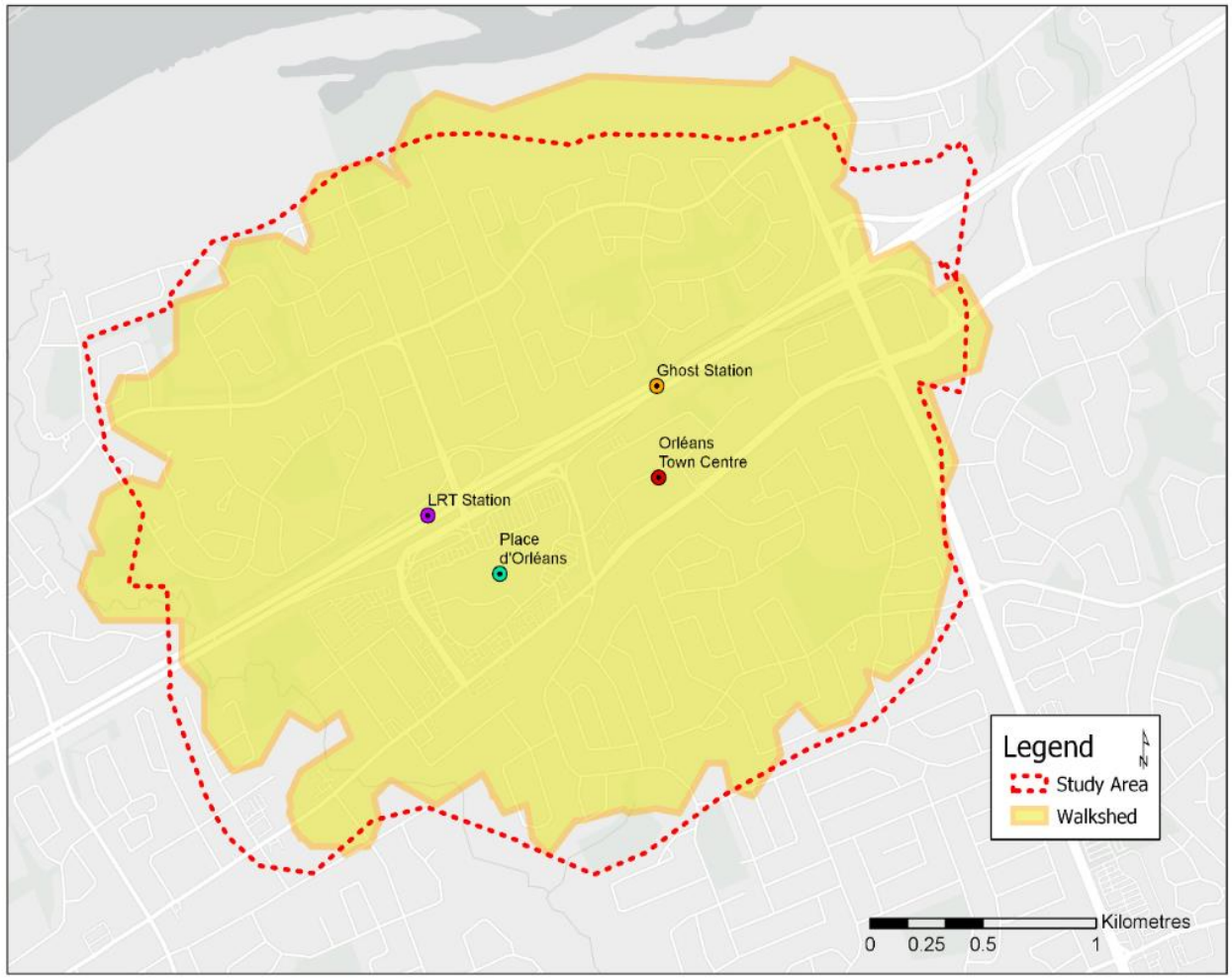


Figure 1b – This map displays the site boundary output as derived using the walkshed feature as well as natural edges (waterways, neighbourhood boundaries, major roads). The study site follows property parcel outlines where applicable.

1.3 Policy Context

The City of Ottawa commissioned this report and proposal in follow up to the *New Official Plan* and the emergence of the 15-Minute Neighbourhood as a policy direction.

1.3.1 New Official Plan

The City of Ottawa Council approved the *New Official Plan* on October 27th, 2021, and it will guide development and growth in Ottawa through to 2046. The *New OP* developed the following 5 Big Moves to manage and direct change:

Growth: More growth by intensification than by greenfield development

Mobility: By 2046, most trips in the City of Ottawa will be made by sustainable transportation (walking, cycling, transit or by carpool)

Urban Design: Improve sophistication in urban and community design, and put this knowledge to the service of good urbanism at all scales

Resiliency: Embed public health, environmental, climate and energy resiliency into the framework of planning policies

Economy: Embed economic development into the framework of planning policies

These 5 Big Moves present half of the guiding policy framework for this document.

1.3.2 15-Minute Neighbourhood

The 15-Minute Neighbourhood is a key direction in the City of Ottawa's *New OP* (City of Ottawa, 2021c). A 15-Minute Neighbourhood is a neighbourhood where residents have 15-minute walking access to all daily services and amenities. A 15-Minute Neighbourhood also has a safe and enjoyable pedestrian environment, which encourages more residents to walk. In the *15-Minute Neighbourhood Baseline Report* (2021), the City of Ottawa scored each of the city's areas access to services and amenities along with the pedestrian environment. The proposal is grounded in the 15-Minute Neighbourhood concept by improving access to services and amenities and enhancing the pedestrian environment.

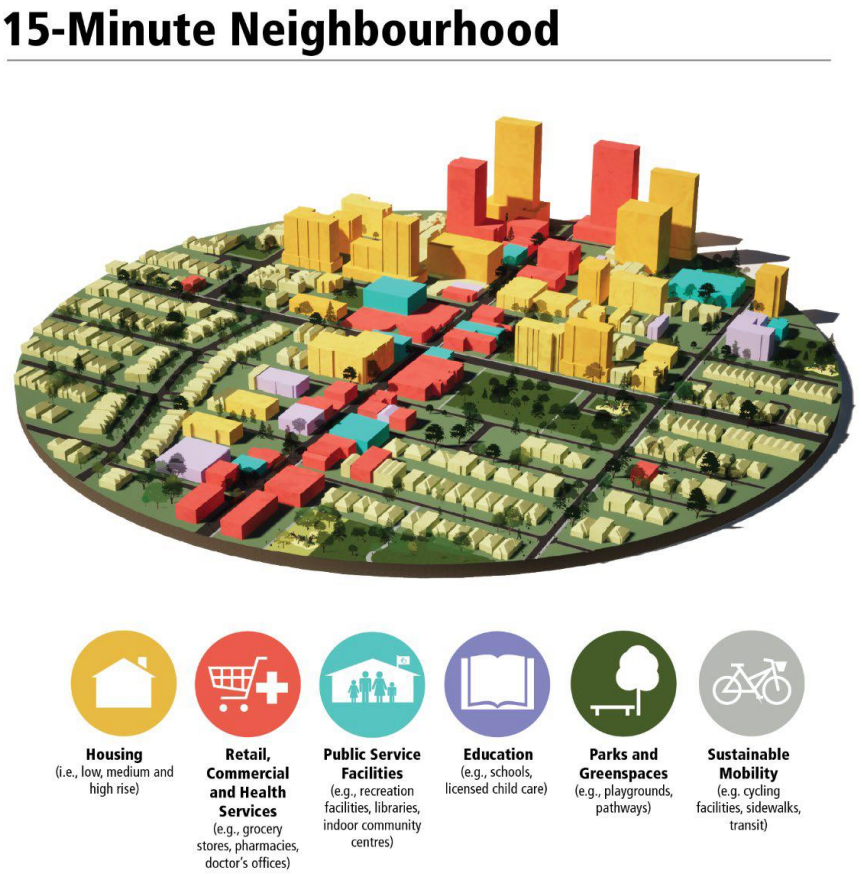


Figure 1c – 15-Minute Neighbourhood and its features as per the New Official Plan (City of Ottawa, 2021a).

1.4 Project Team

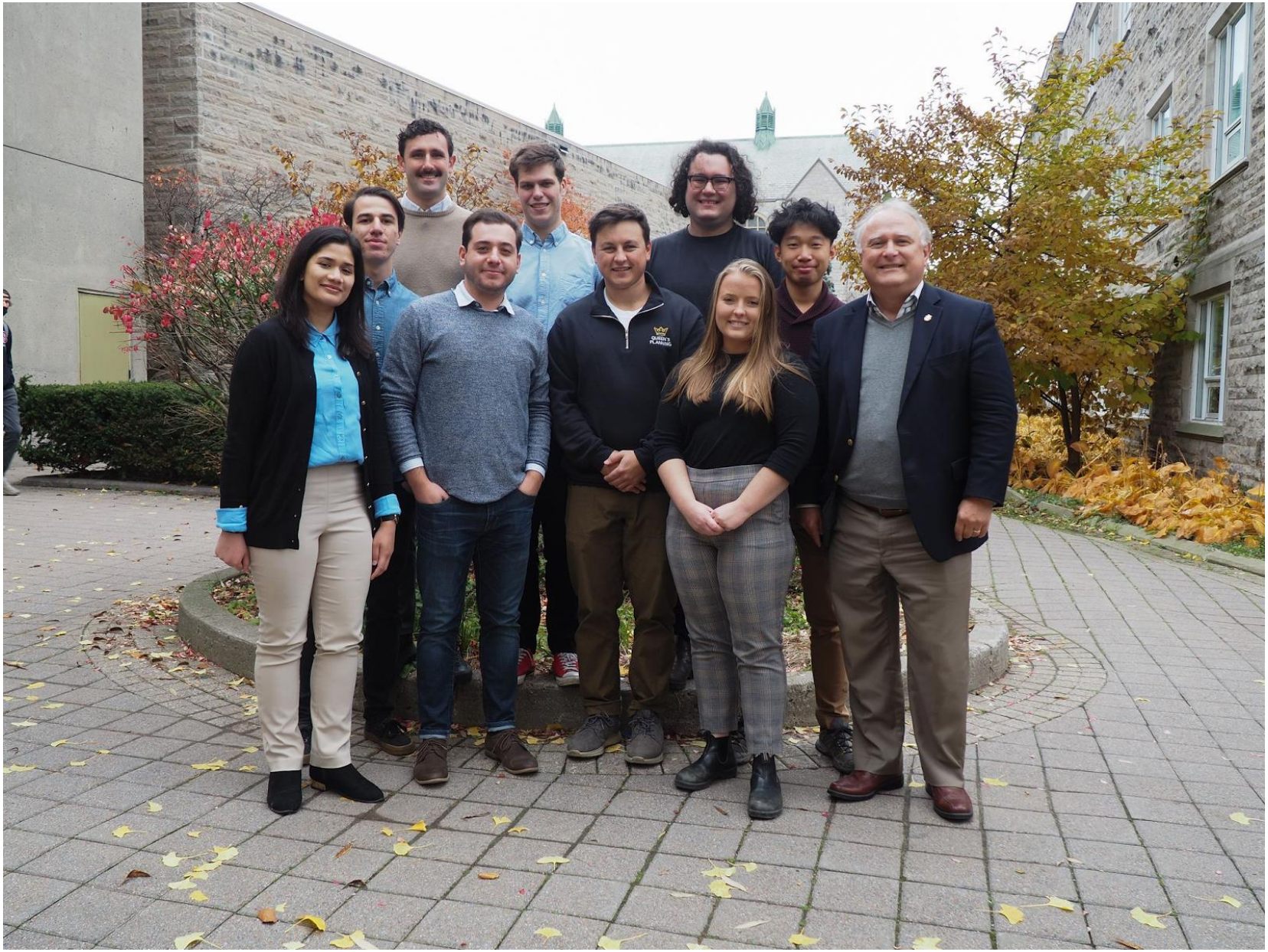


Figure 1d – Project Team (from left to right): Shahida Hoque, Justin Lima, Evan Saunders, Mark Fishman, Michael Donolo, Justin Klimkait, Evan Saslove, Megan Smythe, Titus Lee, Dr. David Gordon.

2.0 Site Analysis

2.1 Site History and Culture

In order to assess the current conditions of Orléans and begin planning to incorporate the 15-Minute Neighbourhood concept into the area with intensification to the OTC, it is imperative to understand the history of the land, culture, and other contexts of Orléans.

Prior to the arrival of British and French settlers, the City of Ottawa, including the area known today as Orléans, was the traditional homelands of the Algonquin Anishinaabe Nation. There is no formal treaty which documents any purchase of land by the British Crown for this area from the Algonquin Anishinaabe Peoples, meaning that the City of Ottawa and Study Area of Orléans are situated on unceded lands (City of Ottawa, 2021e).

2.1.1 Francophone History

Early French explorers were supported by Indigenous Peoples, specifically the Algonquin allies, in their exploration of the Ottawa Valley. Samuel de Champlain sought to build trust with the Algonquins through assistance in their military expeditions against the Iroquois by supplying French muskets, which proved effective. Once the area was defended from the Iroquois, the Algonquins assisted the French in establishing trade and navigational networks along the Ottawa River, leading to fur-trade routes, the lumber trade, and future industry (Gordon, 2015).

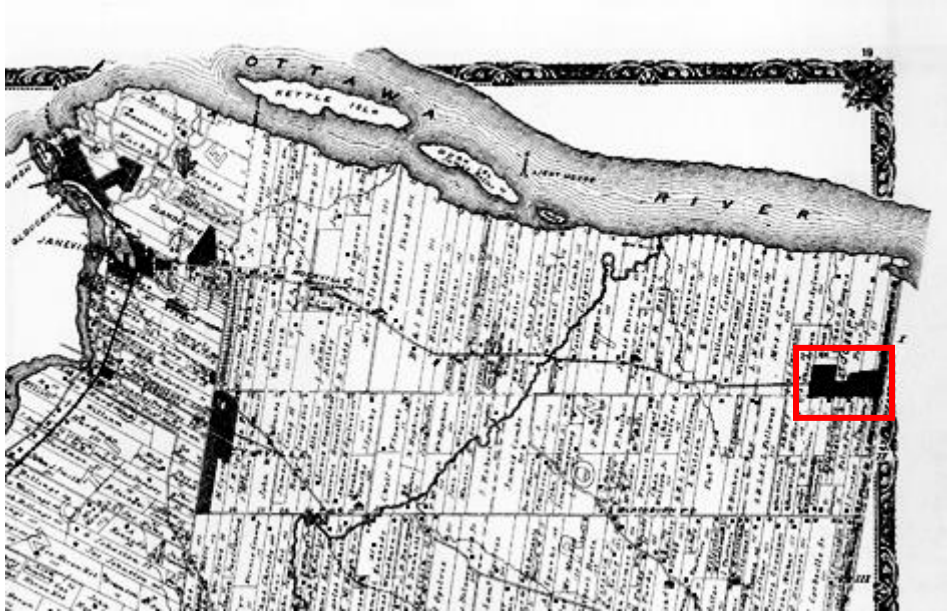


Figure 2.1a – Northern Gloucester Township, Village of St. Joseph outlined in red, 1879. Note the French long lot approach, a common system of land division found in early French-Canadian settlements which abut a river (Illustrated Historical Atlas of the County of Carleton, 1879: 19).

Francophones had settled in the Ottawa region dating back to the 19th century, following the War of 1812, primarily for agricultural opportunities. Orléans was once its own township called the Village of St. Joseph and was first settled in the 1830s by both Francophone and Anglophone settlers (Figure 2.1a). The prominent families that settled Orléans include the Francophone Dupuis, Besserer, Major, Duford and Vézina families and the Anglophone Kenny and McNeely families (SFOPHO, 2017). The location of the Village of St. Joseph was situated on the Gloucester-Cumberland township lines, and the Carleton-Russell County lines respectively, but most of the village was situated in Gloucester Township, Carleton County (Figure 2.1b) (Belden, 1879).

The area was not formally recognized as a village until Luc Major registered the first plan of subdivision (Lots 1 and 2) for the Village of St. Joseph with the County of Carleton, Gloucester Township in 1858. A year later, the village expanded to include Lot 3 in the registered plan (SFOPHO, 2017). By 1860, the Catholic parish St. Joseph of Orléans was established, strengthening the existing Francophone community (Figure 2c). Traditionally, the church was located at the centre of the community and served as a centralized location for religious and social gatherings. In many communities the church would often function as a meeting space and landmark. Within this setting, it indeed was the most prominent landmark and could be identified by the spire.

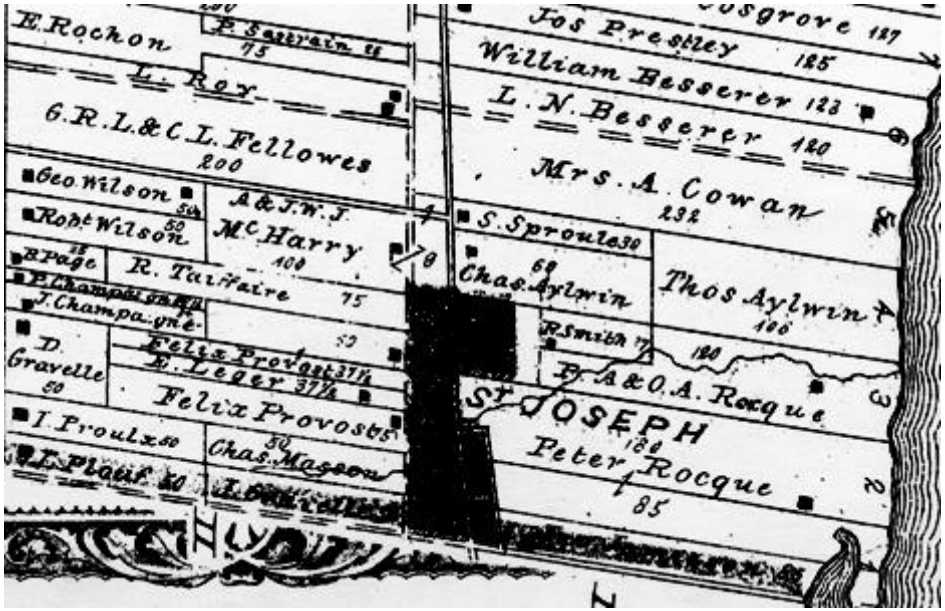


Figure 2.1b – Registered lot owners of the area around the Village of St. Joseph, Gloucester Township, 1879. Note the subdivided lots owned by William and L. N. Besserer, members of the Besserer family who originally settled in Orléans in the 1830s (Illustrated Historical Atlas of the County of Carleton, 1879: 19).

By the late nineteenth century, the Village of St. Joseph was occupied almost entirely by Franco-Ontarians and contained key community amenities aside from the church such as a post office, hotel, and schools located along St. Joseph Boulevard (Figure 2.1d). Furthermore, St. Joseph Boulevard, was the road that connected Ottawa and Montréal. This increased activity along this corridor and attracted further community growth and development. By the end of the nineteenth century, Gloucester Township had the highest concentration of Franco-Ontarians within the Ottawa region (Belden, 1879).

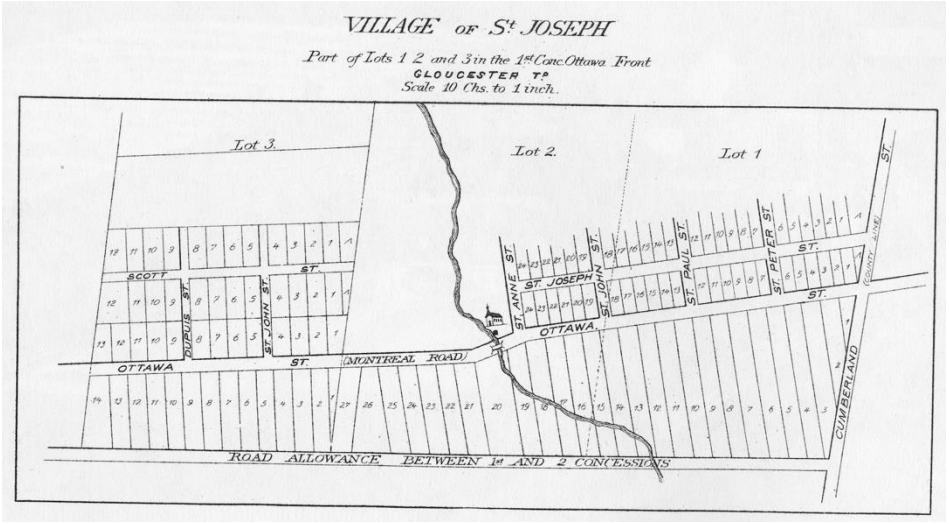


Figure 2.1c – Village of St. Joseph in 1879, centred around the Catholic parish of St. Joseph of Orléans along Montréal Road, now St. Joseph Boulevard, denoted as a church on the map. Although the original church was rebuilt between 1917-1922, the new church occupies the same site in the centre of the historic village and still exists today. Note the original subdivision pattern south of St. Joseph Boulevard and surrounding the church still approximately exist today. Also note the change in direction of Montréal Road at the church, which creates a sightline of the St. Joseph d'Orléans steeple from the east and west (Illustrated Historical Atlas of the County of Carleton, 1879: 18).

Figure 2.1d – (Left) St-Joseph Academy French-language school established in 1890. (Right) Second Paroisse St. Joseph d'Orléans built in 1922 (SFOPHO, 2021).

The Société franco-ontarienne du patrimoine et de l'historie d'Orléans (SFOPHO) is an organization which seeks to commemorate and preserve the cultural and built heritage of Orléans. To date, SFOPHO has installed 27 commemorative plaques along St. Joseph Boulevard to identify the history of various buildings and sites and completed extensive survey research on properties of heritage interest throughout the region (SFOPHO, 2017).

2.1.2 Modern History

The late 1970s saw the beginning of the transformation from a traditional Franco-Ontarian farming village into the current suburban neighbourhood (Figure 2.1e) (geoOttawa, 2021). As the area within the Greenbelt that was proposed in Jacques Gréber's 1950 *Plan for Canada's Capital* was quickly becoming filled, un-serviced residential subdivisions on the opposite side of the greenbelt in areas such as Orléans became common (Gréber,1950). During the development of Orléans, heritage buildings became replaced with new housing, commercial strips malls, and shopping centres such as Place d'Orléans, which was built in the heart of Orléans off St. Joseph Boulevard in 1979. New homeowners were attracted to the neighbourhood due to its proximity to downtown Ottawa and the appeal of the suburban lifestyle.

Car travel was initially the most popular mode of travel within these new suburbs due to the lack of any public transit routes. The Transitway was constructed in 1983 by the OC Transpo for the former Regional Municipality of Ottawa-Carleton and provided rapid bus connections between downtown Ottawa and the new suburbs, including Orléans (OC Transpo, 2021). The introduction of bus routes further increased the appeal of Orléans by efficiently connecting the neighbourhood to downtown Ottawa and Gatineau, where most federal government offices are located.

Figure 2.1e – Aerial photograph of Orléans in 1976, star represents the location of the Orléans LRT station. Note that development was located along St. Joseph Boulevard (geoOttawa, 2021).

Before the amalgamation of the City of Ottawa in 2001, Cumberland Township briefly became its own municipality in 1999. The Town Centre building was constructed in the eastern portion of Orléans,

north of St. Joseph Boulevard and east of Place d'Orléans Shopping Centre. It was constructed in Orléans because it was Cumberland's most populated area which the eastern half of Orléans was under its municipal jurisdiction (Province of Ontario, 1999). The City of Ottawa is currently preparing an Orléans Corridor Secondary Plan, which includes the Town Centre site to enhance its social and economic prominence in the community (City of Ottawa, 2021f). Since amalgamation, Orléans has become the City of Ottawa Urban Sub-Area Number 15 (Figure 2.1f) (City of Ottawa, 2021g).

Moving forward with the redevelopment of the OTC area, it is important to preserve the deep-rooted Franco-Ontarian history of the area. The preservation of heritage buildings and significance cultural features should be a priority of the redevelopment. Most notably, there are the efforts to retain sightlines of St. Joseph of Orléans parish along St. Joseph Boulevard while reimagining the traditional main street commercial uses in a contemporary context. This also includes introducing bilingual signage which indicates the history of a particular building or site, such as the work of the SFOPHO in installing commemorative plaques. Ultimately, redeveloping the core of Orléans provides an opportunity to preserve and educate visitors on its history.

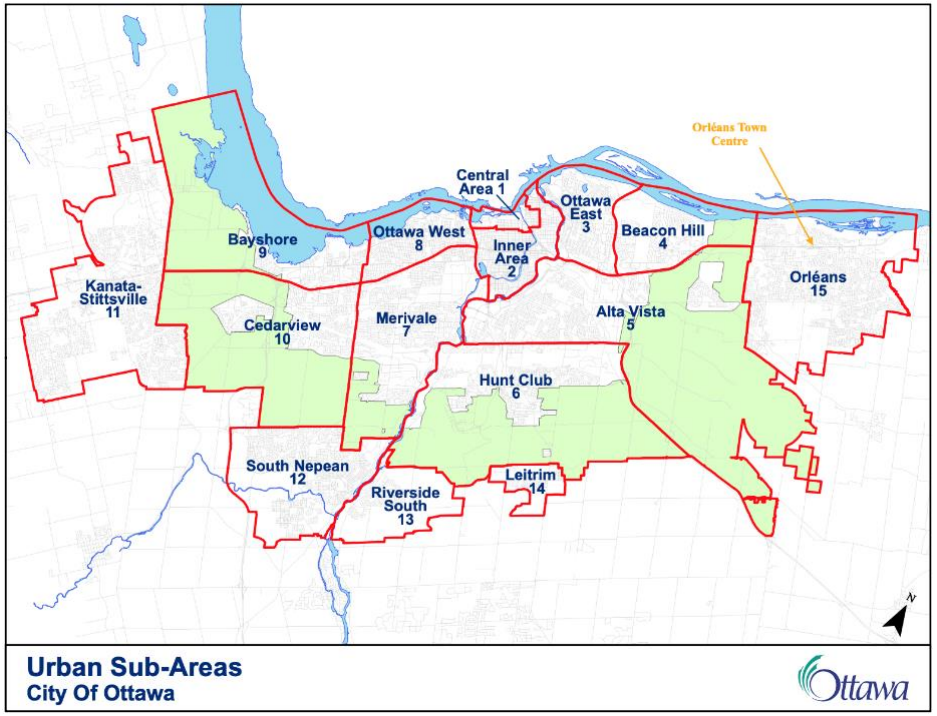


Figure 2.1f – Urban Sub-Areas of Ottawa. Orléans is Urban Sub-Area 15 (City of Ottawa, 2021g).

2.2 Local and Regional Context

2.2.1 Proximity to Ottawa's Downtown Core

Orléans is a suburb of the City of Ottawa that is located about 16 km from its downtown core. This proximity provides access to Ottawa's urban core via personal vehicles, the BRT, and soon the LRT with Phase 2 of the LRT East Extension.

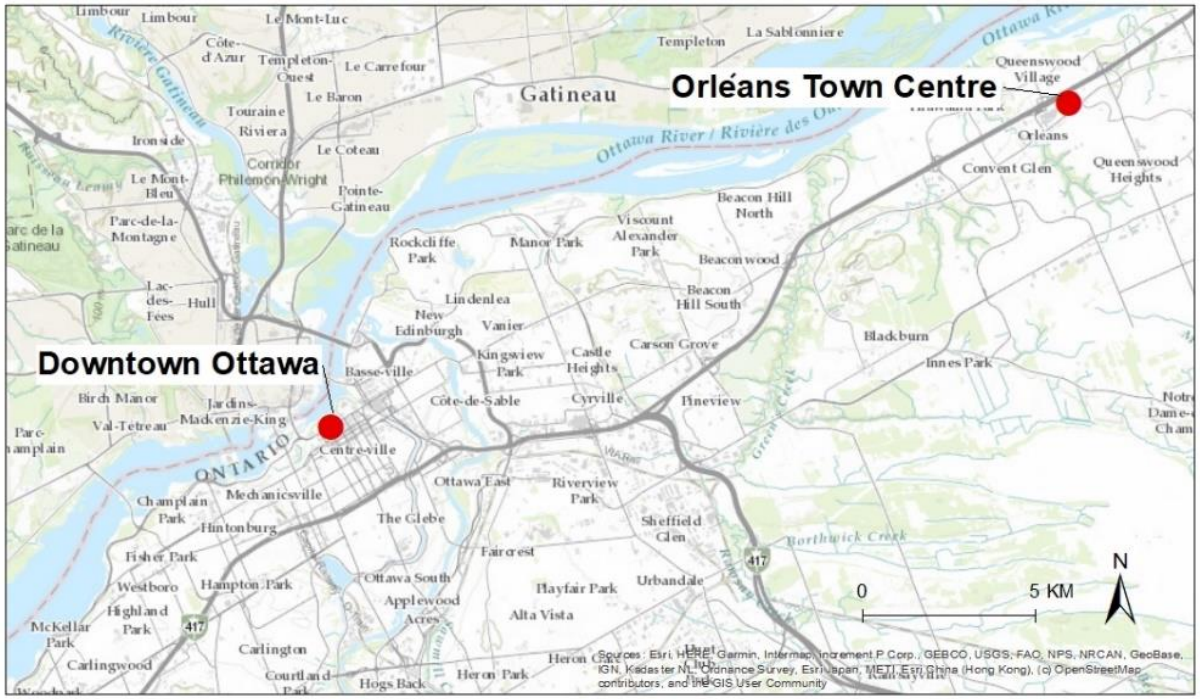


Figure 2.2a – Orléans is a suburb of Ottawa located approximately 18 km east from the downtown core.

Orléans is located directly east of the Greenbelt and has access to portions of escarpment. To the north, Orléans is close to the Ottawa River and has significant parks and greenspace along the shoreline.

2.2.2 Proximity to Employment Centres

Orléans currently has access to existing employment centres along the BRT line. Many residents presently commute to the urban core for work, with approximately 30% reporting a commute duration of between 15 to 29 minutes and 50% reporting a commute duration over 30 minutes (City of Ottawa, 2021k). Located just east of the OTC is the Taylor Creek Business Park that provides a limited number of jobs with potential for future growth and expansion that could increase available employment opportunities. Using efficient and effective planning, the OTC has the potential to become a vibrant hub that provides many jobs to local residents and encourages active transportation. The existing jobs and people per Ha density target of 120 outlined in the *New OP* is used as a baseline target for redevelopment (City of Ottawa, 2021c).

2.2.3 Transect Model

When proposing a vision for the OTC, it is essential to situate the area within the urban context of the City of Ottawa. The range of transect zones, from rural-to-urban is one such strategic planning tool that allows for the organization of city elements into different transects and is embedded within the City's *New OP* Policies. Each transect zone represents the evolution of built environments and planning from least urban to most urban. Similarly, the least urban (rural) represents low density human dwellings and the most urban (urban core) represents high density dwellings.

Using the City of Ottawa's analysis of the transect within *New OP* policies, Orléans can be evaluated within the transect context. Using this analysis, as OTC is located outside of the Greenbelt, and given the era of development and predominant built form which exists, it is classified as suburban (T3) on the transect (City of Ottawa, 2021c). Typical of a suburban zone, OTC is comprised of low-rise built form, a separation of land uses, and many stand-alone buildings that are connected to the Downtown Core through rapid transit. Due to their evolution and the prevailing planning approaches of auto-dependency during the original construction, suburban zones are not

easily walkable areas due to the separated uses and spacing between buildings (Duany & Falk, 2020).

Further, the OTC has specific Town Centre and Hub designations that anticipates the development of a denser built form and urban character when compared to its historical suburban sprawl (City of Ottawa, 2021c). St. Joseph Boulevard has also been identified within the Official Plan as a Mainstreet Corridor encouraging further intensification in development, and active transportation. More specific parameters for Town Centre, Hub, and Mainstreet Corridor designations will be outlined within Appendix A. To successfully transition Orléans into a 15-Minute Neighbourhood, a shift to prioritizing transit, walking, and cycling will need to occur in tandem with intensification of the urban form as outlined within the OP.

Figure 2.2b – Transects (City of Ottawa, 2021a). The OTC has existed within the suburban zone of the transect for the past several decades.

The City of Ottawa's TOD plans most relevant to OTC according to suburban development patterns and categorization within the transect are Blair, Cyrville, and St. Laurent. It is important to note that these three TOD plans are situated inside the Greenbelt and are within the Inner Urban transect according to the City of Ottawa's *New OP* however the suburban development patterns share similarities that allow for comparison. Similarities include car-oriented design and high dependency on personal vehicles for transportation. As part of the TOD study development plans, mixed housing and increased density are large components and each TOD plan is catered to the specific needs of that area.

Table 2.2c – Comparison of OTC (City of Ottawa, 2021k) to three similar TOD Study Areas (City of Ottawa, 2014).

TOD Study Area	Study Area Size (ha)	Existing Jobs and People	People/ha Existing	People and Jobs Projected Long Term	People/ha Projected Long Term
St Laurent	120	7,700	64	43,700	363
Cyrville	98	3,500	36	38,800	393
Blair	119	8,700	73	28,900	243
Orléans	132	6,700	50	19,770	150

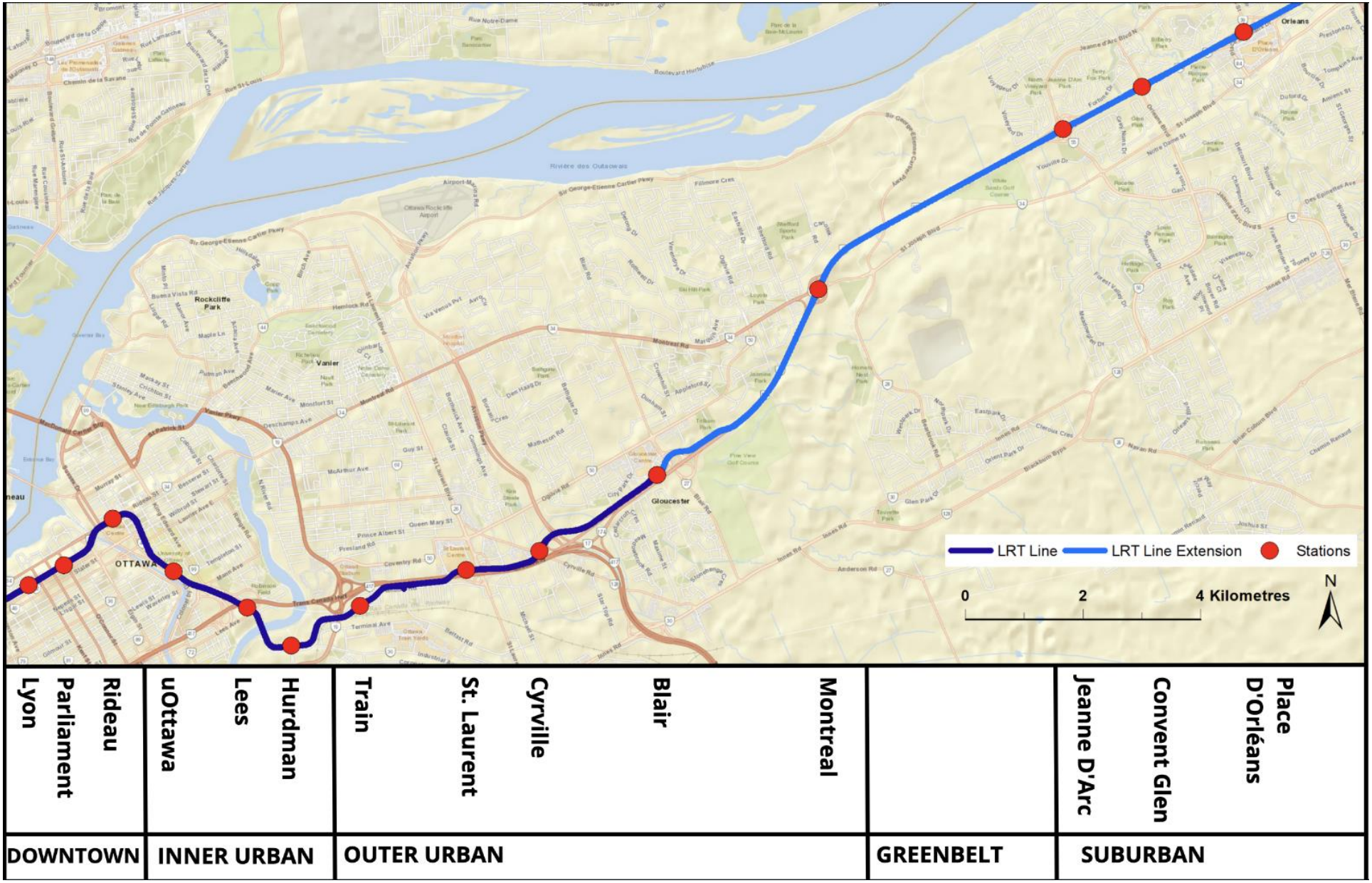


Figure 2.2d – OTC Station is located towards the end of the current BRT line and future O-Train expansion area. Stations are classified in this figure according to the rural-to-urban transect to illustrate the gradient of urban development.

2.2.4 Implications for Planning and Design

Analysing the OTC Study Area using the transect model indicates that the Study Area's built-form is auto-oriented and reflective of the suburban zone. Orléans currently exhibits separated uses, a lack of housing diversity (although a small number of medium density projects are present), and the use of vehicles as the primary mode of transportation.

Like the Blair Station TOD, Orléans is situated near various employment opportunities within the Place d'Orléans mall and OTC. From the *New OP*, Town Centres are intended to be the most important and largest Hub of their suburban community and are planned for at least 10,000 jobs each. Orléans already has existing infrastructure in place to facilitate a lively and walkable suburban core and can be developed to a similar capacity as the Blair, Cyrville, and St. Laurent neighbourhoods.

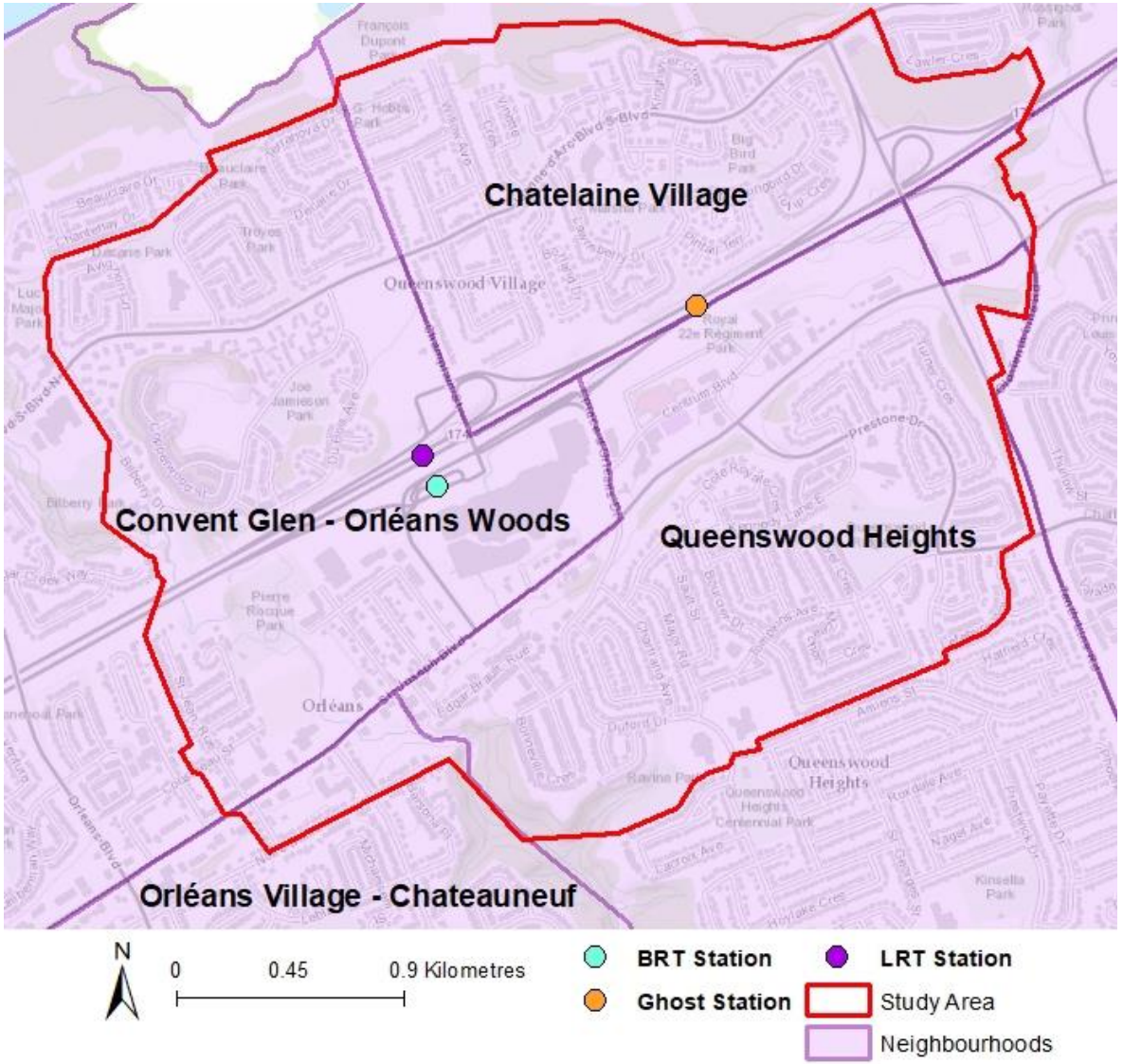


Figure 2.2e – OTC and Surrounding Neighbourhoods

2.3 Built Environment

The urban fabric in Orléans is sparsely built and consists of low-density commercial and retail development along major roads which accommodate several wide lanes of fast-moving traffic, such as St. Joseph Boulevard and Orléans Boulevard inner-street blocks are composed of residential development, some community spaces, and several parks or greenspaces. The Queensway and St. Joseph Blvd both run east-west through the suburban neighbourhood, separating the area into distinct blocks and creating physical barriers to community cohesion and connectivity.

The street pattern is based upon these block divisions, and create smaller communities as depicted in Figure 2.3a. Residential blocks are accessed by loop streets and culs-de-sac branching off collector roads, which lead to arterials such as Jeanne d'Arc or Orléans Boulevard. This street system implies longer routes for active transportation which must circle around residential developments, rather than follow the direct path to a destination.

Figure 2.3a – Street Pattern - The Queensway runs east-west through Orléans, dividing the neighbourhood into two halves.

The freeway and major arterials are facilitated as continuous bands which cut through the community rather than integrating into the street system. Figure 2.3b portrays a figure-ground map of the Orléans neighbourhood which demonstrates the lack of development at the commercial corridor, as well as low-density residential development throughout the community.

Figure 2.3b – Figure Ground Map of Orléans Study Area.

Retail and commercial properties on the main streets are built on large empty lots where the buildings do not have street frontage and are typically obscured behind front-facing parking lots at the street front. Residential properties are built on small, linear plots of land often abutting other residences at the rear with no buffer space. There are a few trails or pathway connections between residential neighbourhoods, as shown in Figure 2.3h, which provides some convenience while navigating through the mazelike arrangement of detached residential housing. Most of the original dwellings were constructed approximately 40-60 years ago, with the oldest properties aging from 70-100 years old (Haynes, 2021).

The residential community predominantly consists of single-family detached houses, a handful of semi-detached homes, and infrequent development of multi-unit housing north of the Queensway; existing housing typology is portrayed in Figure 2.3c. Although there are various forms of housing existing throughout the Orléans neighbourhood, the majority of dwellings are detached, with approximately 20% being semi-detached, or row houses (Haynes, 2021).

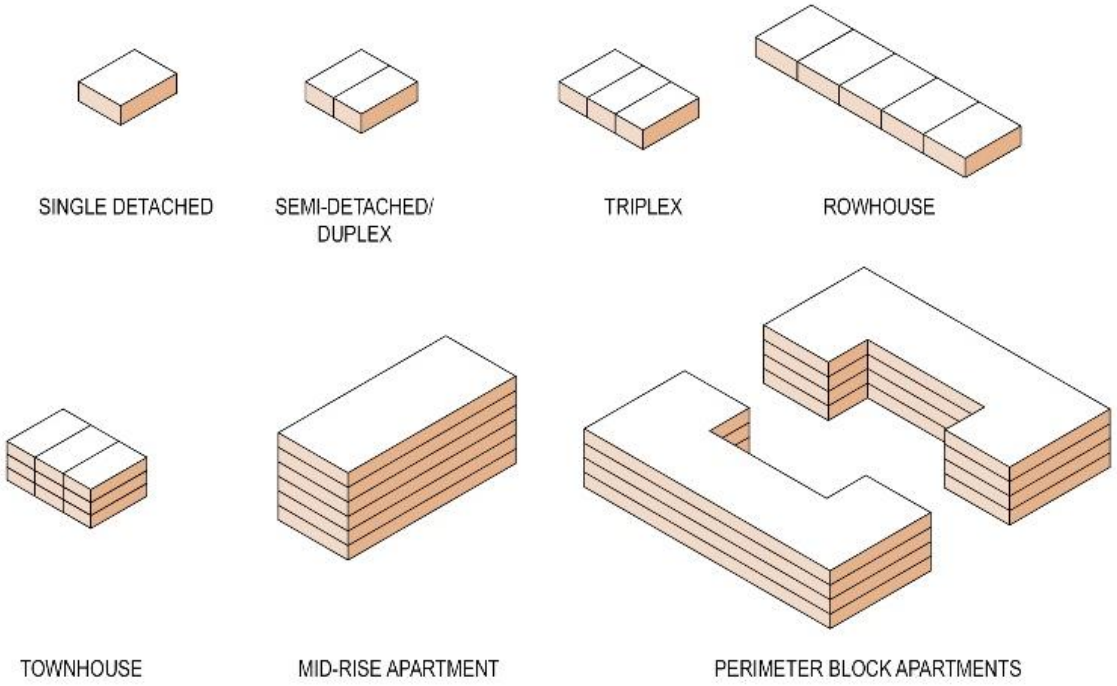


Figure 2.3c – Housing Typology within Orléans.

2.3.1 Infrastructure

The most significant factor affecting walkability and community connectivity is the street network and facilitation of circulation. While streets have been arranged to direct local traffic onto the main roads, the pedestrian and active transportation pathways are not equally effective. Streets are provided with some pedestrian infrastructure in the newer developments, while older residential neighbourhoods lack sidewalks, crosswalks, bus shelters, or other urban furniture.

The streetscape is inconsistent throughout the community where some bus stops are provided with shelters, interior, and exterior seating benches, while others are not accommodated with any amenities. Sidewalks typically do not provide a buffer strip between the road and pedestrian thoroughfare other than at major crossroads, lack planting or shade for users, and are discontinued on inner streets, which creates inconvenience and safety hazards for local pedestrians. Figures 2.3d-g exhibit different street conditions in distinct neighbourhoods.

The provision of sidewalks and pedestrian infrastructure varies based on the hierarchy of the street, which disrupts wayfinding, and discourages local residents from utilizing the street network. As portrayed in Figure 2.3d, pedestrians are less inclined to use sidewalks where there is no buffer between the road curb and the pedestrian thoroughfare, due to lack of safety. This is a crucial feature adjacent to arterials with faster moving traffic, such as St. Joseph Boulevard. Additionally, some arterials or collector roads have wider lanes, or more lanes than necessary for local traffic, creating an automobile-dominated environment as demonstrated in Figure 2.3d. These large roads perform better with islands in the middle lane to separate the two directions of traffic. Furthermore, community services, amenities, and retail facilities are located on the main streets at a distance from the residential neighbourhoods, indicating poor walkability and sprawled development.

Figure 2.3d – Wide arterial with island and sidewalk at curb at St. Joseph Blvd & Promenade Prestone Drive.

Figure 2.3e – Single-loaded Sidewalk with buffer at Sunview Drive.

Figure 2.3f – Tree Canopy on trail connecting neighbourhoods.

Figure 2.3g – Marked crosswalk across Jeanne d'Arc Blvd.

2.3.2 Landmarks & Amenities

The location of services and amenities are mapped on Figure 2.3h exhibiting the clustered provision of necessities such as grocery stores, restaurants, and community services around St. Joseph Blvd. They are poorly accessible for local residents without the use of automobiles or public transit. For the purpose of this analysis, the services provided within Place d'Orléans Shopping Centre were not included in the map. There is one distant grocery store, and a few restaurants scattered in the northern neighbourhood, and almost no provisions south of St. Joseph Blvd until the next main street at Innes

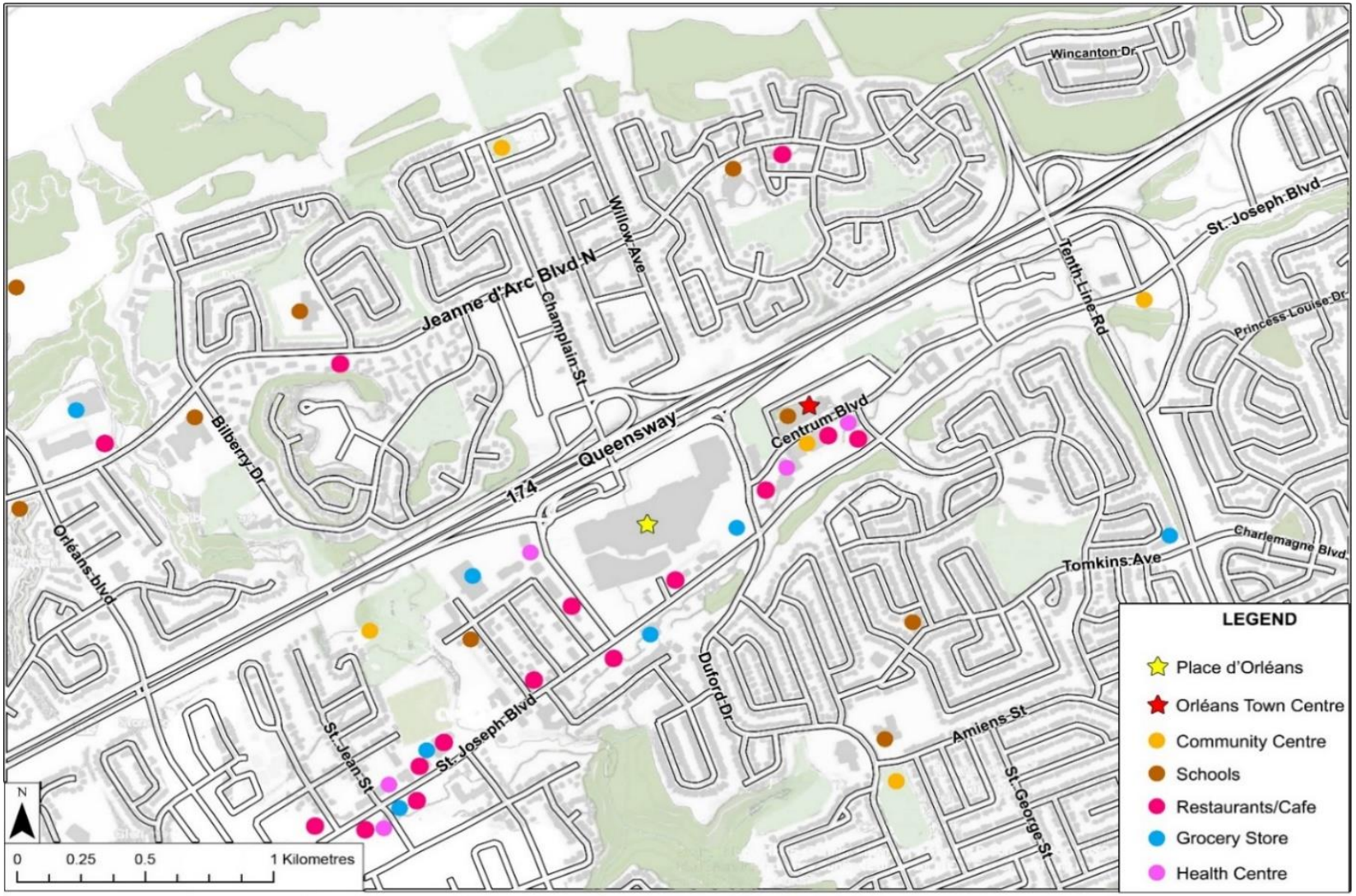


Figure 2.3h – Local Services and Amenities in Study Area.

Road. However, several schools are distributed within the neighbourhoods, providing adequate services for children in the community.

Representative of a typical neighbourhood unit, there are public and Catholic schools to support the surrounding population, in addition to supplementary music schools to accommodate arts focused students. Although the recreation centres are located on the outskirts of the Orléans study, the immediate neighbourhood is facilitated with a tennis club (depicted in Figure 2.3i) and community centres providing various resources and programs for the community. To accommodate the elderly population in the community, a few retirement homes have been established, as well as Cumberland Seniors Park which features accessible design, connectivity to nature, and activities for senior citizens (Cook, 2009). There are various public parks such as Bilberry Park, François Dupont Park, or Queenswood Ridge Park, dispersed around the Study Area which provide sports fields and courts. Additionally, some private residential communities provide their own community parkettes with playscapes for younger children. Ultimately, the disparity of services, retail, and commercial needs is evident within the residential neighbourhoods.

The Orléans neighbourhood is recognized as a historic French community. However, through time many of the original buildings have been demolished or redeveloped. The lost heritage architecture consisted of old farmhouses, storage facilities, and churches. The most prominent historical building which stand today are pictured in Figure 2.3i, the St. Joseph of Orléans Parish, or Paroisse St-Joseph d'Orléans, which was built of stone in 1922, symbolizing the significance of the gothic architectural style to the Catholic Church (Our History, (n.d.)). Most of the heritage architecture, which was demolished or retained was built of stone, including the Vinette Farm Silo which is protected as a remnant of the farming heritage in the community, depicted in Figure 2.3i (Willing, 2019).

Although some heritage characteristics are no longer present in the existing urban fabric, the Second Empire architectural style is represented in masonry buildings with mansard roofs which defined the regional typology of housing in Quebec's French towns (Simpson, 2018). In contrast, the Shenkman Arts Centre, shown in Figure 2.3i, was built over a decade ago and designed with sustainable features in a contemporary architectural style. The building accommodates various arts programs, classes, and events, attracting the artist and theatre community, and establishing a focal point of arts and culture in the community. These key amenities and features of the Orléans community are depicted on the annotated map in Figure 2.3i.

Figure 2.3i – Annotated Map – Key Landmarks and Features.

2.4 Natural Heritage

Orléans encompasses several picturesque natural features which compose a beautiful landscape, recreational parks, and community attractions. While the Ottawa Greenbelt forms the western border of Orléans, the natural heritage system within the community has a significant presence with frequent greenspaces, including watercourses which lead to the Ottawa River. The primary watershed regions of the neighbourhood consist of East Bilberry Creek and Taylor Creek, where approximately three-quarters of the area is classified urban (RVCA, 2015). Another key natural feature includes the Ottawa riverside wetlands protected by the Rideau Valley Conservation Authority. The greenspace network within the neighbourhood and surrounding region is mapped in Figure 2.4a indicating major pedestrian trails and bridges. Additional dirt trails and unofficial pathways not illustrated on the map have been created over time as a result of pedestrian use.

The Bilberry Creek natural area is home to aged trees and plenty of wildlife native to the woodland ecosystem, including 17 different fish species. Alternatively, the Ottawa riverbank features a wetland habitat protected under the Rideau Valley Conservation Authority. Tree species at Bilberry Creek include Cedar, Pine, and Fir, as well as Maples, Birches, and Aspen trees, which provide a thorough tree canopy and shade (RVCA, 2015). The natural area is facilitated with hiking trails steps, bridges, and maps to guide pedestrians and users through the forest and protect the vulnerable qualities of the site.

This forested area is at the centre of several residential communities, providing a healthy respite within the suburban community, and enabling immersion in nature while promoting safe usage. However, the natural corridor and continuity of the greenspace network is disrupted by street infrastructure and large surface parking lots north of St. Joseph Blvd. These regions have significant potential to bridge

Figure 2.4a – Greenspace Network through Orléans neighbourhood.

the gap between the northern and southern communities, as well as connect the trail system along Bilberry Creek up to the Ottawa River.

Although the landscape provides great recreational opportunities for local residents, the steep topography is not accessible for users of all ages. These sloped terrains create disconnect between the different neighbourhoods in Orléans. As portrayed in Figure 2.4d, the region directly south of St. Joseph Boulevard, and the ravine around Bilberry Creek form the steepest geographies in the neighbourhood, dividing the community into quadrants. As such, users who are unable to cross through the ravine, are obliged to walk around the area, or use automobile transportation.

Establishing an organized trail system is vital to protect the natural qualities of the site, as well as provide convenience and accessibility to users. Monitoring of the stream has indicated anthropogenic impact on the shoreline, with higher levels of erosion at the river mouth where street infrastructure intersects the natural corridor. Additionally, the creek has been altered significantly to accommodate transportation routes, with the implementation of culverts to channel waterflow (RVCA, 2015).

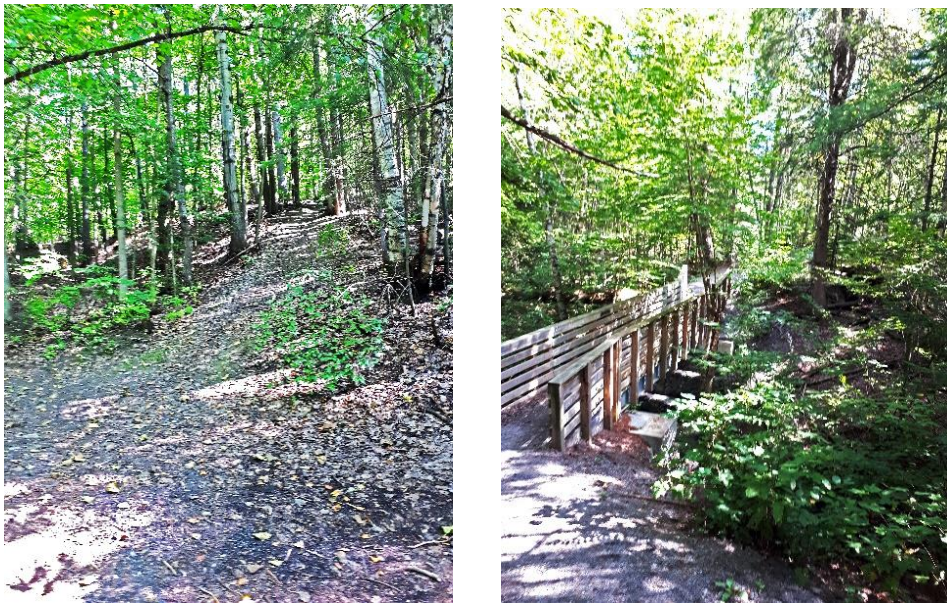


Figure 2.4b/c – Sloped terrain bordering the ravine at Bilberry Creek and bridge over Bilberry Creek.

Erosion and landslides have previously threatened landscape integrity, as well as the stability of dwellings in sensitive regions. These occurrences are mostly due to the clay soils of the landscape. The Orléans neighbourhood is situated within the Ottawa Valley Clay Plains which mainly consists of soft stone and fine-textured soils, making it vulnerable to extreme weather conditions such as heavy rain (Stantec Consulting, 2016). As such, the fundamental natural hazards within this region are risks of flooding, soil instability, steep slopes, and erosion due to the wetlands and ravine geography. Figure 2.4b exhibits the steep slope of the forest trails while Figure 2.4c demonstrates the incorporation of bridges to facilitate pedestrian circulation over the natural watercourse system.

2.4.1 Implications for Planning and Design

Due to the vulnerability of the natural topography, and distinct features to be preserved, future development in the area should be sensitive when building around these critical areas to reduce negative impacts on the existing ecosystem. Furthermore, the clay sediment layers also pose challenges for construction due to soil instability. Whereas the existing infrastructure disrupts continuity of the natural corridor, a future proposal should aim to reconnect the system and decrease the heat island effect by providing more ground cover and establishing a denser tree canopy (City of Ottawa, 2019e).

Individual geotechnical assessments should be conducted at specific development sites to evaluate the range of soil conditions and its ability to support the proposed construction. Ultimately, establishing a buffer zone around natural features is ideal within the Orléans Study Area to maintain integrity of the environmental qualities and limit site interference. Restoring ecological corridors such as the Bilberry Creek watercourse is commendable to re-establish the natural landscape properties. Ultimately, the Orléans community and Study Area is composed of valuable natural features that should be distinguished and emphasized within the redesign of the community.

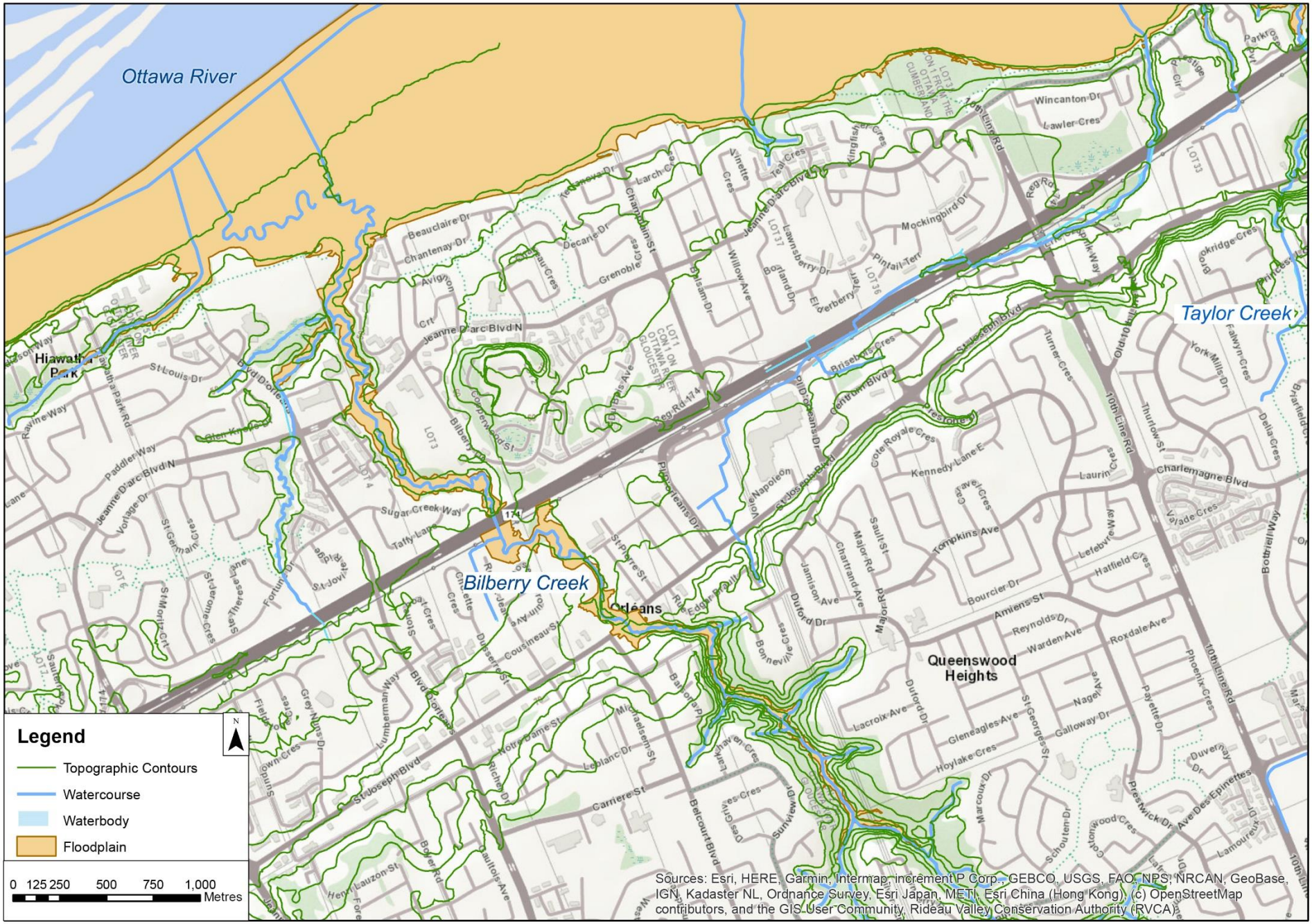


Figure 2.4d – Floodplain & topography of Orléans natural systems (RVCA, Ontario GeoHub, 2021).

2.5 Mobility

The City of Ottawa has set a major goal for sustainable mobility in the next quarter century. By 2046, over half the trips in Ottawa will be through sustainable means (essentially all modes other than single-person vehicle) (City of Ottawa, 2019d). However, there is much work to do in Orléans, as the suburb's low-density nature and current mobility network make supporting increased transit and transportation difficult at this stage. Furthermore, the selected Study Area Census Tracts (SACTs) are home to a smaller share of commuters via active transportation than Ottawa as a whole (28% compared to 31.7% respectively) (Statistics Canada, 2016; 2017).

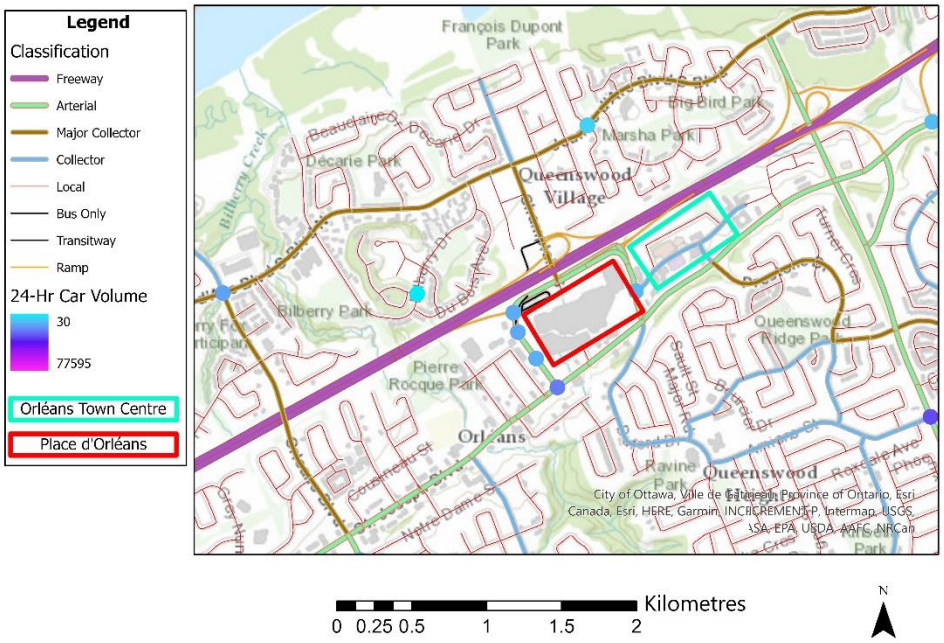


Figure 2.5a – Study Area Road Classification and 24-Hour Car Traffic Volumes (OpenOttawa, 2021e; 2021f).

2.5.1 Vehicular Traffic

As seen in Figure 2.5a, St. Joseph Blvd. and Tenth Line Rd. are designated as arterial roads, with more collectors located within neighbourhoods. The City of Ottawa only gathered traffic data for a handful of intersections in 2019, but traffic is heaviest along arterial roads and at intersections between higher order roads, as is expected. Long-distance drivers do not have to encounter local roads, so intersections like Bilberry Dr. and Quarry Ridge Dr. see far fewer cars than Tenth Line Rd. and Amiens St., for example. Figure 2.5b shows that collisions occurred more frequently in 2019 along higher order, higher speed roads (especially arterials and major collectors) than within residential neighbourhoods.

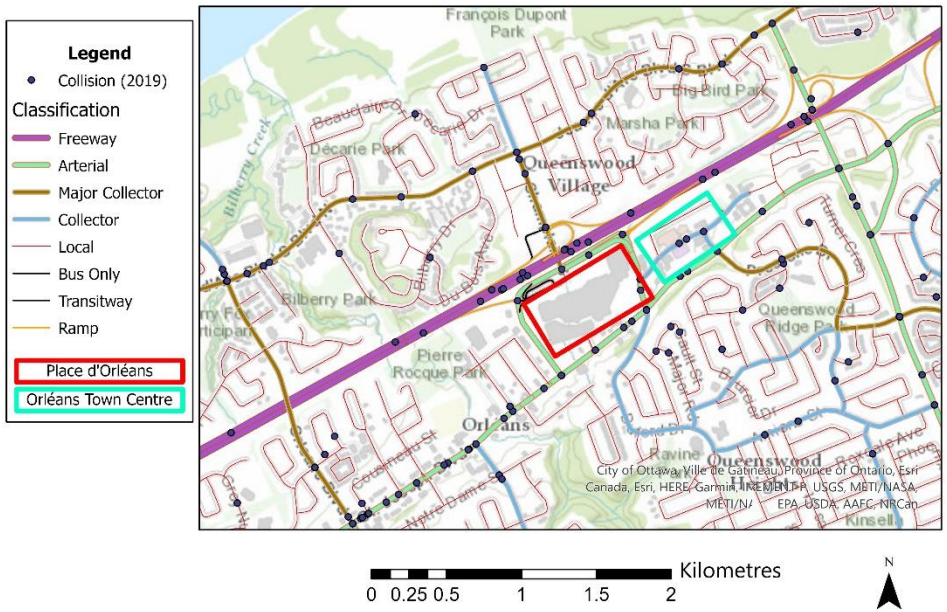


Figure 2.5b – Study Area Collision Locations (2019) (OpenOttawa, 2021e; 2021f).

While stretches of parkway-like, frequently winding streets make driving comfortable and visually pleasing, high-speed limits (even up

to 60 km/h on Jeanne d'Arc, which is not an arterial road) must be reconsidered as active transportation is encouraged across all road classes. Some possible solutions including lowering speed limits, widening sidewalks, adding traffic calming through planters and bulb-outs, and reducing traffic lanes in key pedestrian areas. Furthermore, six collisions occurred in the existing OTC in 2019 (Figure 2), so implementing appropriate traffic-calming measures – including clear pedestrian crossings and lower speed limits as vehicles enter the site from an arterial road – is essential to creating a safe multi-modal environment in a redesigned complex.

2.5.2 Pedestrian Traffic

As displayed in Figure 2.5c, sidewalks are located on arterial, major arterial, and collector roads. Some sidewalks are present on neighbourhood roads, while disconnected pedestrian pathways connect some parks and major roads to neighbourhoods. Unfortunately, the only nearby pedestrian and cycling connection between the north side of Highway 174 and the OTC is Champlain St. (Figures 2.5c & 2.5d). Considering this, both networks need to be expanded to transform the Study Area to be accessible to more residents. Furthermore, vehicle speeds on arterial and collector roads make long walks uncomfortable and unsafe. Thus, enhancing the pedestrian-friendliness of streetscapes along these roads (especially along St. Joseph Blvd) will be important in any proposal. This includes elements such as wide sidewalks, adequate buffering, protected bike lanes, and safe pedestrian crossings.

Only 0.5% of journeys to work in Study Area are completed by walking (compared to 7.4% for all of Ottawa) (Statistics Canada, 2016; 2017). However, this is more likely an indication of long commute distances rather than a lack of pedestrian infrastructure, as workers from Orléans have lengthier commutes than the rest of Ottawa and 19% of internal trips in Orléans are via walking (City of Ottawa, 2013c).

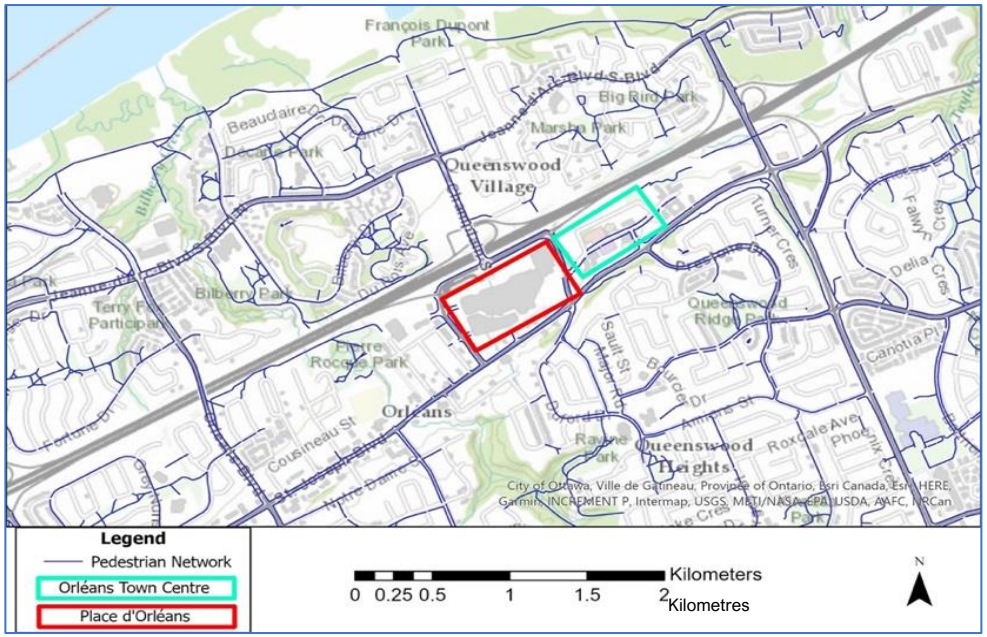


Figure 2.5c – Study Area Pedestrian Network (OpenOttawa, 2021d).

2.5.3 Cyclist Traffic

As of 2011, trips by bike comprise only 2% of internal journeys in Orléans while the city has set a goal of 3% for the year 2031 (City of Ottawa, 2013b). Unlike the pedestrian network, cycling-supportive infrastructure is mostly located away from major arterials and collectors (Figure 4). Recreational bike lanes and paths are located inside neighbourhoods, across parks, and along the Ottawa River.

Spreading out cycling infrastructure (including near the OTC, where there is none as shown in Figure 4) is crucial in supporting Ottawa's active transportation goals and encouraging mobility in all its forms

to and from the Orléans Town Centre. While cycling is not a common commuting mode on average across Ottawa (2.6%), the Study Area is home to even fewer cycling commuters (0.5%) (Statistics Canada, 2016; 2017).

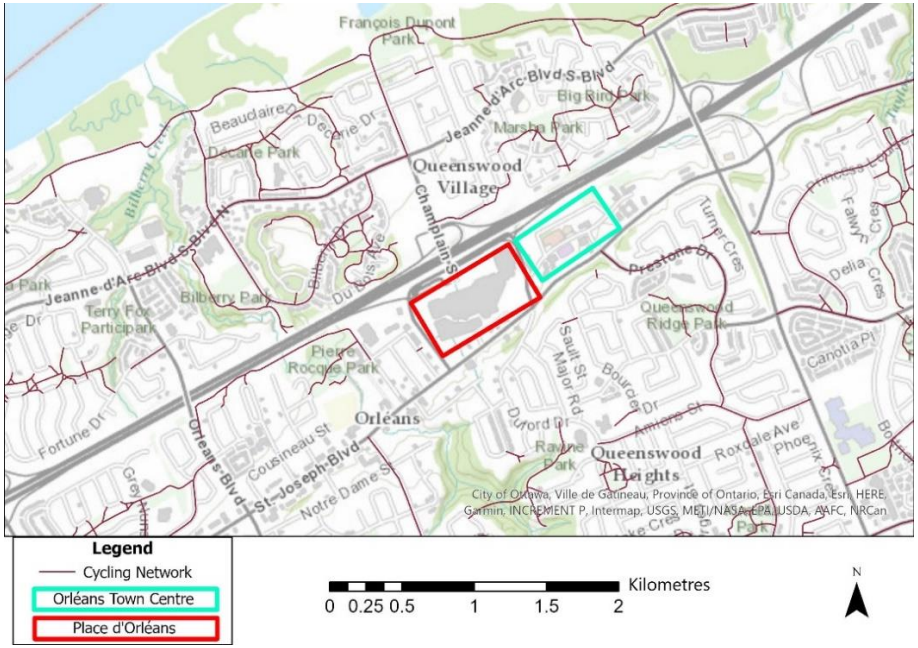


Figure 2.5d – Study Area Cycling Network (OpenOttawa, 2021d).

2.5.3 Public Transit

Looking at Figure 2.6e, the public transit network in the Study Area is shown, with future Confederation Line LRT stops located along the median of Highway 174. Fifteen OC Transpo bus routes currently serve the Study Area; a Transitway BRT station at Place d'Orléans is the terminus of rapid route #39 to Blair LRT station, while other rush-hour and less frequent routes (purple and grey/white, respectively, in Figure 2.5f) connect residents to the Transitway and future LRT along mostly arterial and collector roads (OC Transpo, n.d.B).

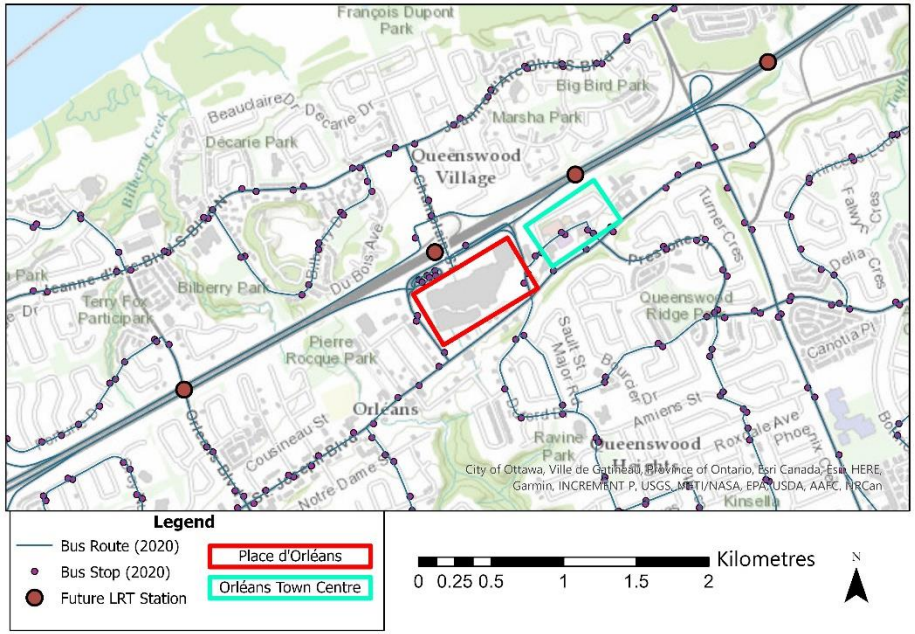


Figure 2.5e – Study Area Transit Network (OpenOttawa, 2021d).

Only a few local road segments (such as Chartrand Ave.) have bus service. However, adding the LRT via the Confederation Line East Expansion (with the station at Place d'Orléans, as shown in Figure 2.5g, due to be complete in 2024) should trigger a reorganization of bus routes and connectivity across Orléans. This would also justify the removal and redevelopment of the park and ride surface parking lot areas (City of Ottawa, n.d.A). Current plans include connecting the Place d'Orléans station in the median of Highway 174 to the existing shopping centre, Transitway bus loop, and to the surrounding communities via entrances on Champlain Street, a footpath to Bilberry Drive, and an existing footbridge (City of Ottawa, n.d.A, n.d.B).

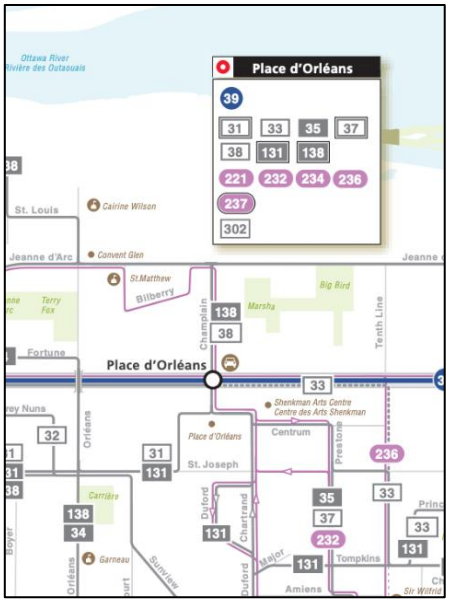


Figure 2.5f – Current OC Transpo Network Map (OC Transpo, n.d.A).

Figure 2.5g – Rendering of the Place d'Orléans LRT Station currently under construction to be complete in 2024, located in the median of Highway 174, connecting to the north via pedestrian bridge (The Heart of Orléans, n.d.).

While Figure 2.5e does show a decent distribution of bus routes into the Study Area neighbourhoods, there are several gaps along the northernmost portions. These will be areas of focus to draw those residents to the OTC. Furthermore, no route in the Study Area is designated a "Frequent" service (at least every 15 minutes throughout most of the day) with an orange hexagon symbol (OC Transpo, n.d.B). Interestingly, despite having a lower share of active transportation in commuting patterns, the Study Area has a higher rate of public transit commuting than the City of Ottawa as a whole (24.95% versus 20.6%) (Statistics Canada, 2016, 2017).

While existing Transitway service from Orléans works well at helping commuters travel downtown via Blair, transit must be both proximate and frequent to be a viable transport mode within neighbourhoods. Therefore, designating a current route as "Frequent" or creating a new "express" route within Orléans are items to explore. Also, the OTC would also benefit from connections to routes that reach out to different parts of Orléans.

2.6 Demographics

Demographic analyses of the subject area and surrounding region can reveal local trends and inform future needs. The *New OP* and the 15 Minute-Neighbourhood framework directs us to take a closer look at who lives in our communities, what their needs are, and how the built form can support. Changes in demographics also influence the mix of services provided by the City of Ottawa to its residents (City of Ottawa, 2011).

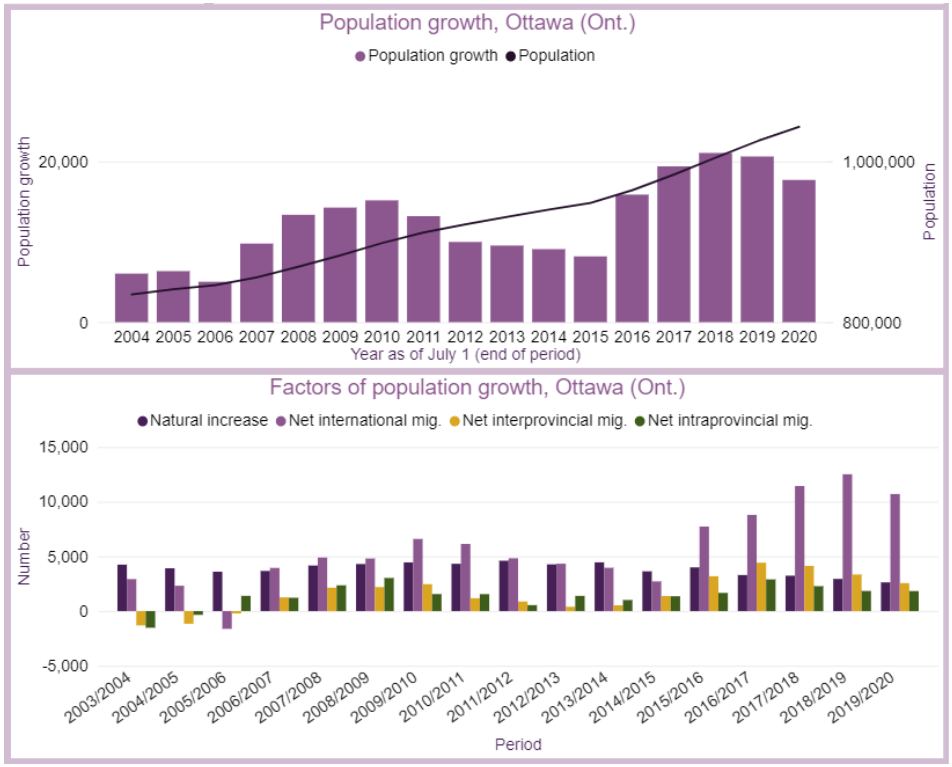


Figure 2.6a – Annual demographic estimates, census divisions: Interactive dashboard (Statistics Canada, 2021).

The Ottawa census division has seen continuous growth in recent years, with its population increasing by 16% over a 10-year period to 1,043,130 as of July 1, 2020 (Statistics Canada, 2021). Figure 2.6b shows yearly trends and reveals that net international migration has been the greatest and most fluctuating factor of population growth.

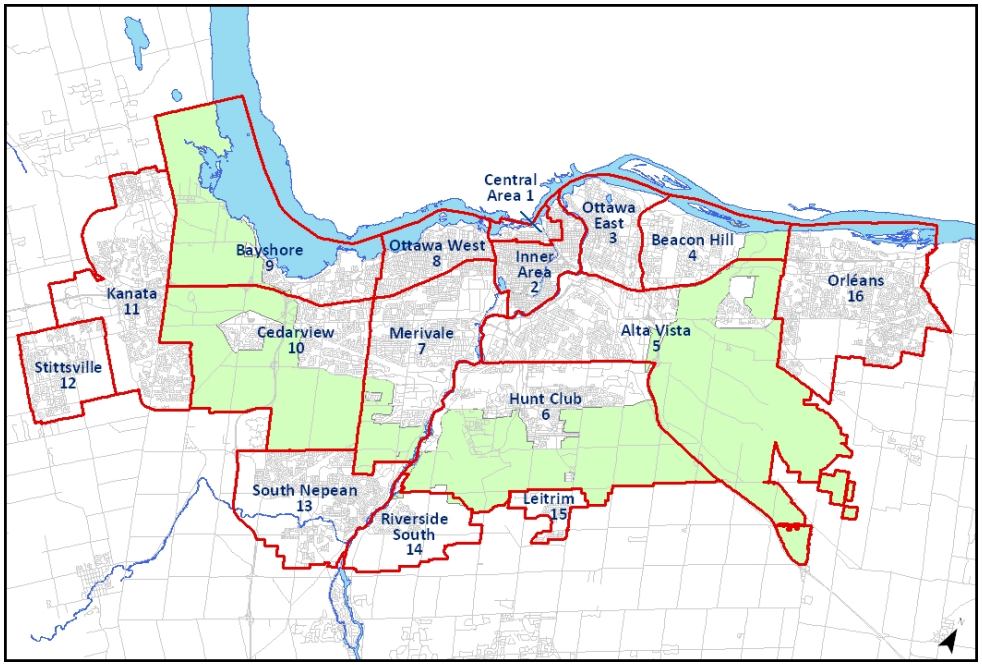


Figure 2.6b – Urban Sub-Areas of the City of Ottawa

With a population of over 100,000, Orléans is comparable to Kanata and Gatineau as a major suburban centre in the NCR. According to the City of Ottawa's current estimates for mid-2021, the Orléans Urban Sub-Area (number 16 in Figure 2.6b) has a population of 124,250 and 49,040 households (City of Ottawa, 2001-2021).

Orléans observed an estimated 6% population increase from 2011 to 2016 (City of Ottawa, 2011; 2016a). By comparison, Canada's population grew by 5%, Ontario's by 4.6%, and the Ottawa-Gatineau CMAs by 5.5% over the same period (Statistics Canada, 2016).

2.6.1 Growth Projections

The City of Ottawa's *New OP* is guided by growth projection models for a 28-year period from July 2018 to July 2046. Three scenarios were developed that resulted in projections of population growth ranging from 264,000 persons (26%) to 579,000 (57%) in this period. Ottawa City Council adopted the medium projection with the addition of 402,000 persons (40% growth). With this estimate, the projected housing requirements was estimated to be 194,800 new private households (48% growth) by 2046. Whilst also considering commuters from outlying regions, an additional 827,000 new jobs (30% growth) were projected (City of Ottawa, 2019c).

The City of Ottawa's *Growth Management Strategy* and *New OP* set intensification targets resulting in 51% of urban residential growth to be within the built-up area from 2018-2046 (City of Ottawa, 2020; 2021k). This intensification will support 15-Minute Neighbourhoods by directing growth to designated Hubs and Corridors, where the majority of services and amenities are located, as well as the portion of neighbourhoods within a short walk to those Hubs and Corridors. Intensification within the Study Area especially important for the *New OP* as the Study Area encompasses both of these designations.

It is anticipated that 47% of that growth will be allocated for urban, built-up areas. A targeted breakdown of each dwelling type to be constructed is also being set, with 34% single-detached, 3% semi-detached, 36% rowhouses, and 27% apartments (City of Ottawa, 2019c). This uniform approach is being applied to all lands in the General Urban Area. Nonetheless, actual development will continue to be guided by local market trends in addition to policy guidelines and restrictions.

2.6.2 Household Composition

At 2.8 persons, the average Orléans household is larger than households in the City of Ottawa (2.5) or Ville de Gatineau (2.3). Half of households have children, 10% more than the regional average. The percentage of one-person households (16.9%) is comparable to Kanata and lower than the CMA average (28.5%). However, there is a higher percentage of married people in Kanata than Orléans (Statistics Canada, 2016). Household sizes and ages also vary within Orléans, with larger and younger households in the south and east areas, and a higher percentage of people living alone in northern neighbourhoods (City of Ottawa, 2021k).

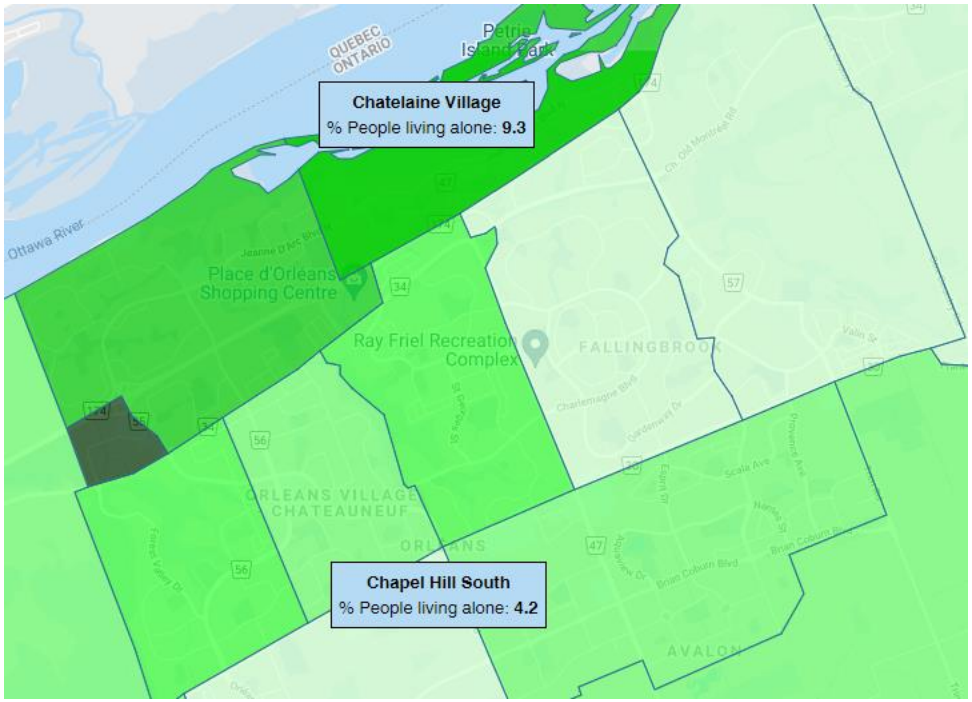


Figure 2.6c – Percentage of people living alone (City of Ottawa, 2021k).

2.6.3 Housing Propensity

Orléans has a high home ownership rate and a corresponding lower percentage of renter households. Housing mobility is low, with 34% having moved in the last 5 years, and 11% having moved in the last year. While single-detached houses are the most common type of private dwelling, row houses are significantly more common choice in Orléans (30%) than in Ottawa as a whole (20%) or Gatineau (6%). However, Orléans residents are less likely to live in apartments or semi-detached houses (Statistics Canada, 2016).

Average values of dwellings are higher in Orléans than Gatineau, but lower than Ottawa and Kanata. A partial survey of occupied private dwellings in Orléans indicates a higher number of newer units than in Gatineau, despite the same data showing that units are comparatively newer in Gatineau than Ottawa as a whole (Statistics Canada, 2016). Median monthly rents in Orléans are higher than most areas within the Greenbelt, but still comparable to other regions outside. Rents in the subject area are close to the Ottawa average (City of Ottawa, 2021k).

2.6.4 Language and Ethnicity

Along with Vanier, Orléans is a French-positive region of Ottawa, having a higher proportion of French-first and French-only speakers. Over 50% of residents east of the Greenbelt are bilingual in English and French. However, Orléans has a lower percentage of first- or second-generation immigrants than the Ottawa average. Its racialized residents are more concentrated in newer outskirt neighbourhoods (City of Ottawa, 2021k). A partial sample of recent immigrants in Orléans lists Haiti (11.6%), the Philippines (5.6%), and Lebanon (4.7%) as their most prevalent places of birth. Orléans also stands out in the Ottawa-Gatineau region with a greater proportion

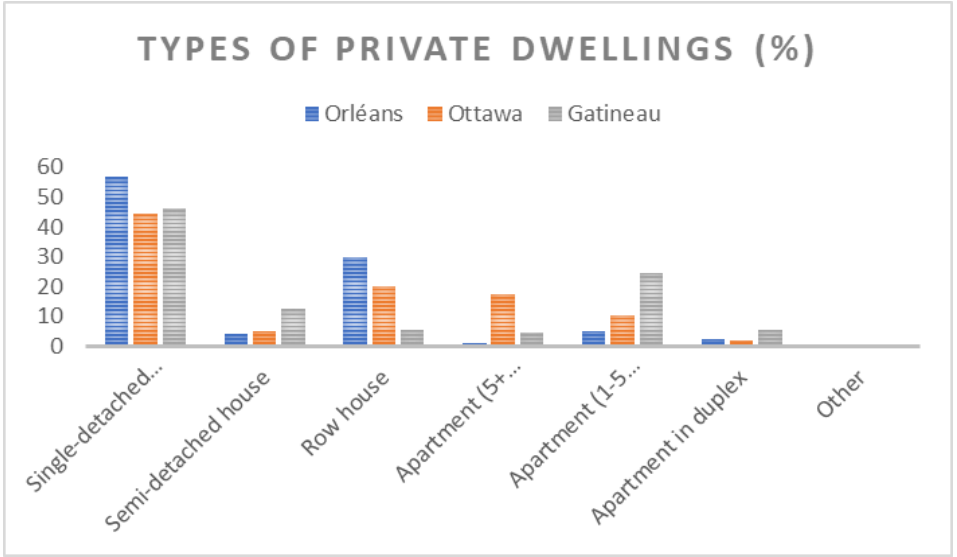


Figure 2.6d– Occupied private dwellings by structural type of dwelling (Statistics Canada, 2016).

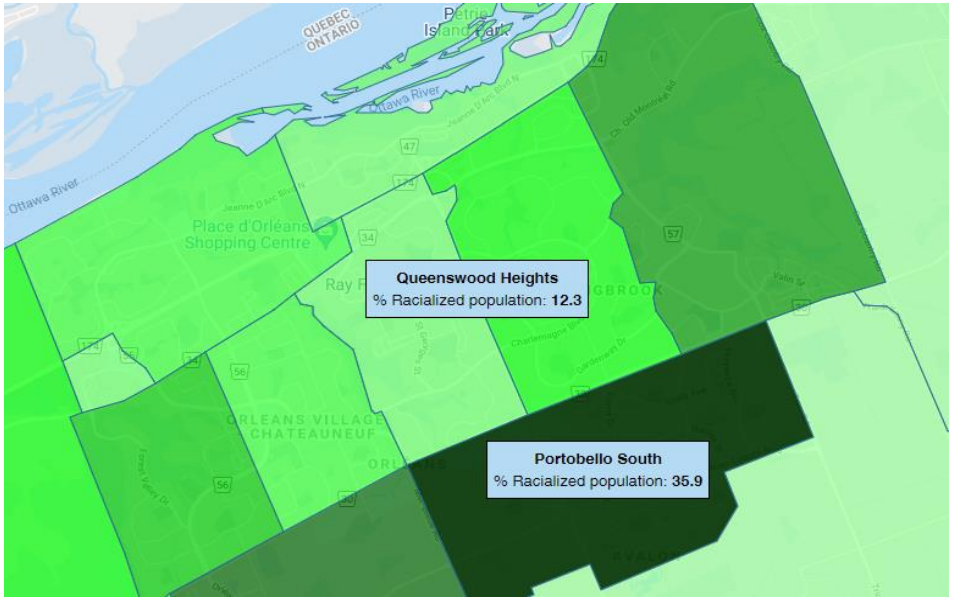


Figure 2.6e – Percentage of racialized population (City of Ottawa, 2021k).

of Black and South Asian visible minorities than the regional average. (Statistics Canada, 2016).

2.6.5 Implications for Planning and Design

As a Francophone-majority community with fewer immigrants, its growth is strongly influenced by its ability to attract newcomers from the surrounding region while retaining its residents. Orléans is comparable to Kanata in population and household composition but not in its linguistic and ethnical makeup. However, with Orléans' high level of home ownership and high housing price level, with few expensive rental options, there is a lack of housing options for incoming residents.

Local rates of high home ownership should not be generalized as a market demand for a single form, and statistics show that dwelling type may be a secondary factor to the number of bedrooms in choice of dwelling. As showcased in the City of Ottawa's 613 Flats strategy, new residences in established neighbourhoods can provide additional housing choice. However, the timeframe for implementation will depend on the willingness of existing homeowners to redevelop their properties.

Efforts should be made as well to accommodate different cultural living arrangements and make room for inter-generational households. The subject area encompasses neighbourhoods with older residents and more people living alone. New residents can bring new life to older community centres. However, care must be taken in ensuring that redeveloped public squares and civic amenities are age-friendly and age-appropriate.

2.7 Existing Land Uses

2.7.1 Key Landmarks

The most notable character element of the study space is the Paroisse St-Joseph d'Orléans church along St. Joseph Boulevard. This iconic element of the old Franco- Ontarian village will help in defining the design character of the area for future development. Another prominent element of the Study Area is the Place d'Orléans LRT Station. This landmark, defined by the pedestrian overpass, is a central node for neighbourhoods on both sides of the highway.

2.7.2 Retail Land Use

The Study Area is anchored by the Place d'Orléans regional shopping centre. This shopping centre is an indoor mall connected via a pedestrian overpass to the future LRT station, currently operating as a BRT station. Surrounded by parking lots, this mall provides a variety of retail outlets as well as a newly renovated food court. Along St. Joseph, there are many strip malls and free-standing retail outlets that are setback from the main street to make room for storefront parking lots. This feature of the built form restricts pedestrian access, attributing to the lower pedestrian environment score indicated in the 15-Minute Neighbourhood Baseline Study (City of Ottawa, 2021a). There are many vacant units along St. Joseph as well as dilapidated buildings. There is also an abundance of car- related repair and mechanic shops along St. Joseph, further contributing to the car- oriented nature of the area. The lack of accessible retail and restaurant space within the Study Area presents the opportunity to guide future redevelopment towards the goals of a 15-Minute Neighbourhood. This will be further discussed within Section 2.8 of the report.

Figure 2.7a – Existing retail locations in Study Area.

2.7.3 Office Space Land Use

There are currently no existing office buildings within the Study Area except for a few office spaces in converted free standing dwellings, and the Orléans Medico-Dental Centre building along St. Joseph Blvd. Knowledge-based employment space is extremely limited (except for the upper floors of Place d'Orléans) and forces residents to travel elsewhere for employment within this sector.

Figure 2.7b – Existing residential home office space in Study Area.

2.7.4 Residential Land Use

The majority of residential building types in the area consists of low-density, single- detached homes within the surrounding neighbourhoods adjacent to the OTC. The housing is located in the suburban enclaves separated from St. Joseph Blvd by the bordering escarpment and Highway 174. Along St. Joseph and directly adjacent, there is very little residential development with the exception of a townhome neighbourhood approximate to Jeanne d'Arc Boulevard.

There are also some semi-detached houses and townhomes which can be found in the newer Orléans Village neighbourhood (located south of St. Joseph Boulevard and west of Bilberry Creek), whereas Queenswood Heights (located south of St. Joseph Blvd and east of Bilberry Creek), an older suburb, is almost completely homogenous in its single-detached housing type.

Figure 2.7c – Existing residential development in Study Area.

2.7.5 Institutional Land Use

The institutional uses surrounding the site include several schools, and the Paroisse St. Joseph d'Orléans Church and Cemetery. Within the surrounding neighbourhoods, there are a variety of schools ranging from elementary to secondary, including the four primary school boards: English Catholic, French Catholic, English Public, and French Public. As noted in Figure 2.7d, there are four schools within the Study Area as delineated by the walkshed analysis. A site visit was completed to observe the existing conditions of the site, as well as how individuals interacted with both private and public spaces. During this site visit, which coincided with the end of the school day, children were seen walking and biking home from school in the Orléans Village neighbourhood (see Figure 2.7f). The schools also provide significant greenspace in the form of fields, enclosed and open access facilities (see Figure 2.7e). However, it was noted from the site visit that high school locations, college campuses, or satellite university campus locations were not present in the study area.

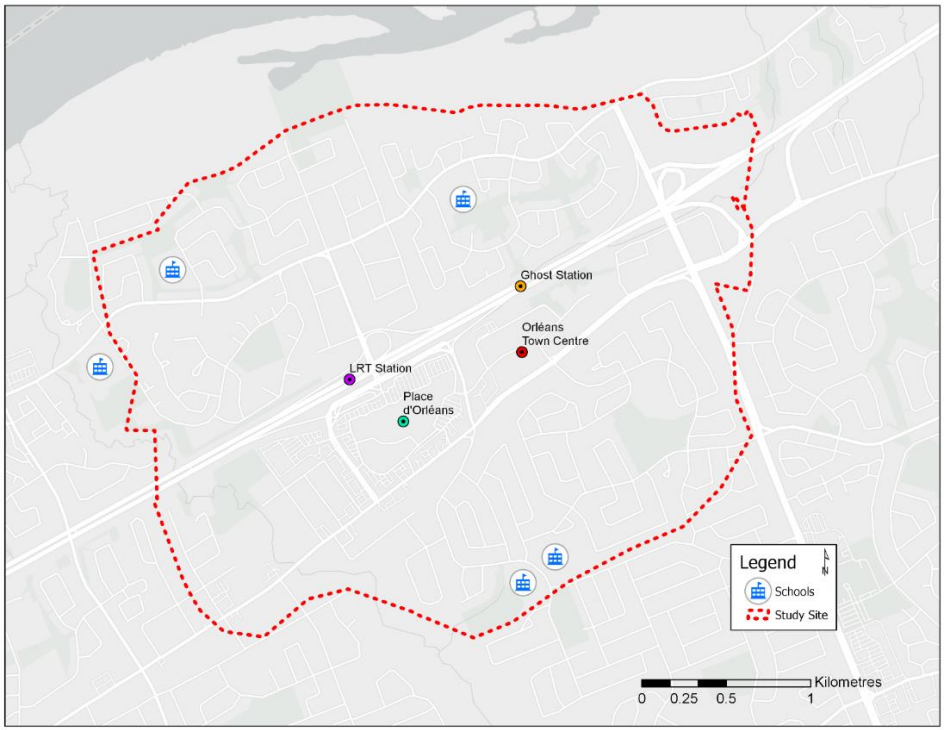


Figure 2.7d – This map indicates the presence of four schools within the boundaries of the Study Area. There is also a school, St. Matthew High School, which sits just outside of the study site (west of the Study Area). This school is shown due to its immediate proximity to the study site and the potential of planning measures improving the walkability of the Study Area leading to its inclusion in the 15-minute walkshed.

Figure 2.7e – Soccer field of École élémentaire catholique Reine-des-Bois with an open access facility accessible via neighbouring path networks.

Figure 2.7f – Children walking home from school along the separated sidewalks in the Orléans Village neighbourhood.

Figure 2.7g – Schools in close proximity to one another with a lack of crossing areas for children.

The church along St. Joseph Boulevard serves as a key landmark within the Study Area, both as a longstanding symbol for the small, Franco-Ontarian village that the area once was, as well in anchoring the visual sightlines along St. Joseph Boulevard. Celebrating its centennial anniversary in 2022, this church is an important piece of history to the area and the Francophone Catholic community. Farming communities were historically designed and planned with the centrepiece and key landmark feature being the church. The spire of the church also plays a role as a landmark and wayfinding feature. Its height allows for the spire to be seen above the surrounding buildings both east and west along St. Joseph Boulevard.

The cultural heritage value of the church is supported by the *Ontario Heritage Act, 1990*. Features of the church, both its physical stature on St. Joseph Boulevard, and the cultural history it represents, meet multiple criteria listed under Section 2 of the *Ontario Heritage Act, 1990*. The cultural heritage value of the church, supported by provincial legislation, provides functional reasoning for the church to be protected, both physically as it stands, and through urban design and land use policies directing development that may impact the viewshed of the spire. It has been noted however, that this property has not been formally designated under Part IV of the *Ontario Heritage Act.* As such, based upon the aforementioned cultural heritage value, it would be recommended that this property be formally designated.

Figure 2.7h – Existing Paroisse St. Joseph d'Orléans Church.

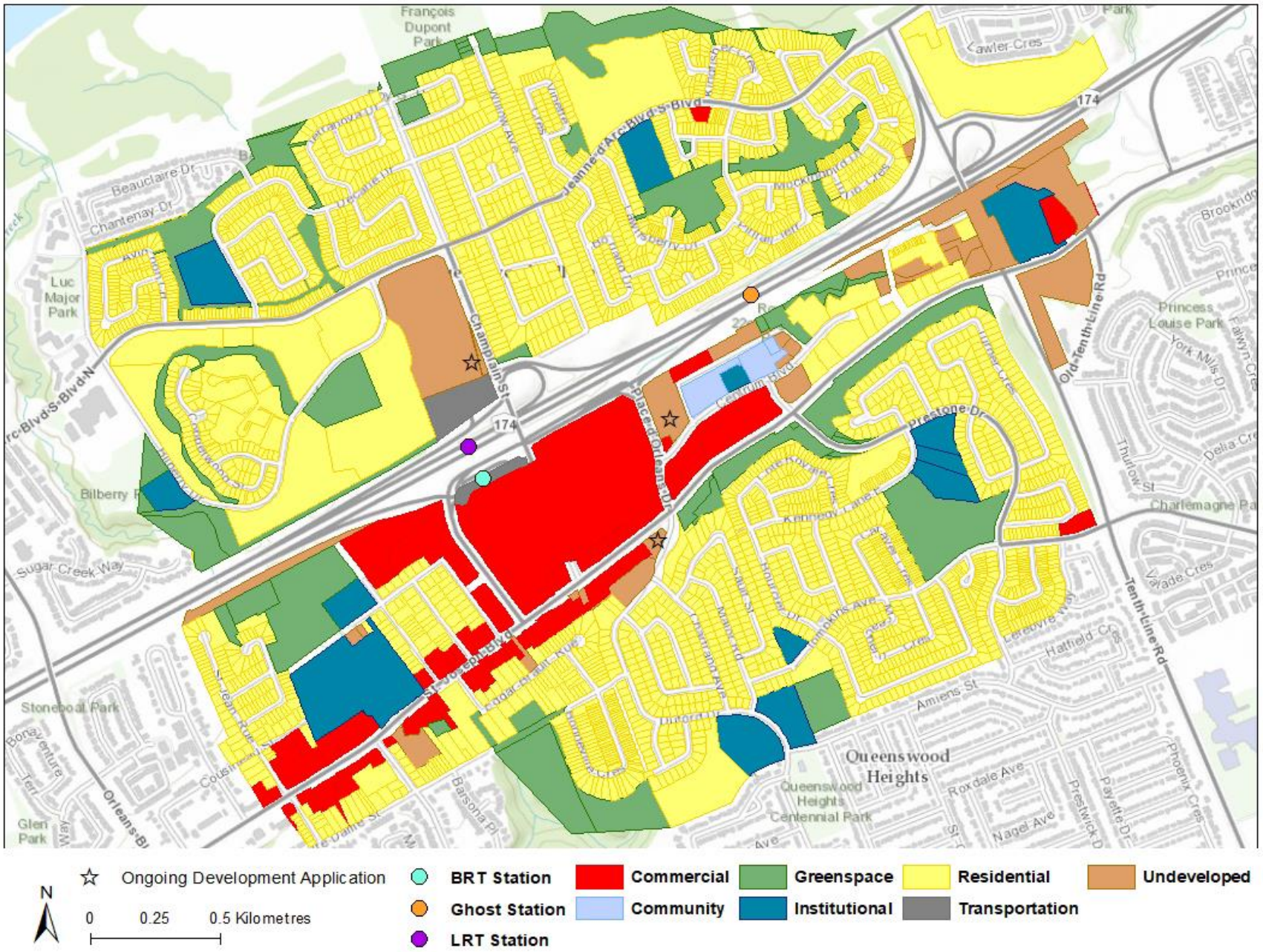


Figure 2.7h – Existing Land Uses within the OTC Study Area by parcel. Various land uses are present however there is limited mixing of the uses as visible by the distinct blocks of separate usages.

2.8 Employment and Market Analysis

2.8.1 Income Level of Residents

Based upon the 2016 Federal Census, the median pre-tax individual and household annual income within Orléans sits at $48,734 and $106,391, respectively. When using the benchmark of $60,000 per household for the poverty line, most households within Orléans are reporting to be above the poverty line, at 81%, above the Ottawa average, with many of the households above $100,000 in household income (Statistics Canada, 2021). The neighbourhoods directly surrounding the Study Area, Chatelaine Village, Convent Glen – Orléans Woods, and Queenswood Heights, follow these median income levels. The low-income prevalence among adults in these communities is well below the average for the GOA, averaging at 3.7% compared to 10.7% for Ottawa (City of Ottawa, 2021k).

Regarding home ownership, most residents in the Study Area are homeowners, with 85.4% of residents residing in private dwellings versus rental dwellings (CMHC, 2021). The construction of the Place d'Orléans LRT station should foster further commercial and residential improvements in the Study Area, fostering increased housing selection and stock, connectivity, and location efficiency (EPA, 2011).

Table 2.8a – Population, Unemployment, and Median Household Income AT for Study Area neighbourhoods (City of Ottawa, 2021k).

Neighbourhood Location	Population	Unemployment Rate	Median Household Income AT
Chatelaine Village	4,210	6.2%	$78,504
Convent Glen – Orléans Woods	14,785	7.2%	$80,530
Queenswood Heights	12,240	5.8%	$85,416
OTTAWA	916,855	7.2%	$73,836

2.8.2 Employment Levels

Considering the existing neighbourhoods within the Study Area, the median age of 45.7 years of age is significantly higher than the Ottawa average of 39.5 years of age. Considering the older age of the community and the high level of government position employment which likely lead to pension income, the labour participation rate average of 63.8% (compared with 67.5% of Ottawa) is as expected. However, an item to note is that there are less than 50 listed federal government jobs in Orléans, making up 0.04% of Ottawa's total federal government jobs and only 599 jobs within advanced technology, making up 1% of Ottawa's total (Balance Orléans, 2020). Due to this, 80% of the Orléans resident labour force commute outside of Orléans to work. The top employment industries that exist within the Study Area in Orléans is Retail, Accommodation, and Recreation at 29.3% and Healthcare and Social Assistance at 20.6%. Compared to the Ottawa average of 19.2% and 9.7%, respectively, the employment opportunities

within Orléans which provide medium to high income salaries are severely limited in nature (City of Ottawa, 2021k).

Comparatively, the employment profile of residents within the Study Area are heavily dominated by Public Administration (13.6%) (see Figure 2.8b), where 1547 residents are reported to be employed within Public Administration. However, as previously mentioned, residents must commute out of Orléans for these positions. This then inevitably leads to an increase in transportation into and out of the region daily due to the commuter nature of employment. This necessity of commute to work also places pressure on the combined housing and transportation costs of residents, influencing affordability of the Study Area. Within the Study Area, of the residents which travel to work, 68.4% drove a private vehicle, 25.3% took public transit, 2.5% walked, and 0.9% cycled (City of Ottawa, 2021k) (see Figure 2.8c). It is important to note that the level of public transit being utilized for commuting is higher than the Ottawa CMA average, which aligns with utilization goals of the Place d'Orléans LRT station.

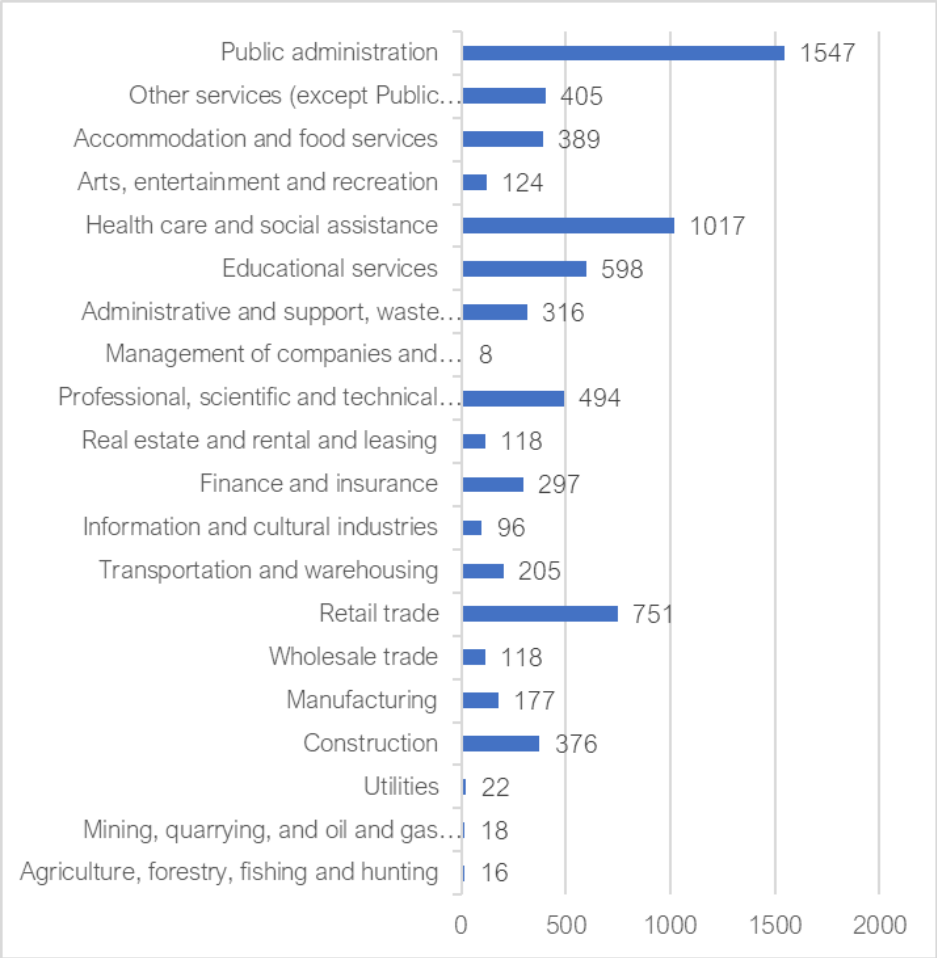


Figure 2.8b – Employment profile of residents in Study Area (City of Ottawa, 2021k).

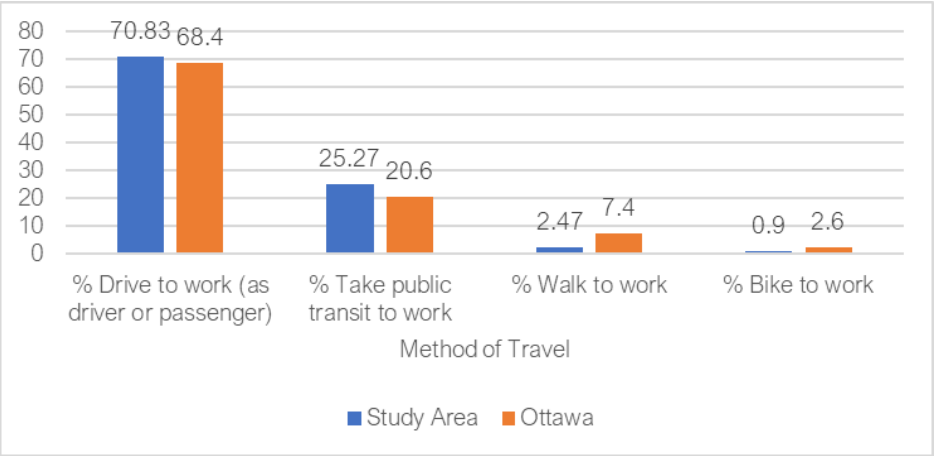


Figure 2.8c – Comparison of transportation methods for commuting to work (City of Ottawa, 2021k).

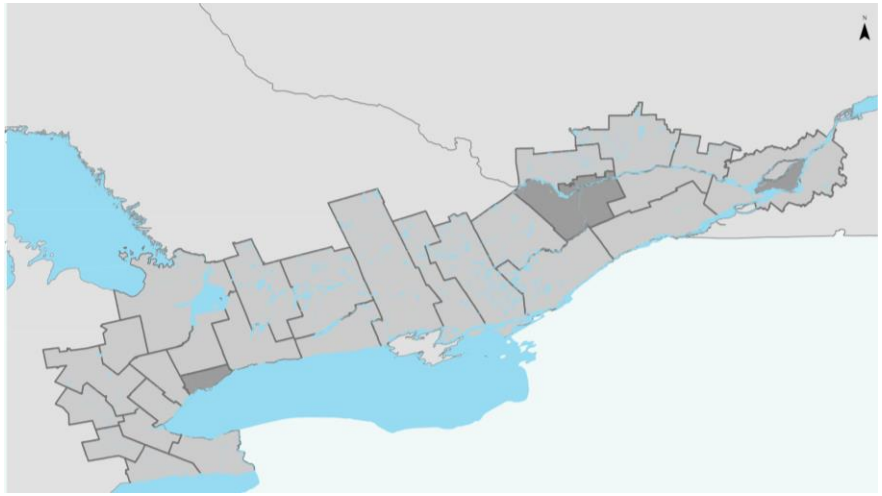


Figure 2.8d – Ottawa's Mega-Region Boundary (City of Ottawa, 2019d).

2.8.3 Implications for Planning and Design

To begin, employment within the OTC geographic area would benefit from diversification of employment, broadening the amount of employment opportunities available locally. The focus should be within targeted sectors as well such as advanced technology as Orléans has the potential to become an attractive location for satellite offices and hubs. This is due to the high level of grey-field area surrounding the study site, the proximity to the major roadway Highway 174 (Queensway) which connects Orléans to Highway 417 and to downtown Ottawa as well, as well as the introduction of the Place d'Orléans LRT station. This is discussed in *Ottawa Next Beyond 2036*, where the knowledge-based and specialty vocation industry are the targets for employment growth under the Mega-Region Scenario for future development (City of Ottawa, 2019d).

Regarding the income level of residents in the Study Area, the median household income AT is higher than the Ottawa average, with 52.3% of residents' household income being above $100,000 (City of Ottawa, 2021k). There is a high degree of home ownership as well, at 85.4%, however considering the lack of rental housing, housing affordability would be an issue for first-time homebuyers as well as immigrants and incoming middle-class workers.

Due to this, there may be an outflow of younger people and new graduates, moving to more affordable areas which have a greater rental supply. Immigrants as well may choose to move towards different regions of Ottawa which have greater affordability as well as a greater level of cultural mix. The community makeup of Orléans is largely made up of persons not identifying as a visible minority (81.1%), non-immigrant (84.4%), and educated (with at least a high school level of education) (88.9%) (City of Ottawa, 2021k).

As mentioned in Section 2.6.5, growth will be strongly influenced through the ability to attract newcomers to the area. This can be partially addressed by introducing a variety of type of residential developments, higher density, and a mix of ownership and rental.

Another interesting item of note for the Study Area, however, would be the high level of residents with French as their mother tongue, at 30.4%, versus 50.9% of residents who speak English as their mother tongue (Statistics Canada, 2016). There is a historical relevance of the OTC, previously being the Francophone village of Saint-Joseph d'Orléans, which can be bolstered and promoted to help transform Orléans into a 'destination location'. This unique Francophone history can help to inform place making opportunities within the public realm and can be used in the promotion of the area. This would align with the target of growth being promoted within suburban neighbourhoods and in creating an urban village feeling (City of Ottawa, 2019d). The higher percentage of francophone speakers also would provide a strong employment base for Federal Government positions which require bilingualism in French and English.

2.8.4 Residential Market

The existing housing market in Orléans is quite strong, seeing significant gains in pricing in the last two decades. From 2019 to 2020, the average selling price of dwellings rose 33.3% ($496,711 in 2020 from $372,561 in 2019). The average price of condominiums also rose 42.9% in this same period (Agent in Ottawa, Realtors, 2021). This is reflective of the Canadian housing market, which has seen unprecedented climbs in housing and condominium prices, especially within and approximate to downtown cores.

When compared against other suburban regions near downtown cores, such as Mississauga and the Greater Toronto Area, a rise of 20.4% and 19.1% in average price is seen, respectively, which are both lower year-over-year increases than within Orléans (CREA, 2021). Looking at the rental market within Orléans, the proportion of renter households is significantly lower than Ottawa in general, sitting at 14.8% compared to 34.3%. However, this does not appear to be due to a lack of demand, as the vacancy rates of rental apartments within Orléans currently sits at 1.6%, significantly lower than the Ottawa level of 3.8%, and has fallen from 2.1% year over year from 2019 to 2020 (CMHC – Gloucester/Western Orléans, 2020). Within the defined Study Area, these figures are roughly the same, with owner occupied dwellings at 83.3% and renter occupied dwellings at 16.7%. Also, within the Study Area, it is important to note that most of the households were occupied by 2 or less persons (62.71%) as well as the age skew towards older cohorts, with the median age of 45.7 years old.

This indicates that there may be a surplus of housing supply for current residents, where older residents without children occupy low-density housing following the moving out of children (City of Ottawa, 2021k). This may also indicate an increased need for seniors' accommodations, exemplified by the recent increase in applications for this type of development.

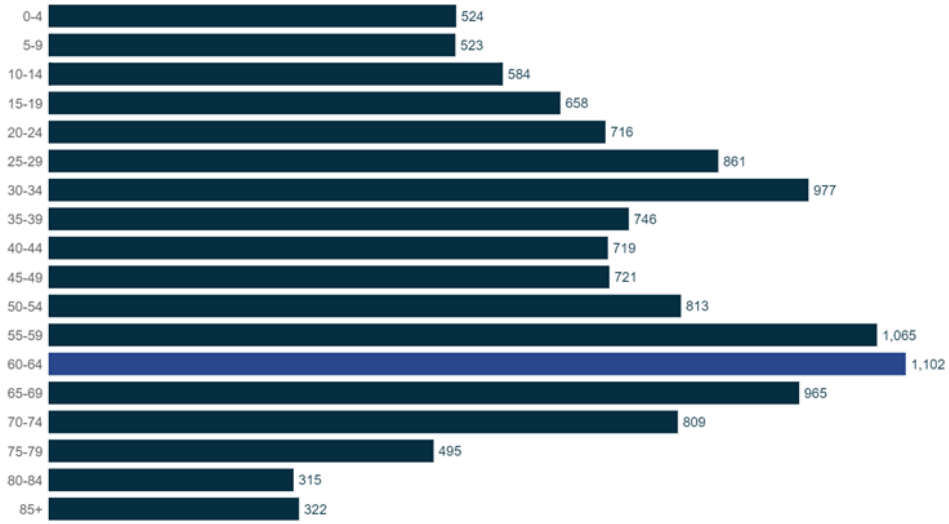


Figure 2.8e – Age groups in Study Area (City of Ottawa, 2021k).

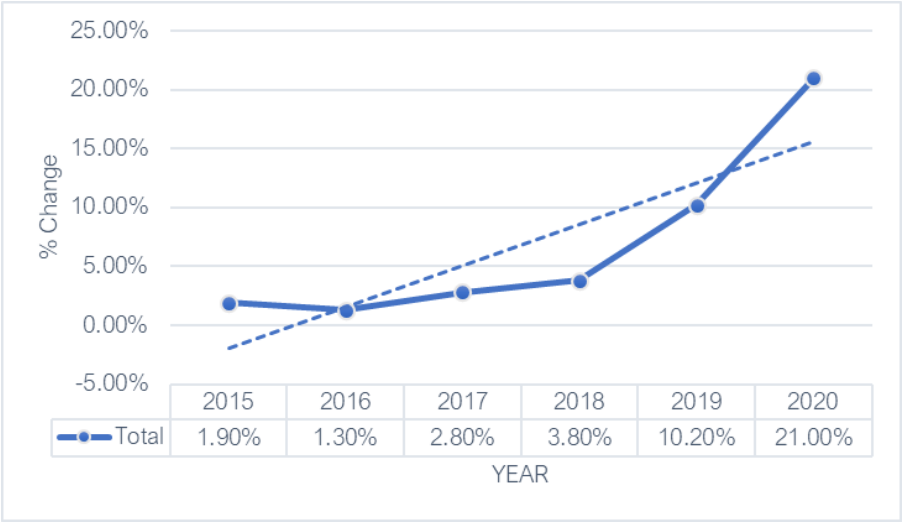


Figure 2.8f – Housing real estate market price level trend (Source: Agent in Ottawa, Realtors, 2021).

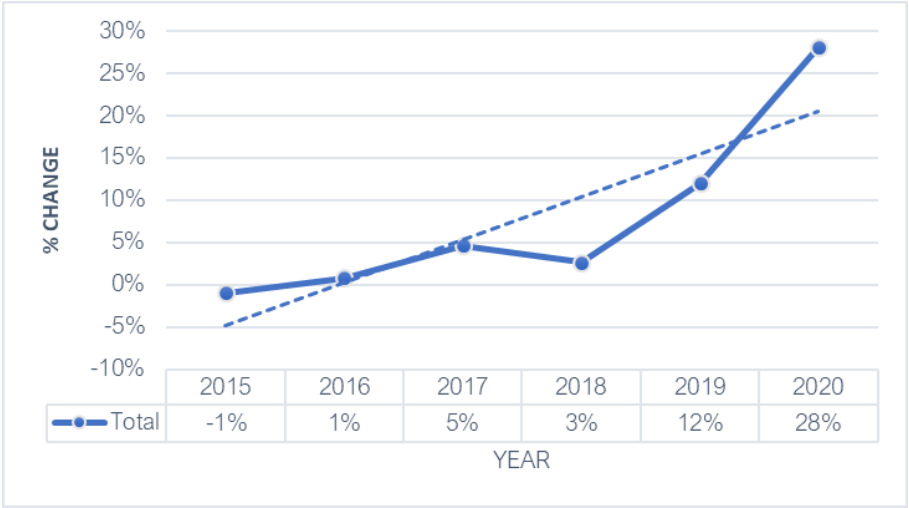


Figure 2.8g – Condominium real estate market price level trend (Source: Agent in Ottawa, Realtors, 2021).

2.8.5 Commercial and Office Market

Currently, the existing commercial locations within the Study Area is largely formed by Health Care and Social Services as well as Retail and Other Services (see Figure 2.8h), lacking in industries which Orléans is looking to target. The built form of the Study Area is largely made up of single-use commercial locations of approximately 1-2 storeys in height, with a small amount of higher commercial or office buildings.

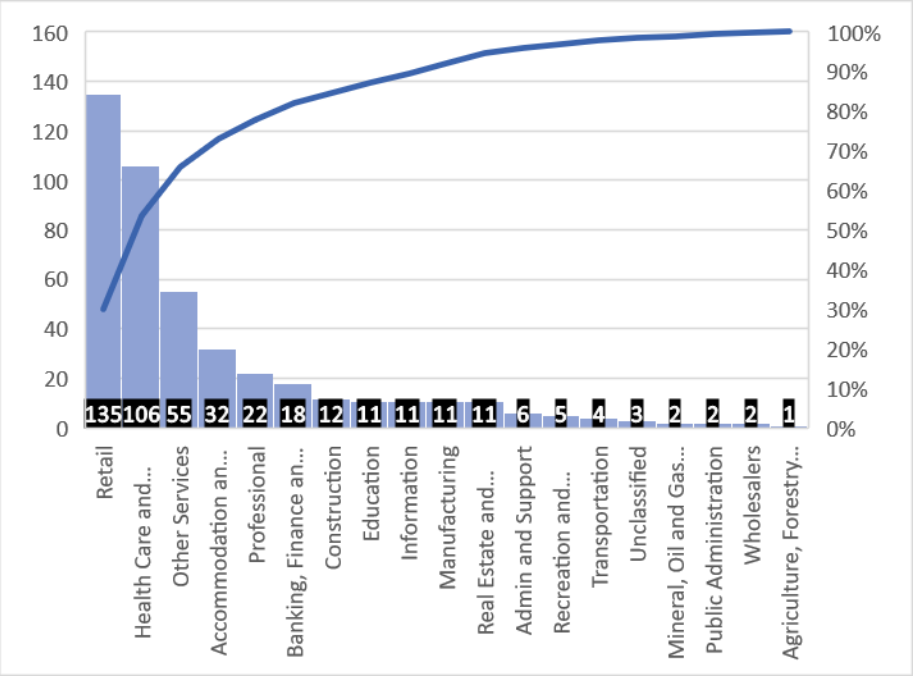


Figure 2.8h – Business Types by Category (City of Ottawa, 2021k).

In terms of vacancy rates, within the Eastern Region of the GOA, where the site area is located, the vacancy of all classes of office buildings is 16.8%, significantly higher than any other demarcated suburban region (13.4% for Fringe Core, 9.2% for South/Airport, 6.6% for West, and 11.2% for Kanata) (GOA Office Market Report – Q4 2020, 2021). This trend also continues for commercial locations, with the Eastern Region of the GOA having the highest vacancy rates. This indicates a relatively weak office market within the Study Area.

When performing on-location site visits within the subject area, this vacancy trend was apparent, with many retail and office locations displaying 'For Lease' signage, looked in need of repair, and were lacking in general foot traffic (see Figure 2.8i). There were also no new commercial or office buildings that were currently under construction in the Study Area. The main retail activity noticed was surrounding the Place d'Orléans Shopping Centre.

Figure 2.8i – Images of commercial rental area located within OTC.

2.8.6 Place d'Orléans Shopping Centre

The Place d'Orléans shopping mall and office building is one of the largest shopping centres in the Ottawa-Gatineau CMA and is host to over 140 shops and services. It is owned by H&R REIT and operated by Primaris Management Inc. The mall is located on a parcel of 17.4 Ha and was developed in several different phases between the years of 1979 and 1999. It is anchored by several retail locations, including Hudson's Bay, FarmBoy, Sport Chek, and Goodlife Fitness. It is over 65,590 m^2 in size on its ground level area. It also has second floor office locations as well as a pedestrian bridge which crosses over Highway 174 to a bus transit terminal and car-pool parking lot. This pedestrian bridge will also provide access to the upcoming Place d'Orléans LRT station.

Figure 2.8j – Image inside the Place d'Orléans shopping centre.

Shopping centre productivity numbers were provided for non-anchor retail locations, reporting as commercial retail units (CRUs). In December of 2019, Place d'Orléans reported a CRU productivity of $481 per square foot, which sits around the median of surrounding Ottawa region mall locations. There are currently 116,553 residents listed in the PTA and 72,501 residents in the STA. With the average household income in the PTA as $119,000, fashion spending potential in trade area is $2,401 per household. Considering the annual traffic to mall at approximately 5,824,000, there is significant potential for revenue (Place d'Orléans Fact Sheet, 2020).

Figure 2.8k – Image inside pedestrian bridge from Place d'Orléans.

2.8.7 Implications for Planning and Design

The first item to note is the fragmentation within the commercial and office market. As can be seen in Appendix A – Policy 18, showing the Integrated Orléans Community Improvement Plan, the defined properties with commercial zoning are fragmented throughout the community. There are a few sections of the Study Area which contain existing clusters of businesses and commercial development, but it is mostly along St. Joseph Boulevard, which is an arterial road that is car-centric in nature, with poor pedestrian and other active transportation connections.

There are transit connections, but once pedestrians were to exit transit, there is little connection for them to be drawn into intensified commercial or recreational areas. This lack of connection, both functional and visual, leads to fragmentation of the commercial areas of the Study Area. Regarding the Place d'Orléans shopping centre, as it does not appear in imminent risk of closing, proposed design should include the mall within its first phase, focusing on redevelopment surrounding it.

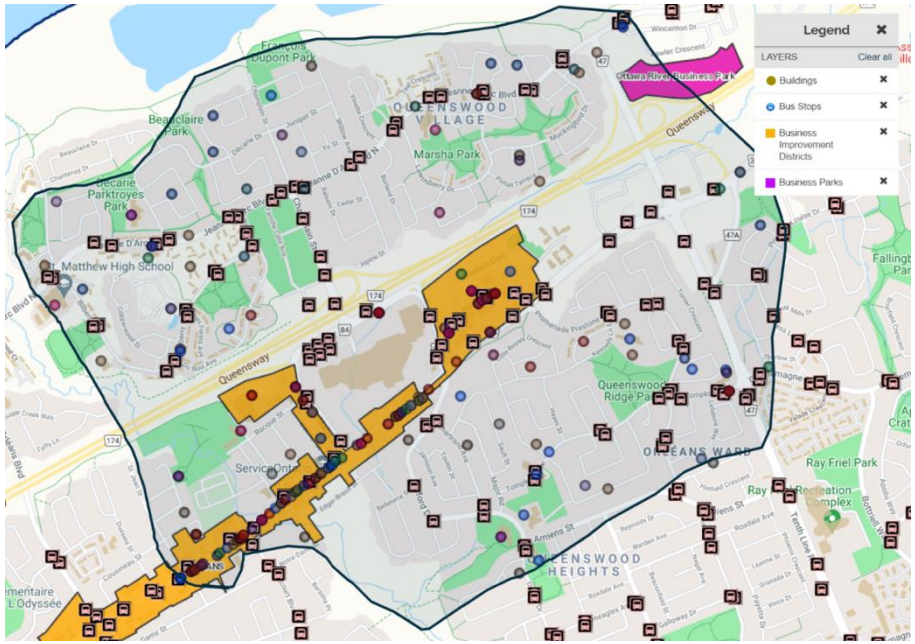


Figure 2.8l – Businesses and transit stops located within Study Area (City of Ottawa, 2021k).

The biggest challenge will be to be to draw new employment of sectors that Orléans wants to target into the area. To do this effectively, there needs to be improvement to the quality of the locations where commercial locations may exist. As seen in Figure 2.8l, there is a defined BIA within the targeted Study Area, however upon site visits, there was little to no indication of the BIA being present. The city must look to encourage development and revitalization of the OTC, provide a clearer and more pleasurable gateway from the shopping centre, and improve active transportation routes. There must also be the establishment of safe and enjoyable linkages between the new LRT Station, Place d'Orléans, and the main street through infrastructure improvements and wayfinding elements.

The demand for both commercial and office spaces in the area will increase for both consumers and businesses after improvements to the housing stock, creation of mixed-use areas, and higher density housing is achieved. Having the ability to live, learn, work, and play within the OTC area will foster the development of further complementary businesses and employment opportunities which align with the 15-Minute Neighbourhood principles, and lead Orléans in a positive direction of change.

3.0 Policy Analysis

3.1 Overview

For the policy analysis, the project team reviewed several policies, documents, and reports. These policies are described in detail and assessed for their implications with supporting figures below. The table below rates the importance level of each policy to this report and the current level of conformity of the Study Area. Red indicates poor, yellow indicates moderate, and green indicates strong importance or conformity. Only those policies with a strong level of importance are included within this section, while policies with a poor or moderate level of importance are in Appendix A, while municipal policies with a poor level of importance are omitted.

All policies are sourced from the City of Ottawa, Province of Ontario, or Government of Canada. Overall, it was found that the current Study Area conforms poorly or moderately to most relevant policies, guidelines, and reports. These policies each contain significant implications for a transit-oriented plan which has a focus on creating a 15-Minute Neighbourhood.

Table 3.1a – List of Policies with Level of Importance & Current Conformity of Study Area (Red – Poor; Yellow – Moderate; Green – Good Conformity)

Policy or Report	Level of Importance	Current Conformity
Municipal Policies – City of Ottawa		
New OP and 5 Big Moves (2021)		
Big Move 1: Growth		
Big Move 2: Mobility		
Big Move 3: Urban Design		
Big Move 4: Resiliency		
Big Move 5: Economy		
Strategic Plan of the City of Ottawa (2019)		
Current City of Ottawa OP (2003)		
Former City of Cumberland Plan (1999)		
City of Ottawa Pedestrian Plan (2013)		
City of Ottawa Cycling Plan (2013)		
Transportation Master Plan (2013)		
Zoning By-Law 2008-250 (2008)		
15-Minute Neighbourhood Baseline Report (2021)		
Environmental Project Report Confederation Line East Extension (Blair Station to Trim Road) (2015)		N/A
10-year Housing and Homelessness Plan 2020-2030 (2020)		
Transit Oriented Development Guidelines (2007)		
Urban Design Objectives per current OP (2003)		
Urban Design Guidelines for Development on Arterial Main Streets (2006)		
Urban Design Guidelines for high-rise Buildings (2018)		
Urban Design Guidelines for Low-rise Infill Development (2012)		
Integrated Orléans CIP (2021)		N/A
Provincial Policies – Province of Ontario		
Provincial Policy Statement (2020)		
Federal Policies – Government of Canada		
Sustainable Development Strategy (2018)		
The Plan for Canada's Capital (2017)		

3.2 Municipal Policies

3.2.1 *New OP* Revised Draft

The *City of Ottawa's New OP* was approved by Council on October 27th, 2021, and it will guide development and growth in Ottawa through to 2046. was revised in August of 2021 and is intended to guide the growth and development of the city to the year 2046. The OP establishes a policy framework to direct development and growth of the city over time. The City of Ottawa's *New OP* positions Ottawa to be flexible, resilient, and above all, a city where people want to live, work and play. The City of Ottawa is expecting rapid growth where Ottawa's population is expected to surpass 1.4 million people by 2046. The City of Ottawa's vision is that Ottawa will become the most liveable mid-sized city in North America (City of Ottawa, 2021c). It is important to note that the *New OP* introduces 5 Big Policy Moves to further establish the goals, objectives, and policies intended to manage and direct physical change (See Table 3.2a below and Appendix A).

Below is a list of land use designations within the subject site in accordance with the *New OP.* In addition, there is a map representing the OTC Protected Major Transit Station Area and designated land uses in our Study Area. A full description of the land uses can be found in Appendix A.

Table 3.2a – The City of Ottawa "5 Big Policy Moves"

1. Growth	Achieve, by end of its planning period, more growth by intensification than by greenfield development: • This growth will also provide a variety of affordable housing options for residents. • Increase share of future growth to be within Ottawa's existing built-up area to 60% by 2046.
2. Mobility	By 2046, the majority of trips in the City of Ottawa will be made by sustainable transportation (walking, cycling, transit or by carpool): • LRT being backbone of Ottawa's transportation network and one of the strongest growth management tools. • Current TMP plans to reach 50% sustainable mode share by 2031.
3. Urban Design	Improve our sophistication in urban and community design, and put this knowledge to the service of good urbanism at all scales, from the largest to the very small: • Sets out preliminary policy direction to plan for the different contexts within Ottawa's boundaries (DT Core, Inner Urban, Outer Urban, Rural). • Planning approach for enhancing Ottawa's major waterways, further protecting heritage, and promoting new high impact city-building projects.
4. Resiliency	Embed public health, environmental, climate and energy resiliency into the framework of our planning policies: • Climate change and extreme weather impacts are increasingly felt through extreme heat and cold events; thus, Ottawa City Council had declared a climate emergency. • Policies from this climate emergency will help the city achieve its target of 100% GHG emissions reduction by 2050. • Planning to withstand against future disrupters such as COVID-19 pandemic.
5. Economy	Embed economic development into the framework of our planning policies:

	• Supports a broad geographic distribution of employment so that people have the choice to work closer to where they live. • Ottawa can position itself as a part of a larger economic mega region (including Toronto and Montreal).

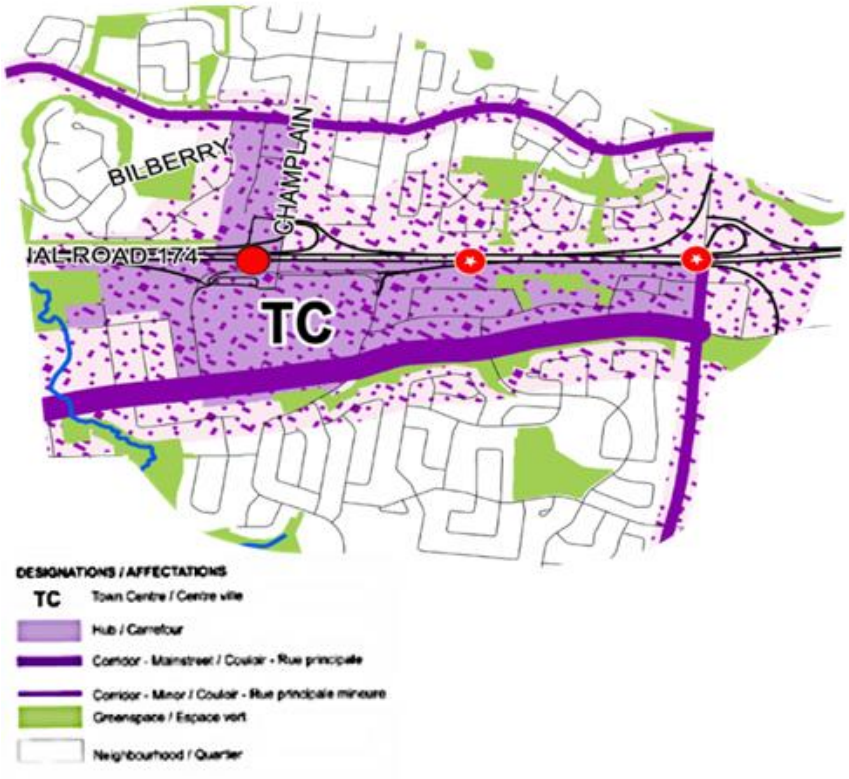


Figure 3.2b – Suburban east transect Land Use Designation Map of Study Area in New OP (City of Ottawa, 2021c).

3.2.2 15-Minute Neighbourhood Report

The 15-Minute Neighbourhood concept is a key direction in the City of Ottawa's *New OP* as part of Ottawa's "Five Big Moves" (City of Ottawa, 2021c). A 15-Minute Neighbourhood is one in which residents have access to daily amenities and services within a 15-minute walk. The City of Ottawa defines 1,200m (via pedestrian networks) as a standard distance that can be walked, including with the use of a mobility aid, in 15 minutes (City of Ottawa, 2021a). These amenities and amenities in order of ranked importance per Ottawa's *15-Minute Neighbourhood Baseline Report* are in Appendix I. Ottawa's report on 15-Minute Neighbourhoods scored each area of Ottawa on its ability to deliver 15-minute walking access to services and amenities and pedestrian friendliness. The report also scored each neighbourhood on the pedestrian environment.

The criteria for pedestrian environment scores are located in Appendix A. Most of the selected Study Area scored high on access to services and amenities while some parts scored moderate (on a scale of high, moderate, or low). However, the report identified the OTC area as well served but in need of attracting further businesses and services as well as recommendations in improving the pedestrian environment. A map of the Study Area scores is shown in Figure 3.2c. Areas near Place d'Orléans, along St. Joseph Blvd, and near the OTC tended to score high on access but low on pedestrian environment. The residential neighbourhoods within the Study Area typically scored moderate or high on access and lower on pedestrian environment. Unfortunately, much of the Study Area scored low on the pedestrian environment, while some small segments scored moderate.

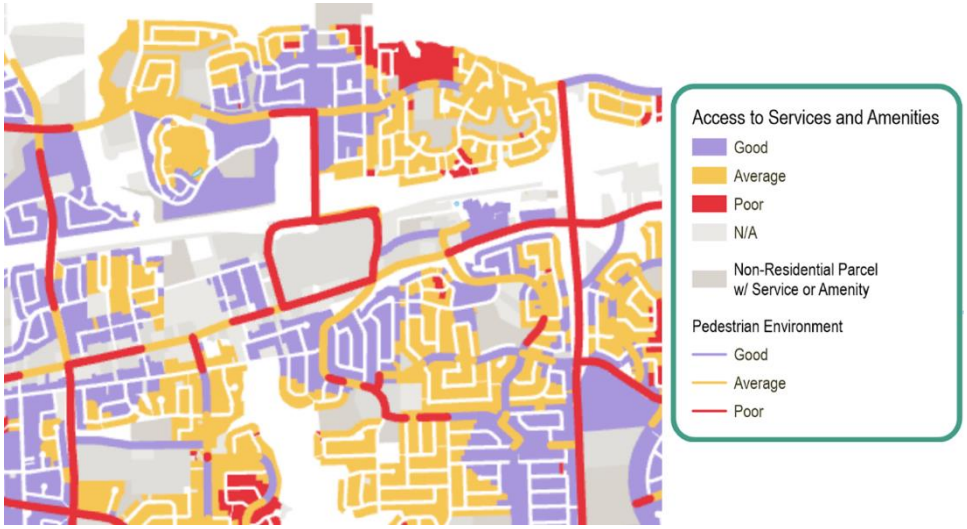


Figure 3.2c – Map of 15-Minute Neighbourhood Scores (City of Ottawa, 2021a).

3.2.3 Urban Design Guidelines for Development on Arterial Main Streets

The City of Ottawa has designated St. Joseph Boulevard as an Arterial Main Street in the *OP* (City of Ottawa, 2003). As part of the *New OP*, the City of Ottawa will update these guidelines and change the phrase "Arterial Main Streets" to "Main Street Corridors" (City of Ottawa, 2021c). However, the principles for the new guidelines will remain the same. The purpose of the *Urban Design Guidelines for Development on Arterial Main Streets* (City of Ottawa, 2006) is to achieve appropriate development for Arterial Main Streets. The objectives of these guidelines are to create development compatible with an Arterial Main Street, promote attractive and pedestrian-friendly streetscapes, establish a high-quality built form and street edge, and create gradual transitions.

These guidelines are important for assessing St. Joseph Blvd. as a current Arterial Main Street and developing a plan to enhance its main street character. There are 53 Arterial Main Street Design Guidelines falling into seven categories. Full descriptions of these categories are in Appendix A. Table 3.2d assesses the current condition of St. Joseph Blvd. as an Arterial Main Streets per the design guideline categories while Figure 3.2e shows the distinction between and adequate and inadequate Arterial Main Street.

Table 3.2d – Assessment of existing development conformity to arterial main street guidelines.

Section	Existing Development
Streetscape	○
Built Form	◔
Pedestrian & Cyclists	◑
Vehicles & Parking	◕
Landscape & Environment	◕
Signs	●
Services & Utilities	●

○ = No conformity
◔ = Poor Conformity
◑ = Moderate Conformity
◕ = Good Conformity
● = Excellent Conformity

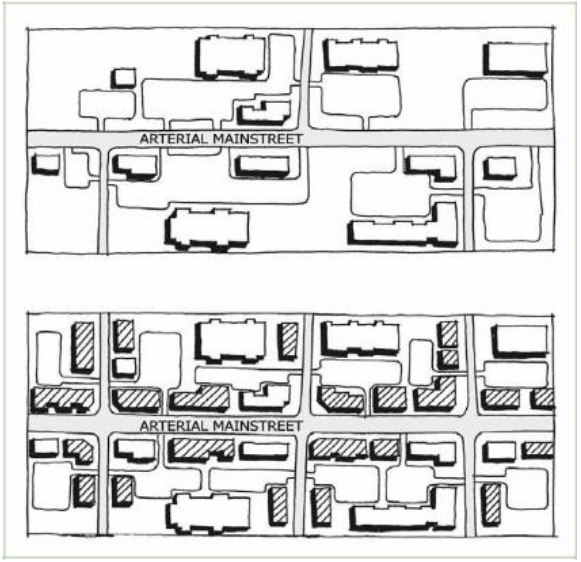


Figure 3.2e – A before (inadequate) and after (adequate) of an Arterial Mainstreet change in layout (City of Ottawa, 2006).

Currently, St. Joseph Boulevard does not perform well as an Arterial Main Street and fails to meet the City of Ottawa's *Arterial Main Street Guidelines* (2006) (soon to be Main Street Corridor). Meeting these guidelines and transforming St. Joseph Blvd. to perform better as an Arterial Mainstreet are essential elements to this report.

3.2.4 Ottawa TOD Guidelines

Ottawa's *Transit-Oriented Development (TOD) Guidelines* pertain to developments within 600m of a transit stop (City of Ottawa, 2007). There are 56 TOD Guidelines divided into six categories. A description of these categories can be located in Appendix A. The TOD guidelines are an important framework for this report and all guidelines will be considered for proposed designs. Table 3.2f assesses the conformity of the current environment to Ottawa TOD guidelines divided by category and Figure 3.2g shows the current state of the Place d'Orléans transit hub.

Table 3.2f – Assessment of existing development conformity to TOD guidelines.

Section	Existing Development
Land Use	○
Layout	◔
Built Form	◑
Pedestrian & Cyclists	◕
Vehicles & Parking	◕
Streetscape & Environment	○

○ = No conformity
◔ = Poor Conformity
◑ = Moderate Conformity
◕ = Good Conformity
● = Excellent Conformity

Figure 3.2g – Current transit hub for BRT by Place d'Orléans.

The current development within 600m of the proposed Place d'Orléans and OTC (Ghost Station) LRT stations fail to meet Ottawa's *TOD Guidelines* (City of Ottawa, 2007). It is important for recommended proposals within this report to attempt to meet these guidelines and establish the area around the potential LRT station as a strong TOD.

3.2.5 Integrated Orléans CIP

The Integrated Orléans Community Improvement Plan (IOCIP) is a CIP developed to replace the previous Orléans CIP and the St. Joseph CIP. The goal of the IOCIP is to address and incentivize job

creation and design-minded development in the Orléans community. The IOCIP focuses on providing developers and landowners with the financial incentives and tools necessary to jumpstart the growth within the area. The CIP also ensures that areas designated as TODs are prioritized for employment and provide a previously absent, friendly pedestrian environment. Incentives are provided in the form of Tax Increment Equivalent Grants, which are based on a percentage of the increase in a property's taxes for up to 10 years, depending on the specific program. Additional information on these programs and a map of areas impacted by the Orléans IOCP are found in Appendix A as well as within Section 2.8.8 of this report.

Overall, the IOCIP delineates incentive-based programs to encourage developments in the Orléans community, with specific emphasis on the new LRT station and the St. Joseph Boulevard corridor. The programs have the goal of attracting developments that contribute to the economic growth for the area, promote pedestrian-friendly streets and environments, and ensure the inclusion of the necessary housing requirements for the growing community.

3.3 Precedent Policies

The City of Ottawa does not have any guidelines for mall redevelopment. However, the City of Toronto *Mall Redevelopment Guide* (2021) and Mississauga's *Reimagining the Mall* (2019) report have useful mall redevelopment guidelines that have been utilized to provide source material for this report. These guides emphasize the following general ideas:

- Connecting streets and blocks
- Creating vibrant, safe, and comfortable parks and open spaces
- Developing interface with the public realms
- Minimizing the impact of parking, servicing, and loading on the public realms
- Phase development to allow the continuation of current retail
- Strengthening communities
- Developing a diversity of uses
- Creating space for all modes of transportation
- Placemaking and integration of spaces

These concepts provide a suitable framework for redevelopment efforts within the area around Place d'Orléans and OTC.

3.4 Overarching Implications

Ottawa's municipal policies, provincial polices, federal policies, and the precedent policies promote compact, high-density, pedestrian-friendly, mixed-use, and transit-supportive development. Current policy is aligned with high-quality 15-Minute Neighbourhood TOD. At present, the Study Area corresponds poorly to these concepts. Through this report, the project team has made proposals which better meet municipal guidelines and requirements.

Unique to this report, however, is that the policy foundations are not existing bylaws, but the *New OP* which includes the 15-Minute Neighbourhood concept (City of Ottawa, 2021c). The design concepts will focus on pushing forward the 5 Big Moves within the OP to attempt to achieve a 15-Minute Neighbourhood that provides access to services and amenities and creates a welcoming pedestrian environment.

4.0 SWOC Analysis

A Strengths, Weaknesses, Opportunities, and Challenges (SWOC) analysis contributes to an overview of a particular area by consolidating the key features that may contribute to the redevelopment of a site. The SWOC findings of Table 4.0a are based on site visit observations, interviews with stakeholders, and research.

Table 4.0a – SWOC Analysis.

Strengths (Internal)	Weaknesses (Internal)
- Strong connectivity to local bus transit routes with sheltered stops and connections to downtown - Traffic calming measures on some minor and collector roads - Existing tree canopy of well-maintained mature trees - Internal community parks with connection to waterfront trails which encourages active lifestyles - Franco-Ontarian heritage, including heritage buildings - Large amount of unused space and strong potential for redevelopment and infill	- Car-oriented culture supported by the built form - Poor and inconsistent active transportation infrastructure, for pedestrians and cyclists - Poor lighting in parks - Underutilized town centre site and shopping centre - Single-use neighbourhoods - High speed limits on major roadways with poor separation from pedestrians and lack of crosswalks - Lack of neighbourhood commercial uses, commercial activity directed to Place d'Orléans. - Lack of pedestrian crossways across Highway 174
Opportunities (External)	**Challenges (External)**
- Provide higher densities around LRT station and along arterial roads - Connections to riverfront and natural landscape - Preserve Franco-Ontarian heritage - Plan for ghost station along LRT line - Strengthen cultural and community centre - Expand local employment opportunities through new commercial or the industrial park near Queensway - Wide roadways with opportunities to narrow lanes and improve sidewalk quality and cycling infrastructure - Creating trail system along creek and expanding on pedestrian use of cemetery	- Current car-oriented design and lifestyle would require significant cooperation of residents - Steep topography of escarpment impedes on establishing pedestrian pathways and creating a 15-Minute Neighbourhood to the south - Integration of older existing suburban streets which lack sidewalk infrastructure - Potential resistance from neighbourhood groups against development to protect views of water - Aging population may discourage investment into active transportation - Presence of Leda clay

4.1 Strengths

The strengths identified reflect key features of healthy community design through the provision of interconnected networks of parks, open spaces, and bus networks which connect Orléans to downtown Ottawa, along with traffic calmed local streets. Vehicular traffic is regulated through a hierarchical road classification network which limits traffic to residential areas. Pedestrians have connections to park networks and pathway systems, although improving connections to neighbourhood hubs, like OTC, and other trail systems would further support 15-Minute Neighbourhood concepts.

4.2 Weaknesses

The most prominent weakness of Orléans is the focus of car-oriented design at the detriment of the pedestrian. The separation of land uses, low density, lack of walking and cycling networks, and ease of vehicle travel encourages car use and diminishes the quality of the pedestrian environment. Despite the area being considered as a cultural centre, the OTC is currently not a destination where people frequent for a certain experience beyond commercial uses, but rather pass through. Transforming the area into a desirable high-density destination for locals and people from throughout the city is an achievable goal, that can be acted on.

4.3 Opportunities

Although the current area lacks strong pedestrian networks is car-centric, the most significant opportunity is to increase residential density through intensification, improve local pedestrian and cycling connectivity, and to diversify the local economic. As the area surrounding Place d'Orléans Shopping Centre is underdeveloped with vacant land, the opportunity for TOD in the area directly surrounding the new Place d'Orléans LRT station with high density, mixed-use development exists. Such development would improve the identity of the local neighbourhood and transform Orléans into a functioning social and economic hub. Other notable opportunities include designing pedestrian connections over natural barriers and creating a second LRT station 800m east to better serve surrounding residential neighbourhoods with transit connections.

4.4 Challenges

The main challenges identified is in improving the pedestrian connections to OTC from north of the Queensway and south of the escarpment. These two features pose significant barriers for pedestrian connectivity but can be overcome through pedestrian bridges or trail systems. Also, shifting travel patterns from car-centric modes to active transit and public transit use may pose as a challenge as travel within Orléans and to downtown Ottawa is convenient by car. The opening of the LRT system, increasing density around the station, and creating more active transit infrastructure may result in travel mode shifts since the availability of alternate modes aside from the car becomes more convenient.

4.5 Implications

Proceeding with intensification of the OTC area surrounding the new LRT station will require the identified strengths to be retained and enhanced, prior to tackling the opportunities. Also, focusing on correcting the weaknesses of the site, with specific regard to the car-orientation and lack of pedestrian and cycling connectivity which are the main challenges associated with implementing 15-Minute Neighbourhood concept.

5.0 Precedents

Case studies from around the globe were gathered to outline examples of redevelopment projects and plans to help further the development of ideas. The project team examined 68 precedents across five countries with completion dates ranging from 1986 to the present. Precedent research was completed for this project with the goal of creating a catalogue from which to draw inspiration, lessons learned, and examples of best practices. This section will draw lessons from case studies from around the world that fall into three themes guiding this project: Mall Redevelopment, TOD, and 15-Minute Neighbourhoods. Appendix C1 outlines the entire precedent catalogue. Nine core case studies were selected due to their relevance to both the OTC project area as well as the key themes guiding the project; and can be found in Appendix C2.

5.1 Greyfield Redevelopment

Figure 5.1a - 2019 Artistic Rendering of the CF Richmond Centre redevelopment (Cadillac Fairview/Shape Properties).

5.1.1 Introduction

Mall redevelopment, otherwise known as greyfield development, is an integral part of future growth outlined in the City of Ottawa's *New OP*. The OTC and the neighbouring Place d'Orléans shopping mall show signs of distress and contain large parking lots with minimal consideration for non-vehicular traffic and connectivity or sustainable development. The arterial roads bordering the mall and town centre boast parking lot-facing commercial uses and automobile servicing shops, providing little opportunity for active transportation and pedestrian activity. Originally, these areas were meant to serve the surrounding community as a regional commercial centre, primarily accessible by car travel. The shopping mall and town centre boast large parking lots helping to further remove pedestrian access from nearby neighbourhoods. These types of mall and commercial centres became commonplace among Canadian cities in the 1960s.

Decades of this car-oriented community design have created vast fields of asphalt, with the primary purpose of serving automobile traffic. Across Canada, malls and commercial areas with similar urban forms have begun to fail and see increased vacancies and turnover rates. The re-development potential of these spaces, aided in-part by their large parking lots which act as blank canvases, along with their usual prominence within suburban contexts, is increasing as cities need intensified development to accommodate their expected growth. The *New OP* hopes to use these spaces as places for growth in the future in lieu of greenfield development.

5.1.2 Relevance

The OTC and Place d'Orléans shopping mall, if they are to be integrated into a 15-Minute Neighbourhood, require increased intensification, improved pedestrian access, and disruption to the

car-oriented nature of the two sites. The following precedents relating to greyfield redevelopment identify examples of developments that took advantage of the opportunities presented in the form of old commercial centres, car-oriented main streets, underutilized regional shopping malls. The precedents present strategies relating to intensification, active transportation connectivity, and mixed-use hub creation.

5.1.3 Selected Precedents

This report examined 25 greyfield redevelopment precedents. The three most relevant precedents were examined in detail and can be found in Appendix C1. These precedents include:

- Shops at Don Mills, Toronto, ON
- Richmond Centre, Richmond, BC
- Northgate Mall, Seattle, WA

5.1.4 Greyfield Lessons Learned for OTC

Based on the examined precedents, a list of best practices has been derived to help inform Reimagining OTC.

- Phase development around structures and features with a long-term redevelopment horizon:
  The phasing of development should consider factors such as the time horizon for Place d'Orléans shopping mall to redevelop, and appropriately plan for surrounding areas to integrated with both the mall as well as later phasing of the mall's redevelopment. Examples from Don Mills and Richmond Centre display the intensification and strategic phasing of areas around larger existing structures.
- Emphasize public realm design strategies
  Develop public spaces dominated by pedestrian-oriented design and inward-facing active frontages to help animate plazas and streetscapes.
- Develop a range of uses to accommodate spaces for live, work, and play
  Residential and office towers should be accompanied by podiums of active frontage retail and civic services along key corridors and within key nodes.
- Plan for appropriate densities near existing and planned transit stations
  Adapt uses and layout of redevelopment to reflect the different intensification targets and contexts within the neighbourhood.
- Re-configure parking to prioritize active transportation access
  Redevelop existing surface parking area within the development and ensure spaces internal to the site are laid out with active transportation infrastructure as a priority.
- Ensure appropriate connections to existing suburban context
  Develop a network of active transportation connections and corridors to neighbouring communities to encourage access to site by surrounding residents.

5.2 Transit-Oriented Development

Figure 5.2a - Orenco Station, Portland, Oregon (CNU, 2019).

5.2.1 Introduction

TOD focuses on the development and intensification of areas surrounding major transit nodes, creating compact, mixed-use, and walkable communities. The goal of TOD is to improve connections to transit as well as improving areas in which transit is easily accessible (Calthorpe & Poticha, 1993). TOD communities have become sought-after endeavours within cities from both a planning and real-estate lens.

5.2.2 Relevance

The OTC is adjacent to the future Place d'Orléans LRT station as well as directly abutting the potential LRT station (ghost station), making this Study Area an ideal candidate for application of TOD principles. The Study Area includes a designated TOD area and is poised to support the target densities and intensification needs of the area. Direct access across Highway 174 would potentially connect the OTC station to regions on either side of the linear barrier, but the areas are lacking in densities and currently exist as car-oriented suburban neighbourhoods. In order to both improve connectivity for existing residents and increase housing supply adjacent to the station, TOD strategies can be implemented to improve the walkability through pedestrian networks and urban design. As well, a mix of uses particularly as part of development on under-utilized sites can help to improve the pull factors encouraging people to visit the OTC.

5.2.3 Selected Precedents

This report examined 25 TOD precedents. The three most relevant precedents were examined in detail and can be found in Appendix C1. These precedents include:

- Orenco Station, Portland, OR
- Marine Gateway Complex, Vancouver, BC
- University City/Brentwood Station, Calgary, AB

5.2.4 TOD Lessons Learned for OTC

Several lessons for the OTC can be drawn from TOD precedents.

- Focus on connections to transit
  Prioritizing diverse connections to the transit station/hub from the broader site is crucial in encouraging transit use (as opposed to the transit station simply being adjacent to dense development).
- Encourage non-residents to visit
  TODs cannot be marketed purely towards the commuter; residential units are only one piece of the mosaic that supports transit use. TODs are strongest when amenities can be used by both locals and non-locals, so incorporating a

cluster of diverse uses would also encourage visitors to stay at the site for longer.

- **Support human-scale development**
  TODs are also most successful when the site is not cluttered by scores of high-rise condominiums and office towers. Attracting the public while encouraging active transportation requires a healthy amount of human-scale/street-level housing, retail, and office space.
- **Consider active transportation throughout the site**
  Once people disembark the LRT or bus at the OTC area, they are continuing their journey on foot or bike, so the infrastructure must be in place to lead them safely and comfortably to their destination (no matter where that is). Parks and other open public spaces can be used for this purpose as well.
- **Be creative**
  TODs are frequently built on greyfield sites or from the ground up, so opportunities for creative and innovative built forms as well as interesting mixes of uses are waiting to be explored. Each precedent has taken advantage of major transit infrastructure in different ways, so the OTC should also use the important transit link as a catalyst to become a new type of hub in the City of Ottawa.

5.3 15-Minute Neighbourhood

Figure 5.3a - Rendering of AGORA Development in Gatineau, Quebec

5.3.1 Introduction

The 15-Minute Neighbourhood concept is relatively new to planning, but the execution of well-connected, walkable, amenity-rich communities has existed for centuries. Although specific 15-Minute Neighbourhood precedents were chosen and sought after, the limited availability and existence of communities developed according to this theme required this report to expand its search to include examples of developments that exemplified common characteristics without bearing the same title.

Popularized in cities such as Paris – and now Ottawa – the 15-Minute Neighbourhood is an attempt to combat habits contributing to the rise in greenhouse gases, primarily driving. These semi-self-contained urban units contain elements of residential, employment, enjoyment, and open space within a 15-minute walk for its daily users. Reducing overall reliance on cars is an especially pertinent

issue in Canada, and more specifically Ottawa. As the city begins a regime change, shifting from sprawling greenfield development to infill development and intensification, creating increasingly complete communities is a step towards improving both the sustainability of new growth as well as encouraging a healthier lifestyle.

5.3.2 Relevance

A key guiding theme for the OTC is the 15-Minute Neighbourhood concept, proposed by the City of Ottawa's *New OP*. The precedents examined within this theme will help to formulate the overall vision for what can be achieved in the OTC as a complete community. Ranging from greyfield redevelopment to master-planned communities, the precedent examples explore a range of strategies with the goal of improving walkability, ensuring a mix of uses and people, and integrating the community into the existing context.

5.3.3 Selected Precedents

This report examined 21 15-Minute Neighbourhood precedents. The three most relevant precedents were examined in detail and can be found in Appendix C1. These precedents include:

- Agora, Gatineau, QC
- Bethesda Row, Bethesda, MD
- Chassé Park, Breda, Netherlands

5.3.4 15-Minute Neighbourhood Lessons Learned for OTC

- Develop purpose-built pedestrian environments and networks
  Destinations should be integrated into pedestrian path networks to encourage and support active transportation as a primary means of meeting daily needs.
- Create appealing visual landscapes
  Each precedent was designed with unique arrangements of buildings and spaces with the goal of drawing both residents and visitors in and encouraging them to engage fulsomely with the site.
- Diversify housing types
  Create a wide range of housing options that can accommodate a changing demographic make-up across time. The precedents display the need for housing suited to meet the needs of families, singles, the elderly, and young professionals – helping to accommodate 'aging in place'.
- Allow for ample public open/gathering spaces
  The precedent examples display the importance of open space within compact, complete communities as a place of gathering and flexible to support a variety of community needs. These public spaces are improved through thoughtful storefront animation, winterized infrastructure, and the dislocation from vehicular traffic.
- Incorporate needed community facilities
  The OTC will come to serve the greater community as a local hub and can use this opportunity to develop community amenities such as a library, helping to draw people from surrounding areas to the neighbourhood.

6.0 Preliminary Stakeholder Analysis

The following analysis assesses the key stakeholders and interested individuals in the redevelopment of the OTC. Working alongside these key stakeholders will be essential to create a plan that is desirable and reaches the needs of all parties involved and interested.

6.1 Parameters

The following chapter outlines key stakeholders who have and who potentially have an interest in the redevelopment of the OTC Study Area. It is important to note that at the time of writing, the list of stakeholders is not final. As the project proceeds with the design phase, additional groups, individuals, or community organizations may later be identified as interested stakeholders in the redevelopment of the OTC.

6.2 Key Stakeholders

Through this report, the Study Area will be focused upon in efforts to propose a transformation into a pedestrian, cyclist, and transit friendly 15-Minute Neighbourhood. This redevelopment will gauge the interest of main actors such as the City of Ottawa Planning Staff, Ottawa City Councillors, Community Residents, Developers, OC Transpo, Commercial Property Owners, Primaris REIT, the Franco-Ontarian Heritage & History Society of Orléans (SFOPHO), and The Heart of Orléans BIA. To better understand each stakeholders' interests, resources, and action channels, stakeholders have been categorized in Table 6.2a below.

Table 6.2a – List of Main and Secondary Actors.

Main Actors	Secondary Actors
• Ottawa City Councillors	• Community Transportation Advocacy Groups (Ottawa Transit Riders & Bike Ottawa)
• City of Ottawa Planning Staff	• Local Transit Users
• OTC Study Area Community Residents	• Office Tenants
• Developers	• Retail Tenants
• OC Transpo	• General Public
• Commercial Property Owners	
• Franco-Ontarian Heritage & History Society of Orléans (SFOPHO)	
• The Heart of Orléans BIA (Non-Profit Organization)	
• Primaris REIT	

6.3 Implications

Regarding the current stakeholders involved in the redevelopment of the OTC, future consultation requiring a broader-reaching knowledge spectrum would be required. This does not indicate that the knowledge, skills, or capabilities of the current stakeholders are

not essential or vital for the future development. However, planners require new knowledge, skills, and perspectives to equip them for effective, responsible participation in multiagency decision-making (Christensen,1993). The stakeholders involved all have important roles in the creation of a 15-Minute Neighbourhood for the OTC.

By identifying main and secondary stakeholders it is easier to understand the potential influences they will have on the redevelopment of the OTC Study Area. By recognizing the main and secondary stakeholders' interests, resources, and action channels one can comprehend the relationship and power dynamics that will ultimately incite change.

The preliminary stakeholder analysis demonstrates that there is a potentially large number of individuals, groups and organizations affected by a proposal within the defined Study Area for this report. Main actors in the above analysis are important because they all have fundamental roles and resources for the future redevelopment of the OTC. The coordination of the main actors will be essential for successful implementation in the conceptual design process. Therefore, successful implementation of creating a 15-Minute Neighbourhood in the OTC will be grounded on engagement and organization between these actors.

Additionally, there are important secondary actors that should not be ignored in the OTC Study Area. For instance, community transportation advocacy groups, local transit users and retail tenants within the OTC are some examples of stakeholders who will be affected by the redevelopment project. However, these secondary stakeholders have less resources or ability to act. Therefore, it is important that these potential secondary stakeholders are acknowledged in the planning process and have their voices heard throughout any redevelopment or new development located in the Study Area.

6.4 Limitations

There are specific limitations when it comes to the stakeholders that would have been involved in this process. It is important to note that the only stakeholder that was able to be obtained throughout this process is the City of Ottawa Planning Staff. In these efforts the project group were able to speak to and interview many different City of Ottawa Planning Staff from different backgrounds and sub-departments. For example, stakeholders from the Planning, Infrastructure, and Economic Development Department, Transportation Planning Service Department, and the Healthy Communities and Public Health Department were all able to be interviewed.

However, due to the COVID-19 pandemic, there were limitations in the ability to meet and speak to some significant main and secondary stakeholders which would be affected by the redevelopment of the Study Area. In addition, due to the compressed timeframe within a larger Study Area some key information was not able to be gathered as well as local knowledge from Indigenous groups and key stakeholders in order to further inform the report and proposal. It is important to understand that all the stakeholders which have been listed are potential stakeholders to the redevelopment of the OTC Study Area and have not been directly involved in the process. It should also be noted that an effort should made to engage the public in the planning process for any redevelopment project which were to proceed.

7.0 Design Charette

Figure 7.0a – Image of Design Charette in main room.

7.1 Introduction and Overview

Following the completion of the background research and policy analysis guiding the project, the Reimagining Orléans Town Centre team organized a design charette on October 22nd, 2021, in Kingston, Ontario. In attendance was a mixture of professional planners from both Ottawa and Kingston, Ontario areas, as well as professors and graduate students from Queen's University's SURP with a diverse range of interests, proficiencies, and experience. The goal of this charette was to explore design options for the different sites within the Study Area, each with its own associated context, assets, and challenges. These design options and brainstorming discussions helped to inform the final vision and guiding framework for Reimagining Orléans Town Centre.

Prior to the design portion of the charette, the project team presented the information gathered in the background studies prepared in the preceding weeks. The presentation spotlighted the impacts of the new Ottawa LRT, the 15-Minute Neighbourhood policy guidance, as well as a SWOC analysis of the existing conditions of the site. Participants were also provided with information related to four key planning themes that were to guide the planning process: Infill/Greyfield Development, Community Design, Transit-Oriented Development, and 15-Minute Neighbourhoods. Each five-minute presentation allowed the participants to familiarize themselves with the concepts, their importance within the context of the project, as well as precedent examples of each theme.

The next stage of the charette was the technical group design workshops. Participants were divided into four groups, each tasked with examining separate precincts within the Study Area and creating design options building upon the themes and background analysis. The four districts were: Place d'Orléans and LRT Station; the Orléans Town Centre and Ghost Station; St. Joseph Boulevard East; and St. Joseph Boulevard West.

7.2 Breakout Room Design Recommendations

Figure 7.2a – Image of St. Joseph West technical group in action.

7.2.1 Place d'Orléans/LRT Station

This group focused on the Place d'Orléans shopping mall and the LRT Station under construction at the writing of this document. The key areas of concern for this group were the long-term development for the parking lots and indoor shopping structure as well as the connectivity to the neighbourhoods on either side of the highway, the town centre, and St. Joseph Boulevard. Below are the resulting key themes used to develop design strategies for the project relating to Place d'Orléans shopping centre and LRT station.

Table 7.2b – Key Themes Identified for Place d'Orléans / LRT Station Group.

Key Themes Identified
Improve and encourage connectivity across Highway 174 and between Place d'Orléans and the OTC
Develop infrastructure that supports and encourages a variety of active transportation modes to, from, and within district
Develop community amenities and spaces as well as improve the quality of the new and existing public realm
Incorporate green spaces and innovative energy strategies into the site and district
Increase density of both residential, commercial, and retail space

Recommendations

- Improve active transportation along roads (e.g., Centrum Boulevard) and make them complete streets.
- Redevelop Place d'Orléans shopping centre with smaller buildings with more diverse uses and densities in helping to produce a 'main street' character.
- Develop taller residential/mixed-use towers along car-focused corridors (Highway 174), leaving smaller-scale mid-rise/low-rise developments for pedestrian-oriented areas.
- Consider implementing district energy and a community energy plan.
- Improve the tree canopy coverage across the district.
- Add storefronts or kiosks to LRT station to improve user experience, develop the feeling of a destination, and provide transit users with direct access to good and services.

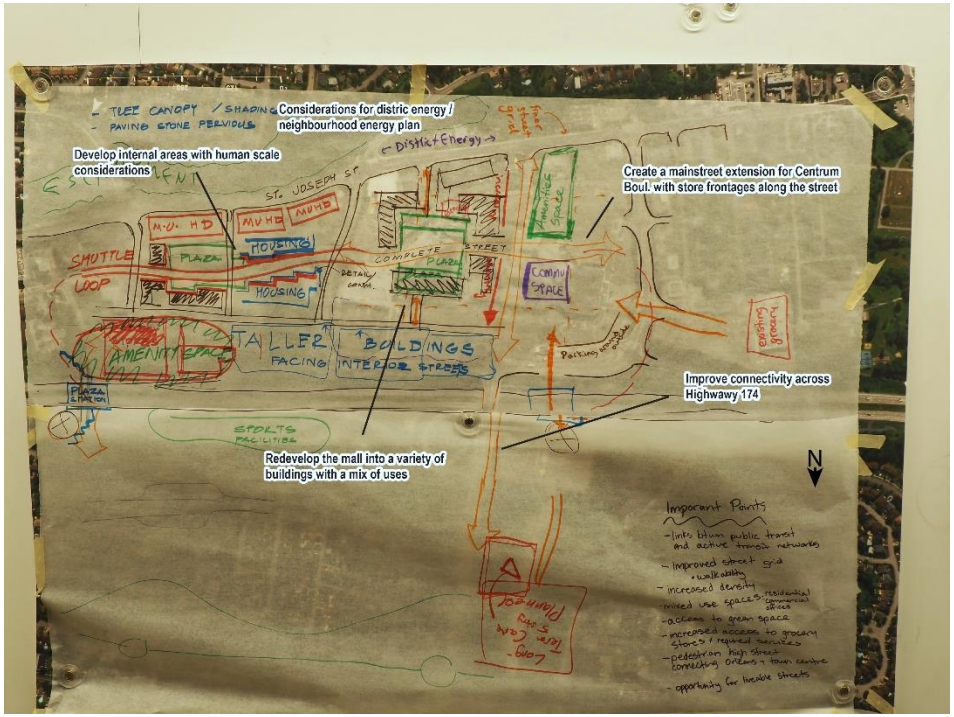


Figure 7.2c – Annotated image of Place d'Orléans / LRT Station Group design suggestions.

7.2.2 Orléans Town Centre/Ghost Station

This group examined and helped to create design options that focused on the Orléans Town Centre and the potential Ghost Station site crossing the Highway 174. The goals of this session were to identify areas with the potential for intensification, configure the connectivity of the district to neighbouring districts, and how the layout of the town centre could be improved to accommodate a more enjoyable pedestrian experience. Through discussions and drawings, this group developed a set of key themes to help in the development of the Orléans Town Centre and LRT Ghost Station.

Table 7.2d – Key Themes Identified for Orleans Town Centre / Ghost Station Group.

Key Themes Identified
Residential intensification
Pedestrian connectivity to the neighbourhood across the highway 174
Development of a post-secondary campus
Create a traditional main street environment with an emphasis on the public realm and human-scaled streetscape design
Develop ageing-in-place infrastructure and housing options
Increased tree canopy coverage and cobblestone paving to improve pedestrian experience within town centre
Establish the OTC as a community and regional hub

Recommendations

- Create a pedestrian-friendly environment in the town centre through prioritized crossing connections, shared bike lanes, and single-sided on-street parking.
- Expand and integrate tree canopy along St. Joseph Blvd.
- Plan for an east-west main street (Centrum Boulevard) extending through the town centre towards Place d'Orléans.
- Protect green spaces around the Ruddy Family YMCA and the adjacent parks.
- Create a connection/green corridor across Highway 174 (Ghost Station site).
- Allow for the development of a satellite college campus within the district facing the highway.
- Place taller towers alongside highway to create a sound buffer within the town centre.
- Parking needs to be met primarily through underground parking, with limited on-street parking throughout the district.
- Prioritize the development of affordable housing on city-owned lots.

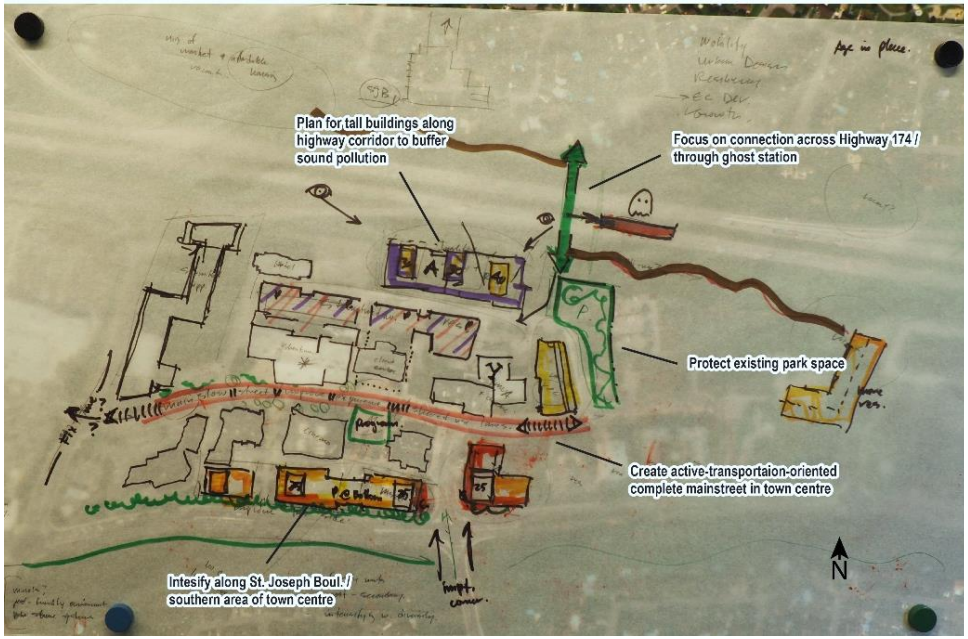


Image 7.2e – Annotated Image of Orleans Town Centre / Ghost Station Group design suggestions.

7.2.3 St. Joseph East

This group focused their efforts on the St. Joseph Boulevard corridor extending from Place d'Orléans Drive to Tenth Line Road, including the properties and areas along the road as well as the connections to the neighbourhood on top of the escarpment. Primary areas of concern for this group were the escarpment as a traversable edge, the natural ecology of the escarpment, and the potential for additional development along corridor.

Table 7.2f – Key Themes Identified for St. Joseph East Group.

Key Themes Identified
Residential intensification along corridor
Improve connectivity across escarpment
Develop appropriate active transportation infrastructure
Reorient main street into OTC
Improve state of natural environment

Recommendations

- Enclose town centre with mid-rise buildings; transition to high-rise buildings to the west and adjacent to highway; retain new low-rise developments to the east of town centre.
- Establish official bike paths and pedestrian trails down the escarpment, connecting to active transportation networks.
- Create public park around the Vinette Silo to increase attention to historical prominence.
- Limit and slow traffic moving through town centre main street and implement a central pedestrian plaza.
- Refurbish and update existing developments in town centre.

Image 7.2g – Annotated Image of St. Joseph East Group design suggestions.

7.2.4 St. Joseph West

This group examined the historic main street of St. Joseph Boulevard extending from Orléans Boulevard in the west to Place d'Orléans Drive in the east. The focus areas of this breakout group were the revitalization of the main street, creation of a natural corridor, and infill development.

Table 7.2h – Key Themes Identified for St. Joseph East Group.

Key Themes Identified
Utilization of existing natural corridor
Defined cultural character area
Built form respects prominent view features
Redefine street layout and usage
Incorporate underutilized spaces into public realm
Strategize infill/redevelopment along St. Joseph

Recommendations

- Develop pedestrian corridor along Bilberry Creek with a road crossing across St. Joseph Boulevard.
- Integrate Saint-Joseph d'Orléans Cemetery into pedestrian network and Bilberry Creek environmental corridor.
- Utilize Paroisse St. Joseph d'Orléans parking lot as a public event space (i.e., farmer's market) when not in use.
- Define cultural character area between Maisonneuve Street and Belcourt Boulevard with limited building heights (3 – 4 stories), and a transition zone between Maisonneuve Street and Place d'Orléans Drive to ensure the gradual increase in density towards the Orléans Town Centre.
- Setback within character area on north side of St. Joseph Boulevard (east of church) to be angled to maintain view of church spire from the east.
- Grandfather-in auto-related land uses but restrict any new development.
- Encourage street fronting mid-rise infill/redevelopment along St. Joseph Boulevard.

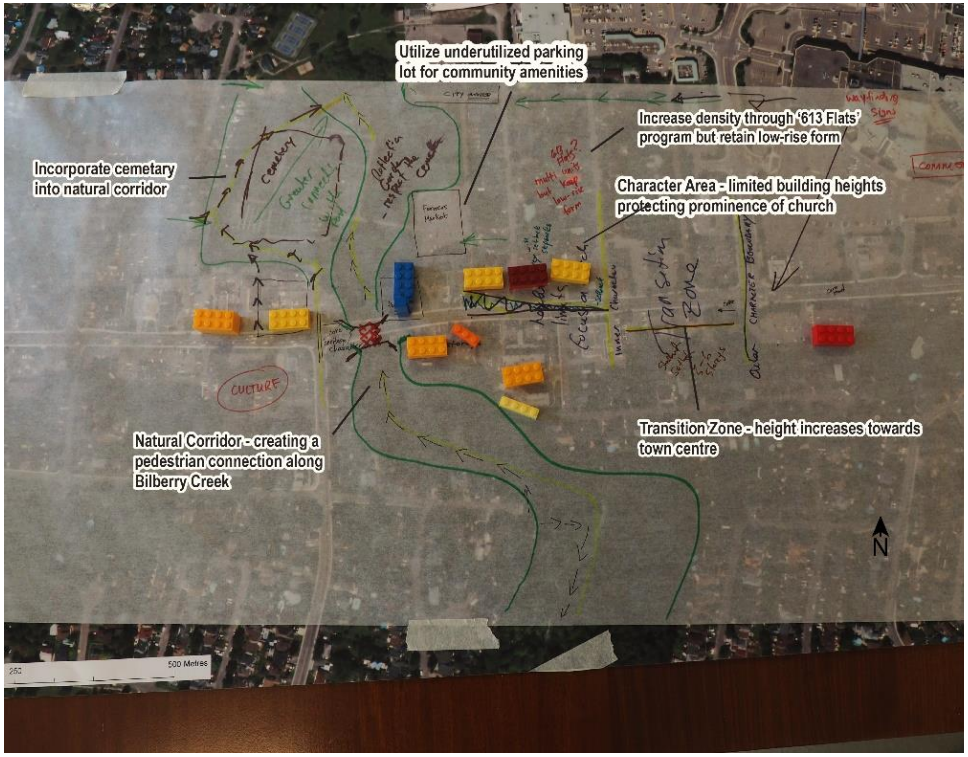


Table 7.2i – Annotated Image of St. Joseph West Group design suggestions.

7.3 Implications for Planning

The preceding themes and recommendations produced by the individual breakout groups were presented to the entire group of participants and project team. An individual participant from each group presented their findings and the key information discussed and presented on their maps.

In summary, the groups derived a variety of design strategies for the four distinct districts, which can be categorized into the following implications for project:

- Intensify development across all districts, whilst maintaining a human-scale built form around key pedestrian nodes.
- Utilize existing natural corridors to improve connectivity.
- Develop a variety of residential options within the town centre with mixed-use buildings.
- Respect and cultivate cultural significance through heritage buildings and design.

Image 7.2j – Image of group reflections and presentations following breakout groups.

8.0 Principles and Vision

8.1 Vision and Guiding Principles

The following vision and guiding principles were established from analysis and observation of the Study Area, interviews with stakeholders, background research, the design charette process, and a precedent analysis of similar redevelopments.

The vision and principles have guided the design process, influencing the proposed redevelopment of OTC. These principles will be used as criteria for the evaluation of the proposed design concepts later in this report.

8.2 Vision

Our vision for the redevelopment of the Orléans Town Centre is to create a healthy community with an active public realm that balances the daily needs of pedestrians, cyclists, transit users, and drivers based on the 15-Minute Neighbourhood concept.

8.3 Guiding Principles

The following seven principles are those which have guided the design process for the proposed OTC Redevelopment:

- **Mobility:** Prioritize active transit and support the expansion of the LRT.
- **Place Making:** Establish a sense of place through design and heritage preservation.
- **Economic Diversity:** Support a range of commercial and office uses, reflecting the 15-Minute Neighbourhood concept.
- **Mixed Land Uses:** To help create a complete community.
- **Environmental Resiliency:** Provide a range of environmental amenities and supports such as increasing the existing tree canopy, utilizing sustainable building materials, and implementing green vehicle charging networks.
- **Gender, Safety & Inclusivity:** Create safe places to support women, the elderly, and other at-risk populations.
- **Growth and Intensification:** Increase density near OTC and LRT station while providing a range of housing options (type, tenure, affordability).

9.0 Design Concepts

9.1 Introduction

The design concept for the OTC study area was derived from the project vision and principles outlined in the previous chapter, with specific focus on the 15-Minute Neighbourhood and TOD practices. To achieve the vision for the OTC, the site was first divided into three distinct precincts, based on character, context, and existing land uses (see Figure 9.6a). Each precinct inspired independent design choices, while allowing for connectivity and integration across the study area. Design choices addressing problems such as traversing key barriers within the site (Highway 174 and the St. Joseph Escarpment) were developed in order to ensure improved connectivity to the surrounding neighbourhoods. Redevelopment designs were then divided into two phases; phase one, which incorporates the existing Place d'Orléans Shopping Centre, and phase two plans that envisions the replacement of the mall with new mixed-use buildings and a network of plazas to intensify the site while supporting commercial uses and creating a vibrant pedestrian experience.

These steps were used to create the final design, over two phases, which will increase connectivity, enhance the quality of the pedestrian and cycling environment, and support mixed-uses throughout the site. The final design has a density of approximately 247 people and jobs per gross hectare. Most taller buildings, and subsequently higher density buildings, were located near the Orléans LRT station, on the periphery of the Place d'Orléans Shopping Centre site, and parallel to Highway 174. The next section of this report will detail design targets and how the proposed design compares to those targets.

9.2 Targets

Table 9.1a – Density statistics for Existing development, Phase 1, and Phase 2 compared to Targets.

	EXISTING	PHASE 1	PHASE 2	MIN TARGET
Dwelling Units	1,411	9,521	11,838	11,562
Net Density (dwelling units per net hectare)	18	121	151	150
Number of Residents	2,367	14,629	19,756	14,000
Dwelling Units	4,272	8,854	12,830	10,000
Gross Density (People and Jobs per gross hectare)	50	178	247	120
Large Dwellings in Intensification (%)	N/A	13%	12%	5%
New Affordable Housing Units	N/A	2,212	2,212	2,085
Coverage of Developable Land	26%	46%	42%	40%
Floor Space Index	0.53	2.07	2.77	2.00
Maximum Height	17	33	33	33

The target gross density, net density, jobs, affordable housing units, and large dwellings within intensification are from the *New OP* (City of Ottawa, 2021). The target number of dwelling units and residents are derived from the target densities. The targets for Net Site Coverage, FSI, and maximum height are estimates of what is needed for a vibrant community and to meet other density targets. The existing conditions are far below the target density figures in comparison to the designs proposed in Phases 1 and 2. This shows that the design concepts achieve a much more suitable density for the study area covering central Orléans.

9.3 Land Uses

9.3.1 Residential

Residential land uses should be compact, well connected, and dense. As a central hub within Orléans, the study area has the potential for greater residential intensification. Residential land uses will be developed in three forms: high-rise apartments, mid-rise apartments, and ground-oriented units. First, high-rise residential apartments will be located in the Place d'Orléans and OTC areas. These will be located in areas close to the LRT station and upon lots with a greater potential for density along the Queensway – helping buffer the site visually and audibly from the highway. Furthermore, by locating the tallest buildings along the highway, the shadows of these buildings would be cast over the highway instead of internally or onto neighbouring residential areas. A shadow analysis of the proposed design can be found in Appendix F. Second, mid-rise residential apartments along the St. Joseph Blvd. main street corridor should contribute to a main street feel while remaining conscious of the existing context in the surrounding neighbourhoods. Third, ground-oriented units in the form of free-standing units as well as units integrated into mid- and high-rise towers. The City of Ottawa should also continue to encourage and incentivize the construction of secondary dwelling units throughout the existing residential areas to introduce "invisible density". Finally, utilizing 613 Flats within the residential neighbourhoods will allow for residential intensification while meeting market demand for ground-oriented units.

9.3.2 Commercial

In its current state, the study area has a significant lack of available office space. Therefore, this report proposes creating leasable office space in a variety of forms across all three precincts. This will help transform central Orléans into an employment hub, evolving away from its current state as a 'bedroom community' where residents are forced to commute for employment.

Retail opportunities within the study area are sparsely distributed and lack connectivity for active transportation. A key goal of this report is to include mixed use buildings with ground-level retail to encourage the development of a lively main street with friendly pedestrian thoroughfares. This will also ensure greater accessibility for pedestrians to access these retail locations. This goal also includes maintaining Place d'Orléans as a retail hub but transforming it towards being more accessible retail for visitors using active transportation.

9.3.3 Institutional and Community

The study area has large institutional and community spaces including the YMCA, the Shenkman Arts Centre, and Paroisse St-Joseph d'Orléans. A key goal of the proposal is to both, develop a community hub within the Orléans Town Centre, as well as create smaller-scale community spaces for day-to-day uses. The existing community amenity space in the OTC can be used to define the design and planning for this area, focusing on community uses and access. As for smaller-scale community spaces, this includes smaller community spaces and amenities such as health centres, community centres, and recreational areas. These community spaces will be located throughout the site in order to encourage access from both new developments and existing residential areas.

9.3.4 Mixed-Use

The preceding land uses are to be integrated into mixed-use buildings in order to create vibrant mixed-use environments. The main street corridor along St. Joseph Boulevard, Place d'Orléans (in

Phase 2), and the OTC will all become dense, mixed-use areas. This range of uses will help to create spaces that remain lively and vibrant at all times of day. Through the develop of mixed-use residential, commercial, and community amenities, the site benefits from improved access and experience in these spaces.

9.3.5 Open Space

Existing open space in the area includes naturalized spaces in the form of Bilberry Creek and the St. Joseph escarpment, a privately owned public space in front of the OTC, and Pierre Rocque Park on the western portion of the study area. This report proposes creating more community-oriented pedestrian spaces throughout the study area. Features such as community gardens, flexible spaces for community events, and passive pedestrian plazas will be integrated into the greater path network through the study area. Also, new recreational spaces such as a soccer field to the north of Highway 174 where the current LRT construction yard is located. These additions and improvements will help to enhance the pedestrian environment, provide new recreation spaces, and connect the existing residents to other areas of the neighbourhood.

9.4 Built Form and Building Typology

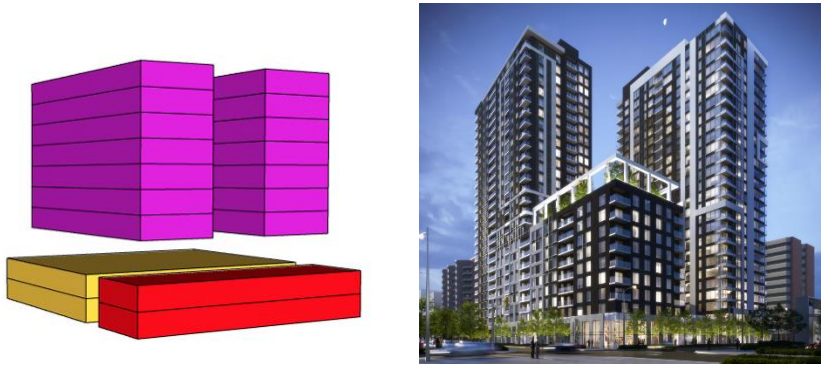


Figure 9.4a – Building Type 1 – Mid-rise Mixed-Use 1 (showing Claridge Royale Condos, 245 Rideau Street, Ottawa, ON).

Building Type 1 is a midrise building with two office towers (Pink), ground floor commercial (Red), and ground floor residential (Yellow). This mixed-used building type contains three different uses which will help contribute to a vibrant and active community in the design area. Central Orléans is lacking office space, so buildings like these provide needed employment intensification. Additionally, the ground-oriented retail is pedestrian friendly, and the first-floor housing meets the market demand for ground-oriented housing units.

Figure 9.4b – Building Type 2: Mid-rise Mixed-Use 2 (showing Keel Condos, Ottawa, ON).

Building Type 2, which will line St. Joseph Boulevard, provides apartment unit housing on upper floors and ground level commercial and residential. Building Type 2 contains residential and commercial spaces. These are buildings typical of a main street in Ontario and will help recapture the traditional main street feeling along St. Joseph while also fulfilling the market demand for ground-oriented units. Building Type 2 will provide commercial and residential intensification and help create an active main street along St. Joseph Boulevard. The inspiration for this building type was taken from mixed-use commercial buildings with residential townhomes found on Holmwood Ave. in Lansdowne Park, as shown in Figure 9.4d.

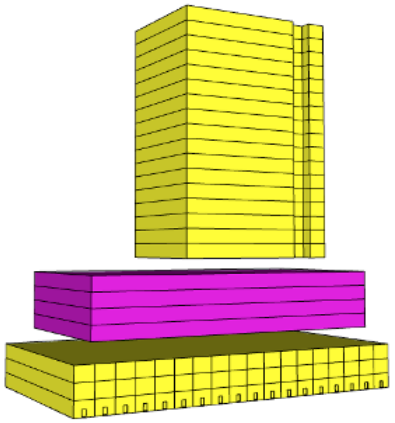


Figure 9.4c – Building Type 3 – High-rise Mixed-Use 1.

Building Type 3 includes residential and office land uses. This is primarily a residential tower with stacked townhouses at grade along with four floors of office space. Within this high-rise mixed-use building type, ground floor residential is encouraged, with office uses above to ensure a mixed-use environment that improves accessibility for both tenants and employees. By providing a mixed-use high-rise building that is primarily residential, the OTC will be able to increase density within the area, which will help meet the *New OP's* desired density targets.

Figure 9.4d – Photo of 225 Marché Way and the accompanying townhomes located in Lansdowne Park, Ottawa.

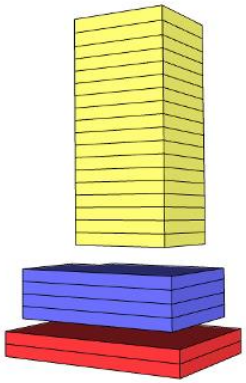


Figure 9.4e – Building Type 4 – High-rise Mixed-Use 2 (showing 96 Nepean Street, Ottawa, ON).

Building Type 4 is a high-rise building that includes residential, institutional and community, and commercial uses. This mixed-use building incorporates multiple land uses which will support accessibility and convenience to residents in the building and surrounding areas. Institutional and community land uses in this building type, in form of building-exclusive, or greater community-oriented, could include libraries, community centres, educational centres, or recreational facilities. These spaces can be negotiated for by the City of Ottawa during the implementation process. In addition, the commercial land use at grade allows residents of the OTC to "shop at home". These mixed-use developments will increase connectivity for pedestrians, while maintaining and promoting healthy community habits.

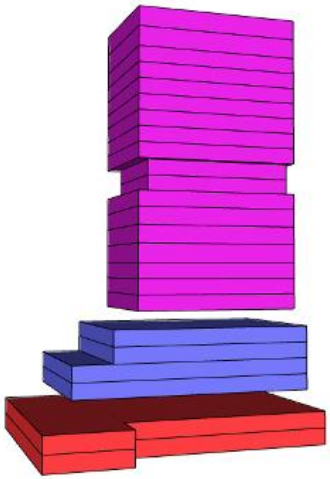


Figure 9.4f – Building Type 5 – High-rise Mixed-Use 3.

Building Type 5 is a high-rise building with land designations that include office, institutional and community, and commercial uses. This mixed-use high-rise building incorporates land uses that will promote the economic diversity of the OTC. Additionally, with the building mostly composed of office and retail space, this building type will support employment opportunities to grow employment opportunity within Orléans. The institutional and community uses will provide accessibility to nearby amenities and services for people who reside in the OTC and surrounding areas.

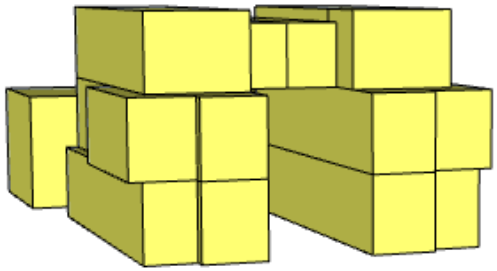


Figure 9.4g – Building Type 6 – 613 Flats Type 4.

613 Flats are low-rise townhouses. These building types utilize previously single-detached lots with higher-density, yet context-sensitive, compact units. Ottawa recommends 613 Flats in the *New OP* (2021) as they help to meet a market demand for ground-oriented housing while still intensifying an area. 613 Flats are a form of compact development that balances out with the reality that many homebuyers are searching for ground-oriented units (see Figure 9.4h). 613 Flats further the proposals aim of meeting target density goals while providing an appealing type of housing for existing and new residents to Orléans. 613 Flats typology 2 and 4 were incorporated into the proposed development.

Figure 9.4h – Rendering of building typology #4 from the 613 Flats strategy that seeks to develop 4 units from a single 30 m x 30 m parcel.

9.5 Connectivity

This proposal will prioritize active transportation connectivity for pedestrians and cyclists, while maintaining reasonable connectivity for automobiles. Beyond basic connectivity, the design concepts will create a much more inviting and pleasant environment for pedestrians and cyclists. This includes creating a complete main street along parts of St. Joseph Boulevard and Centrum Boulevard (see Street Hierarchy in Figure 9.5a). This will also be accomplished by reducing the car lanes on St. Joseph Boulevard from four and five lanes down to three, the addition of bike lanes along St. Joseph, and the widening of sidewalks throughout the design area. Improving pedestrian infrastructure will also extend to creating additional crosswalks across major arterial roads such as St. Joseph Blvd. This additional connectivity will both improve connections within the site as well as creating safer connections to existing surrounding neighbourhoods. Additionally, as mentioned previously, this proposal builds on existing green networks throughout the study area through the creation of cross walks at key intersections such as where Bilberry Creek crosses St. Joseph Boulevard.

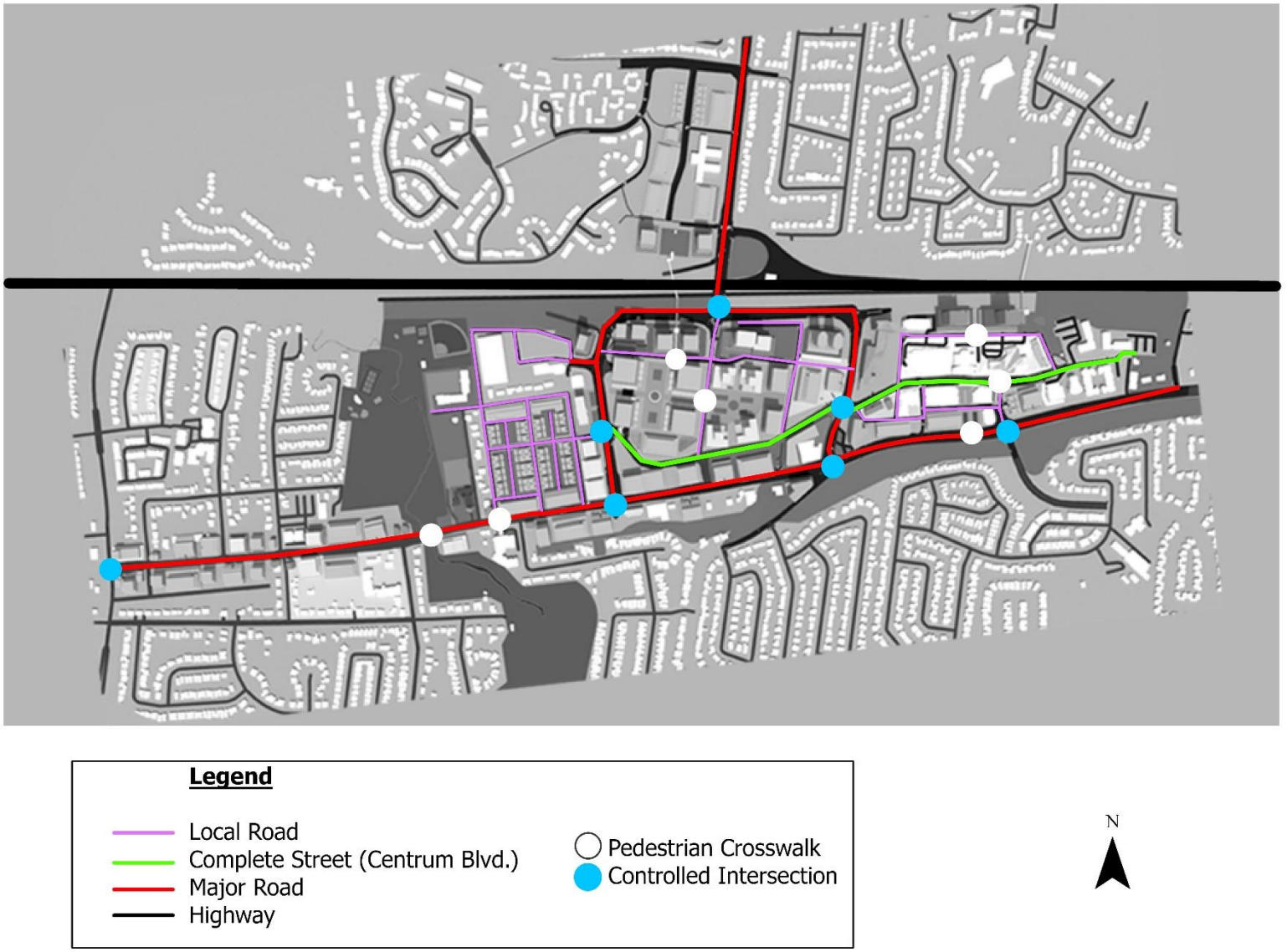


Figure 9.5a – Showing street hierarchy throughout Study Area.

9.6 Precinct Analysis

The OTC Study Area was divided into three precincts based on their character, context, and existing conditions (see Figure 9.6a). The breakdown of the area into smaller precincts, Precinct A, Precinct B, and Precinct C, ensures that the guiding design principles can be best adapted to fit the characteristics of each location. These precincts were further divided into blocks to ensure that land use data and density calculations can remain on a manageable scale. The following sections will describe each precinct in their current built form and the proposed vision. A complete building inventory can be found in Appendix E, in addition to a list of development assumptions.

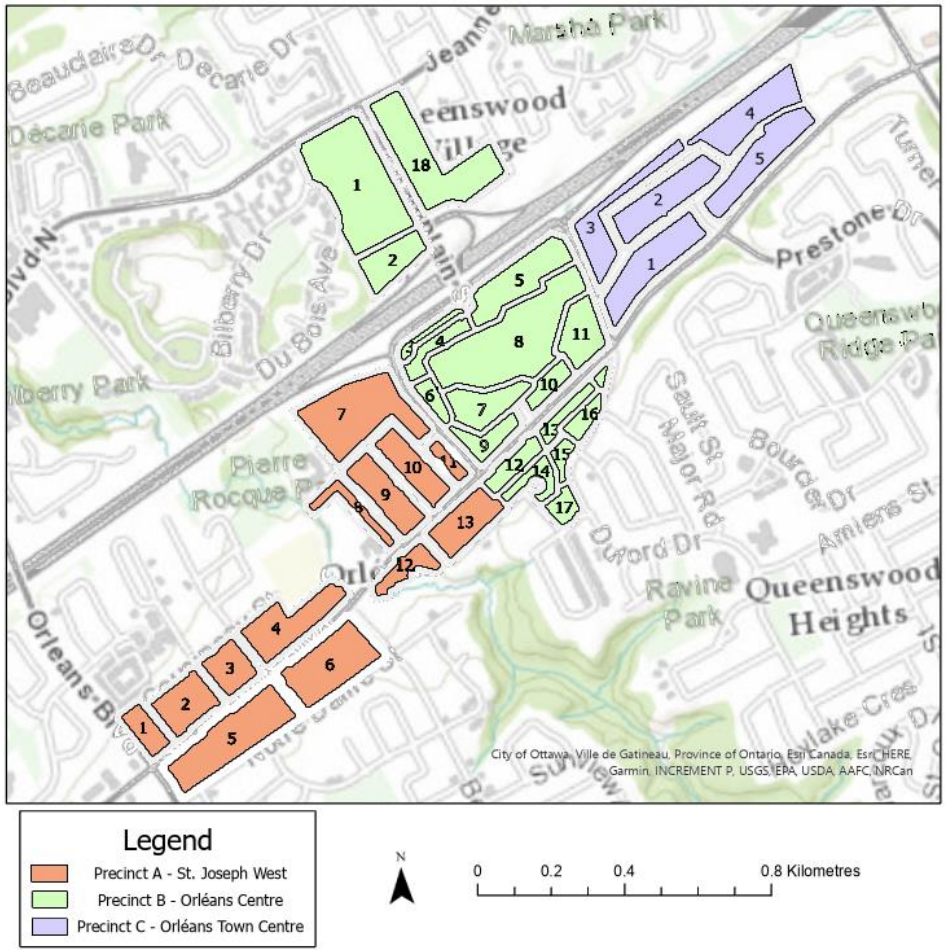


Figure 9.6a – Precincts A, B, and C for Study Area.

9.6.1 Precinct A – St. Joseph West

Precinct A consists of 16 blocks on the western portion of the study area (see Figure 9.6b), the majority of land currently exists as either homogenous residential or car-oriented commercial uses along St. Joseph Boulevard. The northern portion of this area near Highway 174 is currently undeveloped and the eastern portion incorporates a mix of residential single-family homes and commercial uses such as a grocery store, health clinic, and more. Table 9.6d outlines the current gross and net density, both of which significantly fail to meet the City of Ottawa's density targets.

The goal of this precinct is to increase the residential density and diversity of land uses, encourage active transit, enhance the pedestrian experience, and preserve the Franco-Ontarian history of Orléans. Despite the current low density of the precinct, the proposed plan seeks to transition the parking-lot-fronted commercial buildings into mid-rise, mixed-use buildings with both residential as well as office uses above ground-level retail. The eastern portion of the precinct will see the development of the continued densities along St. Joseph Boulevard, proposed for the western portion, and the regeneration of existing suburban developments following the 613 Flats strategy. Ultimately, the vision for development is to increase densities along the main corridor as well as create active frontages and streetscapes through diversified uses.

Figure 9.6b – Precinct A shown (Phase 1).

To improve the pedestrian environment and active transit infrastructure, this plan seeks to establish a trail network that runs parallel to Bilberry Creek and cycling lanes along St. Joseph Boulevard. Although an intermittent trail exits, connecting and expanding the network together to reach other recreational spaces would significantly enhance the quality of the public realm. Furthermore, reducing the amount of traffic lanes on St. Joseph Boulevard

between St-Jean Street and Gabriel Street allows for wider sidewalks, pedestrian features like benches and bike racks, and additional pedestrian crossings to be created – all features which benefit the pedestrian experience and contribute to an active 15-Minute Neighbourhood.

Given the historic significance of Franco-Ontarian history in Orléans, an integral aspect of the proposed plan is to preserve that heritage by maintaining the St. Joseph d'Orléans Parish as a cultural landmark – this plan proposes seeking heritage designation under Part IV of the Ontario Heritage Act for the St. Joseph Parish. To achieve this, this plan seeks to preserve the sightline of the church spire along St. Joseph Boulevard by reducing the height of buildings along the arterial road and increasing building setbacks. Also, a public open space in front of the church, paired with a new

Figure 9.6c – Design showing an existing propane station replaced with public open space, community amenities, and wayfinding elements.

pedestrian crossing that connects with the new trail network, is proposed to be constructed to enhance the public realm and ensure that the surrounding area of the church remains a prominent feature in Orléans.

The public open space will replace a propane station and parking lot. It will contain a community garden, fitted with multi-use pathways, benches, lighting, and wayfinding signs to create a destination for all members of the community to attend (see Figure 9.6c). Ultimately, the area surrounding the church is to be transformed into a cultural hub that preserves the Franco-Ontarian history of Orléans while providing the basis for the creation of a future community identity.

Table 9.6d – Statistics for Precinct A.

Data	Precinct A Existing	Precinct A Proposed
Dwelling Units	368	3,267
Net Density (dwelling units per net hectare)	12	98
Number of Residents	796	4,008
Dwelling Units	1,482	3,573
Gross Density (People and Jobs per gross hectare)	48	160
Large Dwellings in Intensification (%)	N/A	16%
New Affordable Housing Units	N/A	0
Coverage of Developable Land	20%	35%
Floor Space Index	0.30	1.38
Maximum Height	3	25

9.6.2 Precinct B – Place d'Orléans Shopping Centre

Precinct B is located at the centre of the study area and currently consists of the surface level parking surrounding the Place d'Orléans shopping mall, the Place d'Orléans LRT station, and commercial uses along St. Joseph Boulevard (see Figure 9.6e). North of the Queensway sits the OC Transpo Park and Ride lots and a proposed long-term care facility, with an array of undeveloped lots transitioning into the exiting suburban context. These blocks have significant potential to increase the residential density of the area and diversity to the mix of housing types, to meet the growing population demand which is anticipated by the City of Ottawa. South of St. Joseph Boulevard, Blocks 12-17 consist of commercial uses which back onto the escarpment. Also, an approved development application located on Block 16 will lead to the construction of a 16-storey mixed use building consisting of 165 residential units with over 426 square metres of retail space at grade. Similar to Precinct A, the gross and net densities of Precinct B are significantly below the targets of the City of Ottawa, which can be seen in Table 9.6f.

Based on the phasing approach developed by this plan, the Phase 1 developments will intensify around the existing mall and parking structure. This strategy was based on the development of the Richmond Centre precedent example, in which the mall structure is maintained while developments and intensification occurred in the lots surrounding the mall. Precinct B is proposed to be based on introducing more high-rise mixed-use buildings, intensifying the density and uses of the site, and creating an inviting public realm. Replacing the current surface level parking with high density mixed-use buildings, including high-rise buildings Highway 174 will increase the residential density and ensure the provision of commercial, office, and community uses in the area.

Figure 9.6e – Precinct B shown (Phase 1).

Replacing the Place d'Orléans Shopping Centre and accompanying parking structure in Phase 2 of the redevelopment, will provide the opportunity to create mixed-use buildings and pedestrian-exclusive plaza networks. Also, the location of the current BRT station and OC Transpo lot are owned by the City of Ottawa, providing an opportunity to develop affordable housing units of varying tenure near the LRT station in order to ensure improved housing affordability around a key node in Orléans. Additionally, this plan proposes to enhance the public realm of this precinct by replacing the mall with mixed-use buildings containing retail at grade, a community garden to create an engaging public space, and traffic-calmed complete streets to create more pedestrian-friendly blocks. The retail stores displaced during the replacement of the mall will be reincorporated into the new commercial units. Centrum Boulevard will be extended from Precinct C to support a shuttle service, and bike lanes will be built along St. Joseph Boulevard.

Table 9.6f – Statistics for Precinct B.

Data	Precinct B Existing	Precinct B Proposed Phase 1	Precinct B Proposed Phase 2
Dwelling Units	261	4,281	6,598
Net Density (dwelling units per net hectare)	8	127	195
Number of Residents	539	7,522	12,649
Dwelling Units	1,860	4,247	8,223
Gross Density (People and Jobs per gross hectare)	41	201	356
Large Dwellings in Intensification (%)	N/A	12%	11%
New Affordable Housing Units	N/A	1,110	1,110
Coverage of Developable Land	30%	54%	44%
Floor Space Index	0.57	2.67	4.29
Maximum Height	16	33	33

9.6.3 Precinct C – Orléans Town Centre

Precinct C consists of the OTC and a range of land uses, in addition to the escarpment on the south side of St. Joseph Boulevard which separates the OTC from the single-detached housing (see Figure 9.6g). The OTC is surrounded by restaurants, the Shenkman Arts Centre, a YMCA, open spaces, parks, and a seniors' residence. Currently, there is a development application under review in Block 3 proposing a 17-storey retirement home facility with underground parking. This type of development, specifically a high-density, high-rise building close to the LRT station, is consistent with the proposed vision. Most of the precinct is underdeveloped and has significant potential for intensification. The escarpment and Queensway pose significant difficulties in developing adequate connections to the neighbourhoods north and south of the OTC. There are minimal

Figure 9.6g – Precinct C shown (Phase 1) Note the new active recreation playing fields north of Highway 174 in addition to the pedestrian and cycling bridge connecting the proposed future LRT station with the residential neighbourhood north of the highway.

paths that connect the neighbourhoods through the escarpment and no current connection across the Queensway, limiting the current possibility for a 15-minute neighbourhood. Similar to Precincts A and B, Precinct C has a net and gross density that are significantly lower than that of the City of Ottawa target densities, as seen in Table 9.6h.

The proposed Precinct C seeks to improve the quality of the public realm of the area surrounding the OTC. This objective will be met by enhancing pedestrian and transit access to the site, increasing the residential density through the provision of mid and high-rise buildings, and creating an inclusive public realm. Considering the current challenges to the 15-Minute Neighbourhood posed by the escarpment and Highway 174, improving pedestrian access to the site will be achieved through improving trail networks in the escarpment and constructing a pedestrian and cycling bridge across the highway to connect to the LRT station and the neighbourhoods beyond.

The bridge will ensure that residents of the subdivisions to the north and south of the OTC will be able to access the site in a 15-minute walk. To accompany the improved escarpment trail network, an additional pedestrian crossing on St. Joseph Boulevard is proposed between Duford Drive and Prestone Drive to ensure safe pedestrian crossing of the arterial road. Additionally, the proposed pedestrian and cycling bridge can serve as access to a future LRT station if the demand exceeds the current planned capacity.

Given that the current site is well below the residential density targets, providing mid and high-rise buildings along the northern portion of St. Joseph Boulevard and directly south of Highway 174 will increase the density to meet the targets and create a vibrant community. Notably, the high-rise buildings will be of various mixed-use designs including residential walk-up units, commercial ground-floor buildings, and units with community amenities, such as community centres, event space, and libraries. The tallest of the high-rise buildings will be located on lots directly south of the highway to ensure that traffic noise and wind is buffered from the interior of the site.

To enhance the quality of the public realm, this plan proposes to transform Centrum Boulevard into a complete street with active transit infrastructure that continues west into Precinct B. This ‘complete’ streetscape will include features such as traffic calming measures (different paving materials, buffers between cars and pedestrians), improved pedestrian infrastructure (lighting, wayfinding, street furniture), and green infrastructure (street trees and permeable surfaces). In addition, the proposal will improve transit service by providing a shuttle service that connects with Precinct B (see Figure 9.7b). The proposal will also create shorter blocks by expanding Brisebois Crescent south to reach St. Joseph Boulevard. This design includes event spaces and amenities for community gatherings, including the enhancement of the public square directly south of the OTC (see Figure 9.6g).

Ultimately, this precinct provides excellent opportunity for development while establishing the necessary social and neighbourhood hub characteristics of the town centre, adding recreational fields to the area currently used as the LRT construction site, and improving connections to the Queenswood neighbourhood north of Highway 174.

Table 9.6h – Statistics for Precinct C.

Data	Precinct C Existing	Precinct C Proposed
Dwelling Units	782	1,974
Net Density (dwelling units per net hectare)	66	172
Number of Residents	1,031	3,099
Dwelling Units	930	1,034
Gross Density (People and Jobs per gross hectare)	76	160
Large Dwellings in Intensification (%)	N/A	10%
New Affordable Housing Units	N/A	1,102
Coverage of Developable Land	30%	56%
Floor Space Index	1.01	2.32
Maximum Height	17	27

9.7 Phasing

In order for the redevelopment of the OTC area into a dense 15-Minute Neighbourhood TOD which meets the target criteria, both short- and long-term plan horizons are necessary. This report proposes two phases for the redevelopment of the OTC area which can occur over the next 20-30 years, allocating approximately 10-15 years per phase. This incremental development ensures that the site maintains functionality as a commercial and transit centre for Orléans, while setting the framework for future growth.

9.7.1 Phase 1

Intensifying the OTC and Place d'Orléans Shopping Centre area, improving the pedestrian connectivity to and throughout the OTC and mall area, and creating pedestrian walking and cycling networks through the escarpment are the first improvements to be completed.

Notably, most taller buildings in this phase will be located parallel to Highway 174, abutting the Place d'Orléans O-Train station to the north and south, and along the periphery of the Place d'Orléans Shopping Centre (see Figure 9.7a). Furthermore, intensifying the commercial and residential uses of the OTC site, constructing 613 flats to the western portion of the site, and improving green networks will be included in the first phase. Other features of this phase include:

- Replacing most surface-level parking around Place d'Orléans with mixed-use buildings of varying height and density.
- Intensifying existing structures by adding more residential units and diversifying retail outside the mall.
- Improving mobility options within and around the site
    - Extending Centrum Blvd. to continue south of Place d'Orléans.
    - Integrating a bus station into the city-owned affordable housing developments on the current BRT station site.
- Turning Centrum Blvd. into a "complete street" with infrastructure that supports active transportation and improves pedestrian conditions through features such as improved tree canopies.
- Accommodating more cyclists and pedestrians on St. Joseph Boulevard.
    - Adding bike lanes
    - Creating a pedestrian crossing in front of the Town Centre
    - Designing trails along the escarpment to connect to the Queenswood Heights neighbourhood

Figure 9.7a – Axonometric rendering of proposed Phase 1 development within in Study Area with building colours based on land use designations.

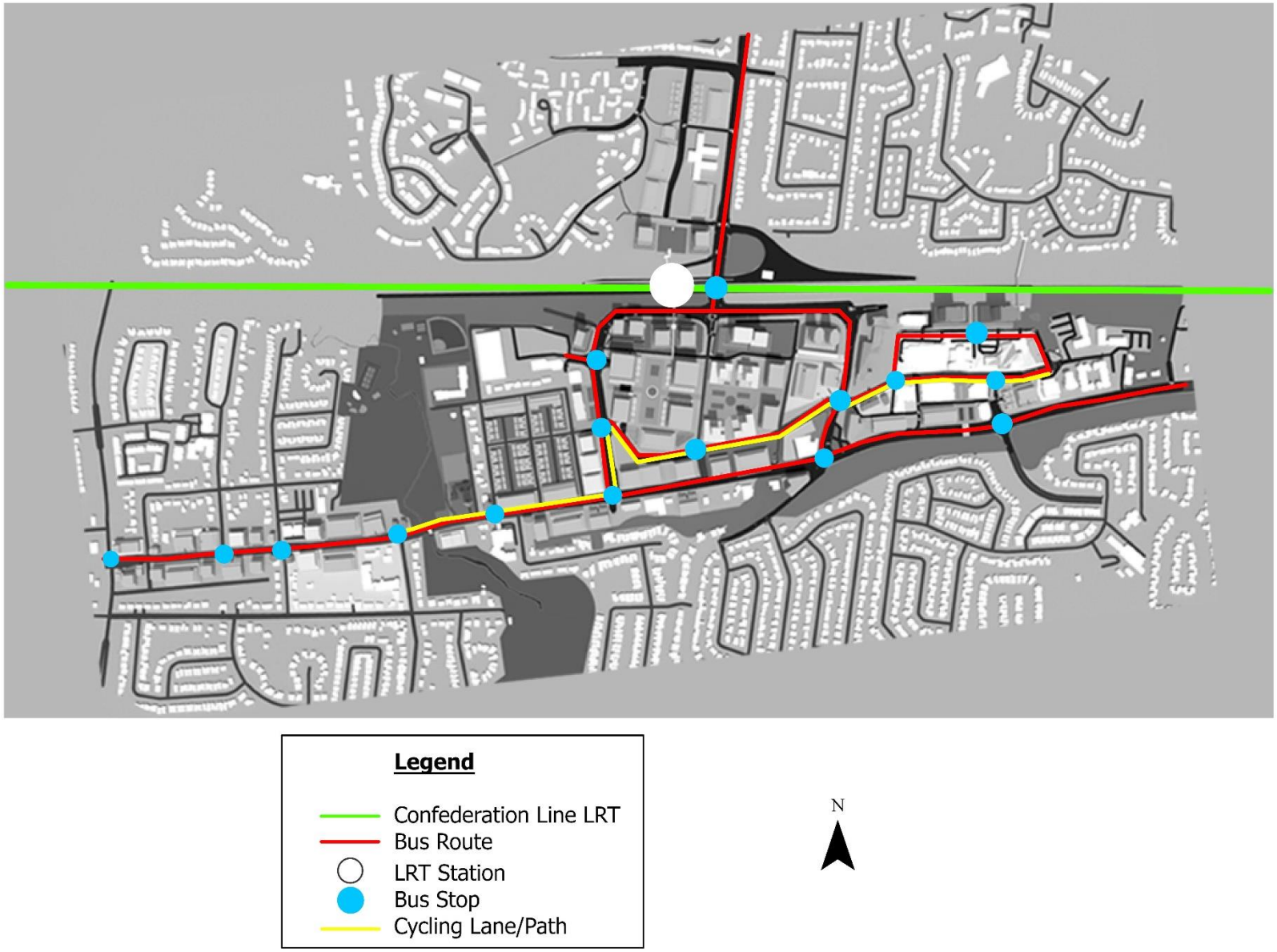


Figure 9.7b – Showing proposed improved transit throughout Place d'Orléans Dr. and Centrum Blvd.

9.7.2 Phase 2

Following the increase in density and improvement to pedestrian networks of Phase 1, the second phase will replace the Place d'Orléans Shopping Centre with mixed use buildings and a local road for improved connectivity. As part of this phase, a pedestrian and cycling bridge will be constructed over Highway 174, approximately 800 metres west of the Orléans LRT station, to improve connectivity to the neighbourhoods north of the highway in support of the 15-Minute Neighbourhood concept and support the construction of a future LRT station. Further intensification of the mall and OTC areas will occur during this phase.

Additional features of this phase include:

- Replacing Place d'Orléans and its parking structures with a series of mixed-use buildings and public open spaces and privately owned public space.
- Creating a finer street grid with separated pedestrian walkways.
- Connecting people throughout the area by adding a shuttle service across Champlain St., Place d'Orléans Blvd., and Centrum Dr.
- Achieving employment and residential density targets by adding gradually taller buildings from St. Joseph towards Highway 174.
- Balancing high-rise and human-scale residential dwellings by including podiums, 613 Flats, and ground-level townhouses.
- Creating dynamic public and green spaces with the intent of attracting both residents and visitors.
- Enhancing the spectrum of community services by adding a library and event space.
- Adding a pedestrian crossing across Highway 174 when the LRT station is built at the Town Centre.

Figure 9.7c – Land use map of proposed Phase 2 development within in Study Area with defined building based on land use designation. Note that the mall and parking structure has been replaces with mixed-use buildings and open spaces.

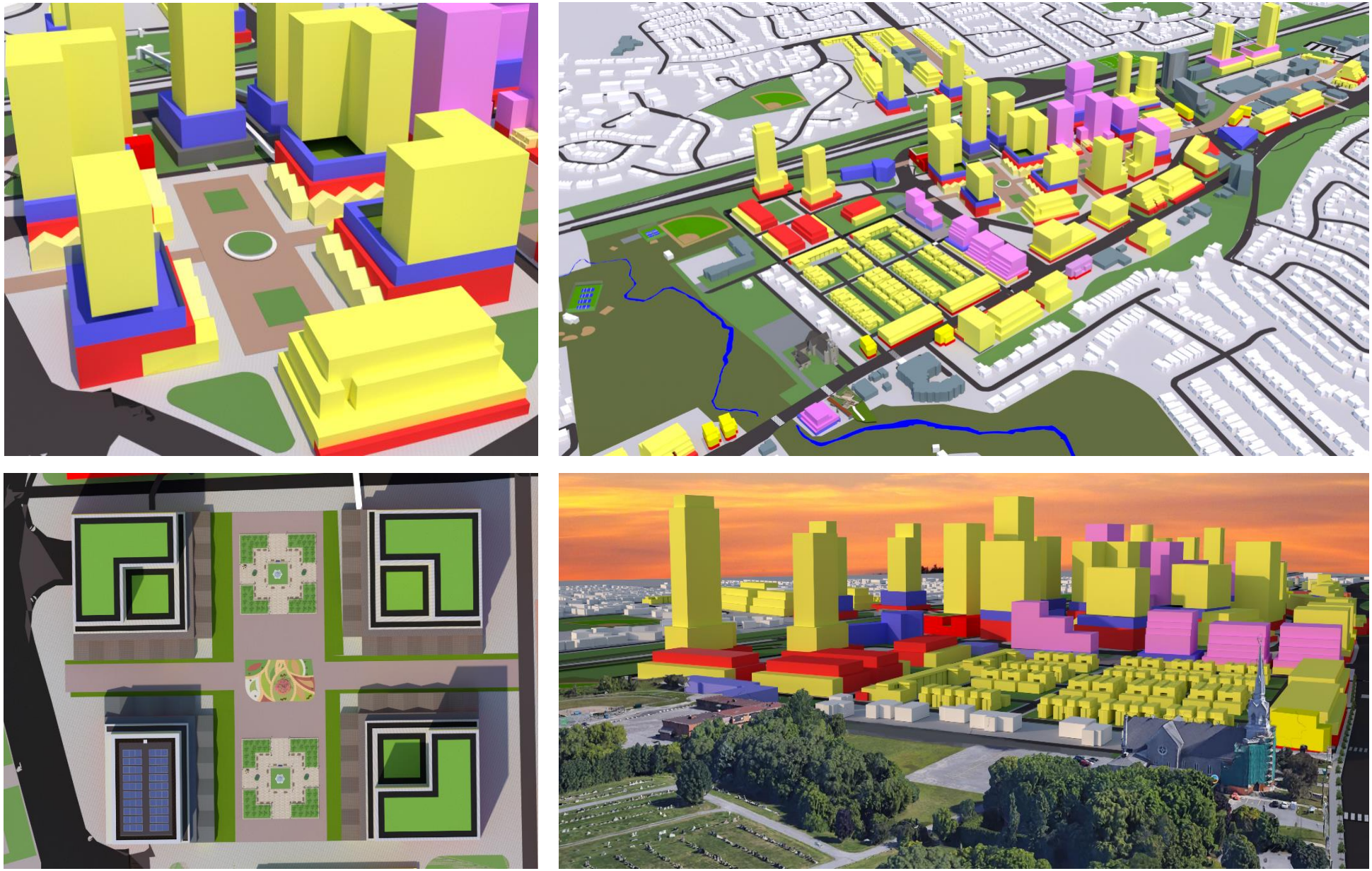
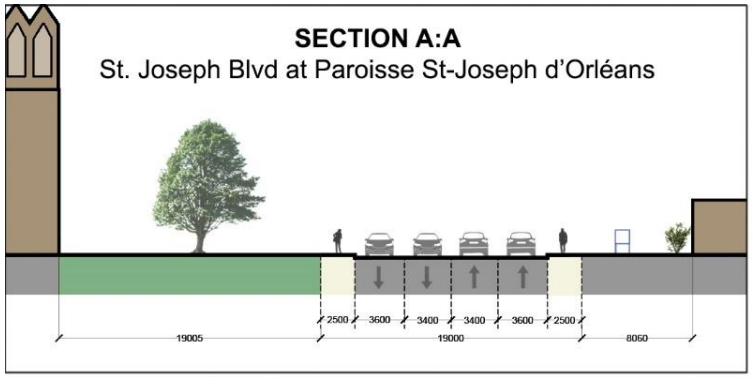


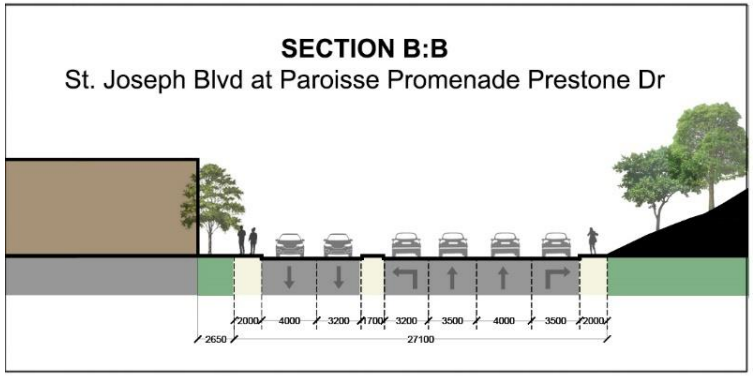
Figure 9.7d – Axonometric Views of Phase 2 development proposal and internal privately owned public space proposed where Place d'Orléans is located.

9.8 Streetscapes

The following streetscapes show the proposed street design within the proposed development. Through examinations of existing ROWs in the study site, three distinct street cross sections were used to generalize the improvements being made throughout the site. The goal of the streetscape designs shown is to create friendly, green, safe, and enjoyable experiences for all residents and visitors. There has been a significant focus on improving active transportation networks as well as creating a buffer between car traffic and pedestrians, to ensure safe travel throughout the subject areas.

Figure 9.8a – Showing existing ROW network in Study Area.





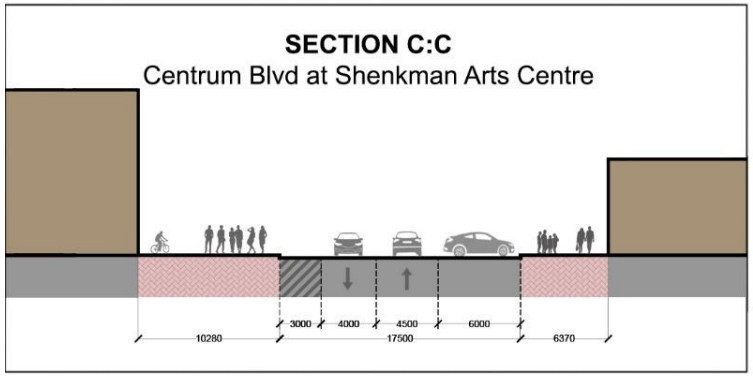


Figure 9.8b – Showing existing cross sections of chosen streetscapes for redevelopment within Study Area.

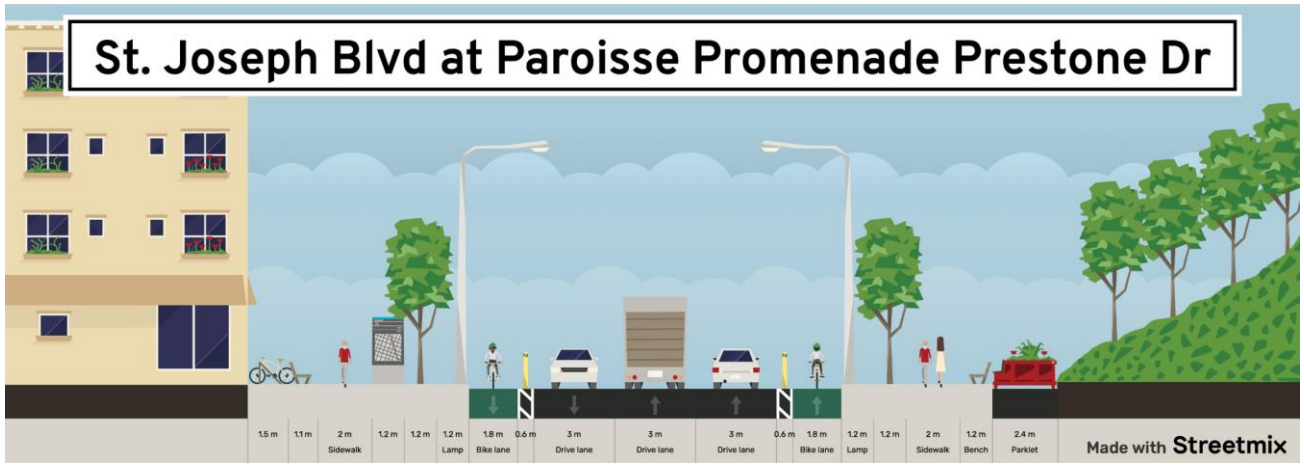


Figure 9.8c – Streetscape cross-section of St. Joseph Blvd at Paroisse Promenade Prestone Drive.

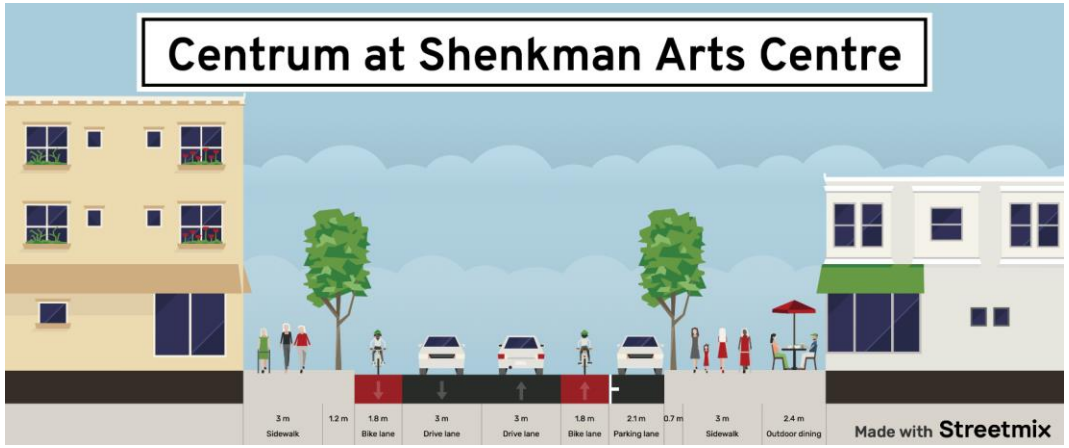


Figure 9.8d – Streetscape cross-section of Centrum Blvd at Shenkman Arts Centre.

Figure 9.8e – Streetscape cross-section of St. Joseph Blvd at Paroisse St. Joseph

10.0 Evaluation

Existing	Phase 1	Phase 2	Target	Criteria	Principle
○	◔	●	●	Mix of land uses	Land Use
◒	●	●	●	15-minute neighbourhood	
○	●	●	●	Complete streets	
◕	●	●	●	Mix of building type	
○	◔	●	●	Urban design on a human scale	Place Making
◕	◒	●	●	High quality public realm	
◒	●	●	●	Preservation of Franco-Ontarian history	
◒	◔	●	●	Supply of public spaces	
◒	●	●	●	Wayfinding measures	
◕	◒	◒	●	Ensure appropriate connections to abutting suburban neighbourhoods	Mobility
○	◔	●	●	Pedestrian and cycling networks	
◒	◔	◔	●	Supply of trail networks	
○	●	●	●	Active transit options	
◕	●	●	●	Connections to transit	
◕	●	●	●	Cycling lanes and infrastructure	
◕	●	●	●	Range of commercial and office uses	Economic Diversity
○	●	●	●	Number of jobs	
◕	●	●	●	Commercial at grade of mid- and high-rise buildings	
●	●	●	●	Access to childcare and healthcare facilities	Gender and Safety
○	●	●	●	8-80 principle	
◕	●	●	●	Lighting on streets, paths, and bus stops	
○	●	●	●	Pedestrian friendly sidewalks	
○	●	●	●	High Density	Growth and Intensification
○	●	●	●	Intensification near transit nodes	
○	●	●	●	Affordable housing	
○	●	●	●	Mix of housing type	
○	●	●	●	Mix of housing tenure	
◒	●	●	●	Tree canopy	Environmental Resiliency
◔	●	●	●	Green spaces	
●	●	●	●	Environmental protection	
◕	●	●	●	Permeable surfaces	

Legend
○ = No Conformity
◕ = Poor Conformity
◒ = Moderate Conformity
◔ = Good Conformity
● = Excellent Conformity

10.1 Land Use

The recommended concept design achieves a target density of about 150 people and jobs per gross hectare. This target comes from the recently approved *New OP*. In addition, to the density target, the design achieves a mix of land uses such as residential, commercial, open space, and institutional and community. The mix of land uses will ultimately transform the OTC into a complete community demonstrating the 15-Minute Neighbourhood concept. Existing community amenities, such as the Farm Boy grocery store will be preserved for convenience and accessibility purposes for the overall community. Open space will be protected for increased connections for multi-use trails and pathways. Additionally, open space will be incorporated and preserved in the overall design for the enhancement of green networks, which pose significant connections throughout the OTC Study Area.

10.2 Place Making

This report has a main goal to transform OTC to become a popular destination, instead of intermediary or undesired stop along larger travel routes. Achieving a high-quality public realm requires a purposeful aesthetic and urban design elements in the OTC Study Area. This includes tree canopies, wider sidewalks, multi-use pathways, and shared bike lanes. Additionally, potential local food markets where open space is available could also help transform the OTC into a destination where people come from areas outside Orléans. High quality streetscaping will focus on a pedestrian-friendly environment to further create an enjoyable pedestrian experience. The preservation of Franco-Ontarian history was also recommended in the design plans. This will be achieved by maintaining the historic presence and sightlines of the Catholic parish St. Joseph of Orléans church as an important landmark in the OTC.

10.3 Mobility

The redesigned Centrum Boulevard will serve as a traditional main street in the OTC core, which will incorporate newly developed pedestrian, cycling, and transit infrastructure. This will ensure that there are efficient and safe active transportation routes. The recommended concept design also plans to achieve more supply of trail networks along the escarpment to increase appropriate connections to suburban neighbourhoods such as Queenswood Heights. In addition, this proposal will include another pedestrian and cycling bridge beginning from OTC across to the Northern neighbourhoods across Highway 174. There will also be the ability to connect to the proposed Ghost LRT station when this becomes a reality. This will help create a 15-Minute Neighbourhood concept by providing pedestrians and cyclists with convenience and access to amenities in the OTC Study Area. Achieving safe and enjoyable connections to abutting suburban neighbourhoods is a major goal that the 15-Minute Neighbourhood design concept strives to reflect.

10.4 Economic Diversity

The wide range of commercial and office land uses in the OTC Study Area provides an opportunity for the area to expand and grow economically. Incorporating commercial and office uses can maximize the number of jobs in the area and create an environment where people want to come for employment opportunities. Additionally, providing commercial uses at grade of mid and high-rise buildings will not only improve the employment opportunities within the OTC, but will also support efforts to keep pace with Ottawa's population and employment growth projections. A significant amount of infill development and intensification is planned to occur in the OTC, therefore potentially achieving more jobs per hectare and attracting new employment opportunities. Residents in the OTC can

enjoy a more well-balanced environment with more employment opportunities and mixed-use buildings that incorporate commercial uses and office space.

10.5 Gender, Safety, and Inclusivity

The addition of wider sidewalks, shared-use bike lanes and more multi-use pathways further provides necessary elements of safety within the OTC Study Area. The site provides pedestrian and cyclist friendly spaces to ensure that all age groups are feeling safe and protected along St. Joseph Blvd. and Centrum Blvd. Following policy directions stated in the City of Ottawa's *New OP*, the OTC has been redesigned to incorporate a pedestrian-friendly streetscape that will provide all genders and ages to realize the right to feel safe when traveling throughout the entire OTC Study Area. This includes recognition of trip chaining and travel patterns of women, facilitating access to daily needs, and providing child-friendly public spaces. Significant new lighting on streets such as Centrum Blvd. have been elevated to ensure pedestrians feel secure when walking during the day or night. Additionally, Bilberry Creek trail, which is currently used as a major green network pathway, will have additional lighting proposed to ensure safety and visibility for all genders and ages.

10.6 Growth and Intensification

Achieving the targeted density of 120 people and jobs per gross hectare and 150 dwelling units per net hectare will require significant amounts of infill development and intensification across the OTC Study Area. Mixed-use high-rise buildings near major transit nodes such as the Place d'Orléans LRT station have been redeveloped so that residential infill can occur within the OTC. North of Centrum Blvd approximate to the planned senior's apartment development will be a high-rise tower incorporating a mix of market condominium and affordable rental units. In addition, Phase 2 will include a variety of affordable housing units, which will be redesigned into podiums, ground-level townhouses, and 613 Flats. The addition of new housing types and tenures within the OTC Study Area will provide future residents the opportunity to live in an area that is close to major transit nodes with a multiplicity of employment opportunities. Residential intensification within the Study Area will support Ottawa's overall goal in keeping up with growth and population projections, which plans to surpass 1.4 million people during its growth.

10.7 Environmental Resiliency

Planning for environmental improvements within Orléans is paramount to ensure the long-term environmental resiliency of the area. Supplying permeable surfaces in both phases of design ensures a sustainable baseline for the OTC area to grow upon. Increased surface permeability will minimize runoff and ensure that stormwater can drain naturally into the ground in addition to utility infrastructure, to offset the impermeable surfaces associated with redevelopment construction. Increasing the tree canopy leads to improved air quality, natural means of reducing surface temperature due to shading, and provides a livelier streetscape. Furthermore, supplying new green spaces such as city parks, community gardens, and trails will support the environmental resiliency of Orléans by diversifying the local ecology and offset the denser core of the proposed plan. These goals of environmental resiliency are aimed to meet the City's objectives for environmental sustainability in the *New OP*.

11.0 Implementation

The proposed redevelopment of the OTC area is a large undertaking which requires specific implementation tools to achieve. Since most of the developable area is not owned by the city, most development will be done by the private sector, while working under public policies and guidelines.

Given the scale of the project, we believe that the most prominent means to achieve our vision is to adopt a two-phased approach spanning 30 years. The detailed description of each phase can be found in Section 9.6, although a timeline of 10-15 years per phase is the most practical approach.

11.1 Phasing

Phase one will generally commence with the intensification of Precincts A and C, in addition to sites directly surrounding the LRT station, along St. Joseph Boulevard, and along the highway, while retaining the mall and parking structure. This phase will also see the extension of active transportation and green networks in the form of trails and a new pedestrian bridge over the highway to improve active transportation permeability to the site and create a 15-Minute Neighbourhood.

Phase two will generally see the replacement of mall with a pedestrian-focused public realm that hosts a range of land uses, complimented by increased density, public plazas, and complete streets with active transit infrastructure.

The phased approach is beneficial for the redevelopment of Orléans because it will:

- Recognize the current prominence of the Place d'Orléans Shopping Centre as a commercial hub of the area and accommodate the gradual replacement of the mall in the second phase once more commercial spaces are provided in phase one.
- Provide the opportunity for business within the mall to relocate within Orléans once redevelopment is complete.
- Increase residential density, including the supply of affordable housing units on City of Ottawa owned lands near the LRT station and OTC, from the beginning of the project.
- Improve active transit networks and transitions from a car-dominated area to a pedestrian focused built environment.
- Allow the city to reassess travel demands once density increases to consider the opening of a second LRT station at the new pedestrian bridge, just north of the OTC.

Ultimately, the phased approach will ensure that the area gradually transforms into the final vision, while servicing the current population with more amenities and open spaces while supporting the opening of the LRT station.

Table 11.1 – Implementation and Recommendation Phasing Plan for the OTC Study Area.

Timeline	City of Ottawa	OC Transpo	The Heart of Orléans BIA	Primaris REIT
Short Term 0-10 Years	• Complete the Secondary Plan for Orléans, drawing on the principles and recommendations of this report. • Explore and implement opportunities for affordable housing on city-owned parcels. • Convert Brisebois Crescent and Centrum Boulevard into complete streets. • Work with Primaris REIT to extend Centrum Boulevard west through the mall site. • Construct pedestrian bridge over Highway 174 north of OTC and improve trails in the escarpment to extend the scope of the 15-minute neighbourhood.	• Complete Place d'Orléans LRT station. • Update local area transit plans to consider future bus connections and proposed improvements for the BRT Station connection on Champlain Street. • Identify and implement funding towards transit projects that will ultimately create and inclusive and accessible environment for all transit passengers.	• Identify storefronts and streetscapes in the OTC site that require improvements on accessibility and liveliness. • Take a leadership role in attracting businesses that make the Heart of Orléans distinct. • Work with the City of Ottawa and local businesses to encourage vibrant festivals, local farmers markets, and public art gathering spaces.	• Retain the Place d'Orléans Shopping Centre and implement a redevelopment plan along the periphery. • Collaborate to maintain key amenities such as a medical clinic just west of Place d'Orléans Drive. • Identify and begin implementing attractive redevelopment to excite market interest around Place d'Orléans Shopping Centre and LRT Station.
Mid Term 10-20 Years	• Ensure redevelopment proceeds in accordance with the implementation of the *New Official Plan* 5 Big Moves. • Begin infrastructure and redevelopment process on city-owned parcels.	• Monitor current proposed bus loop through redeveloped street connections.	• Collaborate with the City of Ottawa and other stakeholders to revitalize the OTC into a destination that is more walkable, bikeable, and connected to LRT.	• Negotiate with current owners on the provision of adequate commercial and retail locations in the redevelopment area before mall demolition.
Long Term 20-30 Years	• Continue to monitor the redevelopment process in the OTC study area. • Reassess travel demands and consider constructing a second LRT station at the new pedestrian bridge.	• Integrate a shuttle bus service that would support connectivity throughout the OTC site. • Monitor transit use and connectivity at the OTC	• Continue to monitor how the redevelopment is attracting jobs (both federal government and major employers) in the OTC study area.	

12.0 Recommendations

To support the implementation of the plan, we have identified seven key areas of recommendations to achieve a 15-Minute Neighbourhood in Orléans. They are land use, housing, mobility, urban design, financing and attracting development, community, and environmental resiliency.

12.1 Land Use

- Rezoning of the site and review of Official Plan land use designations to ensure that the relevant policies are consistent with the proposed uses.
- Locate highest density and tallest buildings near the LRT station and along the highway to ensure that new residents are connected to key features, the shadow impact is minimized, and vehicular related sound from the highway is buffered.
- Ensure active transit access to daily and weekly amenities to enhance the scope of the 15-minute neighbourhood.

12.2 Housing

- Ensure a mix of housing type and tenure to attract residents of varying demographics.
- Supply affordable rental housing units on city owned lots to diversify the population and housing market.
- Explore the introduction of secondary residential units in existing lower density neighbourhoods to meet density targets.

12.3 Mobility

- Continue to focus on active transit to support healthy lifestyles and support the 15-Minute Neighbourhood concept.
- Increase pedestrian access to the site in the form of a new active transit bridge over the highway and paths in the escarpment.
- Improve on site public transit in the form of more local bus routes and a shuttle service that connects key nodes with the LRT station.

12.4 Urban Design

- Plan for complete streets, such as the proposed Centrum Boulevard design, to create a destination.
- Provide ground-oriented retail, service, and commercial uses to cater to the pedestrian.
- Design open spaces that are scaled to the pedestrian with viewsheds, pedestrian infrastructure, and an engaging public realm.
- Preserve the sightline of the church spire through increased building setbacks and stepbacks.

12.5 Financing and Attracting Development

- Utilize the economic incentives of the IOCIP to attract local businesses and expand economic base.
- Support the Heart of Orléans BIA and provide basis for growth.
- Consider negotiating with developers to supply Privately Owned Public Spaces (POPS), given that most of the area is in the private sector

12.6 Community

- Retain Franco-Ontarian heritage through maintaining the church as a prominent community feature and through bilingual wayfinding.
- Supply new city parks and support third places for gatherings such as trail networks and a soccer field.
- Support community events in new plazas such as farmers markets, music festivals, art shows, holiday markets, skating rinks, and more.
- Ample public spaces to allow for adequate social distancing measures, if necessary.

12.7 Environmental Resiliency

- Green vehicle charging stations throughout the site, at the LRT station, and at loading docks.
- Improve the tree canopy to improve surface permeability conditions.
- Explore alternative energy sources such as green roofs and solar panels.
- Employ sustainable building standards such as LEED or Well Building.
- Reassess demands on public utility infrastructure throughout phased development.
- Improve water quality of Bilberry Creek

13.0 Conclusions

13.1 Project Background

The City of Ottawa retained the project team to create a redevelopment proposal for the Orléans Town Centre Area based upon policies in Ottawa's *New OP*, namely the 15-Minute Neighbourhood concept. A 15-Minute Neighbourhood is a community where residents live within a 15-minute walk or cycle ride to all necessary daily services and amenities. The project team determined the Study Area from a 15-minute walkshed analysis from key nodes in the site: Place d'Orléans Shopping Centre, the Place d'Orléans LRT Stop, the OTC, and the Ghost Station.

The Study Area contains a significant Franco-Ontarian history and is a typical example of a dendritic North American suburb. Ottawa classifies the Study Area as a suburban transect. Key sites in the Study Area include the OTC, Place d'Orléans, the escarpment, the St. Joseph main street corridor, and Highway 174. The Study Area has a clear separation of land uses and lacks employment nodes. However, the Study Area does have an ample supply of open spaces. Orléans has a history of economic stagnation and as a 'bedroom community'. The lack of connections within the Study Area's street network, the isolation of different land uses, the major barriers of Highway 174 and the escarpment, and a lack of pedestrian-oriented infrastructure were the largest barriers in creating a 15-Minute Neighbourhood.

In addition to the *New OP* and 15-Minute Neighbourhood concept, the project team also reviewed dozens of other key policies, most notably Ottawa urban design guidelines and the IOCIP. The project team then completed a SWOC analysis that illuminated how the Study Area's automobile-oriented street networks complicated the prospects for a 15-Minute Neighbourhood. Next, the project team completed a precedents catalogue and analysis to determine some of the best practices for a TOD, 15-Minute Neighbourhood, and greyfield redevelopment. Next, the project team looked at existing stakeholders for the Study Area and how a redevelopment may affect or involve them. Lastly, the project team hosted a design charette.

13.2 Design Proposal

The project team then determined a design area, to narrow the redevelopment focus, broken up into three culturally and economically distinct precincts. The project team then created a two-phased redevelopment proposal based on the following guiding principles:

1. **Mobility:** Prioritizing active transit and supporting LRT expansion.
2. **Place Making:** Establish a sense of place through design and heritage.
3. **Economic Diversity:** Support a range of commercial and office uses.
4. **Mixed Land Uses**: A mixture of land uses to create a complete community.
5. **Environmental Resiliency:** Improve and increase green spaces and enhance environmental features.
6. **Gender and Safety:** Safe places for women, children, and the elderly.
7. **Growth and Intensification:** Increase density and provide a range of housing.

The proposal included transitional development of high-rise to mid-rise to low-rise allowing for less starkness in the built form for neighbourhood residents. The proposal creates multiple new urban plazas that can act as community gathering spaces. The design also offers new major community amenities like a library and satellite college campus. Additionally, the design concept maintains and enhances existing amenities that suit a 15-Minute Neighbourhood like medical offices, open spaces, recreational areas, and grocery stores. Most buildings in the proposal are mixed-use incorporating some residential, retail, office, and community uses. The mixture of land uses will help create a live, work, and play environment. Overall, the design proposal achieves a dense 15-Minute Neighbourhood that reflects Orléans' community identity and enhances the community's social and economic prospects.

13.3 Implementation and Recommendations

A key component of this proposal's implementation is a phased approach. The project team has established a phased approach as this allows for an easier transition for residents in the neighbourhood. Additionally, the phased approach will provide retail spaces for mall tenants in advance of Place d'Orléans' replacement.

The following recommendations will help achieve the design concept and create a 15-Minute Neighbourhood:

- Land Use: Rezoning and reassessing land designations, build tallest buildings next to Highway 174 to minimize impacts and buffer highway.
- Housing: A mixture of housing types, provide affordable housing units, encourage secondary suites.
- Mobility: Encourage active transit, increase pedestrian access, improve public transit.
- Urban Design: Create complete streets, ground-oriented commercial, service, and residential units, craft open spaces and preserve sightlines.
- Financing and Economic Development: Utilize the IOCIP, support Orléans' BIA, negotiate POPS.
- Community: Highlight Franco-Ontario heritage, develop new parks and third places, support community events.
- Environmental Resiliency: Introduce green vehicle charging stations, improve tree canopy and surface permeability, employ alternative energy sources and green building standards.

13.4 Summary

The proposals in this project are grounded in a thorough and intricate analysis. Overall, this report has put forward a vision for a new 15-Minute Neighbourhood around the OTC that will improve, distinguish, and enliven the community of Orléans.

14.0 Appendices

Appendix A – Policy Analysis

Policy 1 – *New Official Plan* (2021) - Land Use Descriptions & Evolving Overlay

Hub (Mixed Use Town Centre)

Hubs in the *New OP* are designated as Protected Major Transit Station Areas (PMTSAs) as identified in Section 6.1. These areas identified as Hubs are envisioned as major employment centres and centred on planned or existing rapid transit stations that focus on a diversity of functions. All developments in this designated area are directed to support higher density development, a greater degree of mixed uses and a higher level of public transit connectivity than the areas abutting and surrounding the Hub. The prioritization of transit, walking, and cycling are essential to lands designated as Hubs. The OTC currently has lots of surface parking space and is highly automobile dependent. However, the current area will need to be redeveloped to further enhance a safer public realm, which will prioritize transit, walking, and cycling.

Neighbourhood

This intent for this urban designation is that they, along with Hubs and Corridors, permit a mix of building forms and densities. Neighbourhoods are planned for ongoing gradual, integrated, sustainable and context-sensitive development. The OTC Study Area has some areas designated under Neighbourhood, which many of are at the fringes of the Study Area. However, many areas in the OTC Study Area are referred to as Evolving Neighbourhood. This can encourage a range of local services to further promote the goal of 15-Minute Neighbourhoods. This includes retail, service, cultural, leisure and entertainment uses that will serve residents within walking distance.

Corridor – Mainstreet & Minor

This urban designation applies to bands of land along specified streets whose planned function combines a higher density of development, a greater degree of mixed uses and high level of street service. Regarding Mainstreet Corridors, St. Joseph Boulevard is the primary function of this designation in the OTC. In the Study Area, however, this Mainstreet Corridor does not currently support the circulation network since the needs of pedestrians, cyclists, and transit users are not prioritized over the private automobile. The Minor Corridor known as Jeanne d'Arc Boulevard in the OTC Study Area further supports the need for more buildings with an internal mix of uses supporting the evolution of a 15-Minute Neighbourhood.

Greenspace

This greenspace designation identifies a network of public parks, and other spaces within the public realm and natural lands that collectively provide essential ecosystem services to Ottawa's residents. This designation demonstrates how important it is to protect the ecosystem services of natural features, build resilience towards future climate conditions, and contribute to healthy, active communities. Therefore, the future of these lands must be used in an integrative way that will enhance public access and connections to parks, open spaces, and urban natural features located in the OTC Study Area.

Evolving Neighbourhood Overlay

The Evolving Neighbourhood Overlay recognizes areas that are in close proximity to Hubs and Corridors to signal gradual evolution over time, which will see a change from suburban to urban character to further support intensification. This will allow for the growth and intensification of new built forms and more diverse functions of land.

An Evolving Overlay is demonstrated in Schedule B8 of the New Official Plan (See Figure A.a). Regarding the OTC, the Evolving Overlay encompasses the HUB designation area. This signifies the importance of transforming the OTC into a new urban built form character. In addition, the Evolving Neighbourhood Overlay focused on the OTC is in anticipation of future intensification. Therefore, the

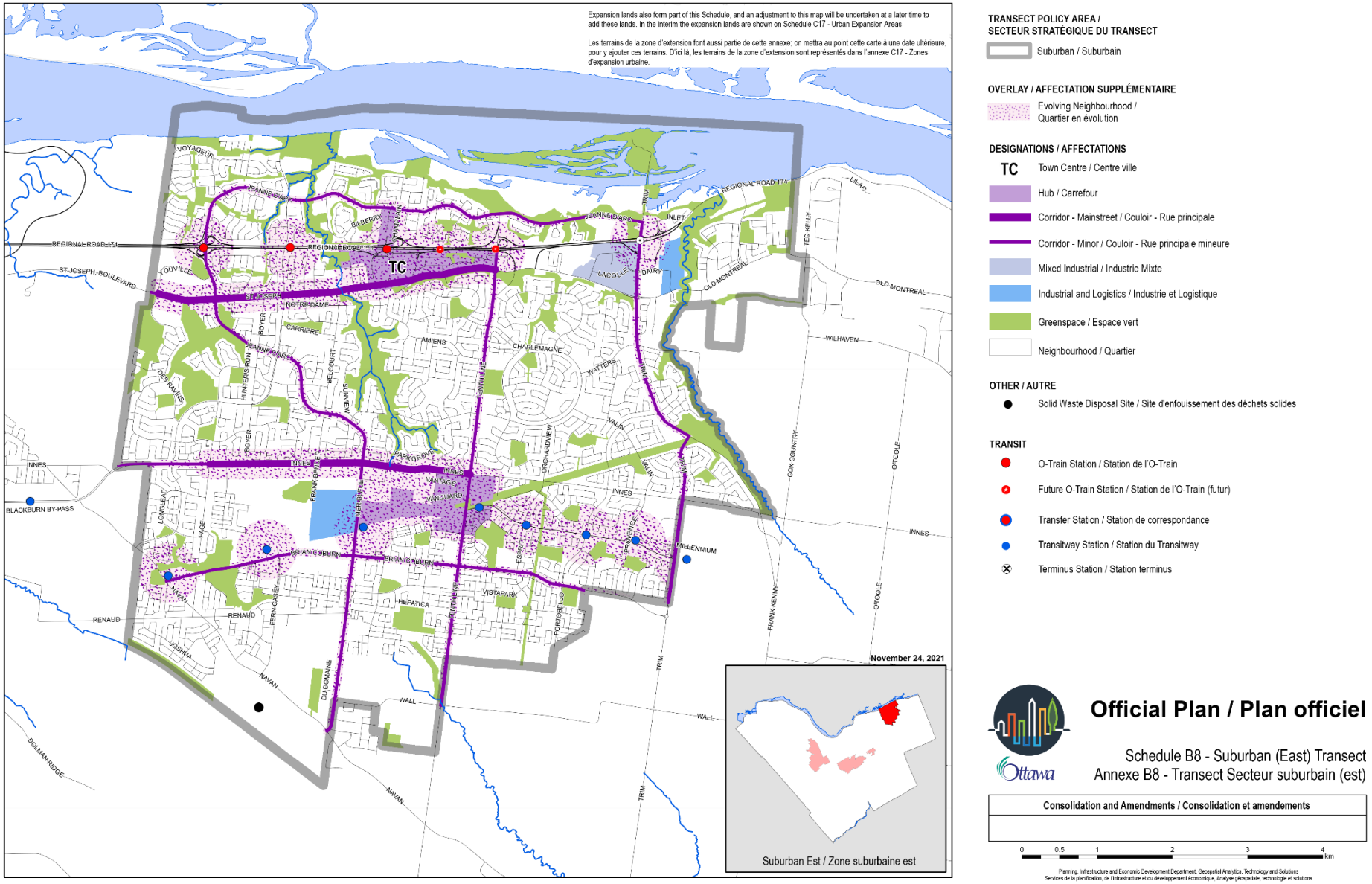


Figure A.a – New Official Plan Suburban (East Transect) Land Use Map.

OTC Study Area should be guided by an evolving urban character supporting new building typologies, urban site design, and applicable transportation mode share goals.

Policy 2 – City *of Ottawa Strategic Plan* (2019) - Strategic Outcomes

The *Strategic Plan of the City of Ottawa* addresses planning objectives and priorities over a four-year term to ensure accurate and timely review (City of Ottawa, 2019a). The ***2019-2022 Strategic Plan*** is the key corporate planning document that defines what City Council plans to accomplish over its four-year term. Additionally, the City of Ottawa will contribute strategic actions to achieve these priority outcomes in three ways. The City of Ottawa will take actions, will collaborate directly with strategic stakeholders, and will support and indirectly help others achieve the priority outcomes.
Strategic Priorities include:

- Economic Growth and Diversification
- Integrated Transportation
- Thriving Communities
- Environmental Stewardship
- Service Excellence Through Innovation
- Sustainable Infrastructure
- Thriving Workforce

Of these, the most relevant to the OTC is the strategic priority concerning Integrated Transportation. This is because the OTC encompasses the O-Train (East) LRT Line and the current BRT Line. Additionally, Place d'Orléans Shopping Centre and Place d'Orléans Station are currently located adjacent to each other. When analyzing the *O-Train East Extension* (City of Ottawa 2021b), the LRT Station is currently an existing Transitway Station that will be converted to serve as a Transfer Station. There will be two entrances allowing for both BRT and LRT access from Champlain Street allowing passengers to transfer between bus and train service. Within the Integrated Transportation section of the Strategic Plan are key specific actions that will be taken to meet the four strategic outcomes by the year 2022, the concluding year of the Strategic Plan. All four outcomes are supportive of TOD and 15-Minute Neighbourhoods for the OTC. The four strategic outcomes are given below:

IT1 – An Integrated Transportation Network that Incorporates all Modes of Getting Around

The City of Ottawa will take the following action during the term to achieve this important outcome by 2022. Specifically, the strategic outcome calls for the construction of the Stage 2 LRT in which the City of Ottawa will bring 77% of residents within 5 kilometres of an LRT station and connect the city's east, west, and south communities.

IT2 – Residents Have Easy Access to Their Preferred Transportation Choice

This outcome calls for the implementation of mobility safety initiatives to enhance the safety of vulnerable road users like pedestrians, cyclists, and motorcyclists. Additionally, the City of Ottawa will work collaboratively with each Councillor to identify sites for the installation of temporary traffic-calming measures.

IT3 – Transportation Infrastructure Investment is Sustainable and Meets Long Term Needs

This outcome calls for the City of Ottawa to update the Transportation Master Plan to define the policies, projects and other actions that will support a connected and sustainable transportation network. The City of Ottawa will also support stakeholders in the advancement of the city's autonomous vehicles initiative.

IT4 – Building Development in and around Transportation Hubs is Central to Official Planning

The City of Ottawa will take the following action to achieve the desired outcome by 2022. A major goal of this outcome is to report to the Transit Commission on system performance metrics for OC Transpo that are reflective of the multimodal transit system. Additionally, there will be continued collaboration with the NCC, the City of Gatineau and all of Ottawa's mobility partners (provincial ministries of transportation) on the new interprovincial crossing study led by the NCC, and other studies related to strategic transportation planning.

Policy 3 – Current *City of Ottawa Official Plan* – Adopted by Council (2003) vs. New *Revised City of Ottawa Official Plan* (2021) Table Comparison

City of Ottawa Current OP	City of Ottawa *New OP*
Section 1.1 – The Role of the OP Provides a vision of the future growth of the city and a policy framework to guide its physical development to the year 2036. Population of 940,000 in 2013. Sustainability as its primary goal – development that meets the needs of the present generation without compromising the ability of future generations. **Section 1.6 – How Guiding principles are addressed in the OP** Addresses the principles from a land use and community design perspective and the following points indicate some of the ways the OP responds to each principle: • A Caring and Inclusive City • A Creative City Rich in Heritage, Unique in Identity • A Green and Environmentally Sensitive City • A City of Distinct, Liveable Communities • An Innovative City Where Prosperity is Shared Among All • A Responsible and Responsive City • A Healthy and Active City **Section 1.3 – The Challenges Ahead** • A shifting global economy • Energy Costs and Consumption • Climate Change • Population Change • Affordability • Health **Section 2 – Strategic Directions (policies that will govern growth and change in Ottawa over the next 20 years)** 1. Managing Growth – City of Ottawa will manage growth by directing it to the urban area where services already exist.	**Section 1.1 – Context** Ottawa's population surpassed a million people in 2019 and by 2046 is expected to surpass 1.4 million people. Vision for the future is that Ottawa will become most liveable mid-sized City in North America. Positions Ottawa to be flexible, resilient, and above all, a city where people want to live, work, and play. Heavily relies on the 15-Minute Neighbourhood concept. **Section 2 – Strategic Directions (5 Big Moves)** 1. Growth – By end of its planning period achieve more growth by intensification than by greenfield development. • Provide variety of affordable housing options for residents. • increase share of future growth to be within Ottawa's existing built-up area to 60% by 2046. 2. Mobility – By 2046, majority of trips in Ottawa will be made by sustainable transportation (walking, cycling, transit or carpool). • LRT being backbone of Ottawa's transportation network and one of the strongest growth management tools. • Current TMP plans to reach a 50% sustainable mode share by 2031. 3. Urban/Community Design – Improve sophistication in urban/community design and put this knowledge to the service of good urbanism at all scales, from largest to very small. • This plan sets out preliminary policy directions to plan for the different contexts within Ottawa's boundaries (DT Core, Inner Urban, Outer Urban, Rural). • Planning approach for enhancing the City's major waterways, further protecting heritage, and promoting new high impact City-building projects

- Support growth in Villages to enhance their vitality, with provision for Village expansion where it is economically feasible.
- Growth in existing designated urban areas will be directed to areas where it can be accommodated in compact and mixed-use development, and served with quality transit, walking, and cycling facilities.

2. Providing Infrastructure – A transportation system that emphasizes walking, cycling and transit will be built.

- Public water and sanitary wastewater facilities will be provided to reinforce the city's commitment to a compact urban area and safe/healthy communities

3. Maintaining Environmental Integrity – Air quality will be supported by a transportation system that emphasizes walking, cycling, and transit and by policies that protect forests, wetlands, and other natural environments.

- The city will preserve natural features and the integrity of natural systems.
- Greenspaces will be valued and protected for their environmental, cultural heritage, recreational, educational, and aesthetic qualities.

4. Building Liveable Communities – Attention to urban design will help create attractive communities where buildings, open space and transportation will work well together.

- Growth will be managed in ways that create complete communities with a good balance of facilities and services to meet people's everyday needs, including schools, community facilities, parks, variety of housing, and places to work/shop.

Land Use Designation Map – (Schedule B – Urban Plan Policy)

Regarding the Proposed Study Area for the OTC the "General Urban Area", "Urban Natural Features", "Arterial Mainstreet", "Mixed-Use Centre", and "Town Centre" designations are termed and used.

4. Resiliency – Embed public health, environmental, climate and energy resiliency into the framework of our planning policies.

- Climate change and extreme weather impacts are increasingly felt through extreme heat and cold events… thus, Ottawa City Council has declared a climate emergency resulting in policies to help the City achieve its target of 100% GHG emissions reduction by 2050.

5. Economy – Embed economic development into the framework of our planning policies.

- Ottawa with Gatineau can position itself as a part of a larger economic mega region that includes Toronto and Montreal.
- Supports a broad geographic distribution of employment so that people have the choice to work closer to where they live.

Section 2.2 – Cross-Cutting Issues (6 identified that are essential to achievement of a liveable City)

- Intensification and Diversifying Housing Options
- Economic Development
- Energy and Climate Change
- Healthy and Inclusive Communities (highly promotes 15-minute walkable neighbourhoods…)
- Women and Gender Equity
- Culture

Land Use Designation Map – Schedule B8 – Suburban (East Transect)

Regarding the proposed Study Area for the OTC the "Suburban", "TC", "Hub", "Corridor", "Minor Corridor", "Mixed Industrial", "Greenspace", and "Neighbourhood" designations are termed and used (see Figure A.a).

Policy 4 – *Former City of Cumberland - Town Centre Secondary Plan*

Site specific policies originating from the *Former City of Cumberland Plan* are found on the City of Ottawa website (City of Ottawa, 1999). According to this former plan, there are Town Centre objectives for the OTC. The basic goal of Council was to encourage the creation of a dynamic, multiple use town centre, with a main street focus which will foster a sense of place for the residents in Orléans. The land use designation map of the former City of Cumberland is shown below. The area located as Major Commercial in the OTC is an integral part to the Orléans community. The objectives of this area are intended to primarily service those who work and live in the area while providing a high-density concentration of retail, service, and office commercial activities.

However, the establishment of government facilities, institutions, and recreation, cultural, entertainment and social uses shall also be encouraged. Additionally, the area located as Business District is established and located near residential, institutional, or commercial uses without resulting in land conflicts. The types of uses that will be encouraged for this specific land use designation is office and light industrial activities. The Urban Residential land use designation objectives focus on providing a residential community to add life to the Town Centre. This is accompanied by several specific policies that encourage medium to high density residential development.

The Open Space land use designation objectives of this area is intended to provide the Town Centre with recreational spaces that enhance the quality and enjoyment of the existing landscape. Several specific policies encourage the development of at least one public park, and adequate pedestrian circulation links or pathways between all components of the OTC. Although this is an important document for understanding the current development context, the *Former City of Cumberland Plan* will not be carried over in the *New OP* (City of Ottawa, 2021c).

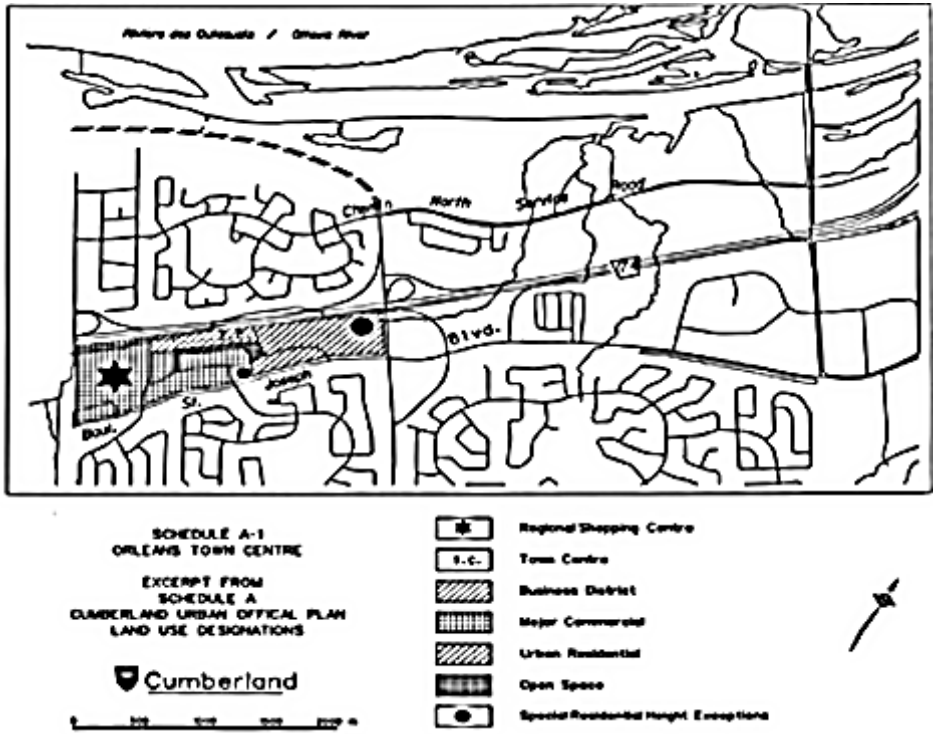


Figure A.b – Former City of Cumberland Land Use Map (City of Ottawa, 1999).

Policy 5 – *City of Ottawa Pedestrian Plan*

The *City of Ottawa Pedestrian Plan* outlines and recommends strategies for intervention where essential and integration of improved pedestrian networks in the form of sidewalks and multi-use pathways (City of Ottawa, 2013c). The Town of Orléans of which the OTC is part of, was on the lower end regarding walking modal share for internal trips at 19% in 2011. Riverside South was lower at 18%, while Barrhaven and Kanata in 2011 were 23% and 22 % respectively. The Orléans Minor Collector from St. Joseph to Jeanne d'Arc had the highest priority from the Phase 1 Testing of the selected sidewalk links.

The Orléans corridor had a score of 54 and priority ranking of 1 out of 13 areas tested (see Table A.c). In Phase 2 another set of criteria was used to gain an understanding of where pedestrian networks should be a major priority. The results did not change and St. Joseph

Table A.c – Phase 1 Testing of Sidewalk Link in Major Suburban Areas (City of Ottawa, 2013a).

Criteria		Potential Points	Sidewalk Link												
			Youville Drive (St. Joseph to Jeanne d'Arc)	Castlefrank Road (Winchester to Torcastle)	Iris Street (Southwood to Cobden)	Roman Avenue (Connaught to Hindley)	Cedarview Road (Fallowfield to Jockvale)	Carp Road (Hazeldean to Hobin)	Pleasant Park Road (Haig to Saunderson)	Arc En Ciel (Gardenway to Tourelle)	Knightsbridge Road (Sherbourne to Lockhart)	Saunderson Drive (Goren to Chapman)	Bermuda Avenue (Hochelaga to Carsons)	Crofton Road (Meadowbank to Ashgrove)	Lillico Drive (Erin to Lillico)
			Orleans	Kanata	Nepean	Bayshore	Barrhaven	Stittsville	Alta Vista	Orleans	Ottawa West	Elmvale Acres	Ottawa East	Cedarview	Hunt Club
			Minor Coll.	Arterial	Major Coll.	Local	Arterial	Arterial	Minor Coll.	Local	Local	Minor Coll.	Local	Local	Local
PHASE 1															
Pedestrian Demand and Adjacent Land Use															
Area Population/Employment	High	20	0	0	0	0	0	0	0	0	0	0	0	0	0
	Med - High	15	0	15	0	0	0	0	0	15	15	0	15	0	0
	Med	10	10	0	10	10	0	0	10	0	0	10	0	0	10
	Med-Low	5	0	0	0	0	5	5	0	0	0	0	0	5	0
	Low	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Demand Total			**10**	**15**	**10**	**10**	**5**	**5**	**10**	**15**	**15**	**10**	**15**	**5**	**10**
Current City Priorities															
Transit Points															
Rapid Transit Station	On the identified link (600 linear metres either way) of the station	15	15	0	0	0	0	0	0	0	0	0	0	0	0
	Leads directly to the station (600 linear metres either way)	10	0	0	0	10	0	0	0	0	0	0	0	0	0
Transit Intensive Corridor Stops	On the identified link (200 linear metres either way) of the stop	10	0	0	0	0	0	0	0	0	0	0	0	0	0
	Leads directly to the stop (200 linear metres either way)	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Transit	On a transit route	4	4	4	4	0	4	4	4	0	0	0	0	0	0
School Points															
Schools (elementary or intermediate)	School fronts on the identified link (300 linear metres either way)	10	10	0	0	0	10	0	0	0	0	0	0	0	0
	Leads directly to the school and within 300m of the school.	5	0	5	5	5	0	0	5	5	5	5	0	5	0
	School part of School Planning Program (within 300 m radius)	3	0	3	0	0	0	0	0	0	0	0	0	0	0
Secondary, University	School fronts on the identified link (300 linear metres either way)	8	0	0	0	0	0	0	0	0	0	0	0	0	0
	Leads directly to the school and within 300m of the school.	4	0	0	0	0	0	0	0	0	0	0	4	0	0
Parks Points															
Parks lead directly to link, or is on identified link (400 m radius)	Parks with amenities (ballpark, playground etc.)	8	8	8	8	8	0	8	8	8	8	8	8	8	0
	Greenspace	4	0	0	0	0	4	0	0	0	0	0	0	0	4
Current City Priorities Total			**37**	**20**	**17**	**23**	**18**	**12**	**17**	**13**	**13**	**13**	**12**	**13**	**4**
Safety / Roadway Characteristics															
Arterial or Major Collector	Yes - Sidewalk on one side	14	0	14	14	0	14	14	0	0	0	0	0	0	0
	No - Sidewalk on one side	20	0	0	0	0	0	0	0	0	0	0	0	0	0
Minor Collector	Yes - Sidewalk on one side	7	7	0	0	0	0	0	7	0	0	0	0	0	0
	No - Sidewalk on one side	10	0	0	0	0	0	0	0	0	0	10	0	0	0
Local Road	Yes - Automatically Not Qualified	-	0	0	0	0	0	0	0	0	0	0	0	0	0
	No - Sidewalk on one side	5	0	0	0	5	0	5	0	5	5	0	5	5	5
Safety / Roadway Characteristics Total			**7**	**14**	**14**	**5**	**14**	**19**	**7**	**5**	**5**	**10**	**5**	**5**	**5**
PHASE 1 TOTAL (35 point threshold for advancement to phase 2)			**54**	**49**	**41**	**38**	**37**	**36**	**34**	**33**	**33**	**33**	**32**	**23**	**19**
Meets Threshold - Carried forward For Network Implementation Plan or Phase 2 if Applicable			**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Priority Ranking			**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

to Jeanne d'Arc ranked first again (see Table A.d). With the OTC located along St. Joseph Boulevard, the pedestrian connections in the study become even more significant. Creating a 15-Minute Neighbourhood requires that the people living in Orléans feel safe while utilizing pedestrian networks to get to their daily and weekly needs. However, the OTC is situated in a very private-automobile dependent area and therefore creates further implications. Improving the pedestrian connections particularly along St. Joseph to Jeanne d'Arc is a major priority in this plan. This demonstrates the priority ranking for each suburban sidewalk link zone. In addition, this includes criteria for pedestrian demand, additional safety concerns and city priorities.

Policy 6 – *City of Ottawa Cycling Plan*

The *City of Ottawa Cycling Plan* is a long-term strategy to develop, strengthen and support cycling culture in the city (City of Ottawa, 2013b). This plan is consistent with the strategic direction demonstrated in the City of Ottawa's Official Plan, Transportation

Table A.d – Phase 2 Testing of Sidewalk Link in Major Suburban Areas (City of Ottawa, 2013b).

Criteria		Potential Points	Sidewalk Link												
			Youville Drive (St. Joseph to Jeanne d'Arc)	Castlefrank Road (Winchester to Torcastle)	Iris Street (Southwood to Cobden)	Roman Avenue (Connaught to Hindley)	Cedarview Road (Fallowfield to Jockvale)	Carp Road (Hazeldean to Hobin)	Pleasant Park Road (Haig to Saunderson)	Arc En Ciel (Gardenway to Tourelle)	Knightsbridge Road (Sherbourne to Lockhart)	Saunderson Drive (Goren to Chapman)	Bermuda Avenue (Hochelaga to Carsons)	Crofton Road (Meadowbank to Ashgrove)	Lillico Drive (Erin to Lillico)
			Orleans	Kanata	Nepean	Bayshore	Barrhaven	Stittsville	Alta Vista	Orleans	Ottawa West	Elmvale Acres	Ottawa East	Cedarview	Hunt Club
			Minor Coll.	Arterial	Major Coll.	Local	Arterial	Arterial	Minor Coll.	Local	Local	Minor Coll.	Local	Local	Local
PHASE 2															
Pedestrian Demand															
Service and Recreation (Public, City of Ottawa Facilities)	Arena	3	3	3	0	0	0	0	0	0	0	3	0	0	0
	Art Facility	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Athletic Facility	3	3	3	0	0	0	0	0	3	3	0	0	0	0
	Community Centre	3	0	0	3	0	0	0	3	3	0	3	0	0	0
	Cultural Facility	3	0	0	0	0	0	0	0	0	0	0	0	3	0
	Health Care Facility	3	0	0	0	0	0	0	0	0	0	0	3	0	0
	Meeting/Convention Centre	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Stadium	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Library	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Religious Centre	3	3	0	3	0	3	0	0	0	3	3	0	0	0
High Demand Commercial	Within 600m of a high demand commercial area	5	5	0	5	0	0	0	0	0	0	5	0	0	0
Youth and Seniors	Seniors' Residence	3	0	0	3	0	0	0	0	0	0	0	0	0	0
	Long Term Care	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Impaired Persons	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Daycare	3	0	0	0	0	0	0	0	0	3	0	0	0	0
	Youth Centre	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Demand Total			14	6	14	0	3	0	3	6	9	14	3	3	0
Additional Safety Concerns															
Very high speed	Posted speed 80kph +	5	0	0	0	0	0	0	0	0	0		0	0	0
	Posted Speed 50-70 kph	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Very high volume	Peak Hour Traffic >500 vph	5	5	0	0	0	5	5	0	0	0	5	0	0	0
	Peak Hour Traffic 250-500 vph	3	0	3	3	3	0	0	3	3	3		3	3	3
Sightline challenges	Significant bends, grades or other obstacles creating sightline concerns	5	5	0	0	0	0	5	0	0	0	0	0	0	5
Additional Safety Concerns Total			12	5	5	5	7	12	5	5	5	7	5	5	10
City Priorities															
Desire Line	Is there a beaten path (Y)	5	5	5	0	0	0	0	0	0	0	0	0	0	0
In the vicinity of transit or schools	(600m for Rapid Transit, 200m for Transit Intensive or Transit Priority and 300m for schools)	3	3	3	3	3	3	0	3	0	3	3	3	3	0
Parallel Pedestrian Facilities	No Parallel Pedestrian Facility within 400m	3	0	0	0	3	0	0	0	0	0	0	0	0	0
Barriers	Provides a crossing of a significant barrier	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Identified Link	In OP, TMP or other City Priority	5	0	5	0	0	0	0	5	0	5	5	0	0	0
City Priorities Total			8	13	3	6	3	0	8	0	8	8	3	3	0
PHASE 2 TOTAL			34	24	22	11	13	12	16	11	22	29	11	11	10
PHASE 1 AND 2 TOTAL			88	73	63	49	50	48	50	44	55	62	43	34	29
Priority Ranking			1	2	3	5	4	6							

Master Plan, Pedestrian Plan, and Infrastructure Master Plan. Regarding the *New OP* guiding growth and development to 2046, the 2013 Cycling Plan's goals are still well aligned. Additionally, policies in the *New OP* identify that improving the safety, effectiveness and consistency of cycling facilities is consistent with the Mobility Big Policy Move. The *New OP* has incorporated this Big Policy Move to ensure that by 2046, most trips in the city will be made by sustainable transportation. When analyzing the Actual (2011) and Target (2031) Cycling Mode Shares for Internal Trips by Area, the OTC would be considered on the lower end with a small increase of trips made in Orléans via cycling by 2031 (see Table A.e). The future intentions of creating a 15-Minute Neighbourhood focused on the OTC will require more cycling facility infrastructure and Shared Use Lanes (see Table A.f). Accomplishing this goal would further improve the cycling facility along the St. Joseph Mainstreet Corridor and within the town itself while remaining consistent with the *New OP*.

Table A.e – Actual and Target Cycling Mode Shares for Internal Trips by Area in Ottawa (City of Ottawa, 2013c).

Exhibit 3.2 – Actual (2011) and Target (2031) Cycling Mode Shares for Internal Trips by Area (morning peak period)

Area	2011	2031
Inner Area	8%	12%
Inner Suburbs	3%	6%
Orléans	2%	3%
Riverside South/Leitrim	0%	3%
South Nepean	2%	4%
Kanata/Stittsville	1%	4%

Table A.f – Orléans East-West Neighbourhood Bikeway à 2031 Affordable Cycling Project List (City of Ottawa, 2013d).

Phase	Project ID	Project Name	Facility	Project Category
Phase 3	P3-1	Tenth Line Rd. - St.Joseph Blvd. to Innes Rd.	Multi-Use Pathway	Cross-Town Bikeway
	P3-2	Blair Rd. - Ogilvie Rd. to Meadowbrook Rd.	Bike Lanes	TOD
	P3-3	Baseline Rd. - Woodroffe Ave. to Greenbank Rd.	Segregated Bike Facility	Missing Links
	P3-4	Montreal Rd./Ogilvie Rd. - Blair Rd. to Hwy. 417	Segregated Bike Facility	Missing Links
	P3-6	Hazeldean Rd. - Terry Fox Dr. to Eagleson Rd.	Segregated Bike Facility	Missing Links
	P3-7	Innes Rd. - Connections to BBHBP and BBHBP to east of Orleans Blvd.	Segregated Bike Facility	Cross-Town Bikeway
	P3-8	Nepean Creek Pathway	Multi-Use Pathway	Missing Links
	P3-9	Pathway along Cumberland Transit ROW	Multi-Use Pathway	Missing Links
	P3-10	Nepean North-West Neighbourhood Bikeway (Pathway segments only)	Multi-Use Pathway	Neighbourhood Bikeways
	P3-11	Centretown Neighbourhood Bikeway - Arthur St./Arlington Ave.	Shared Use Lane	Neighbourhood Bikeways
	P3-12	Lindenlea - Vanier Neighbourhood Bikeway	Shared Use Lane	Neighbourhood Bikeways
	P3-13	Kanata North Neighbourhood Bikeway	Shared Use Lane	Neighbourhood Bikeways
	P3-14	Barrhaven North-South Neighbourhood Bikeway	Shared Use Lane	Neighbourhood Bikeways
	P3-15	Orleans East-West Neighbourhood Bikeway	Shared Use Lane	Neighbourhood Bikeways
	P3-16	Old Ottawa South Neighbourhood Bikeway	Shared Use Lane	Neighbourhood Bikeways
	P3-17	Victor St. - Hazeldean Rd. to Greer St.	Shared Use Lane	Missing Links
	P3-18	Phase 3 City-wide Enhancements and Bike Parking	Various	Other
PHASE 3 TOTAL COSTS				$ 24,000,000

Policy 7 – *Transportation Master Plan*

The *Transportation Master Plan* demonstrates the City of Ottawa's blueprint for planning, developing, and operating its walking, cycling, transit, and road networks over the next two decades (City of Ottawa, 2013d). The Building a Liveable Ottawa 2031 initiative integrates the concept of complete streets, updating modal and share targets, advancing strategies to improve walking and cycling, and supporting transit-oriented development. This plan is necessary for the guidance of the OTC since it is the main transportation hub in the town of Orléans. In 2005, trips staying within the community was at 36% and increased in 2011 to 41% of trips staying within the community (see Table A.g).

This is important since Orléans has long been known to be a bedroom community in which many people commute outside Orléans for employment purposes. Additionally, the trips to Orléans from Orléans by transit mode shares is low at only 8% and only projected to go up to 11% by 2031 (see Table A.h). St. Joseph is the main arterial road, which is along the OTC, while Ottawa Road 174 is a major city freeway that will see the Eastern LRT expansion service Blair Station and Place d'Orléans Station. The TMP includes the goals of increasing environmentally mindful transportation modes such as walking and cycling travel. This is embedded in this plan so that more people in the City of Ottawa can have more opportunities with active transportation modes in areas such as Orléans, which is heavily automobile dependent.

Table A.g – Internal, Departing and Arriving Trip Rates in Major Suburban Areas (City of Ottawa, 2013e).

Exhibit 2.3 Internal, Departing and Arriving Trip Rates (% of all trips to/from the community in the morning peak period)

Community	Trips staying in the community		Trips departing the community		Trips arriving in the community	
	2005	2011	2005	2011	2005	2011
Kanata/Stittsville	36%	42%	37%	36%	28%	22%
South Nepean	25%	36%	61%	51%	14%	13%
Riverside South/Leitrim	5%	26%	68%	52%	27%	22%
Orléans	36%	41%	50%	48%	14%	12%

Table A.h – Transit Mode Shares Within and Between Areas à 2011 Observations & 2031 Targets (City of Ottawa, 2013f).

Exhibit 2.13 Transit Mode Shares Within and Between Areas: 2011 Observations and 2031 Targets (morning peak period)

Mode shares for 2011 (top) and 2031 (bottom)

Trips from \ Trips to	Inner Area	Inner Suburbs	Orléans	Riverside South/ Leitrim	Barr-haven	Kanata/ Stittsville	Rural Ottawa	Gatineau	*All areas*
Inner Area	15% 20%	28% 35%	28% 30%	9% 15%	5% 15%	31% 35%	1% 2%	29% 32%	***20%*** ***22%***
Inner Suburbs	49% 54%	16% 22%	12% 16%	5% 18%	8% 12%	13% 15%	1% 2%	30% 33%	***24%*** ***28%***
Orléans	61% 65%	19% 22%	8% 11%	4% 7%	10% 12%	6% 7%	0% 0%	27% 30%	***24%*** ***26%***
Riverside South/Leitrim	36% 40%	7% 16%	0% 2%	0% 10%	0% 10%	0% 5%	0% 2%	0% 13%	***9%*** ***16%***
Barrhaven	62% 70%	16% 20%	5% 7%	0% 5%	5% 10%	1% 6%	0% 2%	53% 55%	***20%*** ***26%***
Kanata/ Stittsville	53% 56%	12% 20%	6% 6%	0% 4%	3% 4%	5% 10%	2% 2%	36% 40%	***15%*** ***21%***
Rural Ottawa	31% 39%	4% 8%	3% 10%	0% 2%	2% 3%	1% 3%	1% 1%	7% 8%	***6%*** ***11%***
Gatineau	47% 50%	13% 14%	0% 7%	0% 3%	0% 5%	3% 7%	0% 1%	-	***32%*** ***33%***
All areas	***42%*** ***44%***	***16%*** ***21%***	***9%*** ***13%***	***2%*** ***9%***	***6%*** ***11%***	***6%*** ***11%***	***1%*** ***2%***	***31%*** ***32%***	***22%*** ***26%***

Policy 8 – Zone Type Descriptions per *Zoning By-Law* 2008-250

3.1.3 Zoning

The City of Ottawa's *Zoning By-Law 2008-250* (2008) controls all land uses in Ottawa. Aside from permitted land uses, zoning controls setbacks, Floor Area Ratio (FAR), Ground Floor Area (GFA), Floor Space Index (FSI), maximum height, and parking requirements. A list of Zone types and descriptions are below. A map zoning for our Study Area is shown in Figure A.i. If a zoning adjustment is

necessary, that process would go through the Committee of Adjustments. It is important to note that Ottawa's zoning will go through a full rewrite as part of the *New OP*. Ottawa will move away from a land use-based zoning towards a form-based one with an expected reduction in minimum parking requirements. Six zone types pertain to our Study Area:

Mixed-Use/Commercial Zones

The Place d'Orléans Shopping Centre, the OTC, and adjacent parcels to the east, west, and south of the site are zoned as Mixed-Use Centres (MC) while one small parcel east of the Place d'Orléans Shopping Centre is zoned General Mixed-Use (GM). One large parcel just north of the Queensway and Place d'Orléans is zoned MC. Some properties north of the Queensway and east of Tenth Line Road fall in GM Zones. The purpose of MC and GM Zones is to allow for transit-supportive uses including offices, schools, hospitals, public institutions, retail, and personal services. Additionally, MC and GM zoning encourages medium- and high-density residential use. An MC or GM Zone allows for compact pedestrian-oriented and mixed-use built form and encourages development. Parts of St. Joseph Boulevard are in an Arterial Main Street (AM) Zone. AM Zones accommodate mixed- use buildings and areas allowing retail, personal services, institutions, and offices. Furthermore, AM zones promote intensification. Additionally, there are small Local Commercial (LC) Zones scattered throughout the neighbourhoods. LC zones allow a mixture of commercial and residential uses, albeit on a smaller scale than the other mixed- use/commercial zone types. MC, GM, AM, and LC Zones conform well to the 15-Minute Neighbourhood concept and TOD.

Residential Zones

The Study Area contains Residential First, Second, Third, Fourth, and Fifth (R1, R2, R3, R4, and R5) Zones throughout. Residential Zones permit residential dwellings, and some ancillary uses like allowing residents to work from home. Higher number residential zones allow higher densities and diversity of housing types. R5 Zones also accommodate light commercial uses like convenience retail. R1 and R2 zones do not correspond well to a 15-Minute Neighbourhood and TOD while R3, R4, and R5 Zones correspond better.

Environmental Protection Zones

The City of Ottawa has designated the Ottawa River Waterfront and some ravines in our Study Area as Environmental Protection (EP) Zones. EP Zones cover land that contains wetlands, Natural Environment Areas, or Urban Natural Features. Permitted uses in EP Zones must be compatible with environmental protection of the land and development is heavily regulated in EP Zones to minimize environmental impact. EP zones do not allow for easy access to amenities and thus do not correspond well with 15-Minute Neighbourhoods and TOD. However, EP zones are important for protecting natural features, lowering carbon footprints, and providing access to natural amenities.

Open Spaces and Leisure Zones

There are several Park and Open Space (O1) Zones scattered throughout our study are. The purpose of an O1 zone is to permit parks and open spaces complementing neighbourhoods, permit park associated land uses, and preserve nature. There are a few Community Leisure Facility (L1) Zones in our Study Area. L1 Zones permit recreational space but do not mandate open and natural spaces. O1 and L1 Zones are generally correspondent with the 15-

Minute Neighbourhood concept and TOD as they provide essential neighbourhood amenities.

Minor Institutional Zones

The sites of public schools and daycares in our Study Area are in Minor Institutional (I1) Zones. I1 Zones allow community-based uses, institutional accommodations, and emergency services. I1 Zones conform well to the 15-Minute Neighbourhood framework and TOD as they provide essential neighbourhood services.

Business Park Industrial Zones

There is one small Business Park Industrial (IP) Zone in our Study Area north of the Queensway and east of Tenth Line Road. IP Zones allow a mixture of office types uses and low impact industrial use. Additionally, complimentary uses like recreation, health and fitness, and commerce are allowed. IP Zones align moderately well with 15-Minute Neighbourhoods and TOD as they allow a mixture of uses, however, their lack of residential use is a minor barrier.

Implications

Mixed-use/Commercial Zones conform well to a fifteen-minute neighbourhood as they allow several types of uses and a high density of people. Higher-order Residential Zones conform moderately well to the 15-Minute Neighbourhood, while lower-order ones conform poorly. O1, L1, and I1 Zones conform well to the 15-Minute Neighbourhood as they permit essential amenities and services. EP Zones do not correspond well with any development but provide natural spaces for neighbourhoods and preserve important environmental features. IP Zones conform moderately well to the 15-Minute Neighbourhood as they allow a mixture of uses but lack residential use.

Figure A.i – Zoning Map for Study Area.

Policy 9 – *15-Minute Neighbourhood Baseline Report* (2021)

Below is a list of services and amenities in the City of Ottawa's ranked order of importance based on a public survey which received over 4,000 responses:

1. Grocery stores and supermarkets
2. Parks
3. Retail and commercial
4. OC Transpo bus stops
5. Health services (i.e., doctor's offices, dentist offices, pharmacies)
6. O-Train/light rail transit (LRT) stations
7. Indoor recreation and community facilities, including libraries

8. Elementary and secondary schools
9. Childcare facilities

Development within the Study Area would prioritize 15-minute (1200m) walking access to these services and amenities in this ranked order. The City of Ottawa scored pedestrian environments on safety and enjoyability. The City of Ottawa noted three key primary factors that influenced walkability, which were also the result of the public survey:

1. Maintenance of sidewalks and pathways, including the clearing office and snow,
2. Intersections that feel safe to cross, and
3. Protection from traffic through landscape buffering, parked cars, slow speeds, or other means.

Some additional factors that affected pedestrian environment scores were:

- Short distances between shops and services
- Shade and shelter
- Places to sit for rest and socializing
- A variety of shops and services
- Public art and places for children to play
- Wayfinding, including maps and signage

To score pedestrian environments Ottawa consider Artificial Intelligence results, qualitatively assessed built form and character, and lastly completed a quantitative Geographic Information Systems analysis of desirable and undesirable features within 30 metres of the middle of the street. The access and pedestrian score for Orléans are in Figure A.j. The plan should incorporate the identified features to improve the pedestrian environment of the OTC Area.

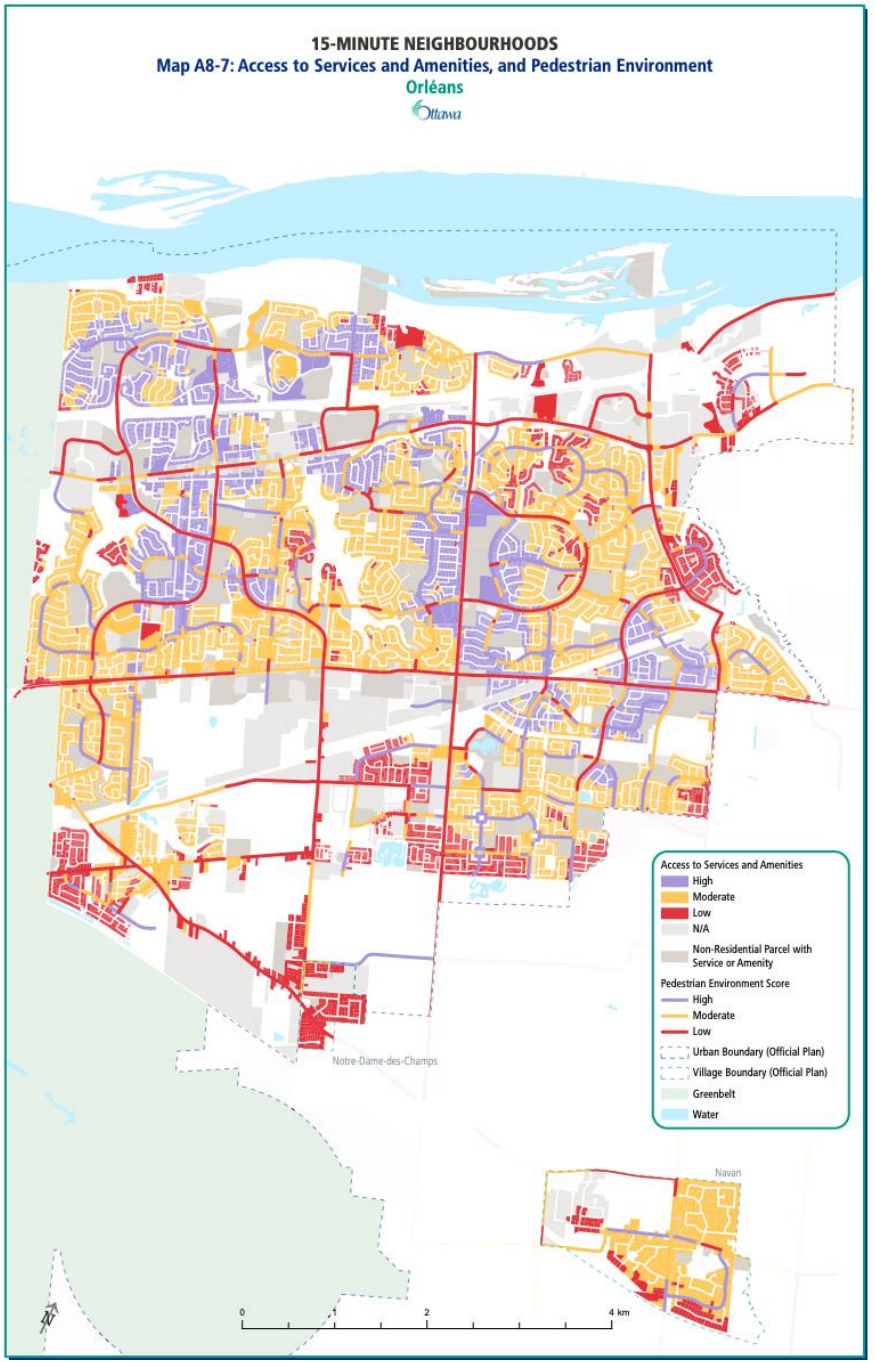


Figure A.j – 15-minute scores for all Orléans (City of Ottawa, 2021a).

Policy 10 – Environmental Project Report

In 2014 the City of Ottawa had AECOM prepare an Environmental Assessment for the Confederation Line East Light Rail Transit (LRT) Extension. The *Environmental Project Report Confederation Line East Extension (Blair Station to Trim Road)* (2015) was a required Environmental Assessment by the Government of Ontario. This report includes the planned future LRT station in our Study Area. This report described the planned project, its anticipated environmental impacts, and the projects consultation process and concluded the LRT path along Ottawa Road 174 was suitable.

Policy 11 – *Housing and Homelessness Plan*

The City of Ottawa's *10-year Housing and Homelessness Plan 2020-2030* identifies housing shortfalls and solutions for Ottawa (City of Ottawa, 2020a). Low vacancy rates, high rents, and high housing demand have made it difficult for low- and medium-income residents of Ottawa to secure adequate housing. The Ottawa Housing Plan addresses these issues by

- Identifying inclusionary zoning and other policies or incentives to increase affordable/supportive housing supply
- leveraging public lands
- Exploring opportunities for building technologies and models (i.e., modular housing, microsuites)
- Leveraging housing benefit programs
- Maintaining community housing and making it more sustainable
- Identifying other strategies (i.e., data strategies, mapping community assets, supporting quick access to housing)

The plan should contain an affordable housing allocation and explore leverageable land and housing benefit programs. Additionally, the plan should look at latching onto current inclusionary zoning initiatives in Ottawa. Per the current *Provincial Policy Statement* (2020) Inclusionary Zoning is only allowed in protected major transit stations, which the OTC Area lies on. A full breakdown of housing and rental affordability in Ottawa are provided in Tables A.k and A.l. These tables provide a contextual understanding of housing affordability for different income levels in Ottawa.

Table A.k – Ottawa Housing Ownership Affordability by Income Levels (City of Ottawa, 2020b).

All Households Income Deciles	Maximum affordable house price	Average Value of Dwellings								
		Total - Structural type of dwelling	Single-detached house	Apartment in a building that has five or more storeys	Semi-detached house	Row house	Apartment or flat in a duplex	Apartment in a building that has fewer than five storeys	Other single-attached house	Movable dwelling
		$444,589	$511,743	$332,836	$399,762	$315,961	$496,999	$359,192	$409,487	$112,860
Low Income Deciles 1-3 ($59,136 and less)	$92,089	No	No	No	No	No	No	No	No	No
	$160,431	No	No	No	No	No	No	No	No	Yes
	$222,016	No	No	No	No	No	No	No	No	Yes
Moderate Income Deciles 4-6 (from $59,137 to $111,844)	$283,383	No	No	No	No	No	No	No	No	Yes
	$348,456	No	No	Yes	No	Yes	No	No	No	Yes
	$419,898	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
High Income Deciles 7-10 ($111,845 and above)	$508,445	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	$634,187	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	$830,341	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A.l – Ottawa Rental Affordability by Income Levels (City of Ottawa, 2020b).

Renter Income Deciles	Maximum Affordable Rent	Primary Rental Market				
		Bachelor	1 Bedroom	2 Bedroom	3 Bedroom +	Average
		$881	$1,088	$1,297	$1,468	$1,195
Low Income Deciles 1-3 ($31,148 and less)	$359	No	No	No	No	No
	$543	No	No	No	No	No
	$779	No	No	No	No	No
Moderate Income Deciles 4-6 (from $31,148 to $61,500)	$1,015	Yes	No	No	No	No
	$1,260	Yes	Yes	No	No	Yes
	$1,538	Yes	Yes	Yes	Yes	Yes
High Income Deciles 7-10 ($61,501 and above)	$1,858	Yes	Yes	Yes	Yes	Yes
	$2,284	Yes	Yes	Yes	Yes	Yes
	$2,972	Yes	Yes	Yes	Yes	Yes

Table A.k tables suggest there is little homeownership opportunity for people of moderate or low incomes. Table A.l indicates that there is no rental opportunity for people of low income and impinged rental opportunity for people of moderate incomes. Therefore, there is an owned and rented housing shortfall in Ottawa, which our plan should address.

Policy 12 – *Complete Street Guidelines* (2015)

The City of Ottawa has developed guidelines called *Complete Streets in Ottawa* (City of Ottawa, 2015). These guidelines give the following reason for complete streets:

- Help reduce heavy traffic and crashes by getting more people cycling, walking, and taking transit
- Help create safe, liveable, and welcoming communities
- Encourage healthy lifestyles by making it easier to walk or bike
- Help build sustainable communities by reducing pollution caused by traffic
- Ensure that more people can easily get to stores and businesses
- Improve the lives of people with mobility impairments or disabilities (City of Ottawa, 2015)

Ottawa defines complete streets as streets that:

- Accommodate multiple modes
- Incorporate context-sensitive design principles
- Can be used as a way to improve neighbourhoods and support liveability (City of Ottawa, 2015)

Complete streets provide safety, comfort, and mobility for all users. The complete street approach is an important direction for urban design in the City of Ottawa. An example of a planned complete street is provided in Figure A.m. For comparison, Figure A.n shows a typical suburban collector in the Study Area. Note the poor road quality and lack of road lines and signage.

The OTC area, and St. Joseph Blvd. particularly, fail to meet the criteria of a complete street. Therefore, our plan should complete streets in the Study Area.

Figure A.m – Suburban Collector Complete Street (City of Ottawa, 2015).

Figure A.n – Typical Suburban Collector Street in Orléans.

Policy 13 – *Transit-Oriented Development Guideline* (2007)

Category Descriptions

Land Use

Plans should emphasize the combination of land uses, the right kinds of land uses, and the intensity of activity. TODs shall locate land uses next to transit stops that will attract riders, allow them to perform multiple tasks, and draw in riders day and night. TODs shall strive for medium to high densities to justify transit service. Figure A.o displays an example of a mixed-use hub adjacent to a Light Rail stop, while Figure A.p shows the current 'hub' by the Place d'Orléans bus stop. The current stop has a large parking lot with little activity.

Figure A.o – An example of a mixed-use transit hub from Strasbourg, France (City of Ottawa, 2007).

Figure A.p – Current transit hub for Bus Rapid Transit Stop by Place d'Orléans.

Layout

This section proposes creating layouts that allow for efficient circulation of transit users. TODs should locate greater intensity uses closer to the transit stop to enhance convenience. Figure A.q shows how a good layout with short blocks can increase circulation and Figure A.r shows a strong TOD and pedestrian-oriented layout.

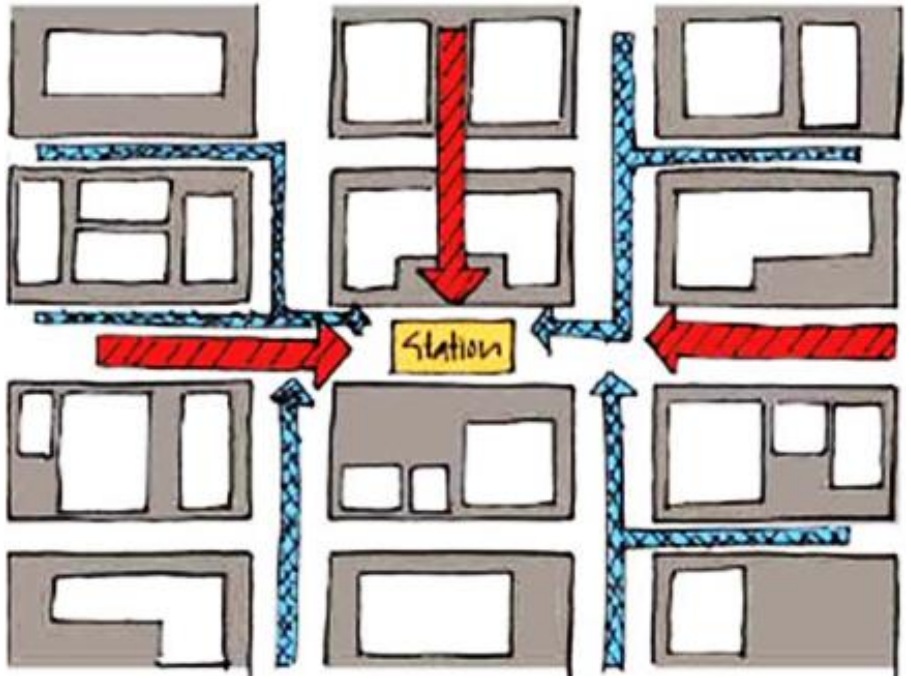


Figure A.q – An illustration of how short blocks create multiple pathways to a transit station (City of Ottawa, 2007).

Figure A.r – An example of a good TOD layout (City of Ottawa, 2007).

Built Form

'Place making' and turning transit stations into destinations are goals for TODs. The purpose of this section is to turn transit stations and TODs into 'good places' and 'good neighbours' within the community via quality urban design. An example of a human scale-built form is provided in Figure As. Figure At shows the OTC with some storied setbacks. Note the lack of architectural character and invitingness of the current development.

Figure A.s – An example of human scale in the built form accomplished partially through building storey setbacks (City of Ottawa, 2007)

Figure A.t – Current development at the OTC, including a storied setback

Pedestrian & Cyclist

The goal of this section is to make walking and cycling more convenient and enjoyable. Figure A.u shows an example of an animated pedestrian-friendly street.

Figure A.u – A model animated street from the Glebe (City of Ottawa, 2007)

Vehicles & Parking

Parking, particularly surface parking, often occupies land that could have better uses. Vehicle parking and movement can sometimes conflict with the movement of pedestrians. This section suggests TODs should reduce the amount of parking.

Streetscape & Environment

This section gives guidance on the quality and design of pedestrian spaces. These environments should contribute to the positive experience of transit users. Figures A.v and A.w give examples of how features can enhance the streetscape without impeding pedestrians. Figures A.x and A.y show the comparable features in the Study Area.

Figures A.v & A.w – A streetscape with lighting that enhances the neighbourhood's historical character and pedestrian benches and trees which do not impede circulation (City of Ottawa, 2007).

Figure A.x & A.y – Typical Lighting and pedestrian landscaping in OTC.

Policy 14 – Urban Design Objectives

The City of Ottawa has several urban design guidelines for different types of development. The goal of these guidelines is to meet the City of Ottawa's six Design Objectives as per Ottawa's current *Official Plan* (City of Ottawa, 2003a):

1. Create Unique Communities
2. Promote Quality Developments
3. Enhance Safety and Accessibility
4. Respect Established Charact
5. Incorporate Adaptability and Diversity

6. Protect Natural Systems

The City of Ottawa has changed these guidelines in the *New OP* as described above (City of Ottawa, 2021c). However, these guidelines provided the context for all current Ottawa urban design guidelines.

Policy 15 – Urban Design Guidelines for Development on Arterial Main Streets

Streetscape

Create continuous streetscapes with pedestrian-friendly landscaping and sidewalks. Figure A.z shows an example of a pedestrian-friendly suburban streetscape and Figure A.a.b shows ideal setbacks. Figure A.a.a display the much less inviting and landscaped streetscape on St. Joseph Blvd. while Figure A.a.c shows large parking lots disallowing ideal setbacks on St. Joseph Blvd.

Figure A.z – A pedestrian-friendly streetscape on a suburban arterial (City of Ottawa, 2006).

Figure A.a.a – Current streetscape on St. Joseph Blvd.

Figure A.a.b – Ideal setbacks for pedestrian-friendly streets (City of Ottawa, 2006).

Figure A.a.c – Current typical setback on St. Joseph Blvd.

Built Form

Design buildings to be compatible with existing neighbourhood character, emphasizing the public realm and circulation patterns. Occupy the majority of lot frontage and create accessible and intensified mixed-use developments. Figure A.a.d shows a layout redevelopment to improve an Arterial Mainstreet. Figure A.a.e shows a well-designed corner lot. Contrastingly, Figure A.a.f shows poorly designed typical corner lots on St. Joseph Blvd with no sidewalk frontage. Figure A.a.g shows the central plaza in the OTC, which is meant to be a major hub of the main street. Figure Aah displays architectural detail enhancing the public street.

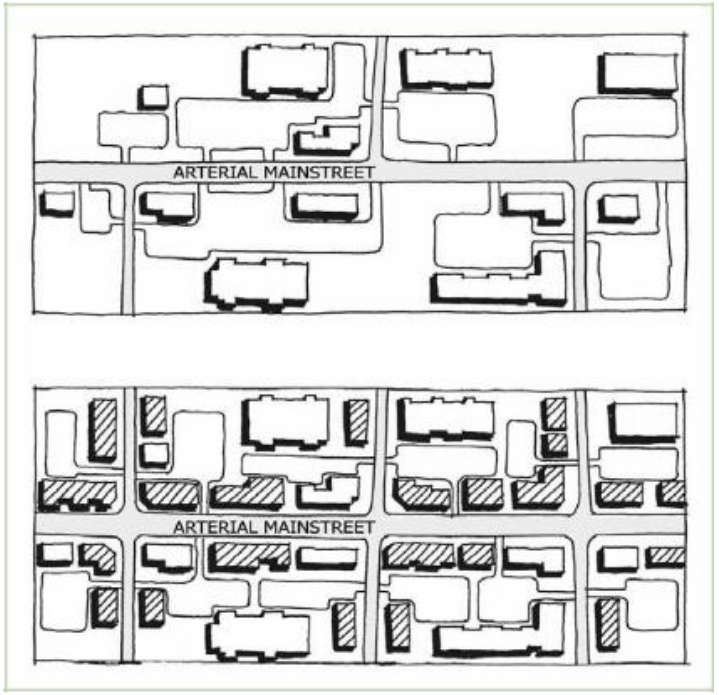


Figure A.a.d – A before (inadequate) and after (adequate) of an Arterial Mainstreet change in layout (City of Ottawa, 2006).

Figure A.a.e – A well-built corner lot taking advantage of its location (City of Ottawa, 2006).

Figure A.a.f – Typical corner lot on St. Joseph Blvd.

Figure A.a.g – Central Plaza of OTC.

Figure A.a.h – Architectural detail enhancing the public realm (City of Ottawa, 2006)

Pedestrians and Cyclists

Connect unobstructed, weather-resistant, and safe pedestrian routes with site furnishings. Figure A.a.i shows a pedestrian pathway allowing circulation and containing amenities.

Figure A.a.i – Pedestrian pathway (City of Ottawa, 2006).

Vehicles and Parking

Do not let parking obstruct the pedestrian experience and develop linkages between properties. Figure A.a.j illustrates how shared driveways can improve pedestrian circulation.

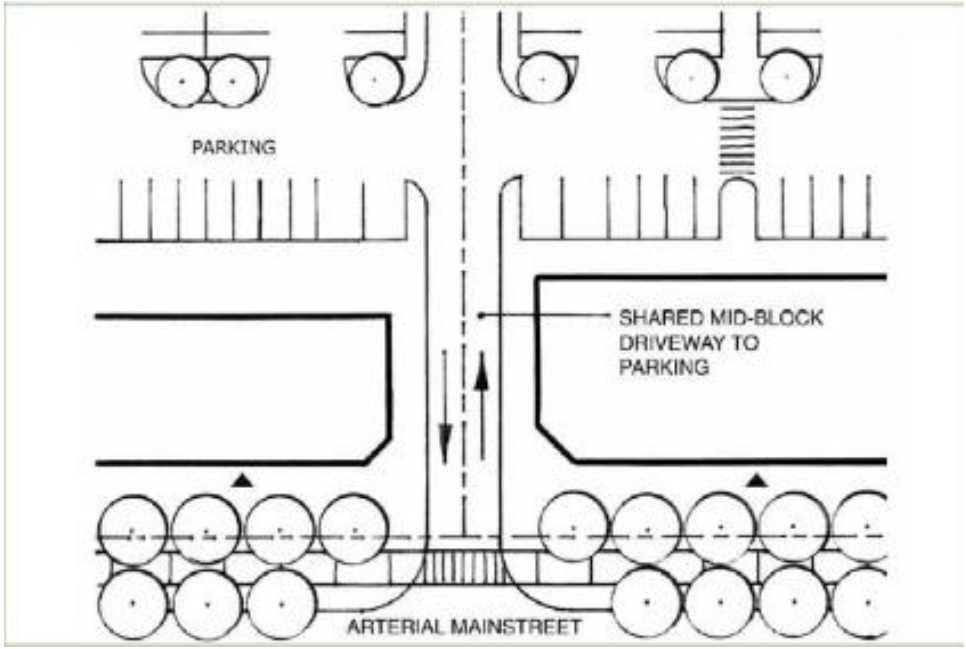


Figure A.a.j – Joint lots allowing for increased pedestrian circulation (City of Ottawa, 2006).

Landscape and Environment: Continuous landscaping, lighting, benches, and tree canopy. Figure A.a.k shows a pedestrian pathway with high-quality landscaping and Figure Aal shows landscaping that contributes to both the pedestrian and vehicular environment. Figure Aam displays a lack of current landscaping on St. Joseph Blvd.

Figure A.a.k – Landscaping creating a pedestrian-friendly environment (City of Ottawa, 2006).

Figure A.a.l – Landscaping that creates a more inviting space for pedestrians and cars (City of Ottawa, 2006).

Figure A.a.m – Current Landscaping on St. Joseph Blvd.

Signs

Retail signage should be scaled, unobtrusive, and attractive.

Servicing and Utilities

Maximize efficiency via service sharing, disguise servicing features within building façades, and avoid obstructive lighting.

Policy 16 – *Urban Design Guidelines for High-rise Buildings* (2018)

The City of Ottawa considers a high-rise building as ten-storey or more in height. The objective of these guidelines is to

- Enhance the character of views and image of the city
- Address compatibility between high-rise buildings and their existing context
- Create human-scale, pedestrian-friendly, and attractive spaces
- Coordinate parking, services, utilities, and public transit
- Encourage development that responds to the physical environment

There are 98 guidelines for High-rise buildings divided into three categories with several subcategories. Each of the categories is listed with some examples of notable guidelines and accompanying visuals.

1. Context:
   - 1.1 Views, Vistas, and Land Buildings
   - 1.2 Transition in Scale
   - 1.3 Lot Conditions for Infill Development
   - 1.4 Heritage

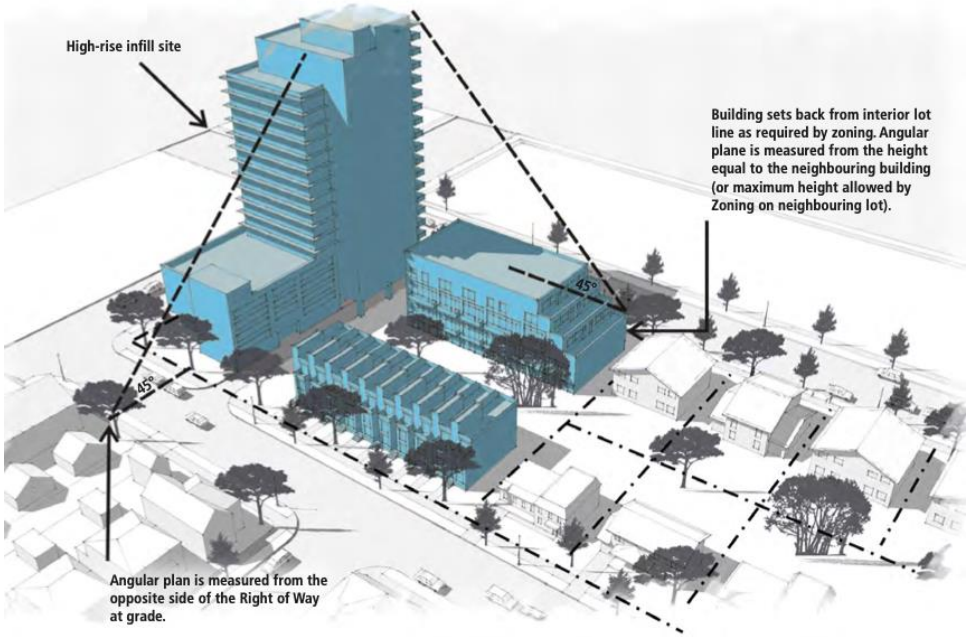


Figure A.a.n – Illustration of ideal high-rise development, with 45° angular plane, full lot fill, and required setbacks (City of Ottawa, 2018).

Figure A.a.o – An example of a high-rise development preserving a surrounding Heritage environment (City of Ottawa, 2018).

2. Built Form:
   - 2.1 Approach
   - 2.2 Point Tower vs. Bar Building
   - 2.3 Base
   - 2.4 Middle
   - 2.5 Top
   - 2.6 Exterior Illumination

Figure A.a.p – An illustration of the base level of a high-rise fitting in with existing residential (City of Ottawa, 2018).

Figure A.a.q – An example of base-level ground-oriented (City of Ottawa, 2018).

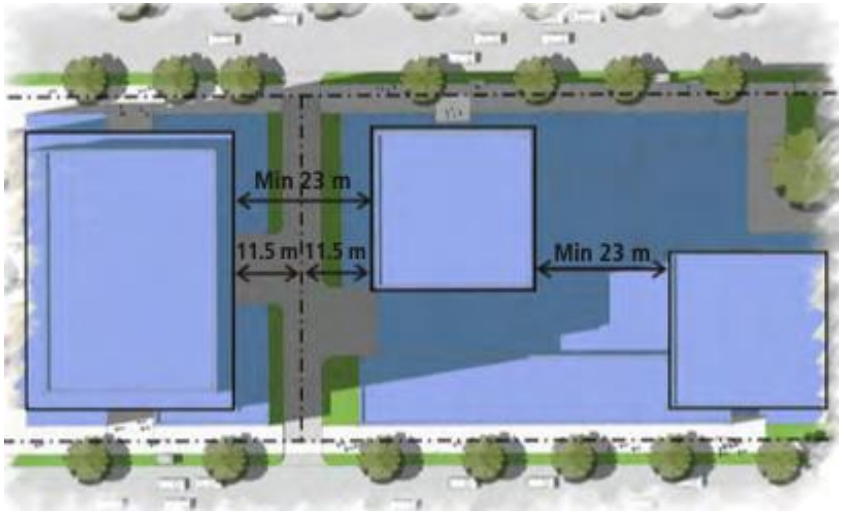


Figure A.a.r – An illustration of ideal tower separation distances (City of Ottawa, 2018)

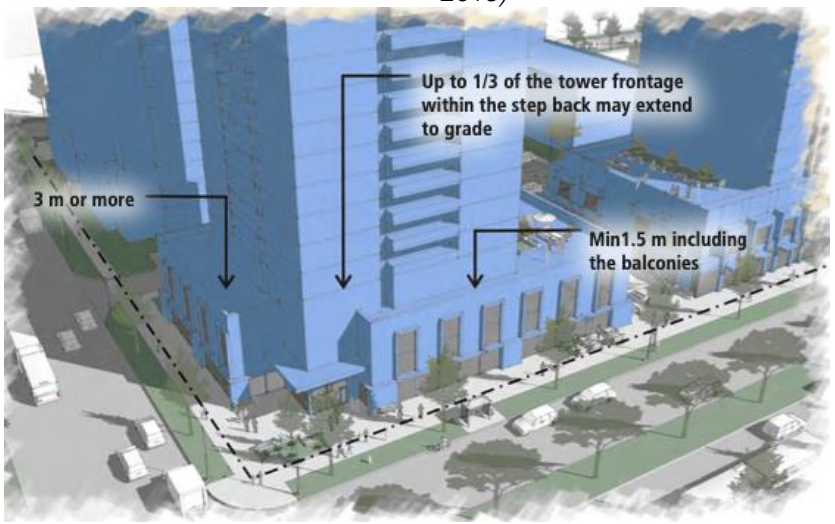


Figure A.a.s – An illustration of ideal tower setbacks (City of Ottawa, 2018).

3. Pedestrian Space and Connection
   - 3.1 Pedestrian Space and Connection
   - 3.2 Animation and Design
   - 3.3 Pedestrian Comfort

Figure A.a.t – An illustration of a way to design parking for high-rise (with some surface level and some underground), while maintaining pedestrian connectivity (City of Ottawa, 2018)

Figure A.a.u – An example of a well landscaped and connected pedestrian space (City of Ottawa, 2013).

Currently, the Study Area contains no high-rise development, therefore there is no need to assess the current conformity of the Study Area to these guidelines. The guidelines will be pertinent for a proposal that contains any high-rise development. Additionally, Orléans does have some waterfront views that should be taken into considerations for any high-rise proposal.

Policy 17 – Urban Design Guidelines Low-rise Infill Development

The City of Ottawa has a series of urban design guidelines for infill development of single-detached houses, semi-detached houses, duplexes, triples, townhouses, and low-rise apartments. If we propose low-rise infill development, these guidelines will be important. The purposes and objectives of Ottawa's *Urban Design Guidelines for Low-rise Infill Development* (2012) are:

- Enhancing streetscapes
- Supporting landscaping
- Creating a compact urban form
- Fitting new housing into an existing neighbourhood's character
- Offering a variety of quality housing
- Deemphasizing garages
- Decreasing asphalt and increasing soft landscaping
- Creating at grade living spaces
- Achieving environmental innovation and sustainability

It is important to note that the City of Ottawa is in the process of reviewing and updating these urban design guidelines. These guidelines are distributed in seven categories listed below in Table A.a.v. Scores for the current conformity of low-rise housing to the guideline categories are also in Table A.a.v. There are some accompanying photographs of key guidelines or features for low-infill housing in Figures A.a.w and A.a.x. Figure A.a.y is a photograph of a typical low-rise streetscape in the Study Area. The Study Area's low-rise streetscapes often lack sidewalks, planted edges, and other pedestrian-friendly landscaping.

Table A.a.v – Assessment table of current conformity of Study Area to low-rise infill housing guidelines.

Section	Existing Development
Streetscapes	○
Landscape	◒
Building Design	◒
Parking & Garages	○
Heritage Building	◒
Service Elements	◒
Infill on Narrow Lots	◒

○ = No conformity
◒ = Poor Conformity
◒ = Moderate Conformity
◒ = Good Conformity
● = Excellent Conformity

Figure A.a.w – An example of an inviting streetscape with low-rise infill housing (City of Ottawa, 2012).

Figure A.a.x – An example of planted edges on public and private property enhancing pedestrian environments (City of Ottawa, 2012).

Figure A.a.y – Typical pedestrian low-rise streetscape in the Study Area.

Policy 18 – *Integrated Orléans Community Improvement Plan* (2021)

The specific objectives of the Integrated Orléans Community Improvement Plan are:

- Urban Renewal and Revitalization
- Stimulate private investment
- Encourage highest and best use
- Add variety to business mix
- Job growth
- Pedestrian-friendly, healthy vibrant streets

There are three key program elements within the IOCIP:

- St. Joseph Boulevard Main Street Program
- Employment Creation Incentive Program
- Pedestrian Friendly Streets

These elements support revitalizing of the main street, encourage local economic growth, and improve the area's urban design. The first program encourages development of St Joseph Boulevard as to revitalize an integral main street in the community. In creating a 'more vibrant' main street, the CIP also stipulates that the grant increases as a development includes more than four affordable housing units.

The second program encourages and incentivizes the renewal and redevelopment of areas in close proximity to the new LRT station in order to stimulate new job growth in Orléans. An advancement from the previous CIP, the new job creation must be 'net' jobs as opposed to gross. This requirement allows for the job growth to be a stimulant for new employment, rather than a transfer or movement of employment from within the greater municipality.

The third program highlighted by the IOCIP is the 'Pedestrian Friendly Street Program'. This program attracts development to areas such as the St. Joseph main street and the new LRT station while keeping considerations for active transportation, streetscape design, and human-scaled development. Features such as active store frontages allow for areas to more effectively create environments that promote walking and active transportation as a means of functional transportation – a key theme in the 15-Minute Neighbourhood context.

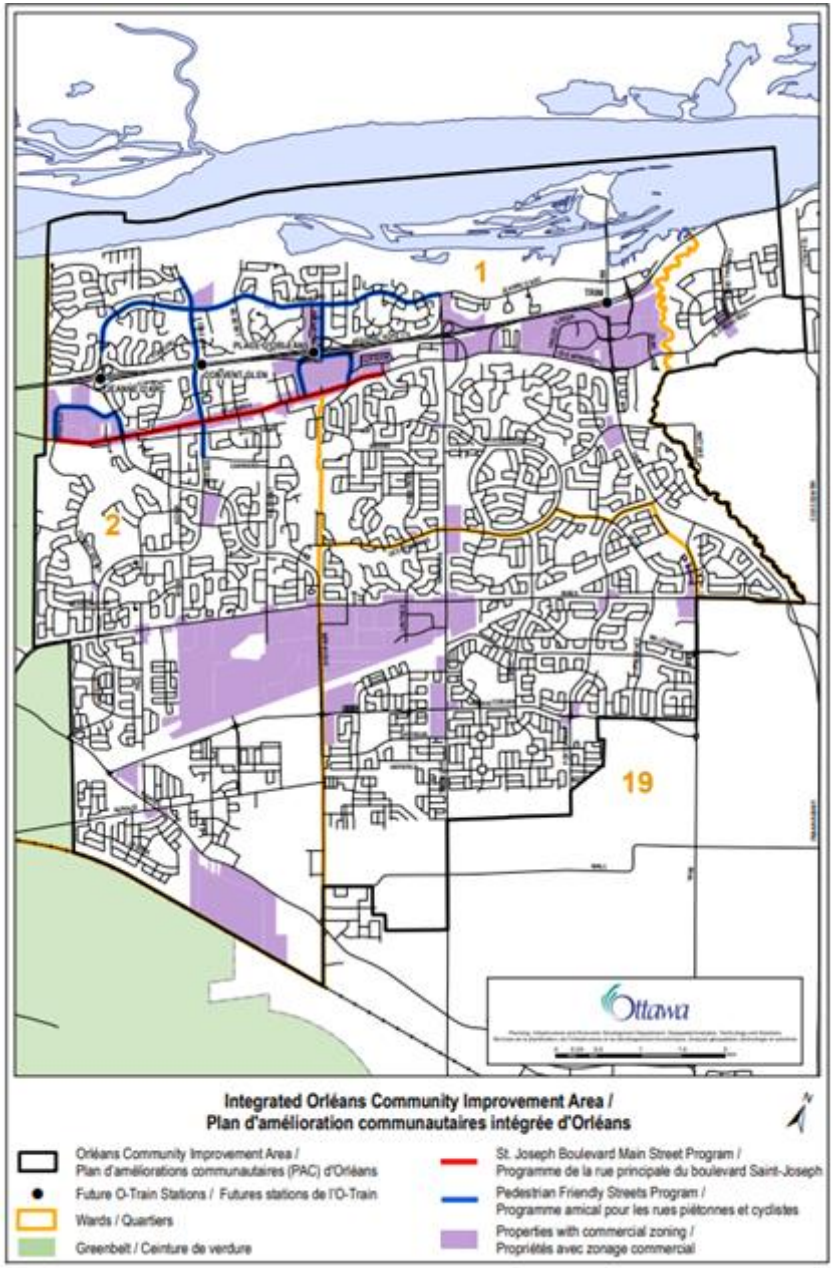


Figure A.a.z – This map indicates the area impacted by the Integrated Orléans Community Improvement Plan (IOCIP).

Policy 19 – *Provincial Policy Statement*, 2020

The Ontario Ministry of Municipal Affairs and Housing issued the 2020 Provincial Policy Statement (PPS) under the Planning Act. It is the objective of the PPS to focus growth within settlement areas to achieve efficient development patterns while managing land use and development. The OTC Study Area is within a designated settlement area and is thus subject to guidance and influence by the PPS and its contents. The PPS is supportive of transit-oriented development and sustainable development in ways that encourage active modes of transportation. The PPS promotes compact, mixed-use development patterns that help to alleviate the need for car centric transportation.

Policy 20 – *Sustainable Development Strategy*, 2018-2023

The Sustainable Development Strategy 2018-2023 is a framework meant to guide the development within the National Capital Region (NCR) in order to create a greener and more sustainable strategy for growth. The Study Area is within the bounds of the NCR and is therefore guided in part by this Strategy. The primary goal of this strategy, as it is relevant for this document, is to incorporate processes that preserve and protect the natural environment around the region. As well, this strategy outlines commitments to combat climate change through social and physical interventions. The plan promotes active transportation in the region and in spaces under the purview of the NCC in order to help reduce GHG emissions.

Policy 21 – *The Plan for Canada's Capital*, 2017-2067

The NCC outlines how the National Capital Region will evolve into the bicentennial of Canada's Confederation. Through the development of federal institutions, landmarks, and employment, this plan sets the framework for federal growth over the proceeding 50 years. In relation to this document, The Plan for Canada's Capital, 2017-2067 does not include any plans for federal landmark or employment development within the OTC Study Area. As a key node along the future expansion of the eastbound LRT, OTC is an area with potential for employment growth in the federal sector given the bilingual nature of the community and connectivity along the transit line.

Appendix B – Stakeholder Analysis

Stakeholders	Interests	Resources	Action Channels
City of Ottawa Planning Staff	• Implement New Official Plan policies (5 Big Moves) • Achieve 15-Minute Neighbourhood Design Concept • Transform the OTC into a Mixed-Use Hub	• Planning expertise and time • Background knowledge/creation of municipal plans and documents • City land ownership	• Implement policies • Set public meetings • Budget Process • Build infrastructure
Ottawa City Councillors	• Maintaining and improving the quality of life for Ottawa residents • Ensuring development is completed in an appropriate manner	• Legislative action and decision-making power	• Votes of council and council committee meetings • Budget process
OTC Study Area Community Residents	• Avoid NIMBY developments • Affordable and mixed housing options • Easy access and connections to amenities and services	• Local knowledge and familiarity within the neighbourhood	• Active participation in public hearings • Advocacy
Developers	• Maximize return on investment and long-term value • Minimize risk involved • Financial feasibility in the short-term	• Finance development projects • Bring jobs and employment • Private land ownership	• Development applications
OC Transpo	• Increase transit ridership • Make transit mobility efficient within the OTC Study Area • Inclusivity and accessibility for all transit passengers	• Planning expertise • Funding towards transit projects • Land ownership at BRT and O-Train station	• Budget process • Build infrastructure

Commercial Property Owners	• Maximize return on investment • Attract more tenants into spaces that are vacant or have high vacancy rates	• Significant land ownership within the OTC and surrounding area	• Public hearings • Development applications
Franco-Ontarian Heritage & History Society of Orléans	• Protect and enhance Francophone heritage and culture • Protect Francophone heritage sites	• Local knowledge and history of the Study Area	• Votes • Advocacy • Public Hearings
The Heart of Orléans BIA	• Improving the streetscape in the OTC Study Area • Attracting business that makes Orléans distinct	• Community leadership • Local knowledge • Employment networking	• Advocacy • Media and marketing
Primaris REIT	• Increase market size and foot traffic from the redevelopment occurring in the OTC Study Area • Maximize revenue garnered from growth and intensification in redevelopment • Ensure continued success of Place d'Orléans Shopping Centre	• Significant land ownership within OTC Study Area • Unique market knowledge and local patterns	• Public Relations Personnel • Investors • Lease negotiations • Advocacy

Table B.a – Main Actors for the redevelopment of the OTC Study Area.

Stakeholders	Interests	Resources	Action Channels
Community Transportation Advocacy Groups (Ottawa Transit Riders & Bike Ottawa)	• Protect and enhance quality of life for residents • Increase mobility choices and accessibility to transit • Maximize pedestrian, cycling and transit friendly transportation	• Local Knowledge	• Votes • Advocacy • Media campaigns • Public hearings

Local Transit Users	• Safe travel through the OTC Study Area • Efficient road network with accessibility to amenities and services	• Local knowledge of road network and transit stops	• Public hearing • Votes
Office Tenants	• Affordable office spaces that suit operational needs • Maintain accessibility for employees • Safety and proximity to transit to get to work	• Knowledge of traffic congestion patterns	• Lease negotiations
Retail Tenants	• Retaining customers and attracting new customers • Affordable and suitable retail space • Increase pedestrian and cycling friendly connections to retail stores	• Knowledge of traffic congestion patterns	• Lease negotiations
General Public	• Safe and efficient pedestrian, cycling, and transit connections throughout the OTC Study Area • Easy accessibility to amenities and services in the OTC Study Area	• Knowledge of the OTC when passing through or visiting	• Votes • Public hearings

Table B.b – Secondary Actors for the redevelopment of the OTC Study Area.

Appendix C – Precedents

Appendix C1 – Complete Precedent List

MALL REDEVELOPMENT/ADAPTIVE REUSE

Project Name	Location	Developer(s)	Site Size (ha)	Opening Date
Shops at Don Mills	**Toronto, ON**	**Cadillac Fairview / Fram Building Group**	**16.4**	**2017**
Northgate Mall	**Seattle, WA**	**Allied Stores / Simon Property Group**	**16.6**	**2019**
Richmond Centre	**Richmond, BC**	**Cadillac Fairview / SHAPE Properties**	**10.9**	**~2022**
A.R. McDiarmid Civic Complex	Brandon, MB	City of Brandon	0.89	2014
Bayshore Town Center	Glendale, WI	Cypress Equities	21.04	2020
Bullring Centre	Birmingham, UK	Hammerson PLC / Henderson Global Investors	10.5	2003
Cachet ParQ	Brantford, ON	Cachet Developments	4.45	~2022
CityCentre	Houston, TX	Midway Development / Simmons Vedder Partners	14.97	2010
Cloverdale Mall	Toronto, ON	QuadReal Property Group	12.95	Ongoing
John A. Brink Trades and Technology Centre	Prince George, BC	Brink Forest Products / College of New Caledonia / Community Futures Development Corporation	1.26	2004
Lansdowne Town Centre	Richmond, BC	Vanprop Investments Ltd.	20.23	2022-2024
Lowry	Denver, CO	Lowry Redevelopment Authority	755	2009
North Hills	Raleigh, NC	Kane Realty	38.04	2004
Oakridge Centre	Vancouver, BC	QuadReal Property / Westbank Development	11.53	~2024
One Hundred Oaks	Nashville, TN	ATR & Associates Inc. / Corinth Properties	22.66	2009
One Santa Fe	Los Angeles, CA	Cowley Real Estate Partners / McGregor Company	1.63	2014
Pike & Rose	North Bethesda, MD	Federal Realty Investment Trust	9.71	2014
Scarborough Town Centre	Toronto, ON	City of Toronto / Oxford Properties	180	Ongoing
Square One District	Mississauga, ON	City of Mississauga / Oxford Properties	52.61	Ongoing
Storrs Center	Mansfield, CT	Education Realty Trust / LeylandAlliance LLC	19.30	2012
The Amazing Brentwood	Burnaby, BC	SHAPE Properties	11.33	2019
The BLVD	Lancaster, CA	Lancaster Redevelopment Agency	n/a	2010
The Village at Bronte Harbour	Oakville, ON	Crombie REIT / Prince Developments	2.29	2020
Westbrook Village	Calgary, AB	City of Calgary / Cushman & Wakefield	20.23	Ongoing
Wychwood Barns	Toronto, ON	Toronto Artscape	1.74	2008

TRANSIT-ORIENTED DEVELOPMENT

Project Name	Location	Developer(s)	Site Size (ha)	Opening Date
Orenco Station	Portland, OR	Costa Pacific Homes / PacTrust	76.89	2003
Marine Gateway Complex	Vancouver, BC	PCI Developments	1.85	2015
University City	Calgary, AB	Knightsbridge Homes	10.85	2016
Canada Square	Toronto, ON	CT REIT / Oxford Properties Group	3.64	Ongoing
Century Park	Edmonton, AB	ProCura Real Estate Services	12.95	~2030
Contra Costa Centre	Walnut Creek, CA	AvalonBay / Millennium Partners	56.65	2010
Collingwood Village	Vancouver, BC	Vancouver Land Corporation	11.31	2006
Empress Walk	Toronto, ON	Menkes Developments Ltd.	2.21	1997
Frontier	Ottawa, ON	Killam Apartment REIT / RioCan Living	28.62	2020
GrandMarc Seven Corners	Minneapolis, MN	American Campus Communities	0.90	1999
Hudson Yards	New York, NY	Oxford Properties Group / The Related Companies LP	11.33	2019
Lansdowne Town Centre	Richmond, BC	Vanprop Investments	20.23	2022-2024
McKenzie Towne	Calgary, AB	Carma Developers LP	430	1995
Metropolis at Metrotown	Burnaby, BC	Cal Investments	19.02	1986
Moody Centre	Port Moody, BC	Anthem Properties / Beedie Living / PCI Developments / Woodridge Homes / Translink / three local families	9.31	Ongoing
North York Centre	Toronto, ON	City of North York	1.81	1989+
One Santa Fe	Los Angeles, CA	Cowley Real Estate Partners / McGregor Company	1.63	2014
Scarborough Town Centre	Toronto, ON	City of Toronto / Oxford Properties	180	Ongoing
Sunnyside Yard	New York, NY	Amtrak / City of New York	72.84	Ongoing
The Amazing Brentwood	Burnaby, BC	SHAPE Properties	11.33	2019
The Groves of Varsity	Calgary, AB	Statesman Homes	6.88	2016
The Orbit	Innisfil, ON	Cortel Group / Town of Innisfil	50.26	Ongoing
Westbrook Village	Calgary, AB	City of Calgary	5.50	2016

15-MINUTE NEIGHBOURHOOD

Project Name	Location	Developer(s)	Site Size (ha)	Opening Date
AGORA	Gatineau, QC	Junic / Divalco / JPL Constructors	~60	~2022
Bethesda Row	Bethesda, MD	Federal Realty Investment Trust	4.85	2000
Chassé Park	Breda, Netherlands	AM N.V. / Proper-Stok Woningen B.V.	13	2007
Avalon	Alpharetta, GA	North American Properties	34.80	2017
Croydon South	Maroondah, VIC	Maroondah City Council / Heart Foundation (Victoria) / Victoria Walks	201	Ongoing
Downsview Lands	Toronto, ON	Canada Lands Company / Northcrest Developments	210	Ongoing
Garrison Woods	Calgary, AB	Canada Lands Company	71	2004
Lansdowne/The Glebe	Ottawa, ON	Trinity Development Group	16.18	2010
Moody Centre	Port Moody, BC	Anthem Properties / Beedie Development Group / PCI Developments / Translink / Woodridge Homes / three local families	9.31	Ongoing
North Hills	Raleigh, NC	Kane Realty	38.04	2004
One Santa Fe	Los Angeles, CA	Cowley Real Estate Partners / McGregor Company	1.63	2014
Pickering Town Centre	Pickering, ON	City of Pickering	134	Ongoing
Rue Principale, Aylmer	Gatineau, QC	(various)	n/a	n/a
Sunshine West	Brimbank, VIC	Brimbank City Council / Heart Foundation (Victoria) / Victoria Walks	790	Ongoing
Storrs Center	Mansfield, CT	Education Realty Trust / LeylandAlliance LLC	19.30	2012
The Island Quarter/Canal Turn	Nottingham, UK	Conygar Investment Company	14.67	Ongoing
The Orbit	Innisfil, ON	Town of Innisfil / Cortel Group	50.26	Ongoing
The Rise	Vancouver, BC	Grosvenor Americas / Manitoba Civil Service Superannuation Board	0.93	2008
University District	Calgary, AB	University of Calgary Properties Group	81	2019
Via6	Seattle, WA	Pine Street Group LLC	0.36	2013
West District	Calgary, AB	Truman Homes	~38	2018

Appendix C2 – Core Precedent Catalogue

MALL REDEVELOPMENT/ADAPTIVE REUSE

The Shops at Don Mills

Toronto, Ontario

Figure C.a – Aerial Image of The Shops at Don Mills (WZMH, 2018).

Key Figures

Size	16.4 ha
Completion	2009 (Phase 1) | 2017 (Upgrades)
Office/Retail Square Footage	500,000 square feet
Residential Units	2,050 units
Project Cost	$21 million

Location

The Shops at Don Mills in located in the Don Mills suburb of Toronto, Ontario at the intersection of Lawrence Avenue East and Don Mills Road.

Date Built

The Shops at Don Mills was originally constructed in the 1950s as a community shopping centre until the 1980s when it transformed into a regional indoor shopping mall with large parking lots surrounding it. Demolition began in 2006, with Phase 1 completion in 2009 and later upgrades completed in 2017.

Type of Development

This redevelopment project had the aim of redesigning and reconfiguring the pedestrian experience within the existing mall through creating walkable, retail-fronted main-street environments. This development of the 16.4 ha site transformed a car-oriented shopping centre into a community node with over 500,000 square feet of office and retail space, eight residential buildings ranging from 11- to 32-stories in height containing a total of 2500 units, a new community centre, and a POPS as shown in Figure C.a (Bousfields, 2018).

Lessons for Orléans

The previous 'Don Mills Centre' on this site was a focal point in a neighbourhood built to suit the needs of the car and not the walkability of the surrounding residents. Supported by suburban neighbourhood structures, similar to Orléans, the shopping centre redevelopment was able to create a live-work-play environment for people both living in the development as well as those in the surrounding areas (WZMH, 2018). The Shops at Don Mills was able

to create a suburban commercial hub outside of the major core (Downtown Toronto) to allow for less car-oriented commuting.

Although The Shops at Don Mills is a great example of suburban greyfield redevelopment, the project does not fully integrate transit into its design, therefore limiting its accessibility to those from neighbouring communities. Orléans has the benefit of having an LRT station (and possibly more) located in its bounds, which provides more rationale for making this area a suburban hub of employment, living, and public space to be utilized by those in walking distance as well as those along the transit network.

Figure C.b – Rendering of the planned town centre and surrounding public space within The Shops at Don Mills (WZMH, 2018).

Figure C.c – Site Plan layout for The Shops at Don Mills (Bousfields, 2018).

Northgate Mall

Seattle, Washington

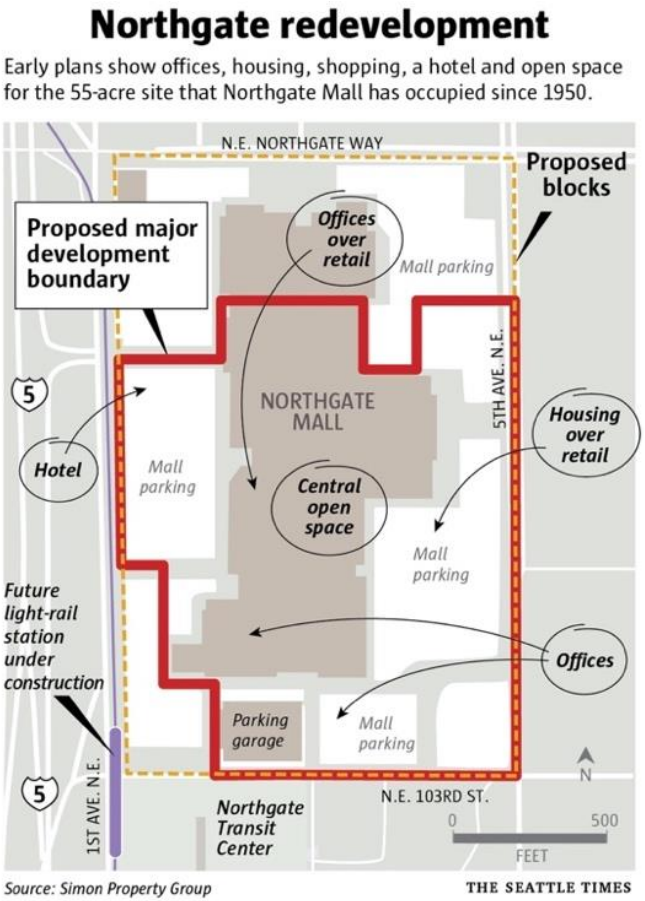


Figure C.d – Northgate Redevelopment Diagram (Rosenberg, 2018).

Key Figures

Size	16.6 ha
Completion	2019 (arena) | 2025 (phase 1)
Office/Retail Square Footage	~995,000 square feet (office) + ~404,000 square feet (retail)
Residential Units	940 units (phase 1)
Project Cost	$500+ million

Location

Northgate Mall is located about 12 kilometres north of Downtown Seattle, WA (and just east of the busy Interstate 5).

Date Built

The original site was built in 1950 and was America's first shopping centre designated as a "mall" (Jiang, 2019). Its redevelopment is in progress and reached its first milestone with the opening of the Kraken Community Iceplex in September 2021 (Condor, 2021).

Type of Development

This development will transform the existing 55-acre site (including Northgate Mall and its large parking lots) with a dense mixed-use complex. Large office towers and apartments will sit above ground-floor commercial space, with open green space being integrated into plans. The Kraken Community Iceplex is a 172,000 square feet community rink and headquarters practice facility for the new Seattle Kraken NHL team (GGLO, n.d.).

The extension of light rail transit service to Northgate has been an important catalyst for change, so it is not only a greyfield/mall redevelopment, but it is also a transit-adjacent development.

Lessons for Orléans

As Northgate has been deemed a "dying mall" (Jiang, 2019), LRT has clearly been a catalyst major development in this area, and it should also be a central part of the planning process for the OTC. Creating seamless and deliberate connections to important destinations is crucial, as many travelers will arrive at the site using the train. Furthermore, developing a site that is successful in the long term must have diverse offerings to bring in different types of visitors;

Northgate will encourage hockey fans, businesses, and shoppers to the area. Furthermore, eliminating eyesore parking lots and creating a more visually pleasing streetscape will make the site more inviting and welcoming for active transportation users.

Figure C.e – Existing Northgate Site (Seattle Times, 2018).

Figure C.f – Kraken Community Iceplex (Condor, 2021).

Richmond Centre

Richmond, British Columbia

Figure C.g – 2019 Artistic Rendering of the CF Richmond Centre redevelopment (Cadillac Fairview/Shape Properties) (Chan, 2019).

Key Figures

Size	10.9 ha
Completion	2022 (Phase 1) | 2026 (Phase 2)
Office/Retail Square Footage	500,000 square feet
Residential Units	2,100 units
Project Cost	$1.5 billion

Location

CF Richmond Centre is in the heart of the City of Richmond, south of Downtown Vancouver. The present-day mall is located next to Canada Line's southern terminus, Richmond-Brighouse Station. Nearby is a major park with a sportsplex and library.

Date Built

The first phase of redevelopment began in spring of 2021 with partial demolition of the mall (Rantanen, 2021). Both phases of the project are expected to be fully complete in 2026 (Chan, 2019).

Type of Development

Richmond Centre is a multi-building, horseshoe-shaped redevelopment around an existing indoor mall. Intended to be a mixed-use retail and residential district, it features 12 new mid-rise buildings situated amongst open air retail, new public plazas and streets, and a mobility hub.

Ground-level townhouses and retail space are located within the lower floors, and residential space within the upper floors. Half of the homes will be two- and three-bedroom units, sized for families. Residences also include 200 market rental units and 141 affordable rental units (Thomas, 2021).

Lessons for Orléans

Richmond Centre offers a great example of modern urban renewal. The redevelopment site serves as a southern gateway to the city's commercial centre and is strategically located among existing amenities. Underutilized civic facilities in Orléans offer opportunities for new programs and would serve well as a focal centre of new infill development. Offering a variety of building types and unit floorplans

could draw a mix of residents, especially families. Development can incentivize its residents and employees to use public transit by offering free passes.

Figure C.h – A rendering of the planned Central Plaza (Urban Land Institute) (Chan, 2019).

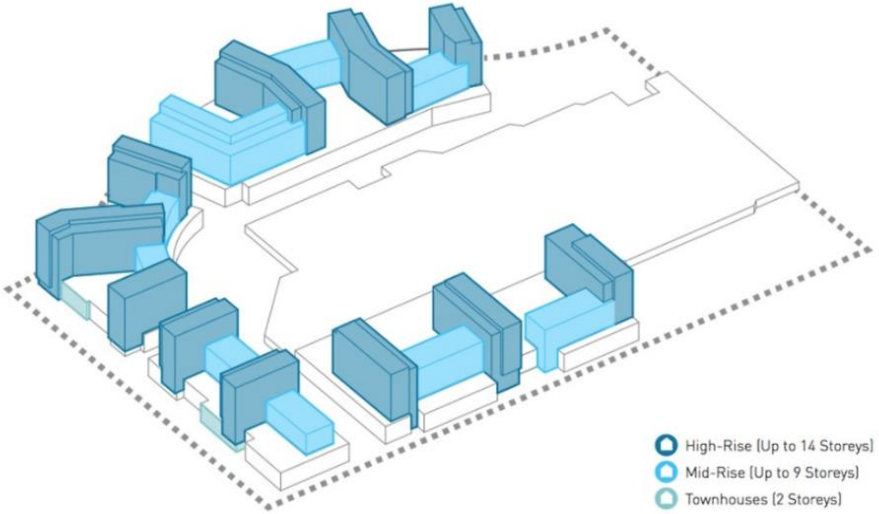


Figure C.i – Form and shape of heights of the CF Richmond Centre redevelopment (GBL Architects/Cadillac Fairview/SHAPE) (Chan, 2019).

TRANSIT-ORIENTED DEVELOPMENT

Marine Gateway

Vancouver, British Columbia

Figure C.j – Aerial View of Marine Gateway (Perkins + Will, 2021).

Key Figures

Size	1.9 ha
Completion	2015
Office/Retail Square Footage	260,000 square feet (office) + 230,000 square feet (retail)
Residential Units	461 units
Project Cost	$400 million

Location

Marine Gateway is located around the Marine Station of the Skytrain's Canada Line at the south end of Vancouver's city proper.

Date Built

Skytrain's first major TOD was completed in 2015, eight years after the opening of the station (Chan, 2017).

Type of Development

Marine Gateway includes a complementary mix of programs, with two neighbourhood plazas, 15-storeys of office space, a 3-storey retail podium with a grocery store, an 11-screen cinema, and two residential towers at 25 & 35 storeys. 70% of the building's energy is generated from geothermal exchange beneath the site's massive footprint, along with recovered waste heat from the commercial units.

Lessons for Orléans

Marine Gateway is exceptional since the high concentration of commercial activity makes it a destination as well as home to its residents – a no brainer given its central position on the Canada Line. Upon inception of the project, developers conducted a comprehensive evaluation of the city of Vancouver's EcoDensity initiative – which examined ways that Vancouver can accommodate its projected growth, maintain its reputation for liveability, and encourage affordability. The city would do well to leverage the Place d'Orléans transit station as an incentive for would-be developers and residents.

Figure C.k – Street View of Marine Gateway (Ruthen, 2017).

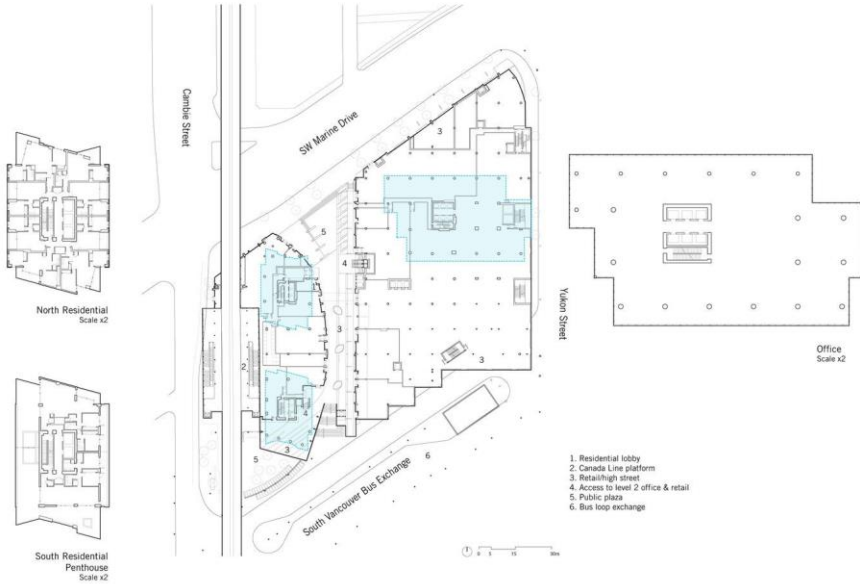


Figure C.l – Site plan (Perkins+Will) (Yeung, 2021).

Orenco Station

Portland, Oregon

Figure C.I – Overall site plan for Orenco Station (Urban Land Institute, 2015).

Key Figures

Size	76.9 ha
Completion	2003
Office/Retail Square Footage	125,503 square feet
Residential Units	1,834 units
Project Cost	$76 million

Location

Orenco Station is a TOD located in the Portland suburb of Hillsboro, approximately 20 km from the downtown core.

Date Built

The Orenco Station neighbourhood was originally a nursery (closed in 1938) that would then sit vacant until the 1990s (CNU, 2019). When the TriMet LRT expansion was planned to reach the neighbourhood of Orenco Station, planning began in 1994 to redevelop the vacant site to suit the needs and potential of a TOD and walkable community. The project was completed in full in 2003.

Type of Development

Orenco Station is a mixed-use TOD development that combines over 1,800 units, a town centre, retail, office, and employment within its 76.9-hectare site (CNU, 2019). Boasting walkable infrastructure and design, Orenco Station provides a New-Urbanist pedestrian experience in walking distance to work, home, play, and transit in a suburban context. Street-level retail, with housing and office space above, along with accessible units throughout, helps to retain a town centre environment for those accessing the space. The public spaces are also flexible to allow for a multitude of uses such as the Hillsboro Farmer's Market (Orenco Station, n.d.).

Lessons for Orléans

Orenco Station has many similar traits to that of Orléans, the proximity to transit, the distance to the downtown core, and the surrounding suburban context. Orenco Station is an early example of how TOD developments can prioritize the pedestrian experience and allow for the amenities and access to the space to be integrated into the wider suburban community – through methods such as the

examination of historic and traditional architectural styles of the region (Urban Land institute, 2015).

The plan for Orenco Station applied prescriptive zoning ordinances that guided the urban design of the area; aspects of the street width, street setback, and back laneways were put in place to ensure the space was accommodating and inviting for people using active modes of transportation (CNU, 2019).

Figure C.m – Rowlock at Orenco Station, Portland (Leeb Architects, 2021).

Figure C.n – Orenco Station, Portland, Oregon (CNU, 2019).

University City

Calgary, Alberta

Figure C.o – Image of Brentwood's University City (Bassett Associates Architecture Inc, n.d).

Key Figures

Size	10.9 ha
Completion	2014 (Phase 1) | 2016 (Phase 2)
Office/Retail Square Footage	40,000 square feet
Residential Units	716 units
Project Cost	~$80 million

Location

University City is a highly visible development in Brentwood, a neighbourhood in the northwest quadrant of Calgary. It is situated just north of the University of Calgary and borders a community plaza and an expressway. Located at the south end of the neighbourhood is a C-Train station.

Date Built

The first towers of University City were completed in 2013-14 as part of a station-area redevelopment. Another townhouse development, Brentwood on the Park, was completed in 2016 (GEC Architecture, 2021).

Type of Development

The 2009 Brentwood LRT Station Area Redevelopment Plan proposed a mix of higher density uses with active frontages. A commercial main street and dedicated pedestrian network were included in the plan, along with structured parking facilities for transit users. Large-format retail uses are not to be abolished but incorporated into the base of higher density mixed-use buildings with pedestrian-friendly entrances. (City of Calgary, 2009). A cluster of townhouses and high-rise towers with street-level retail has been constructed, along with a renewed neighbourhood park. Redevelopment of the neighbouring shopping plaza has also begun with the recent completion of another apartment building.

Lessons for Orléans

The Brentwood neighbourhood of Calgary offers an example of suburban TOD along an expressway, and the difficulties of doing so. It has been 24 years since the opening of the light rail station before intensification took place, and the redevelopment process has been

criticized for its red tape and lack of coordination between planners, councillors, and developers (White, 2019). This project showcases the strong effect of proximity to large institutions, such as the University of Calgary and University Innovation Park. It also illustrates a lag between residential and commercial demand.

Figure C.p – Ground plan of development (Bassett Associates Architecture Inc, n.d).

Figure C.q – View of the University City development with Brentwood Station in view (Bassett Associates Architecture Inc, n.d).

Figure C.r – Townhouses of Brentwood on the Park (Bassett Associates Architecture Inc, n.d).

15-MINUTE NEIGHBOURHOODS

AGORA

Gatineau, Québec

Figure C.s – Rendering of AGORA Development (AGORA, 2021).

Key Figures

Size	~60 ha
Completion	2019 (Phase 1) | 2022 (Phase 3)
Office/Retail Square Footage	210,000 square feet (office) + 120,000 square feet (retail)
Residential Units	600 units
Project Cost	~$250 million

Location

AGORA is in the Plateau neighbourhood of Gatineau, QC, northwest of Downtown Hull.

Date Built

The site is not fully developed yet, but some residential units are already occupied, public spaces are completed, and several businesses are operational (with more opening soon).

Type of Development

AGORA is a dense, mixed-use development, with 600 residential units in mid-rise and high-rise buildings. Commercial space will occupy the ground floors of buildings and some separate buildings. The development is designed as an all-inclusive experience; for example, in-apartment amenities like appliances and Wi-Fi are included, and car-sharing is available 24/7 for residents (AGORA, 2021). As a model for 15-minute communities, the focus of AGORA is providing the needs of residents and the vibrancy of dense cities within walking or cycling distance.

Lessons for Orléans

Providing dense housing at the OTC will hopefully bring customers to businesses and participants to recreational activities in an organic and seamless way. Furthermore, including ample open space like at AGORA will serve multiple purposes: it will encourage active transportation at the redeveloped Town Centre, it will serve as patios or outdoor spaces for businesses during appropriate weather, and it provides residents and visitors with informal public settings for gatherings.

Figure C.t – Ground plan of AGORA Development (AGORA, 2021).

Figure C.u – Rendering of AGORA park (AGORA, 2021).

Figure C.v – Rendering of AGORA plaza (AGORA, 2021).

Bethesda Row

Bethesda, Maryland

Figure C.w – Image of Bethesda Row (Bethesda Row, 2021).

Key Figures

Size	4.9 ha
Completion	2001 (Phase IV)
Office/Retail Square Footage	190,000 square feet (office) + 300,000 square feet (retail) + 60,000 square feet (restaurants)
Residential Units	~140 units
Project Cost	~$50 million

Location

Bethesda Row forms part of the central business district of Bethesda, Maryland, a first-ring suburb immediately northwest of Washington D.C.

Date Built

Phase I was completed in June 1997, Phase II in October 1998, Phase III in October 1999, and Phase IV in January 2001.

Type of Development

Bethesda Row is a mixed-use development in the heart of a historically neglected downtown. The original site consisted of seven contiguous city blocks with industrial and small retail uses (Urban Land Institute, 2015). A development of the Federal Realty Investment Trust, this multi-phase project involved refurbishment and greenfield expansion with a below-ground eight screen arts cinema, ground level street retail with speciality stores and restaurants, and office and residential units upstairs. A future trolley connection is also planned (Cooper Carry, 2018).

Lessons for Orléans

In the changing retail landscape of Orléans, the redevelopment of a commercial area to a mixed-use, walkable district has the potential to draw future residents not only from the immediate suburb, but also the greater metropolitan area as well.

Redevelopment began with retail and office whereas residential units were developed later on. The project has been heralded for its predictable, fair, and cost-effective decision-making (United States Environmental Protection Agency, 2011). Its direct development toward existing communities also serves as a blueprint for other

Federal Realty developments in Montgomery County. Likewise, the redevelopment of the Orléans Town Centre could also provide direction for future infill growth and intensification of Orléans.

Figure C.x (left and right) – Site Plans showing Bethesda Row 15-Minute Neighbourhood (Jerschow, 2000).

Chassé Park

Breda, Netherlands

Figure C.y – Images showing Chassé Park (De Vries & Wassenberg, 2013).

Key Figures

Size	13 ha
Completion	2007
Office/Retail Square Footage	322,917 square feet (office) + 21,528 square feet (retail)
Residential Units	600 multifamily units + 100 single-family units
Project Cost	Public ~€110 million (~$154 million) Private ~€225 million (~$357 million)

Location

A centuries-old military base in a historic centre in Breda, Netherlands transformed into a mixed-use sustainable community.

Date Built

The project began in 1999 and was completed in 2007. 8 different architecture firms, 2 planning firms, and a landscape architecture firm were utilized to emphasize the design themes from a variety of lenses.

Type of Development

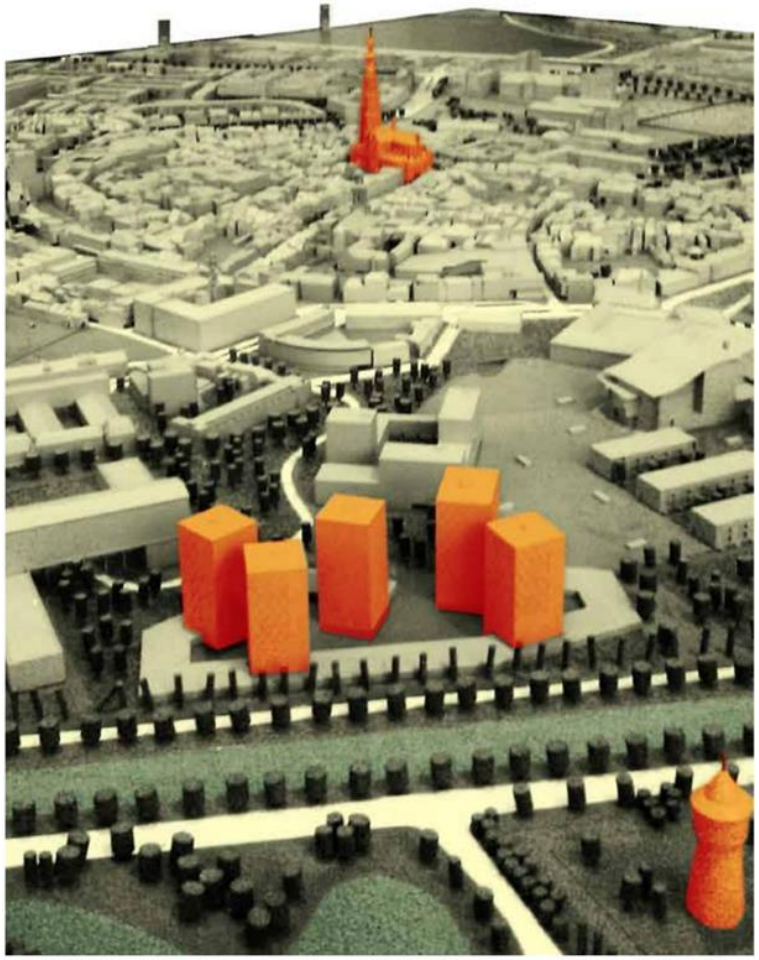
Chassé Park is a "a multiuse urban infill community" (Urban Land Institute, n.d.) which emphasizes active transportation access helping to improve connectivity with surrounding amenities. The neighbourhood did not explicitly strive to meet the qualities of 15-Minute Neighbourhoods (City of Ottawa, 2021), but the resulting community merits its inclusion within the theme. A design-focused campus creates a community with spaces for live, work, and play, allowing for trips to be easily made by active transportation.

The city of Breda is similar in size to Orléans, both geographically as well as by population, making Chassé Park a worthwhile comparison to the OTC. This redevelopment project took advantage of the existing culture and history of the area and created a modern community designed to meet the needs of people at all stages of life.

Lessons for Orléans

Creating an environment with a dedicated pedestrian-exclusive spaces helps to encourage active transportation for those that live within walking distance of amenities. Chassé Park also utilized a variety of housing types allowing for a heterogeneous mixture of

ages, incomes, and household types within the neighbourhood. The project does not identify itself as a 15-Minute Neighbourhood, nor a town centre, but the qualities such as high walkability, a range of uses, and greyfield redevelopment provide a framework from which the OTC project can build upon and adapt to its specific circumstances.



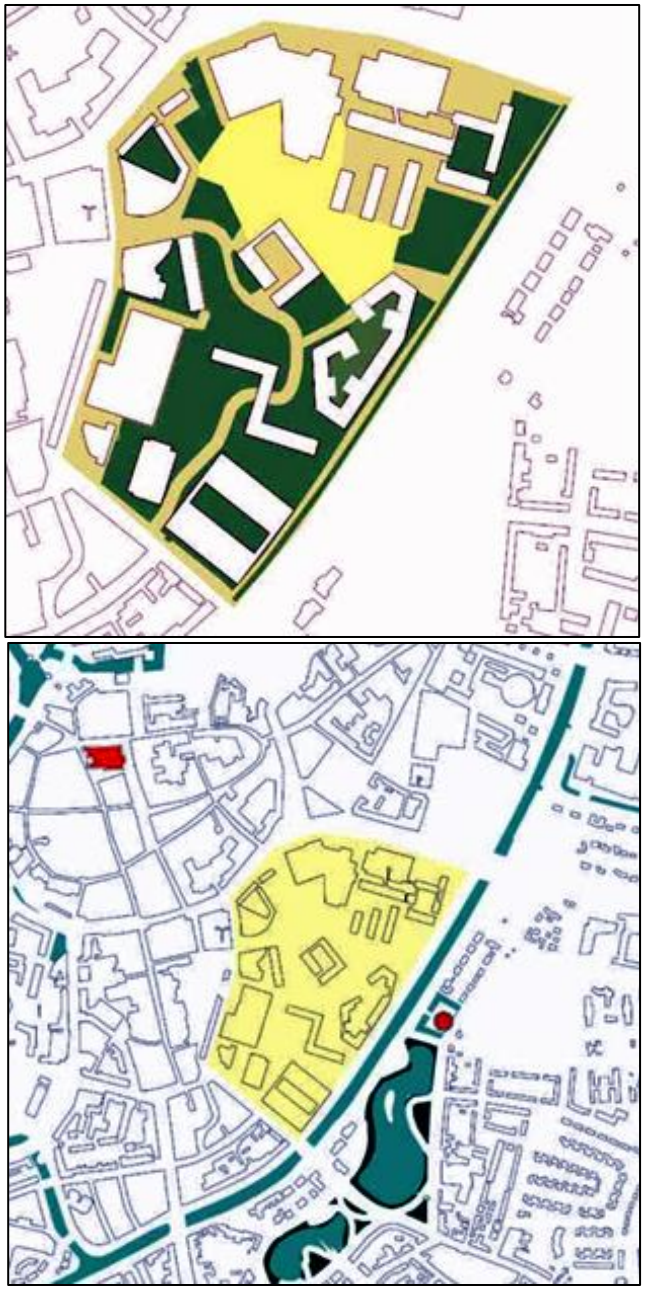


Figure C.z – (Left and Right) Site Plan and Rendering showing Chassé Park (De Vries & Wassenberg, 2013).

Appendix D – Existing Building Inventory and Density

Assumptions and Notes for Appendix D and E Density Calculations

1. Number of existing singed detached, semidetached, and town house dwelling units counted on Google Maps. Apartment, condominium, and retirement unit counts are from the sources below:

    - Number of Number of units for Centrum Heights from Ottawa House and Condo Hub (n.d.)
    - Number of units for 320 Centrum from Ottawa House and Condo Hub. (n.d.).
    - Number of units for 330-340 Centrum from Ottawa House and Condo Hub. (n.d.)
    - Number of units for Symphony from Symphony Senior Living (n.d.).
    - Number of units for Chartwell from Senior Care Living Access (n.d.).
    - Number of units for Jardin Royal Garden from Senior Care Living Access

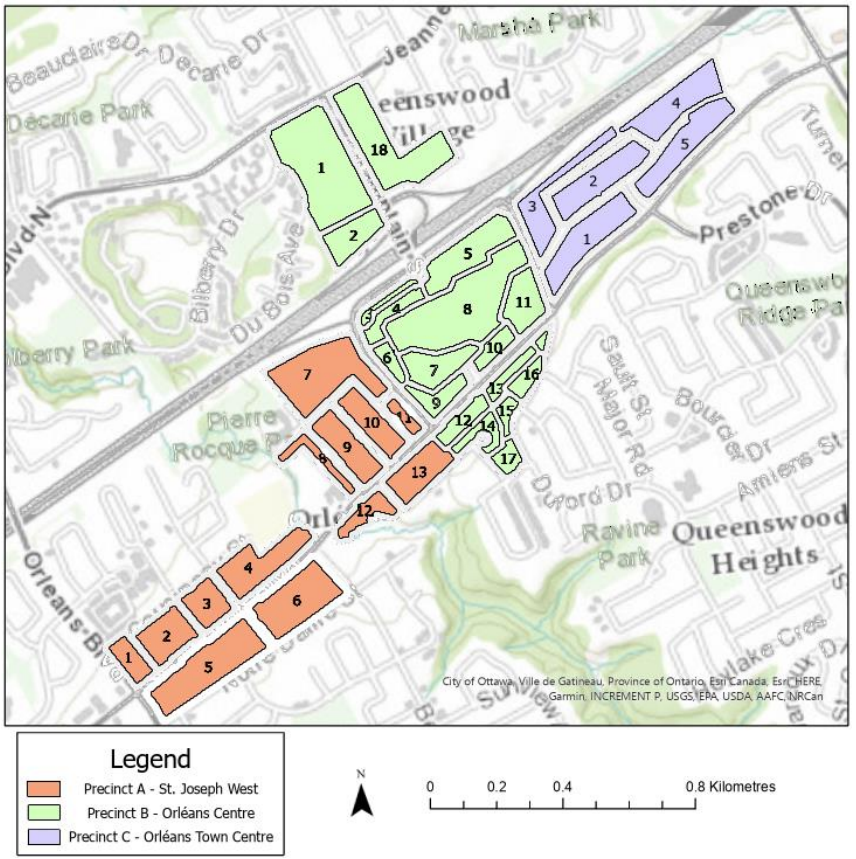


Figure D.a – Block Map used for Existing Density Analysis.

2. Stores and parking space counted for Place D'Orléans from Place d'Orléans (n.d.)

3. These calculations include approved or under review unbuilt developments at 850 Champlain St., 3030 St. Joseph Blvd., and 211 Centrum. Estimates for GFA and number of units for these developments are from Ottawa's DevApps (2021).

4. All Floor Plates are from CADMapper, Google Maps, ArcGIS data from OpenOtttawa, or DevApps since data availability, recency, and accuracy varied

5. All GFAS are from multiplying floor plates by number of storeys observed on Google Street View

6. Existing parking spaces estimated on Google Maps) and not counted on solely residential land

7. Number of residents are average household size by household type in Ottawa CMA (Ontario side) from the *2016 Census*. These are:
    - 2.9 persons per single detached house
    - 1.6 persons per unit in apartment building over 5 storeys
    - 2.6 persons per semidetached house
    - 2.6 persons per row house
    - 2.1 persons per apartment or flat in a duplex
    - 1.7 person per unity in an apartment building that has fewer than five storeys

8. The City of Ottawa provided job numbers for existing development from their 2016 Employment Survey

9. Job estimates for existing commercial development since 2016 and the design phase are estimated using employment factors from The City of Ottawa's 2019 *City-Wide Development Charges Background Study*. These are:
    - 1 job per 35.8 metres squared for commercial GFA
    - 1 job per 37.2 square metres for institutional GFA

10. Apartment dwelling unit size is estimated at 75.5 m^2, derived from the weighted average apartment sizes for market units in Ottawa from rentals.ca 2019 National Report with and 85% efficiency factor (i.e. filtering out hallway, elevator, etc. space).

11. Shifts in net area for design phase are from the creation of new rights of way.

12. Assumed 10 jobs per storey at new library and new community centres.

The target jobs, net and gross densities, portion of large dwellings within intensification, and new affordable housing units are derived from the *New OP* (City of Ottawa, 2021). The target number of dwelling units are residents are derived from the those target densities. The target numbers for FSI, maximum storeys, and site coverage are estimate of what will create a vibrant community.

Precinct A

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Pizza Pizza & Easy Financial	2,639	St. Joseph Blvd.	1	2,026	1	377	19%	377	0	189	189	0	0.19	Commercial	0	0
Single Detached House 1	1,338	Cousineau St.	1	1,613	1	210	13%	210	210	0	0	0	0.13	Residential	1	3
Single Detached House 2	1,332	Cousineau St.	1	1,383	1	181	13%	181	181	0	0	0	0.13	Residential	1	3
Single Detached House 3	1,326	Cousineau St.	1	1,267	1	118	9%	118	118	0	0	0	0.09	Residential	1	3
Single Detached House 4	1,320	Cousineau St.	1	1,267	1	127	10%	127	127	0	0	0	0.10	Residential	1	3
Single Detached House 5	1,314	Cousineau St.	1	1,265	1	229	18%	229	229	0	0	0	0.18	Residential	1	3
Lyndon's Barber Shop & Appartme	2,395	St. Joseph Blvd.	2	688	2	68	10%	136	68	68	0	0	0.20	Mixed-use	1	2
Connor's Irish Pub	2,401	St. Joseph Blvd.	2		1	290		290	0	290		0		Commercial	0	0
Strip Mall 1	2,451	St. Joseph Blvd.	2	7,221	2	1,070	20%	2,140	0	1,070	1,070	0	0.34	Commercial	0	0
Orléans Landscaping	2,473	St. Joseph Blvd.	2	1,979	1	122	6%	122	0	122	0	0	0.06	Commercial	0	0
Single Detached House 6	1,326	Dussere St.	2	550	2	194	35%	388	388	0	0	0	0.71	Residential	1	3
Single Detached House 7	1,324	Dussere St.	2	596	1	133	22%	133	133	0	0	0	0.22	Residential	1	3
Single Detached House 8	1,318	Dussere St.	2	816	1	206	25%	206	206	0	0	0	0.25	Residential	1	3
Single Detached House 9	1,309	Cousineau St.	2	1,120	1	157	14%	157	157	0	0	0	0.14	Residential	1	3
Single Detached House 10	1,311	Cousineau St.	2	767	1	128	17%	128	128	0	0	0	0.17	Residential	1	3
Single Detached House 11	1,313	Cousineau St.	2	1,298	2	95	7%	190	190	0	0	0	0.15	Residential	1	3
Single Detached House 12	1,315	Cousineau St.	2	1,288	1	173	13%	173	173	0	0	0	0.13	Residential	1	3
Single Detached House 13	1,317	Cousineau St.	2	1,283	1	155	12%	155	155	0	0	0	0.12	Residential	1	3
Single Detached House 14	1,319	Cousineau St.	2	674	1	244	36%	244	244	0	0	0	0.36	Residential	1	3
Single Detached House 15	1,321	Cousineau St.	2	777	1	198	25%	198	198	0	0	0	0.25	Residential	1	3
Single Detached House 16	1,331	Cousineau St.	2	699	1	170	24%	170	170	0	0	0	0.24	Residential	1	3
Single Detached House 17	1,333	Cousineau St.	2	699	1	182	26%	182	182	0	0	0	0.26	Residential	1	3
Rollout Autocare	1,339	Cousineau St.	2	688	1	122	18%	122	0	122	0	0	0.18	Commercial	0	0
Rangoli & MM Vapes	2,491	St. Joseph Blvd.	3	1,919	1	341	18%	341	0	341	0	0	0.18	Commercial	0	0
Sure Print & Graphics	2,507	St. Joseph Blvd.	3	1,689	1	277	16%	277	0	277	0	0	0.16	Commercial	0	0
Speedy Auto	2,523	St. Joseph Blvd.	3	2,249	1	381	17%	381	0	381	0	0	0.17	Commercial	0	0
Orléans Chiropractor	2,543	St. Joseph Blvd.	3	941	1	442	47%	442	0	442	0	442	0.47	Institutional	0	0
Single Detached House 18	1,342	St. Jean St.	3	935	2	207	22%	414	414	0	0	0	0.44	Residential	0	0
Single Detached House 19	1,334	St. Jean St.	3	1,387	1	143	10%	143	143	0	0	0	0.10	Residential	1	3
Single Detached House 20	1,326	St. Jean St.	3	1,391	1	154	11%	154	154	0	0	0	0.11	Residential	1	3
Single Detached House 21	1,318	St. Jean St.	3	1,258	2	115	9%	230	230	0	0	0	0.18	Residential	1	3
Single Detached House 22	1,281	Cousineau St.	3		2	66		132	132	0	0	0	0.17	Residential	1	3
Single Detached House 23	1,281	Cousineau St.	3		2	66		132	132	0	0	0		Residential	1	3
Semidetached Houses	1,281	Cousineau St.	3	774	2	153	37%	306	306	0	0	0		Residential	2	5
Row Houses 1	1,309-1,315	Dussere St.	3	873	2	155	18%	310	310	0	0	0	0.74	Residential	3	8
Semidetached House 1-2	1,321-1,323	Dussere St.	3	951	2	138	15%	276	276	0	0	0	0.29	Residential	2	5
Single Detached House 24	1,327	Dussere St.	3	1,387	1	205	15%	205	205	0	0	0	0.15	Residential	1	3
Mechanic Shops	1,237-1,243	Cousineau St.	4		1	797		797	0	797	0	0		Commercial	0	0
Row Houses 2	1,245	Cousineau St.	4		2	142		284	284	0	0	0		Residential	3	8
Single Detached House 25	1,253	Cousineau St.	4	3,562	2	135	30%	270	270	0	0	0	0.38	Residential	1	3
Single Detached House 26	1,309	St. Jean St.	4	377	2	99	26%	198	198	0	0	0	0.53	Residential	1	3
Semidetached House 3-4	1,311-1,313	St. Jean St.	4	546	2	220	40%	440	440	0	0	0	0.81	Residential	2	5
Centre Medico-Dentaire D'Orléans	2,555	St. Joseph Blvd.	4	8,044	4	1,063	13%	4,252	0	0	0	4,252	0.53	Institutional	0	0
Chaussures Regional Shoes	2,589	St. Joseph Blvd.	4		1	1,053		1,053	0	1,053	0	0		Commercial	0	0
Desjardins	2,591	St. Joseph Blvd.	4	4,246	1	599	39%	599	0	599	0	0	0.39	Commercial	0	0
McDonalds	2,643	St. Joseph Blvd.	4	3,713	1	562	15%	562	0	0	3,713	0	0.15	Commercial	0	0
Strip Mall 2	2,561-2701	St. Joseph Blvd.	4	8,407	1	1,872	22%	1,872	0	1,872	0	0	0.22	Commercial	0	0
Kelly Funeral Homes	2,370	St. Joseph Blvd.	5	3,491	2	744	21%	1,488	0	1,488	0	0	0.43	Commercial	0	0
Giant Tiger	2,396	St. Joseph Blvd.	5	3,696	1	1,782	48%	1,782	0	1,782	0	0	0.48	Commercial	0	0

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Strip Mall 3	2,404	St. Joseph Blvd.	5	1,390	1	302	22%	302	0	302	0	0	0.22	Commercial	0	0
Carling Tire	2,422	St. Joseph Blvd.	5	2,436	1	438	18%	438	0	438	0	0	0.18	Commercial	0	0
Strip Mall 4	2,432	St. Joseph Blvd.	5	5,139	2	818	16%	1,636	0	1,636	0	0	0.32	Commercial	0	0
Gloucest Veterinerian	2,470	St. Joseph Blvd.	5	2,226	1	255	11%	255	0	255	0	0	0.11	Commercial	0	0
St. Hubert	2,484	St. Joseph Blvd.	5	3,523	1	666	19%	666	0	0	666	0	0.19	Commercial	0	0
Kozy Nest	2,520	St. Joseph Blvd.	5		1	167		167	0	0	167	0		Commercial	0	0
Strip Mall 5	2,530	St. Joseph Blvd.	5	4,262	1	686	20%	686	0	686	0	0	0.20	Commercial	0	0
New Forma Chiropractic & Wellne	2,548	St. Joseph Blvd.	5	1,018	1	182	18%	182	0	182	0	0	0.18	Commercial	0	0
Semidetached House 5-6	1,364-1,366	St. Jean St.	5	614	2	170	28%	340	340	0	0	0	0.55	Residential	2	5
Semidetached House 7-8	1,368-1,370	St. Jean St.	5	618	2	130	21%	260	260	0	0	0	0.42	Residential	2	5
Semidetached House 9-10	1,372-1,374	St. Jean St.	5	617	2	190	31%	380	380	0	0	0	0.62	Residential	2	5
Semidetached House 11-12	1,376-1,378	St. Jean St.	5	619	2	131	21%	262	262	0	0	0	0.42	Residential	2	5
Semidetached House 13-14	6,941-6,943	Notre Dame St.	5	1,653	2	253	15%	506	506	0	0	0	0.31	Residential	2	5
Single Detached House 27	6,935	Notre Dame St.	5	1,662	1	157	9%	157	157	0	0	0	0.09	Residential	1	3
Single Detached House 28	6,921	Notre Dame St.	5	1,647	1	148	9%	148	148	0	0	0	0.09	Residential	1	3
Single Detached House 29	6,909	Notre Dame St.	5	2,289	2	208	9%	416	416	0	0	0	0.18	Residential	1	3
Single Detached House 30	6,905-6,907	Notre Dame St.	5	1,286	2	361	28%	722	722	0	0	0	0.56	Residential	2	5
Single Detached House 31	6,903	Notre Dame St.	5	961	2	184	19%	368	368	0	0	0	0.38	Residential	1	3
Single Detached House 32	6,897	Notre Dame St.	5	842	1	148	18%	148	148	0	0	0	0.18	Residential	1	3
Single Detached House 33	6,899	Notre Dame St.	5	989	2	182	18%	364	364	0	0	0	0.37	Residential	1	3
Single Detached House 34	6,885	Notre Dame St.	5	640	1	79	12%	79	79	0	0	0	0.12	Residential	1	3
Single Detached House 35	6,881	Notre Dame St.	5	659	1	121	18%	121	121	0	0	0	0.18	Residential	1	3
Single Detached House 36	6,873	Notre Dame St.	5	916	1	151	16%	151	151	0	0	0	0.16	Residential	1	3
Semidetached House 15-16	6,863-6,865	Notre Dame St.	5	621	2	149	24%	298	298	0	0	0	0.48	Residential	2	5
Semidetached House 17-18	6,859-6,861	Notre Dame St.	5	619	2	151	24%	302	302	0	0	0	0.49	Residential	2	5
Semidetached House 19-20	6,855-6,857	Notre Dame St.	5	596	2	151	25%	302	302	0	0	0	0.51	Residential	2	5
Semidetached House 21-22	6,851-6,853	Notre Dame St.	5	594	2	166	28%	332	332	0	0	0	0.56	Residential	2	5
Semidetached House 23-24	6,847-6,849	Notre Dame St.	5	593	2	155	26%	310	310	0	0	0	0.52	Residential	2	5
Strip Mall 6	2,580	St. Joseph Blvd.	6	2,437	1	481	20%	641	0	641	0	0	0.26	Commercial	0	0
Strip Mall 7	2,586	St. Joseph Blvd.	6	4,668	1	674	14%	674	0	674	0	0	0.14	Commercial	0	0
Office Bldn. 1	2,618	St. Joseph Blvd.	6		2	588		1,176	0	0	1,176	0		Commercial	0	0
Office Bldn. 2	2,628	St. Joseph Blvd.	6	3,530	2	276	24%	552	0	0	552	0	0.49	Commercial	0	0
Junkyard/Car Dealer	2,656	St. Joseph Blvd.	6	1,485	1	366	25%	366	0	366	0	0	0.25	Commercial	0	0
Pioneer Energy Gas Station	2,668	St. Joseph Blvd.	6	1,761	1	165	9%	165	0	165	0	0	0.09	Commercial	0	0
Chartwell Belcourt résidence pour retraités	1,344	Belcourt Blvd.	6	6,732	4	2,409	36%	9,636	9,636	0	0	0	1.43	Residential	108	184
Single Detached House 37	1,360	Belcourt Blvd.	6	860	1	257	30%	257	257	0	0	0	0.30	Residential	1	3
Single Detached House 38	1,362	Belcourt Blvd.	6	467	3	123	26%	308	308	0	0	0	0.66	Residential	1	3
Single Detached House 39	7,035	Notre Dame St.	6	476	1	150	32%	150	150	0	0	0	0.32	Residential	1	3
Single Detached House 40	7,025	Notre Dame St.	6	1,410	1	208	15%	208	208	0	0	0	0.15	Residential	1	3
Single Detached House 41	7,015	Notre Dame St.	6	1,428	1	242	17%	242	242	0	0	0	0.17	Residential	1	3
Semidetached House 25-26	7,007-7009	Notre Dame St.	6	1,498	1	161	11%	161	161	0	0	0	0.11	Residential	2	6
Single Detached House 42	7,001	Notre Dame St.	6	1,528	1	193	13%	193	193	0	0	0	0.13	Residential	1	3
Single Detached House 43	6,993	Notre Dame St.	6	1,493	2	154	10%	308	308	0	0	0	0.21	Residential	1	3
Single Detached House 44	6,983	Notre Dame St.	6	1,517	1	159	10%	159	159	0	0	0	0.10	Residential	1	3
Single Detached House 45	6,979	Notre Dame St.	6	1,380	1	141	10%	141	141	0	0	0	0.10	Residential	1	3
Single Detached House 46	6,971	Notre Dame St.	6	1,427	1	180	13%	180	180	0	0	0	0.13	Residential	1	3
Single Detached House 47	6,967	Notre Dame St.	6	695	2	183	26%	366	366	0	0	0	0.53	Residential	1	3
Single Detached House 48	6,957	Notre Dame St.	6	575	1	81	14%	81	81	0	0	0	0.14	Residential	1	3
Single Detached House 49	1,377	St. Jean St.	6	695	2	129	19%	258	258	0	0	0	0.37	Residential	1	3
Semidetached House 27-28	1,371-1,373	St. Jean St.	6	915	2	121	13%	242	242	0	0	0	0.26	Residential	2	5

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Single Detached House 50	1,363	St. Jean St.	6	804	2	82	10%	164	164	0	0	0	0.20	Residential	1	3
Single Detached House 51	1,087	St. Pierre St.	7	741	1	213	29%	213	213	0	0	0	0.29	Residential	1	3
Single Detached House 52	6,819	Rocque St.	7	649	1	168	26%	168	168	0	0	0	0.26	Residential	1	3
Single Detached House 53	6,829	Rocque St.	7	806	1	255	32%	255	255	0	0	0	0.32	Residential	1	3
Single Detached House 54	6,839	Rocque St.	7	584	1	171	29%	171	171	0	0	0	0.29	Residential	1	3
Single Detached House 55	6,849	Rocque St.	7	695	1	165	24%	165	165	0	0	0	0.24	Residential	1	3
Semidetached House 29-30	6,859	Rocque St.	7	695	1	210	30%	210	210	0	0	0	0.30	Residential	2	5
Single Detached House 56	6,879	Rocque St.	7	696	1	223	32%	223	223	0	0	0	0.32	Residential	1	3
Strip Mall 8	1,190	Place d'Orléans Dr	7	3,546	1	1,381	39%	1,381	0	1,381	0	0	0.39	Commercial	0	0
Orleans Urgent Care Clinic	1,220	Place d'Orléans Dr	7		1	790		790	0	0	0	790		Institutional	0	0
Strip Mall 9	1,224	Place d'Orléans Dr	7	20,102	1	1,631	12%	1,631	0	0	1,631	0	0.12	Commercial	0	0
Powercentre 1 (Loblaws, Dollarama, Gym)	1,226	Place d'Orléans Dr	7	20,147	1	6,005	30%	6,005	0	6,005	0	0	0.30	Commercial	0	0
Speedy Glass	2,795	St. Joseph Blvd.	8	1,693	1	215	13%	215	0	215	0	0	0.13	Commercial	0	0
Single Detached House 57	1,162	St. Pierre St.	8	554	2	112	20%	224	224	0	0	0	0.40	Residential	1	3
Single Detached House 58	1,158	St. Pierre St.	8	520	1	161	31%	161	161	0	0	0	0.31	Residential	1	3
Single Detached House 59	1,152	St. Pierre St.	8	541	2	137	25%	274	274	0	0	0	0.51	Residential	2	5
Single Detached House 60	1,150	St. Pierre St.	8	773	1	193	25%	193	193	0	0	0	0.25	Residential	1	3
Single Detached House 61	1,138	St. Pierre St.	8	1,160	1	273	24%	273	273	0	0	0	0.24	Residential	1	3
Single Detached House 62	1,132	St. Pierre St.	8	778	2	134	17%	268	268	0	0	0	0.34	Residential	1	3
Single Detached House 63	1,114	St. Pierre St.	8	614	1	178	29%	178	178	0	0	0	0.29	Residential	1	3
Single Detached House 64	1,112	St. Pierre St.	8	597	2	199	33%	299	299	0	0	0	0.50	Residential	1	3
Duplex 1	1,104	St. Pierre St.	8	558	2	90	16%	180	180	0	0	0	0.32	Residential	2	4
Single Detached House 65	6,780	Rocque St.	8	558	2	186	33%	279	279	0	0	0	0.50	Residential	1	3
Single Detached House 66	6,772	Rocque St.	8	667	1	132	20%	132	132	0	0	0	0.20	Residential	1	3
Mixed-use Building 1	2,803	St. Joseph Blvd.	9		2	502		1,004	502	502	0	0		Mixed-use	2	3
Moonstone Hair	2,813	St. Joseph Blvd.	9		1	36		36	0	36	0	0		Commercial		0
LunchBox	2,817	St. Joseph Blvd.	9	2,284	2	83	27%	166	0	166	0	0	0.53	Mixed-use	1	2
Orléans Motors 2011	2,821	St. Joseph Blvd.	9	586	1	138	24%	138	0	138	0	0	0.24	Commercial		0
Galarneau	2,831	St. Joseph Blvd.	9	1,176	2	254	22%	381	191	0	381	0	0.32	Mixed-use	1	2
Rixx Adult Store	2,837-2,839	St. Joseph Blvd.	9	1,288	2	317	25%	634	0	634	0	0	0.49	Mixed-use	2	3
Semidetached House 31-32	1,148	Maisoneuve St.	9	804	1	235	29%	235	235	0	0	0	0.29	Residential	2	6
Semidetached House 33-34	1,140	Maisoneuve St.	9	804	1	257	32%	257	257	0	0	0	0.32	Residential	2	5
Single Detached House 67	1,134	Maisoneuve St.	9	1,422	1	204	14%	204	204	0	0	0	0.14	Residential	1	3
Single Detached House 68	1,128	Maisoneuve St.	9	673	1	170	25%	170	170	0	0	0	0.25	Residential	1	3
Single Detached House 69	1,124	Maisoneuve St.	9	665	1	187	28%	187	187	0	0	0	0.28	Residential	1	3
Single Detached House 70	1,120	Maisoneuve St.	9	1,055	1	196	19%	196	196	0	0	0	0.19	Residential	1	3
Single Detached House 71	1,112	Maisoneuve St.	9	860	1	169	20%	169	169	0	0	0	0.20	Residential	1	3
Single Detached House 72	1,108	Maisoneuve St.	9	860	1	161	19%	161	161	0	0	0	0.19	Residential	1	3
Single Detached House 73	1,102	Maisoneuve St.	9	888	1	164	18%	164	164	0	0	0	0.18	Residential	1	3
Single Detached House 74	6,818	Rocque St.	9	562	1	183	33%	183	183	0	0	0	0.33	Residential	1	3
Single Detached House 75	1,107	St. Pierre St.	9	818	1	256	31%	256	256	0	0	0	0.31	Residential	1	3
Single Detached House 76	1,115	St. Pierre St.	9	2,025	1	201	10%	201	201	0	0	0	0.10	Residential	1	3
Semidetached House 35-36	1,121-1,123	St. Pierre St.	9	866	1	242	28%	242	242	0	0	0	0.28	Residential	2	5
Semidetached House 37-38	1,129-1,131	St. Pierre St.	9	865	1	237	27%	237	237	0	0	0	0.27	Residential	2	5
Semidetached House 39-40	1,135-1,137	St. Pierre St.	9	865	1	238	28%	238	238	0	0	0	0.28	Residential	2	5
Semidetached House 41-42	1,145	St. Pierre St.	9	1,291	2	290	22%	580	580	0	0	0	0.45	Residential	2	5
Single Detached House 77	1,153	St. Pierre St.	9	1,023	1	131	13%	131	131	0	0	0	0.13	Residential	1	3
Duplex 2	1,159	St. Pierre St.	9	1,023	2	125	12%	250	250	0	0	0	0.24	Residential	2	4
Paramedic Post	2,851	St. Joseph Blvd.	10	1,136	1	156	14%	156	0	0	0	156	0.14	Institutional	0	0
Rhoda Institute	2,871	St. Joseph Blvd.	10	3,952	2	639	16%	1,278	0	0	0	1,278	0.32	Institutional	0	0

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Single Detached House 78	1,154	Gabriel St.	10	844	1	154	18%	154	154	0	0	0	0.18	Residential	1	3
Single Detached House 79	1,146	Gabriel St.	10	847	2	84	10%	168	168	0	0	0	0.20	Residential	1	3
Single Detached House 80	1,140	Gabriel St.	10	847	2	203	24%	406	406	0	0	0	0.48	Residential	1	3
Single Detached House 81	1,136	Gabriel St.	10	846	2	150	18%	300	300	0	0	0	0.35	Residential	1	3
Single Detached House 82	1,130	Gabriel St.	10	842	1	88	10%	88	88	0	0	0	0.10	Residential	1	3
Single Detached House 83	1,124	Gabriel St.	10	844	1	105	12%	105	105	0	0	0	0.12	Residential	1	3
Single Detached House 84	1,118	Gabriel St.	10	844	1	149	18%	149	149	0	0	0	0.18	Residential	1	3
Single Detached House 85	1,112	Gabriel St.	10	850	1	159	19%	159	159	0	0	0	0.19	Residential	1	3
Semidetached House 43-44	1,102-1,104	Gabriel St.	10	734	1	214	29%	214	214	0	0	0	0.29	Residential	2	5
Single Detached House 86	6,890	Rocque St.	10	606	1	157	26%	157	157	0	0	0	0.26	Residential	1	3
Single Detached House 87	6,880	Rocque St.	10	701	1	169	24%	169	169	0	0	0	0.24	Residential	1	3
Single Detached House 88	6,870	Rocque St.	10	701	1	155	22%	155	155	0	0	0	0.22	Residential	1	3
Single Detached House 89	1,113	Maisoneuve St.	10	898	1	215	24%	215	215	0	0	0	0.24	Residential	1	3
Single Detached House 90	1,119	Maisoneuve St.	10	943	1	169	18%	169	169	0	0	0	0.18	Residential	1	3
Single Detached House 91	1,125	Maisoneuve St.	10	898	1	197	22%	197	197	0	0	0	0.22	Residential	1	3
Single Detached House 92	1,133	Maisoneuve St.	10	965	2	178	18%	297	297	0	0	0	0.31	Residential	1	3
Single Detached House 93	1,143	Maisoneuve St.	10	1,333	1	183	14%	183	183	0	0	0	0.14	Residential	1	3
Single Detached House 94	1,149	Maisoneuve St.	10	900	1	177	20%	177	177	0	0	0	0.20	Residential	1	3
Tim Hortons	2,859	St. Joseph Blvd.	11	2,496	1	310	12%	310	0	310	0	0	0.12	Commercial	0	0
Wendy's	1,170	Place d'Orléans Dr	11	4,171	1	357	9%	357	0	357	0	0	0.09	Commercial	0	0
Strip Mall 9	2,742	St. Joseph Blvd.	12	1,468	2	427	29%	854	0	854	0	0	0.58	Commercial	0	0
Orléans Propane Centre	2,754	St. Joseph Blvd.	12	1,464	1	76	5%	76	0	76	0	0	0.05	Commercial	0	0
Altshuller Health Svc Inc	2,776	St. Joseph Blvd.	12	2,572	1	547	21%	547	0	0	0	547	0.21	Institutional	0	0
Raymond Chabot - Syndic autorisé	2,788	St. Joseph Blvd.	12	1,749	2	107	6%	214	0	214	0	0	0.12	Commercial	0	0
Eidoz @ Earl's Barbershop	2,790	St. Joseph Blvd.	12	741	2	99	13%	198	0	198	0	0	0.27	Commercial	0	0
Jardin Royal Garden	2,802	St. Joseph Blvd.	12	10,847	3	2,945	27%	8,835	8,835	0	0	0	0.81	Residential	95	162
Fabricland	2832	St. Joseph Blvd.	13	3,464	1	1,136	33%	1,136	0	1,136	0	0	0.33	Commercial	0	0
The Love of Chocolate Factory	2854	St. Joseph Blvd.	13	747	2	134	18%	268	0	268	0	0	0.36	Commercial	0	0
Service Ontario	2862	St. Joseph Blvd.	13	651	1	201	31%	201	0	0	0	201	0.31	Institutional	0	0
Vantage Jewellers	2864	St. Joseph Blvd.	13	1,160	1	53	5%	53	0	53	0	0	0.05	Commercial	0	0
Fraser Cleaners	2866	St. Joseph Blvd.	13		1	59		59	0	59	0	0		Commercial	0	0
Salon Alta Moda	2866	St. Joseph Blvd.	13	1,159	1	78	12%	78	0	78	0	0	0.12	Commercial	0	0
Orleans Denture Clinic	2882	St. Joseph Blvd.	13	606	1	159	26%	159	0	0	0	159	0.26	Commercial	0	0
Riopelle Lawyers	2888	St. Joseph Blvd.	13	723	2	90	12%	180	0	0	180	0	0.25	Commercial	0	0
Orléans Family Dentist	2894	St. Joseph Blvd.	13	1,059	2	153	14%	306	0	0	0	306	0.29	Commercial	0	0
Willie's Chinese Food	2908	St. Joseph Blvd.	13	932	1	107	11%	107	0	107	0	0	0.11	Commercial	0	0
Single Detached House 95	6,841	Edgar-Brault St.	13	694	1	136	20%	136	136	0	0	0	0.20	Residential	1	3
Single Detached House 96	6,851	Edgar-Brault St.	13	817	2	123	15%	246	246	0	0	0	0.30	Residential	1	3
Single Detached House 97	6,859	Edgar-Brault St.	13	1,495	1	237	16%	237	237	0	0	0	0.16	Residential	1	3
Single Detached House 98	6,871	Edgar-Brault St.	13	1,895	2	156	8%	312	312	0	0	0	0.16	Residential	1	3
Single Detached House 99	6,875-6,879	Edgar-Brault St.	13	908	2	285	31%	570	570	0	0	0	0.63	Residential	1	3
Single Detached House 100	2,902	Edgar-Brault St.	13	916	2	213	23%	426	426	0	0	0	0.47	Residential	1	3
Single Detached House 101	6,885	Edgar-Brault St.	13	2,066	2	502	24%	1,004	1,004	0	0	0	0.49	Residential	1	3

Precinct B

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community/ Utility GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Seniors Home - Approved	850	Champlain St.	1	65,229	3	3,330	5%	10,600	10,600	0	0	0	0.16	Residential	0	0
Bus Shelter and Maintenance		Champlain St.	2	18,890	1	157	1%	157	0	0	0	157	0.01	Institutional	0	0
Bus Shelter and Maintenance	1231	Place d'Orléans Dr	3		1	210		210	0	0	0	210		Institutional	0	0
Bus Shelter and Maintenance	1231	Place d'Orléans Dr	3		1	210		210	0	0	0	210		Institutional	0	0
Bus Shelter and Maintenance	1231	Place d'Orléans Dr	3	6,885	1	348	11%	348	0	0	0	0	0.11	Commercial	0	0
			4				0%		0	0	0	0	0.00	Parking	0	0
Mastermind	1315	Place d'Orléans Dr	5		1	435		435	0	435	0	0		Commercial	0	0
			6						0	0	0	0		Parking	0	0
Place d'Orléans Garage	1180	Place d'Orléans Dr	7		2	14,806		29,612	0	0	0	0		Parking	0	0
Place d'Orléans	110	Place d'Orléans Dr	8		2	59,607		119,214	0	111,763	7,451	0		Commercial	0	0
RBC	2945	St. Joseph Blvd.	9	171,303	1	450	44%	450	0	450	0	0	0.87	Commercial	0	0
Choice Car Wash	2975	St. Joseph Blvd.	9		1	169		169	0	169	0	0		Commercial	0	0
Shell Choice Car Wash	2975	St. Joseph Blvd.	9	3,132	1	304	15%	304	0	304	0	0	0.15	Commercial	0	0
Topteck Automotive	3003	St. Joseph Blvd.	10	1,596	1	168	11%	168	0	168	0	0	0.11	Commercial	0	0
Taing Fine Jewellers	3007	St. Joseph Blvd.	10	1,287	1	264	21%	264	0	264	0	0	0.21	Commercial	0	0
BrokerLink	3009	St. Joseph Blvd.	10	1,554	2	244	16%	488	0	488	0	0	0.31	Commercial	0	0
Onroute Autosales	3017	St. Joseph Blvd.	10	1,222	1	466	38%	466	0	466	0	0	0.38	Commercial	0	0
Farm Boy	3035	St. Joseph Blvd.	11	6,177	2	2,070	34%	4,140	0	4,140	0	0	0.67	Commercial	0	0
Herbert & Roy	2828	St. Joseph Blvd.	12	543	2	157	29%	314	0	0	314	0	0.58	Office	0	0
Shoppers Drugmart	2962	St. Joseph Blvd.	12	6,071	2	1,519	25%	3,038	0	3,038	0	0	0.50	Commercial	0	0
Semidetached House 1	2980	St. Joseph Blvd.	12	368	2	69	19%	138	138	0	0	0	0.38	Residential	1	3
Semidetached House 2	2980	St. Joseph Blvd.	12	1,429	2	69	5%	138	138	0	0	0	0.10	Residential	1	3
Paul Rushforth Real Estate	3002	St. Joseph Blvd.	13	2,608	2	179	7%	358	0	0	358	0	0.14	Office	0	0
Adlife Services	3006	St. Joseph Blvd.	13	1,911	1	189	10%	189	0	189	0	0	0.10	Commercial	0	0
Pho Truc Lien	3010	St. Joseph Blvd.	13	1,209	1	235	19%	235	0	235	0	0	0.19	Commercial	0	0
DentalDocs	3012	St. Joseph Blvd.	13	2,438	2	660	27%	1,320	0	0	0	1,320	0.54	Commercial	0	0
Stripmall 1	3018-302	St. Joseph Blvd.	13	1,176	2	393	33%	590	197	0	0	393	0.50	Mixed-Use	2	3
Single Detached House 1	6831	Edgar-Brault St.	14	1,050	1	179	17%	179	179	0	0	0	0.17	Residential	1	3
Single Detached House 2	6887	Edgar-Brault St.	14	1,543	2	172	11%	344	344	0	0	0	0.22	Residential	1	3
Single Detached House 3	6889	Edgar-Brault St.	14	401	2	157	39%	314	314	0	0	0	0.78	Residential	1	3
Single Detached House 4	6891	Edgar-Brault St.	14	401	2	151	38%	302	302	0	0	0	0.75	Residential	1	3
Single Detached House 5	6893	Edgar-Brault St.	14	401	2	179	45%	358	358	0	0	0	0.89	Residential	1	3
Single Detached House 6	6895	Edgar-Brault St.	14	401	2	186	46%	372	372	0	0	0	0.93	Residential	1	3
Single Detached House 7	6897	Edgar-Brault St.	14	401	2	149	37%	298	298	0	0	0	0.74	Residential	1	3
Single Detached House 8	6899	Edgar-Brault St.	14	401	2	170	42%	340	340	0	0	0	0.85	Residential	1	3
Single Detached House 9	6901	Edgar-Brault St.	14	401	2	154	38%	308	308	0	0	0	0.77	Residential	1	3
Single Detached House 10	6903	Edgar-Brault St.	14	374	2	150	40%	300	300	0	0	0	0.80	Residential	1	3
Single Detached House 11	6905	Edgar-Brault St.	14	491	2	189	38%	378	378	0	0	0	0.77	Residential	1	3
Single Detached House 12	6907	Edgar-Brault St.	14	777	1	190	24%	190	190	0	0	0	0.24	Residential	1	3
Single Detached House 13	6909	Edgar-Brault St.	14	1,750	1	208	12%	208	208	0	0	0	0.12	Residential	1	3
Single Detached House 14	6911	Edgar-Brault St.	14	1,108	2	210	19%	420	420	0	0	0	0.38	Residential	1	3
Single Detached House 15	6908	Edgar-Brault St.	14	709	2	191	27%	382	382	0	0	0	0.54	Residential	1	3
Single Detached House 16	6906	Edgar-Brault St.	14	748	2	217	29%	434	434	0	0	0	0.58	Residential	1	3
Single Detached House 17	6904	Edgar-Brault St.	14	605	2	210	35%	420	420	0	0	0	0.69	Residential	1	3
Single Detached House 18	6902	Edgar-Brault St.	14	488	2	213	44%	426	426	0	0	0	0.87	Residential	1	3
Single Detached House 19	6900	Edgar-Brault St.	14	598	2	160	27%	320	320	0	0	0	0.54	Residential	1	3
Single Detached House 20	1382	Duford Dr.	15	673	2	308	52%	616	616	0	0	0	0.92	Residential	1	3
Single Detached House 21	1380	Duford Dr.	15	604	2	225	37%	450	450	0	0	0	0.75	Residential	1	3
Single Detached House 22	1378	Duford Dr.	15	2,930	2	303	10%	606	606	0	0	0	0.21	Residential	1	3

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Single Detached House 23	1374	Duford Dr.	15	993	2	179	18%	358	358	0	0	0	0.36	Residential	1	3
Single Detached House 24	1372	Duford Dr.	15	939	2	211	22%	422	422	0	0	0	0.45	Residential	1	3
High Rise - Approved	3,030	St. Joseph Blvd.	16	2,644	16	426	16%	11,167	10,704	462	0	0	4.22	Mixed-Use	165	264
Natural Space/Escarpment - Undevelopable			16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Open Space	N/A	N/A
Single Detached House 25	1427	Ridgegate St.	17	650	2	174	27%	348	348	0	0	0	0.54	Residential	1	3
Single Detached House 26	1429	Ridgegate St.	17	617	2	149	24%	298	298	0	0	0	0.48	Residential	1	3
Single Detached House 27	1431	Ridgegate St.	17	498	2	141	28%	282	282	0	0	0	0.57	Residential	1	3
Single Detached House 28	1433	Ridgegate St.	17	524	2	146	28%	292	292	0	0	0	0.56	Residential	1	3
Single Detached House 29	1435	Ridgegate St.	17	524	2	164	31%	328	328	0	0	0	0.63	Residential	1	3
Single Detached House 30	1437	Ridgegate St.	17	491	2	165	34%	330	330	0	0	0	0.67	Residential	1	3
Single Detached House 31	1439	Ridgegate St.	17	420	2	140	33%	280	280	0	0	0	0.67	Residential	1	3
Single Detached House 32	1441	Ridgegate St.	17	562	2	155	28%	310	310	0	0	0	0.55	Residential	1	3
Single Detached House 33	1392	Duford Dr.	17	780	2	201	26%	402	402	0	0	0	0.52	Residential	1	3
Single Detached House 34	1390	Duford Dr.	17	673	2	184	27%	368	368	0	0	0	0.55	Residential	1	3
Single Detached House 35	1388	Duford Dr.	17	673	1	274	41%	274	274	0	0	0	0.41	Residential	1	3
Single Detached House 36	1386	Duford Dr.	17	673	1	235	35%	235	235	0	0	0	0.35	Residential	1	3
Single Detached House 37	1384	Duford Dr.	17	674	1	238	35%	238	238	0	0	0	0.35	Residential	1	3
Single Detached House 38	883	Champlain St.	18	690	2	153	22%	306	306	0	0	0	0.44	Residential	1	3
Single Detached House 39	881	Champlain St.	18	695	2	172	25%	344	344	0	0	0	0.49	Residential	1	3
Single Detached House 40	879	Champlain St.	18	695	2	160	23%	320	320	0	0	0	0.46	Residential	1	3
Single Detached House 41	877	Champlain St.	18	695	2	153	22%	306	306	0	0	0	0.44	Residential	1	3
Single Detached House 42	875	Champlain St.	18	695	2	153	22%	306	306	0	0	0	0.44	Residential	1	3
Single Detached House 43	873	Champlain St.	18	695	2	153	22%	306	306	0	0	0	0.44	Residential	1	3
Single Detached House 44	871	Champlain St.	18	695	1	137	20%	137	137	0	0	0	0.20	Residential	1	3
Single Detached House 45	869	Champlain St.	18	695	2	172	25%	344	344	0	0	0	0.49	Residential	1	3
Single Detached House 46	867	Champlain St.	18	701	2	167	24%	334	334	0	0	0	0.48	Residential	1	3
Single Detached House 47	865	Champlain St.	18	701	2	144	21%	288	288	0	0	0	0.41	Residential	1	3
Single Detached House 48	861	Champlain St.	18	1,029	1	205	20%	205	205	0	0	0	0.20	Residential	1	3
Single Detached House 49	859	Champlain St.	18	876	2	229	26%	458	458	0	0	0	0.52	Residential	1	3
Single Detached House 50	857	Champlain St.	18	876	2	199	23%	398	398	0	0	0	0.45	Residential	1	3
Single Detached House 51	855	Champlain St.	18	695	2	184	26%	368	368	0	0	0	0.53	Residential	1	3
Single Detached House 52	853	Champlain St.	18	695	2	202	29%	404	404	0	0	0	0.58	Residential	1	3
Single Detached House 53	851	Champlain St.	18	694	2	176	25%	352	352	0	0	0	0.51	Residential	1	3
Single Detached House 54	849	Champlain St.	18	696	2	152	22%	304	304	0	0	0	0.44	Residential	1	3
Single Detached House 55	847	Champlain St.	18	473	2	156	33%	312	312	0	0	0	0.66	Residential	1	3
Single Detached House 56	845	Champlain St.	18	996	1	203	20%	203	203	0	0	0	0.20	Residential	1	3
Single Detached House 57	8004	Jeanne D'Arc Blvd.	18	733	1	171	23%	171	171	0	0	0	0.23	Residential	1	3
Single Detached House 58	8006	Jeanne D'Arc Blvd.	18	734	1	176	24%	176	176	0	0	0	0.24	Residential	1	3
Single Detached House 59	844	Balsam Dr.	18	699	1	167	24%	167	167	0	0	0	0.24	Residential	1	3
Single Detached House 60	846	Balsam Dr.	18	652	1	169	26%	169	169	0	0	0	0.26	Residential	1	3
Single Detached House 61	848	Balsam Dr.	18	750	1	151	20%	151	151	0	0	0	0.20	Residential	1	3
Single Detached House 62	850	Balsam Dr.	18	768	1	128	17%	128	128	0	0	0	0.17	Residential	1	3
Single Detached House 63	852	Balsam Dr.	18	698	1	174	25%	174	174	0	0	0	0.25	Residential	1	3
Single Detached House 64	854	Balsam Dr.	18	696	1	206	30%	206	206	0	0	0	0.30	Residential	1	3
Single Detached House 65	856	Balsam Dr.	18	766	1	150	20%	150	150	0	0	0	0.20	Residential	1	3
Single Detached House 66	858	Balsam Dr.	18	835	1	193	23%	193	193	0	0	0	0.23	Residential	1	3
Single Detached House 67	860	Balsam Dr.	18	766	1	174	23%	174	174	0	0	0	0.23	Residential	1	3
Single Detached House 68	862	Balsam Dr.	18	835	1	107	13%	107	107	0	0	0	0.13	Residential	1	3
Single Detached House 69	864	Balsam Dr.	18	737	1	126	17%	126	126	0	0	0	0.17	Residential	1	3
Single Detached House 70	866	Balsam Dr.	18	863	1	164	19%	164	164	0	0	0	0.19	Residential	1	3

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community/ Utility GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Single Detached House 70	866	Balsam Dr.	18	863	1	164	19%	164	164	0	0	0	0.19	Residential	1	3
Single Detached House 71	868	Balsam Dr.	18	765	1	133	17%	133	133	0	0	0	0.17	Residential	1	3
Single Detached House 72	870	Balsam Dr.	18	964	1	206	21%	206	206	0	0	0	0.21	Residential	1	3
Single Detached House 73	872	Balsam Dr.	18	1,333	1	175	13%	175	175	0	0	0	0.13	Residential	1	3
Single Detached House 74	874	Balsam Dr.	18	1,872	1	178	10%	178	178	0	0	0	0.10	Residential	1	3
Single Detached House 75	876	Balsam Dr.	18	992	1	229	23%	229	229	0	0	0	0.23	Residential	1	3
Single Detached House 76	878	Balsam Dr.	18	828	1	111	13%	111	111	0	0	0	0.13	Residential	1	3
Single Detached House 77	880	Balsam Dr.	18	760	1	158	21%	158	158	0	0	0	0.21	Residential	1	3
Single Detached House 78	882	Balsam Dr.	18	897	1	167	19%	167	167	0	0	0	0.19	Residential	1	3
Single Detached House 79	884	Balsam Dr.	18	761	1	110	14%	110	110	0	0	0	0.14	Residential	1	3
Single Detached House 80	886	Balsam Dr.	18	904	1	206	23%	206	206	0	0	0	0.23	Residential	1	3
Single Detached House 81	874	Willow Ave.	18	571	1	114	20%	114	114	0	0	0	0.20	Residential	1	3
Single Detached House 82	876	Willow Ave.	18	578	1	131	23%	131	131	0	0	0	0.23	Residential	1	3
Single Detached House 83	878	Willow Ave.	18	578	1	135	23%	135	135	0	0	0	0.23	Residential	1	3
Single Detached House 84	880	Willow Ave.	18	578	1	180	31%	180	180	0	0	0	0.31	Residential	1	3
Single Detached House 85	129	Alpine St.	18	578	1	167	29%	167	167	0	0	0	0.29	Residential	1	3
Single Detached House 86	127	Alpine St.	18	909	1	204	22%	204	204	0	0	0	0.22	Residential	1	3
Single Detached House 87	125	Alpine St.	18	834	1	140	17%	140	140	0	0	0	0.17	Residential	1	3
Single Detached House 88	123	Alpine St.	18	971	1	170	18%	170	170	0	0	0	0.18	Residential	1	3
Single Detached House 89	121	Alpine St.	18	764	1	156	20%	156	156	0	0	0	0.20	Residential	1	3
Single Detached House 90	119	Alpine St.	18	696	1	158	23%	158	158	0	0	0	0.23	Residential	1	3
Single Detached House 91	117	Alpine St.	18	696	1	113	16%	113	113	0	0	0	0.16	Residential	1	3
Single Detached House 92	115	Alpine St.	18	670	1	158	24%	158	158	0	0	0	0.24	Residential	1	3

Precinct C

Building Name	Street #	Street Name	Block	Parcel Area (m^2)	Storeys	Floor Plate (m^2)	Parcel Coverage	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community /Utility GFA (m^2)	Floor Space Index (FSI)	Land Use	Dwelling Units	# of Residents
Petro Canada & Car Wash	3055	St. Joseph Blvd.	1	2,970	1	489	16%	489	0	489	0	0	0.16	Commercial	0	0
Strip Mall 1	210	Centrum Blvd.	1	8,188	2	2,488	30%	4,976	0	0	2,488	0	0.61	Commercial	0	0
Strip Mall 2	240	Centrum Blvd.	1		2	1,983		2,975	0	1,487	1,487	0		Commercial	0	0
Orléans Town Centre	250	Centrum Blvd.	1		2	3,151		6,302	0	5,602	700	0		Commercial	0	0
Commercial Building 1	260	Centrum Blvd.	1		2	1,516		3,032	0	1,516	1,516	0		Commercial	0	0
Strip Mall 3	3095	St. Joseph Blvd.	1	21,952	2	856	34%	1,712	0	685	1,027	0	0.64	Commercial	0	0
Shenkman Arts Centre	245	Centrum Blvd.	2	10,998	2	5,324	48%	10,648	0	0	0	10,648	0.97	Community	0	0
Peter C. Clark Long Term Care	255	Centrum Blvd.	2	3,862	3	1,848	48%	5,544	0	0	0	5,544	1.44	Community	0	0
YMCA/YWCA	265	Centrum Blvd.	2	12,640	2	3,037	24%	6,074	0	0	0	6,074	0.48	Community	0	0
Seniores Home - Application	211	Centrum Blvd.	3	15,279	4-17	5,108	33%	30,421	30,207	214	0	0	1.99	Mixed-use	397	397
Holiday Inn Express	500	Brisebois Cres.	3	4,338	5	1,115	26%	5,575	0	0	0	0	1.29	Commercial	0	0
Centrum Heights 2	325	Centrum Blvd.	4	7,958	4	1,462	18%	5,848	5,848	0	0	0	0.73	Residential	64	109
Centrum Heights 1	345	Centrum Blvd.	4	7,682	4	1,448	19%	5,792	5,792	0	0	0	0.75	Residential	64	109
Celestia	310	Centrum Blvd.	5	3,585	6	1,306	36%	7,836	7,836	0	0	0	2.19	Residential	69	110
320 Centrum	320	Centrum Blvd.	5	3,504	6	891	25%	5,346	5,346	0	0	0	1.53	Residential	71	114
330-340 Centrum Bldn. 1	330	Centrum Blvd.	5		5	1,467		7,335	7,335	0	0	0		Residential	44	70
330-340 Centrum Bldn. 2	340	Centrum Blvd.	5	7,402	5	1,451	39%	7,255	7,255	0	0	0	1.97	Residential	44	70
Christal Place	3211	St. Joseph Blvd.	5		3	688		2,064	2,064	0	0	0		Residential	27	46
Historical Farmhouse	3213	St. Joseph Blvd.	5	2,801	2	145	25%	290	0	0	0	0	0.84	Vacant	0	0
Single Detached House 1	3217	St. Joseph Blvd.	5	2,610	1	264	10%	264	264	0	0	0	0.10	Residential	1	3
Single Detached House 2	3227	St. Joseph Blvd.	5	1,730	1	210	12%	210	210	0	0	0	0.12	Residential	1	3
Old Silo		Vieux Silo Rd.	5	1,613	5	18	1%	18	0	0	0	18	0.01	Community	0	0

Block and Total Densities

Precinct A

Block	Precinct Area Gross (m^2)	Block Area Net (m^2)	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/ Community GFA (m^2)	Block Coverage	Floor Space Index (FSI)	Dwelling Units	Dwelling Units per Net Hectare	# of Residents	# of Jobs	# of People and Jobs per Gross Hectare
1		8,821	1,242	1,242	865	189	189	0	14%	0.14	5	6	15		
2		21,143	3,707	5,134	2,392	1,672	1,070	0	18%	0.24	13	6	37		
3		15,754	2,843	3,743	2,302	1,441	0	442	18%	0.24	13	8	36		
4		28,895	6,542	10,327	1,192	4,321	3,713	4,252	23%	0.36	7	2	19		
5		46,216	9,425	13,568	5,966	6,769	833	0	20%	0.29	31	7	83		
6		37,781	7,523	16,628	13,054	1,846	1,728	0	20%	0.44	126	33	235		
7		48,661	11,212	11,212	1,405	7,386	1,631	790	23%	0.23	8	2	23		
8		9,013	2,010	2,676	2,461	215	0	0	22%	0.30	13	14	36		
9		22,703	4,976	6,420	4,754	1,476	381	0	22%	0.28	31	14	78		
10		20,531	3,701	4,896	3,462	0	0	1,434	18%	0.24	19	9	55		
11		6,667	667	667	0	667	667	0	10%	0.10	0	0	0		
12		18,841	4,201	10,724	8,835	1,342	0	547	22%	0.57	95	50	162		
13		19,292	3,822	5,478	2,931	1,701	180	666	20%	0.28	7	4	20		
Total	**473,791**	**304,318**	**61,871**	**92,714**	**49,617**	**29,025**	**10,392**	**8,131**	**20%**	**0.30**	**368**	**12**	**796**	**1,482**	**48**

Precint B

Block	Precinct Area Gross (m^2)	Block Area Net (m^2)	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/ Community GFA (m^2)	Block Coverage	Floor Space Index (FSI)	Dwelling Units	Dwelling Units per Net Hectare	# of Residents	# of Jobs	# of People and Jobs per Gross Hectare
1		65,229	3,330	10,600	10,600	0	0	0	5%	0.16	0	0	0		
2		18,890	157	157	0	0	0	157	1%	0.01	0	0	0		
3		6,885	768	768	0	0	0	420	11%	0.11	0	0	0		
4		12,030	0	0	0	0	0	0	0%	0.00	0	0	0		
5		31,359	435	435	0	435	0	0	1%	0.01	0	0	0		
6		7,438	0	0	0	0	0	0	0%	0.00	0	0	0		
7		20,643	14,806	29,612	0	0	0	0	72%	1.43	0	0	0		
8		70,383	59,607	119,214	0	111,763	7,451	0	85%	1.69	0	0	0		
9		12,965	923	923	0	923	0	0	7%	0.07	0	0	0		
10		5,659	1,142	1,386	0	1,386	0	0	20%	0.24	0	0	0		
11		6,177	2,070	4,140	0	4,140	0	0	34%	0.67	0	0	0		
12		8,411	1,814	3,628	276	3,038	314	0	22%	0.43	2	2	5		
13		9,342	1,656	2,692	197	424	358	1,713	18%	0.29	2	2	3		
14		13,048	3,435	6,293	6,293	0	0	0	26%	0.48	19	15	55		
15		6,139	1,226	2,452	2,452	2,452	0	0	20%	0.40	5	8	15		
16		2,644	426	11,167	10,704	462	0	0	16%	4.22	165	624	264		
17		7,759	2,366	3,985	3,985	0	0	0	30%	0.51	13	17	38		
18		43,018	9,025	11,750	11,750	0	0	0	21%	0.27	55	13	160		
Total	**585,816**	**348,019**	**103,186**	**197,451**	**46,257**	**125,023**	**8,123**	**2,290**	**30%**	**0.57**	**261**	**7**	**539**	**1,860**	**41**

Precinct C

Block	Precinct Area Gross (m^2)	Block Area Net (m^2)	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/ Community GFA (m^2)	Block Coverage	Floor Space Index (FSI)	Dwelling Units	Dwelling Units per Net Hectare	# of Residents	# of Jobs	# of People and Jobs per Gross Hectare
1		33,110	10,483	19,486	0	9,779	7,219	0	32%	0.59	0	0	0		
2		27,500	10,209	22,266	0	0	0	22,266	37%	0.81	0	0	0		
3		19,617	6,223	35,996	30,207	214	0	0	32%	1.83	397	202	397		
4		15,640	2,910	11,640	11,640	0	0	0	19%	0.74	128	82	218		
5		23,245	6,440	30,618	30,310	0	0	18	28%	1.32	257	111	417		
Total	**258,402**	**119,112**	**36,265**	**120,006**	**72,157**	**9,993**	**7,219**	**22,284**	**30%**	**1.01**	**782**	**66**	**1,031**	**930**	**76**

Summary Table

Table D.b – Existing Density Compared to Target.
*17 storey tower approved, not yet built

	Existing	Target
DWELLING UNITS	1,411	11,562
NET DENSITY	18.31	150
NUMBER OF RESIDENTS	2,367	14,000
NUMBER OF JOBS	4,272	10,000
GROSS DENSITY (PEOPLE AND JOBS PER GROSS HECTARE)	50.37	120
PORTION OF LARGE-HOUSEHOLD DWELLINGS WITHIN INTENSIFICATION	N/A	5%
NEW AFFORDABLE HOUSING UNITS	N/A	2,128
COVERAGE OF DEVELOPABLE LAND	26%	40%
FSI	0.53	2
MAXIMUM HEIGHT	17*	33

Block Map

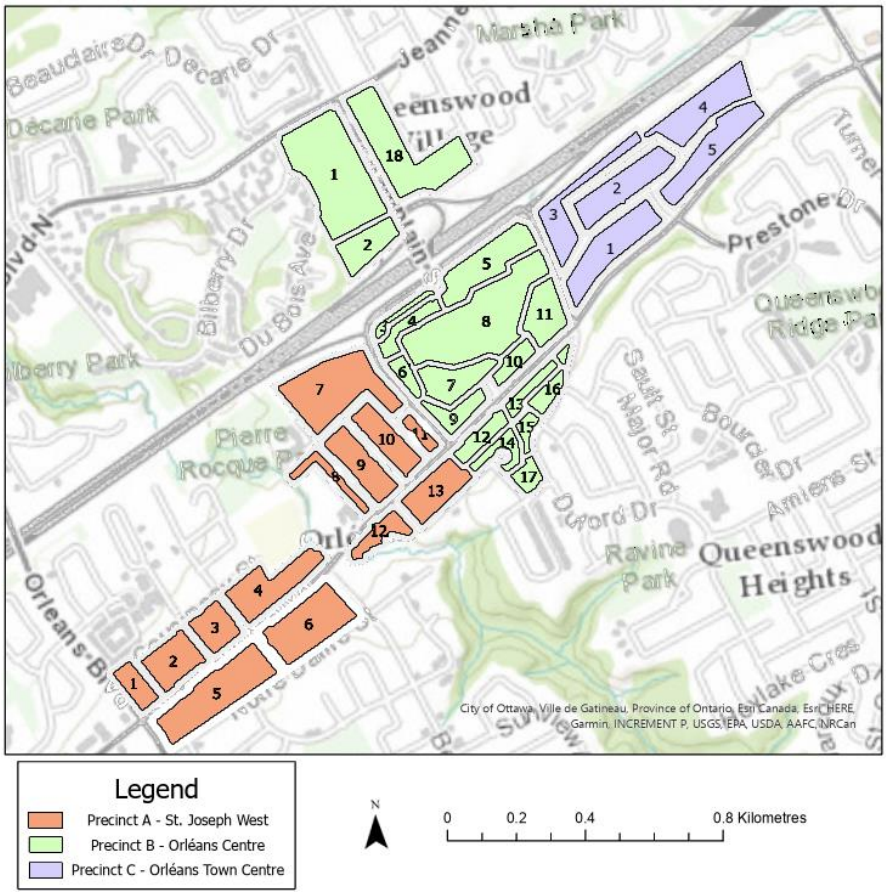


Figure D.c – Block Map used for Existing Density Analysis.

Appendix E – Proposed Building Inventory and Density

Precinct A

Building I.D.	Block	Storeys	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community/ Utility GFA (m^2)	Land Use	Dwelling Units	# of Residents	# of Jobs	Phase
1.1	1	5	2,400	10,084	1,800	8,284	0	0	Mixed-use	20	34	231	1
1.2	1	5	3,000	12,664	2,250	10,414	0		Mixed-use	25	43	291	1
1.3	1	25	2,074	21,515	17,367	4,148	0	0	Mixed-use	196	332	116	1
1.4	1	27	2,074	20,799	16,651	4,148	0	0	Mixed-use	187	319	116	1
1.5	1	5	2,400	10,084	1,800	8,284	0	0	Mixed-use	20	34	231	1
1.6	1	5	2,400	10,084	1,800	8,284	0	0	Mixed-use	20	34	231	1
1.7	1	6	1,975	9,876	0	0	0	9,876	Institutional	0	0	265	1
1.8	1	8	N/A (existing)	7,108	0	0	7,108	0	Mixed-use	0	0	199	1
2.1	2	3	4,814	14,318	14,256	62	0	0	Mixed-use	33	86	2	1
2.2	2	3	131	392	392	0	0	0	Residential	3	8	0	1
2.3	2	3	261	783	783	0	0	0	Residential	6	16	0	1
2.4	2	3	261	783	783	0	0	0	Residential	6	16	0	1
2.5	2	3	131	392	392	0	0	0	Residential	3	8	0	1
3.1	3	3	4,814	14,318	14,256	62	0	0	Mixed-use	33	86	2	1
3.2	3	3	131	392	392	0	0	0	Residential	3	8	0	1
3.3	3	3	261	783	783	0	0	0	Residential	6	16	0	1
3.4	3	3	261	783	783	0	0	0	Residential	6	16	0	1
3.5	3	3	131	392	392	0	0	0	Residential	3	8	0	1
4.1	4	4	345	1,381	1,036	345	0	0	Mixed-use	12	20	10	1
5.1	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.2	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.3	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.4	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.5	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.6	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.7	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.8	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.9	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.10	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.11	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.12	5	3	131	392	392	0	0	0	Residential	3	8	0	1
5.13	5	3	1,102	3,306	2,633	673	0	0	Mixed-use	30	50	19	1
6.1	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.2	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.3	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.4	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.5	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.6	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.7	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.8	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.9	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.10	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.11	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.12	6	3	131	392	392	0	0	0	Residential	3	8	0	1
6.13	6	6	3,234	19,404	17,787	1,617	0	0	Mixed-use	200	320	45	1
7.1	7	6	1,034	7,225	517	517	6,191	0	Mixed-use	6	15	187	1
7.2	7	6	1,034	7,225	517	517	6,191	0	Mixed-use	6	15	187	1
7.3	7	8	1,034	8,219	517	517	5,504	1,681	Mixed-use	6	15	178	1
8.1	8	4	345	1,251	905	345	0	0	Mixed-use	10	17	10	1

Building I.D.	Block	Storeys	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community/ Utility GFA (m^2)	Land Use	Dwelling Units	# of Residents	# of Jobs	Phase
8.2	8	8	1,469	9,440	8,963	477	0	0	Mixed-use	101			1
8.3	8	7	6,010	22,963	22,359	604	0	0	Mixed-use	252	403	17	1
8.4	8	8	1,634	11,558	8,358	3,200	0	0	Mixed-use	94	151	89	1
9.1	9	4	1,761	4,466	0	0	2,705	1,761	Mixed-use		0	123	1
10.1	10	4	345	1,251	905	345	0	0	Mixed-use	10	17	10	1
10.2	10	6	1,936	8,867	968	968	6,931	0	Mixed-use	11			1
10.3	10	7	6,010	22,963	22,359	604	0	0	Mixed-use	303	17	17	1
11.1	11	4	345	1,251	905	345	0	0	Mixed-use	10	17	10	1
11.2	11	5	901	3,314	2,864	451	0	0	Mixed-use	32	52	13	1
11.3	11	4	345	1,251	905	345	0	0	Mixed-use	10	17	10	1
11.4	11	5	901	3,314	2,864	451	0	0	Mixed-use	32	52	13	1
11.5	11	7	6,010	22,963	22,359	604	0	0	Mixed-use	303	17	17	1
11.6	11	5	901	3,314	2,864	451	0	0	Mixed-use	32	52	13	1
11.7	11	6	1,634	10,496	9,550	946	0	0	Mixed-use	108	172	26	1
11.8	11	5	901	3,314	2,864	451	0	0	Mixed-use	32	52	13	1
11.9	11	4	345	1,381	1,036	345	0	0	Mixed-use	12	20	10	1
13.1	13	4	345	1,381	1,036	345	0	0	Mixed-use	12	20	10	1
13.2	13	6	1,634	10,496	9,550	946	0	0	Mixed-use	108	172	26	1
13.3	13	6	1,634	10,023	9,550	473	0	0	Mixed-use	108	172	13	1
13.4	13	5	1,838	6,277	0	0	6,277	0	Mixed-use	0	0	175	1
14.1	14	4	345	1,381	1,036	345	0	0	Mixed-use	12	20	10	1
14.2	14	5	901	3,314	2,864	451	0	0	Mixed-use	32	52	13	1
14.3	14	5	2,025	6,678	0	1,013	3,054	2,612	Mixed-use	0	0	124	1
15.1	15	7	6,010	22,963	22,359	604	0	0	Mixed-use	303	17	17	1
15.2	15	8	2,068	8,752	1,034	1,034	4,962	1,722	Mixed-use	12	19	177	1
15.3	15	6	1,634	10,496	9,550	946	0	0	Mixed-use	108	172	26	1
15.4	15	4	345	1,381	1,036	345	0	0	Mixed-use	12	20	10	1
15.5	15	4	345	1,381	1,036	345	0	0	Mixed-use	12	20	10	1

Precinct B

Building I.D.	Block	Storeys	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community/ Utility GFA (m^2)	Land Use	Dwelling Units	# of Residents	# of Jobs	Phase
1.1	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.2	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.3	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.4	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.5	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.6	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.7	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.8	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.9	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.10	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.11	1	3	131	392	392	0	0	0	Residential	3	8	0	1
1.12	1	3	131	392	392	0	0	0	Residential	3	8	0	1
2.1	2	7	6,010	22,963	22,359	604	0	0	Mixed-use	252	403	17	1
3.1	3	3	4,752	14,256	14,256	0	0	0	Residential	33	86	0	1
3.2	3	3	131	392	392	0	0	0	Residential	3	8	0	1
3.3	3	3	261	783	783	0	0	0	Residential	6	16	0	1
3.4	3	3	261	783	783	0	0	0	Residential	6	16	0	1
3.5	3	3	131	392	392	0	0	0	Residential	3	8	0	1
3.6	3	7	6,011	32,527	32,527	0	0	0	Residential	366	586	0	1
4.1	4	3	4,752	14,256	14,256	0	0	0	Residential	33	86	0	1
4.2	4	3	131	392	392	0	0	0	Residential	3	8	0	1
4.3	4	3	261	783	783	0	0	0	Residential	6	16	0	1
4.4	4	3	261	783	783	0	0	0	Residential	6	16	0	1
4.5	4	5	901	3,314	2,864	451	0	0	Mixed-use	32	52	13	1
4.6	4	7	6,011	32,527	32,527	0	0	0	Residential	366	586	0	1
4.7	4	7	6,011	32,527	32,527	0	0	0	Residential	366	586	0	1
5.1	5	25	3,007	117,734	18,827	6,014	0	8,312	Mixed-use	212	339	208	1
5.2	5	25	3,007	66,305	18,827	6,014	0	8,312	Mixed-use	212	339	208	1
6.1	6	26	4,171	28,577	22,320	6,257	0	0	Mixed-use	251	402	175	1
6.2	6	30	3,007	32,029	23,717	0	0	8,312	Mixed-use	267	427	40	1
6.3	6	21	3,007	116,984	14,915	0	0	8,312	Mixed-use	168	269	40	1
7.1	7	25	3,688	30,953	0	3,688	26,015	1,250	Mixed-use	0	0	863	1
8.1	8	33	6,249	93,129	49,678	6,249	6,249		Mixed-use	559	895	359	1
9.1	9	7	6,010	22,963	22,359	604	0	0	Mixed-use	252	403	17	1
9.2	9	4	672	2,688	2,016	672	0	0	Mixed-use	23	39	19	2
10.1	10	20	2,500	32,826	3,915	5,239	23,672	0	Mixed-use	15	39	828	2
10.2	10	20	2,500	29,760	24,520	5,240	0	0	Mixed-use	276	442	166	2
10.3	10	20	2,500	32,826	3,915	5,239	23,672	0	Mixed-use	15	39	828	2
10.4	10	16	2,500	27,393	22,153	5,240	0	0	Mixed-use	249	399	166	2
10.5	10	15	2,700	156,591	0	10,800	15,903	4,396	Mixed-use	0	0	766	2
10.6	10	15	2,700	62,198	0	10,800	15,903	4,396	Mixed-use	0	0	766	2
11.5	11	7	2,200	135,918	11,302	2,200	0	0	Mixed-use	127	331	81	2
11.1	11	20	4,140	63,774	38,018	14,400	0	11,356	Mixed-use	428	1,113	422	2
11.2	11	15	3,748	53,899	19,872	14,400	0	4,710	Mixed-use	224	582	422	2
11.3	11	20	4,140	63,774	38,018	14,400	0	11,356	Mixed-use	428	1,113	422	2
11.4	11	15	4,140	117,673	28,143	14,400	0	11,356	Mixed-use	317	824	422	2
12.1	12	7	2,200	20,857	11,302	2,200	0	0	Mixed-use	127	331	61	2
12.2	12	8	4,462	191,014	16,395	4,462	0	0	Mixed-use	185	480	125	2
13.1	13	8	1,634	11,558	8,358	3,200	0	0	Mixed-use	94	151	89	1
13.2	13	7	6,010	22,963	22,359	604	0	0	Mixed-use	252	403	17	1
14.1	14	6	6,621	21,578	8,336	13,242	0	0	Mixed-use	94	150	370	1
15.1	15	4	552	2,208	0	552	1,656	0	Mixed-use	0	0	62	1
15.2	15	8	1,634	11,558	8,358	3,200	0	0	Mixed-use	94	151	89	1

Precinct C

Building I.D.	Block	Storeys	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/Community/ Utility GFA (m^2)	Land Use	Dwelling Units	# of Residents	# of Jobs	Phase
1.1	1	3	3,518	10,430	10,368	62	0	0	Mixed-use	24	62	2	1
2.1	2	23	4,500	38,648	30,896	0	7,752	0	Mixed-use	348	557	217	1
2.2	2	27	4,500	41,872	34,120	0	7,752	0	Mixed-use	384	615	217	1
4.1	4	3	131	392	392	0	0	0	Residential	3	8	0	1
4.2	4	3	261	783	783	0	0	0	Residential	6	16	0	1
4.3	4	6	1,634	10,496	9,550	946	0	0	Mixed-use	108	172	26	1
6.1	6	6	3,257	15,052	13,424	1,629	0	0	Mixed-use	151	242	45	1
8.1	8	4	276	1,104	828	276	0	0	Mixed-use	9	16	8	1
8.2	8	4	552	2,208	1,656	552	0	0	Mixed-use	19	32	8	1
9.1	9	1	4,609	13,827	0	0	0	13,827	Institutional	0	0	30	1
9.2	9	3	2,464	9,856	6,171	407	0	0	Mixed-use	69	118	11	1

Block and Total Densities

Precinct A

Block	Psecinct Asea Gsoss (m^2)	Block Area Net (m^2)	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/ Community GFA (m^2)	Block Coverage	Floor Space Index (FSI)	Dwelling Units	Dwelling Units per Net Hectare	# of Residents	# of Jobs	# of People and Jobs per gsoss Hectare	Phase
1		48,661	18,494	104,385	41,668	44,943	7,108	10,666	38%	2.15	469	96	797	1,741		1
2		7,741	5,597	16,667	16,605	62	0	0	72%	2.15	51	66	133	2		1
3		8,391	5,597	16,667	16,605	62	0	0	67%	1.99	51	61	133	2		1
4		9,013	2,140	3,841	3,496	345	0	0	24%	0.43	25	27	55	10		1
5		13,044	2,668	8,004	7,331	673	0	0	20%	0.61	66	50	144	19		1
6		11,661	4,800	24,102	22,485	1,617	0	0	41%	2.07	331	284	414	45		1
7		37,781	3,103	22,670	1,551	1,551	17,886	1,681	8%	0.60	17	5	45	553		1
8		18,841	11,619	48,895	43,516	4,733	180	465	62%	2.60	464	246	591	133		1
9		19,292	5,459	14,260	8,835	412	2,705	2,308	28%	0.74	0	0	162	134		1
10		37,781	13,795	46,665	37,286	2,448	6,931	0	37%	1.24	450	119	270	57		1
11		46,216	15,669	56,563	52,175	4,388	0	0	34%	1.22	603	130	533	123		1
12		8,821	2,703	7,142	865	0	6,277	0	31%	0.81	5	6	15	175		1
13		21,143	6,060	24,636	22,460	2,176	0	0	29%	1.17	239	113	399	57		1
14		15,754	4,673	13,675	6,201	1,808	3,054	2,612	30%	0.87	44	28	71	146		1
15		28,895	12,858	51,214	36,206	4,071	4,962	5,974	45%	1.77	452	157	247	377		1
Total	473,791	333,034	115,236	459,386	317,286	69,291	49,104	23,706	35%	1.38	3,267	98	4,008	3,573	160	1

Precint B

Block	Precinct Area Gross (m^2)	Block Area Net (m^2)	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/ Community GFA (m^2)	Block Coverage	FSI	Dwelling Units	Dwelling Units per Net Hectare	# of Residents	# of Jobs	# of People and Jobs per Gross Hectare	Phase
1		42,387	7,105	10,498	10,498	0	0	0	17%	0.25	73	17	200	0		1
2		20,582	9,340	33,563	32,959	604	0	0	45%	1.63	252	122	403	17		1
3		11,661	11,546	49,132	49,132	0	0	0	99%	4.21	417	358	719	0		1
4		27,781	18,328	84,582	84,131	451	0	0	66%	3.04	813	293	1,348	13		1
5		18,890	6,014	113,714	37,653	12,028	0	16,624	32%	6.02	424	224	678	416		1
6		14,975	10,953	140,979	60,951	6,257	0	17,044	73%	9.41	686	458	1,098	255		1
7		21,546	3,688	30,953	0	3,688	26,015	1,250	17%	1.44	0	0	0	863		1
8		13,608	6,249	93,129	49,678	6,249	6,249	0	46%	6.84	559	411	895	359		1
9		7,878	6,682	25,651	24,375	1,276	0	0	85%	3.26	274	348	441	36		2
10		26,473	15,400	212,917	48,630	42,558	79,150	8,792	58%	8.04	533	201	883	3,520		2
11		42,153	18,368	457,155	134,057	59,800	0	38,778	44%	10.85	1,509	358	3,924	1,770		2
12		12,298	6,662	94,198	27,697	6,662	0	0	54%	7.66	312	254	811	186		1
13		9,494	7,644	34,521	30,717	3,804	0	0	81%	3.64	346	364	553	106		1
14		8,445	6,621	21,578	8,336	13,242	0	0	78%	2.56	94	150	150	370		1
15		32,712	7,308	33,704	21,987	10,128	2,328	1,713	22%	1.03	268	82	438	313		1
16		26,946	7,027	12,730	12,730	2,452	0	0	26%	0.47	37	14	107	0		1
Total Phase 1	585,816	337,829	182,897	902,104	426,468	177,327	42,043	36,631	54%	2.67	4,281	127	7,522	4,247	201	1
Total Phase 2	585,816	337,829	148,934	1,449,001	633,529	169,198	113,741	84,201	44%	4.29	6,598	195	12,649	8,223	356	2

Precinct C

Block	Precinct Area Gross (m^2)	Block Area Net (m^2)	Floor Plate (m^2)	Total GFA (m^2)	Residential GFA (m^2)	Retail GFA (m^2)	Office GFA (m^2)	Institutional/ Community GFA (m^2)	Block Coverage	FSI	Dwelling Units	Dwelling Units per Net Hectare	# of Residents	# of Jobs	# of People and Jobs per Gross Hectare	Phase
1		27,500	13,727	32,696	10,368	62	0	22,266	50%	1.19	62	23	62	344		1
2		19,617	15,223	116,516	95,223	214	15,504	0	78%	5.94	1,129	576	1,568	110		1
3		15,640	2,910	11,640	11,640	0	0	0	19%	0.74	128	202	397	0		1
4		23,245	11,322	44,820	43,908	604	0	18	49%	1.93	406	175	664	17		1
5		6,868	6,650	12,309	0	8,605	3,703	0	97%	1.79	0	0	0	344		1
6		7,028	4,113	16,764	13,424	2,313	1,027	0	59%	2.39	151	215	242	93		1
7		3,241	2,488	4,976	0	0	2,488	0	77%	1.54	0	0	0	69		1
8		3,428	828	3,312	2,484	828	0	0	24%	0.97	28	82	48	15		1
9		8,359	7,073	23,683	6,171	407	0	13,827	85%	2.83	69	83	118	41		1
Total	258,402	114,927	64,334	266,715	183,217	13,033	22,723	36,111	56%	2.32	1,974	172	3,099	1,034	160	1

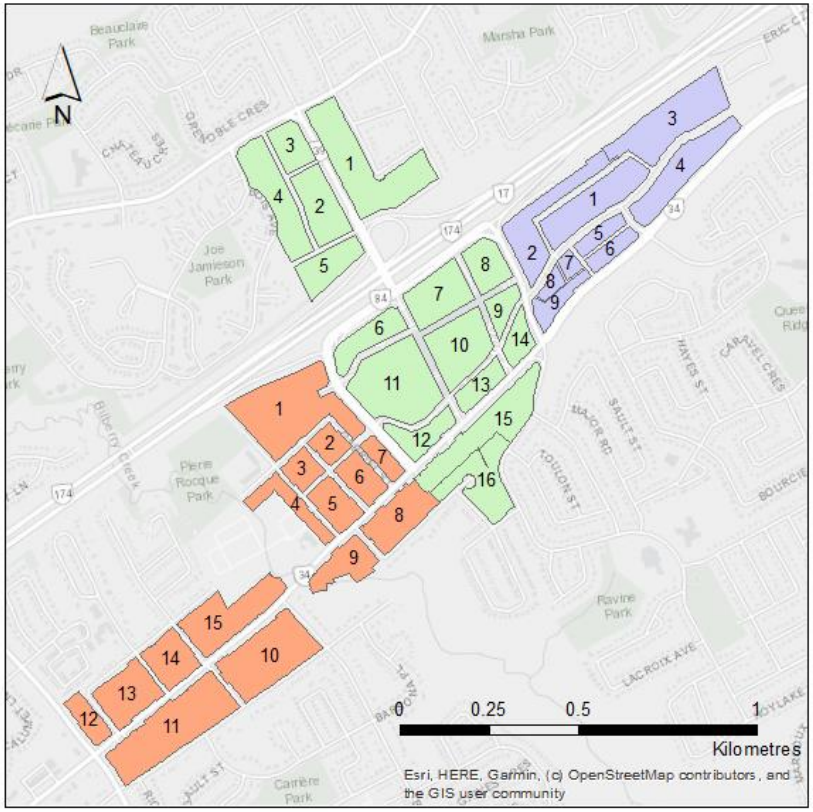
Summary Table

Table E.a – Proposed Density Compared to Existing Target.
*17 storey tower approved, not yet built

	EXISTING DESIGN AREA TOTAL	PHASE 1	PHASE 2	MINIMUM TARGET
DWELLING UNITS	1,411	9,521	11,838	11,562
NET DENSITY (DWELLING UNITS PER NET HECTARE)	18	121	151	150
NUMBER OF RESIDENTS	2,367	14,629	19,756	14,000
NUMBER OF JOBS	4,272	8,854	12,830	10,000
GROSS DENSITY (PEOPLE AND JOBS PER GROSS HECTARE)	50	178	247	120
PORTION OF LARGE-HOUSEHOLD DWELLINGS WITHIN INTENSIFICATION	N/A	13%	12%	5%
NEW AFFORDABLE HOUSING UNITS	N/A	2,212	2,212	2,085
COVERAGE OF DEVELOPABLE LAND	26%	46%	42%	40%
FLOOR SPACE INDEX (FSI)	0.53	2.07	2.77	2.00
MAXIMUM HEIGHT	17	33	33	33

Block Map

Figure E.b – Block Map used for Proposed Density Analysis.



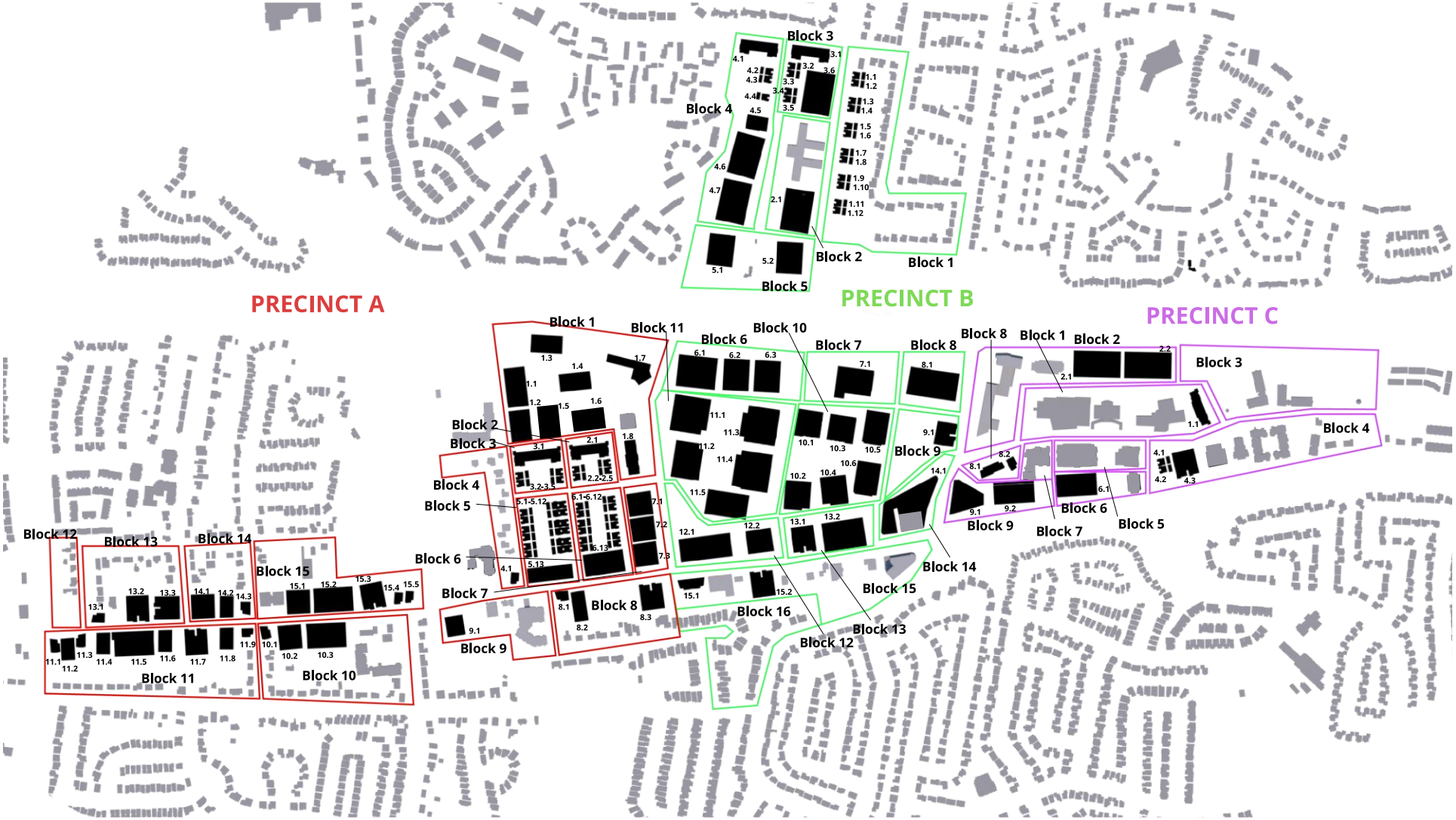


Figure E.c – Proposed Figure Ground and Build IDs

Appendix F – Design Concepts

Greenspaces

In order to address the gap between the green corridor as identified in the site analysis, the proposed development incorporates a network of new and existing green spaces, parks, and pedestrian plazas which are connected from one end of the site to the other. The new pedestrian greenspaces introduced include a system of private plazas and public parks as identified in Figure F.a below. Public spaces consist of a soccer park north of the highway to connect with the green network and residents in the north, in addition to a commemorative park space proposed to feature the Vinette Farm Silo adjacent to the Town Centre.

Figure F.a – Plan of connected green network with new park spaces for the proposed development.

Figure F.b – Orléans Town Centre Plaza looking south towards escarpment.

The new plaza proposed at the Orléans Town Centre will feature community gardens, events spaces, facilitate food trucks, and public art, in addition to providing wayfinding signage which help visitors navigate through the site.

The design promotes accessibility within urban design, creates safe places for community gatherings, and establishes a lively destination place for the neighbourhood to enjoy food, arts, and entertainment.

Community Amenities

A variety of amenity spaces are provided throughout the site to support community engagement and enrich lifestyle opportunities for residents of the surrounding neighbourhoods. In addition to the community amenities provided within podiums of the high-rise buildings, some key features and institutions are identified in Figure F.c below. These prominent facilities service the community with leisure and recreational opportunities to integrate existing community members with the new residents coming in.

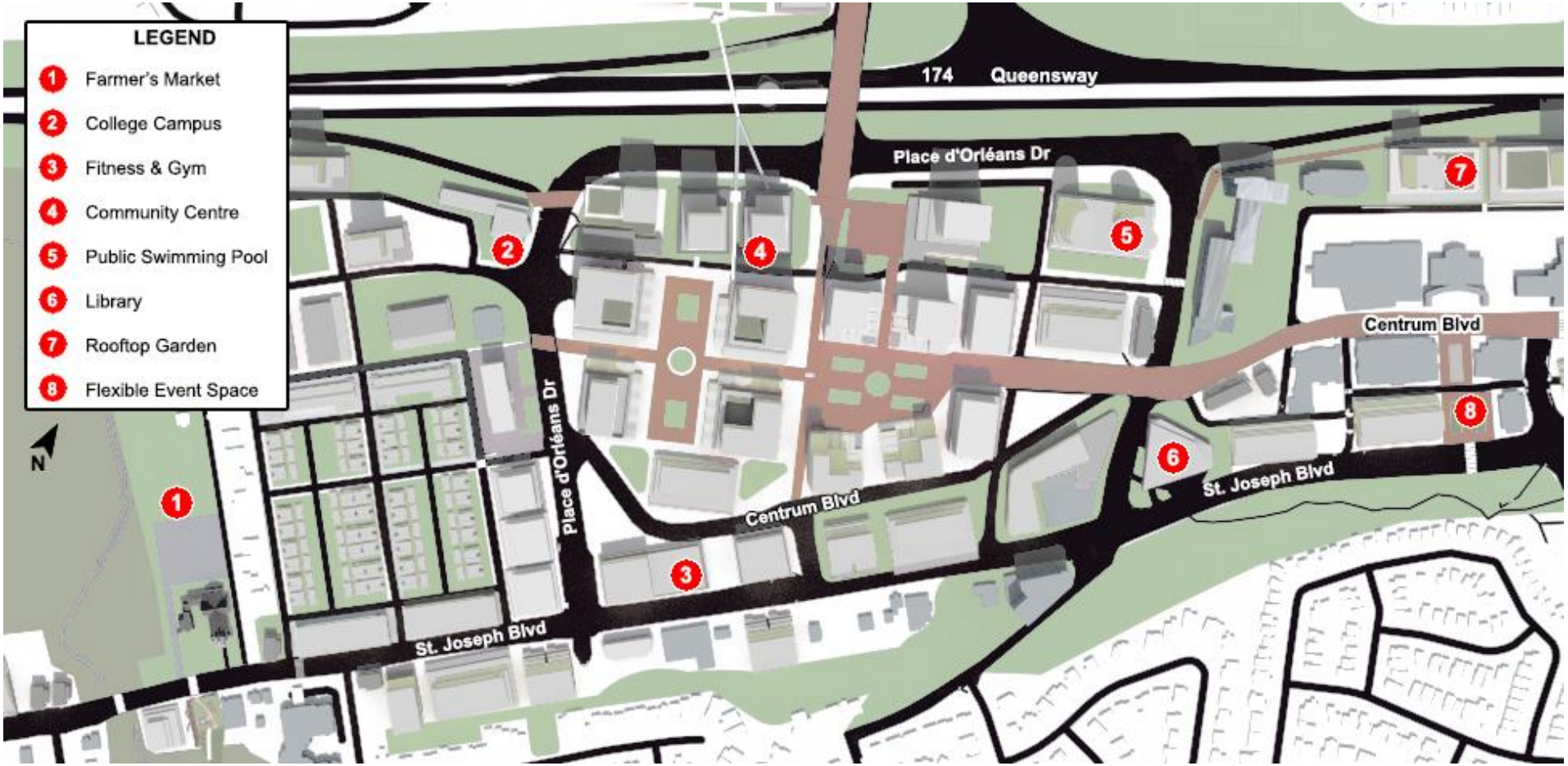
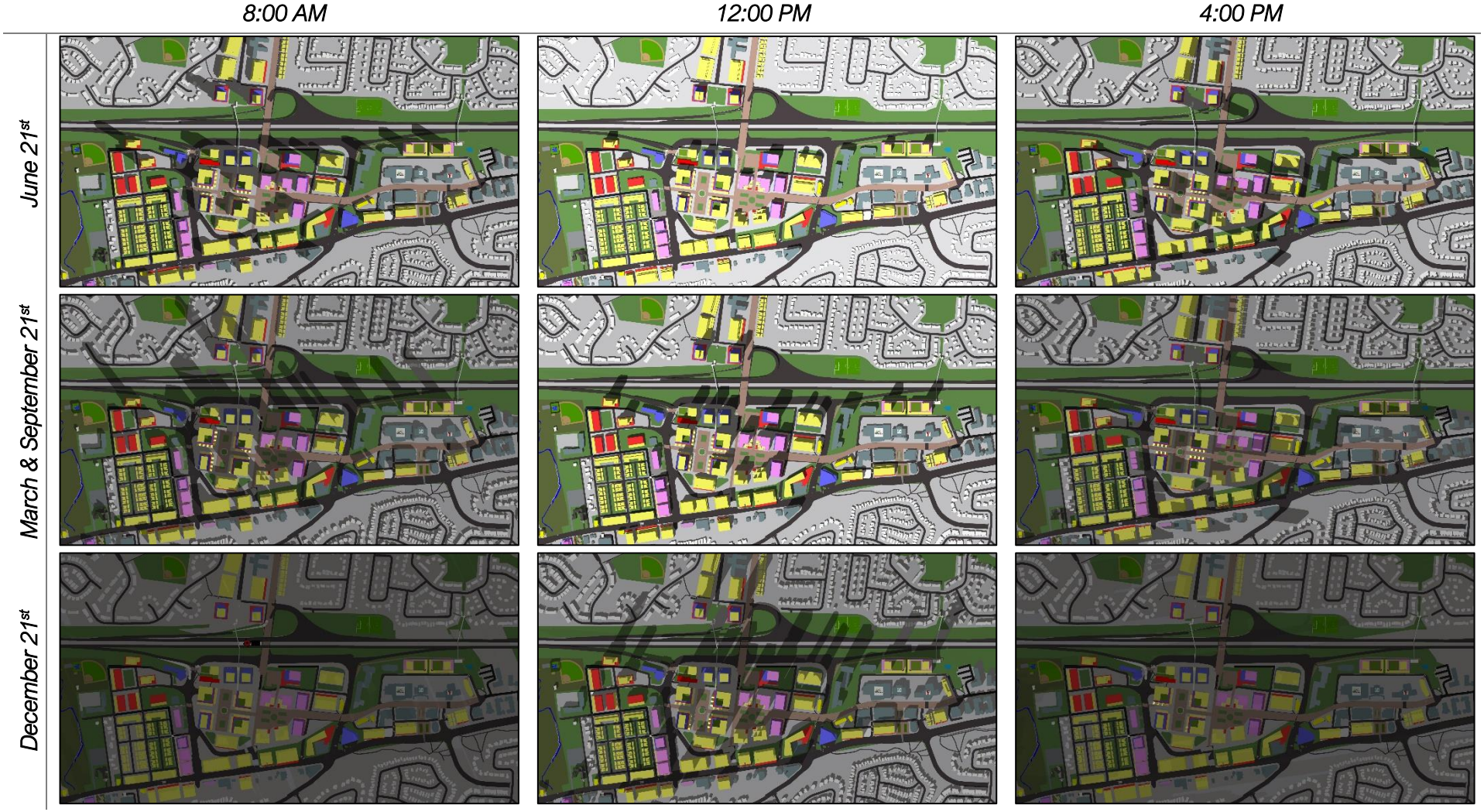


Figure F.c – Map of Key community amenities within proposed development.

Shadow Study

The project's proposal for the Orléans Town Centre includes increasing the height and massing surrounding the Place d'Orléans LRT Station, as well as along Highway 174. This area was recognized to have the most significant impact on shadows in the area due the prevalence of high-rises, therefore this area was selected to perform a shadow study. The increased massing will result in larger shadow impacts across the site. Utilizing the highway as a shadow buffer for the existing residential areas north of the highway, these increased shadow impacts are primarily cast on the highway. This shadow analysis indicates the impacts of shadows based on the proposed site design.



Appendix G – Ethics Review

General Research Ethics Board (GERB) Research Ethics Application Short Form for Course-Based Student Research

1.	**Name of Student:** SURP 824 Students (Justin Lima, Megan Smythe, Evan Saslove, Evan Saunders, Justin Klimkait, Titus Lee, Mark Fishman, Michael Donolo, Shahida Hoque) **Student Number:**
2.	**Name of Course:** SURP 824 **Professor:** Dr. David Gordon
3.	**Title of Study:** Creating a 15-Minute Neighbourhood at the OTC Purpose of Study: The purpose of the Land Use and Real Estate project course (SURP 824) is intended to give students in the course experience in preparing a plan under conditions that simulate professional practice. This year, the project focuses on creating a long-term vision of the OTC area in Ottawa, Ontario based on healthy community design, transit-oriented development, and the 15-Minute Neighbourhood concept. The project team will work towards developing a plan that contributes to success at various levels, including growth management, mobility, urban and community design, climate, energy, and public health, economic development, and gender and healthy communities.
4.	**Method of Collecting Data:** (if applicable, attach sample of questionnaire or other data collection instruments) In addition to conducting background research and analyses, and hosting a design workshop, the study will include a series of stakeholder interviews to gain further insight into how individuals from various professional and community groups use the OTC area, how they are currently and will be impacted by the area in its present and future form, respectively; and their vision for the area. It is intended for the interview questions to be open-ended, capturing themes including the importance, functionality, and user experience of the OTC area. The interviews will be conducted either via email, via Microsoft Teams, or by telephone.
5.	**How many research participants?** **Who are the research participants?** The research participants mainly consists of public officials working at different levels of government in Ottawa as well as representatives of local community groups. Approximately 12 individuals or groups will be initially contacted to determine whether they are interested in participating in the interviews.
6.	**How will you protect the participants' confidentiality or privacy?** This study will not use the names of the interviewed participants; only their professional titles will be used in the report. Responses will be kept confidential and only the project group members will have access to this information. As mentioned in the consent form, participants can withdraw at any time and ask to destroy the information. The participants are also entitled a copy of the final report.
7.	**How will you guarantee the participants' free and informed consent and ensure that the participants can stop at any time?**

	Participants can withdraw from the project at any time without any negative consequences nor effect on their involvement in future projects and events at Queen's University. Should a participant choose to withdraw from the project during or after an interview session, the participant can inform project manager, Justin Lima, justin.lima@queensu.ca (416-859-2575). Participants may also decline to answer any of the interview questions if they wish.
8.	Where will the data be collected and stored? Upon the completion of each interview, any written notes will be kept in the team members' locked offices at Queen's University. Electronic versions of interview responses will be kept under password protection on the team members' personal laptops, and any hard copies will also be kept in the locked offices. All data will be destroyed upon completion of the project.
9.	What are the risks and benefits to the participants? There is minimal risk that participants may find some of the interview questions too personal to respond to. At any point if there is a question that they do not wish to answer they are free to refrain from responding. Participants may request to be anonymized within the report and be referred to only by their professional title. There are no foreseeable physical or psychological risks to the participants. At any point during the research process participants have the right to terminate their involvement in the study.

LETTER OF INFORMATION - CREATING A 15-MINUTE NEIGHBOURHOOD AT THE ORLÉANS TOWN CENTRE SURP 824 – LAND USE AND REAL ESTATE PROJECT

This research is being conducted by a team of nine graduate students from the School of Urban and Regional Planning (SURP) in the project course SURP 824 – Land Use and Real Estate Project at Queen's University in Kingston, Ontario. The course is supervised by Dr. David Gordon (Professor of the School of Urban and Regional Planning at Queen's University).

What is this study about? Second-year graduate students complete a project course intended to give students experience in preparing a plan under conditions that stimulate professional practice. This year, the Land Use and Real Estate Project course focuses on creating a long-term vision of the Orléans Town Centre area in Ottawa, Ontario based on healthy community design, transit-oriented development, and the 15-Minute Neighbourhood concept. The study will require interviews to gather background information about the Orléans Town Centre and to receive input on what opportunities and challenges are the most relevant to this study. You will be provided with a list of interview questions that will form the jumping-off point for interviews conducted on Microsoft Teams. Alternatively, interviews can also be conducted via Zoom or by telephone. There are no known physical, psychological, economic, or social risks or direct benefits to participants associated with this study.

Is my participation voluntary? Yes, participation is voluntary. Although it be would be greatly appreciated if you would answer all questions as frankly as possible, you should not feel obliged to answer any material that you find objectionable or that makes you feel uncomfortable. You may withdraw from this study, or any aspect of the study, at any time without any negative consequences by advising the project manager. Participation needs will very through each stage of the project, which is to be completed in December 2021.

What will happen to my responses? We will keep your responses confidential, to the extent permitted by applicable laws. Only the project group members will have access to this information. The data may also be published in professional journals or presented at conferences, but any such presentations will be of general findings and will never breach individual confidentiality. Should you be interested, you are entitled to a digital or paper copy of the findings.

The Queen's General Research Ethics Board (GREB) may request access to study data to ensure that the researchers have or are meeting their ethical obligations in conducting this research. GREB is bound by confidentiality and will not disclose any personal information. The Queen's University retention policy for research records is a minimum of 5 years. Identifiable information, such as participants name, title, and contact information will be collected for the purposes of project record keeping and communication. This information will be stored/retained digitally and disposed of upon completion of the project.

Will I be compensated for my participation? You are not being compensated for your participation in this project.

Due to COVID-19 and given the nature of the online interviewing process, explicit consent is requested for the following:
I consent to audio recording:
☐ Yes
☐ No
I consent to video recording:
☐ Yes
☐ No
I consent to the use of direct quotes:
☐ Yes
☐ No

What if I have concerns? Any questions about study participation may be directed to the project manager, Justin Lima justin.lima@queensu.ca; or the project supervisor, Dr. David Gordon gordond@queensu.ca (613-533-6000 x 77063). If you have any ethics concerns please contact the General Research Ethics Board (GREB) at 1-844-535- 2988 (Toll free in North America) or email chair.GREB@queensu.ca. You have not waived any legal rights by consenting to participate in this study.

Again, thank you. Your interest in participating in this research study is greatly appreciated.

Verbal Consent Script

This research is being conducted by a team of nine graduate students from the School of Urban and Regional Planning (SURP) in the Land Use and Real Estate Project at Queen's University. There are no known physical, psychological, economic, or social risks or direct benefits for participants associated with this study. Your participation is voluntary and you may withdraw at any time without negative consequences by advising the project manager. Your legal rights are not affected by consenting to participate in this study. We will keep your responses confidential, to the extent permitted by applicable laws. Only the project group members will have access to this information. The data may be published in professional journals or presented at conferences, but any such presentations will be of general findings and will never breach individual confidentiality. Should you be interested, you are entitled to a digital or paper copy of the findings. Due to COVID-19, and given the nature of the online interviewing process, explicit consent is requested for audio recording, video recording, and/or the use of direct quotes. Any questions about study participation may be directed to the project manager, Justin Lima, or the project supervisor, Dr. David Gordon. Your interest in participating in this research study is greatly appreciated. Thank you!

I confirm the following:

☐ I have reviewed all aspects of this study to the participant as outlined above.

☐ I answered all of the participant's questions to their satisfaction and the participant had sufficient time to consider their participation in this study.

☐ The participant was informed that they may choose to stop their participation at any time for any reason without negative consequences.

☐ The participant was informed that their legal rights would not be affected by consenting to participate in this study.

☐ The participant verbally agreed to participate in this study and to follow the study procedures.

☐ The participant was provided with/offered a copy of the Letter of Information for their records.

☐ The participant consented to the use of Audio Recording

☐ The participant consented to the use of Video Recording

☐ The participant consented to the use of Use of Quotes

Appendix H – Final Presentation Q&A and Feedback

Date of Presentation: December 12th, 2021
Location: Geneva Hall, Knox Presbyterian Church, Ottawa, Ontario

1) (Public Health) How will the design deal with climate change?
   Answer: Flexible spaces, environmental resiliency as an ongoing process in the redevelopment.

2) We come across issue of how street grid is designed, connections to street systems, do you have any ideas?
   Answer: Generating ideas of creating mid-block connections, improving connections between key nodes, and expanding Centrum Boulevard to the west where the mall is located (possibility of shuttle service through main street…).

3) Recommendations for *New OP* vs old OP?
   Answer: In looking at demographic analyses for the area, changes in the density requirements for both OP's.

4) How do you go about buffering noise along Highway 174?
   Answer: Opportunity for the highway being located where it is and proposed high rise towers buffering and blocking the noise with a podium, parking, and additional distancing proposed.

5) (Phase 2) Why are plazas placed where they are?
   Answer: There are 2 distinct plazas, one is dedicated for the residential area, and one is for the proposed commercial hub (POPS).

6) Job targets for the area?
   Answer: *New OP* has minimum for 10,000 jobs/hectare.

7) Pedestrian overpass from Town Centre to Ghost Station?
   Answer: The overpass would connect residents to amenities and provide easier access and convenience to suburban neighbourhood north of the highway.

8) Looking at policies other than changing zoning, what would you address or change further?
   Answer: Parking guidelines and mall redevelopment guidelines (City of Ottawa lack in these documents).

9) How do we bring jobs to Orléans, and supporting small businesses?
   Answer: Having a college satellite campus would help growth and bring more jobs into the area potentially as well as having the infrastructure in place to attract small businesses. Bring the people and the jobs will follow.

10) Lessons from large scale mall redevelopments?
    Answer: Richmond Centre is an example of keeping existing mall and building higher densities on the periphery of the existing mall.

Additional Comments for further exploration:

1) Wonder if you explored relationships between St. Joseph Boulevard to Centrum Boulevard; how do you re-imagine this feeding off each other?
2) North and East connection in the St. Joseph Church Plaza (comment received on final rendering in Precinct A of the redevelopment)?
3) There is not a great deal of recreation and activity to draw people to public plazas (parks planning staff made comment on this).
4) What happens beyond boundary of study site? There should be a follow up of edges of the study site to ensure that streets like Champlain are still involved in the design process.

Photos of the socially distanced final presentation in Geneva Hall, near Ottawa City Hall.

Appendix I – References

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Appendix J – List of Tables and Figures