

**St. Catharines Terroir**

by

Michael Ryan Trussell

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## **AUTHOR'S DECLARATION**

I hereby declare that I am the sole author of this thesis.

This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## **ABSTRACT**

This thesis is set in St. Catharines Ontario, a mid-sized city of 132,000 people, situated in the heart of the Niagara Region. Once a thriving manufacturing centre, St. Catharines has experienced two decades of traumatic economic contraction due to the collapse of the local automotive industry. Like other cities that have experienced the loss of their predominant industry, St. Catharines is struggling not only with unemployment, economic uncertainty and environmental degradation, but also with issues concerning the city's very identity. As industrial activity played a critical role in shaping the form and character of the city, its steady disappearance has left both a functional and symbolic void in the community.

The challenges associated with deindustrialization and decentralized urbanization have had a devastating impact on St. Catharines. The city's historic core has not only lost its role as the symbolic centre of the community, unremitting suburban expansion has also led to the destruction of some of Canada's most productive agricultural terrain in the surrounding vicinity.

This thesis argues that the current economic crisis offers a unique opportunity to radically reconsider St. Catharines' urban environment. The thesis looks to the earth – the terroir – as the basis for the development of a robust vision to transform the city's underappreciated historic core into a hub for the Niagara Region's expanding wine industry. Essential to this vision is the extensive cultivation of urban vineyards and the planning of key pieces of urban armature around which future development will occur. The design aims to improve the overall quality-of-life offered in St. Catharines, and build a broader sense of community by enhancing the unique experience of the place and engaging citizens in the local wine enterprise.

## **ACKNOWLEDGEMENTS**

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*This thesis is dedicated to Bacchus, god of wine.*



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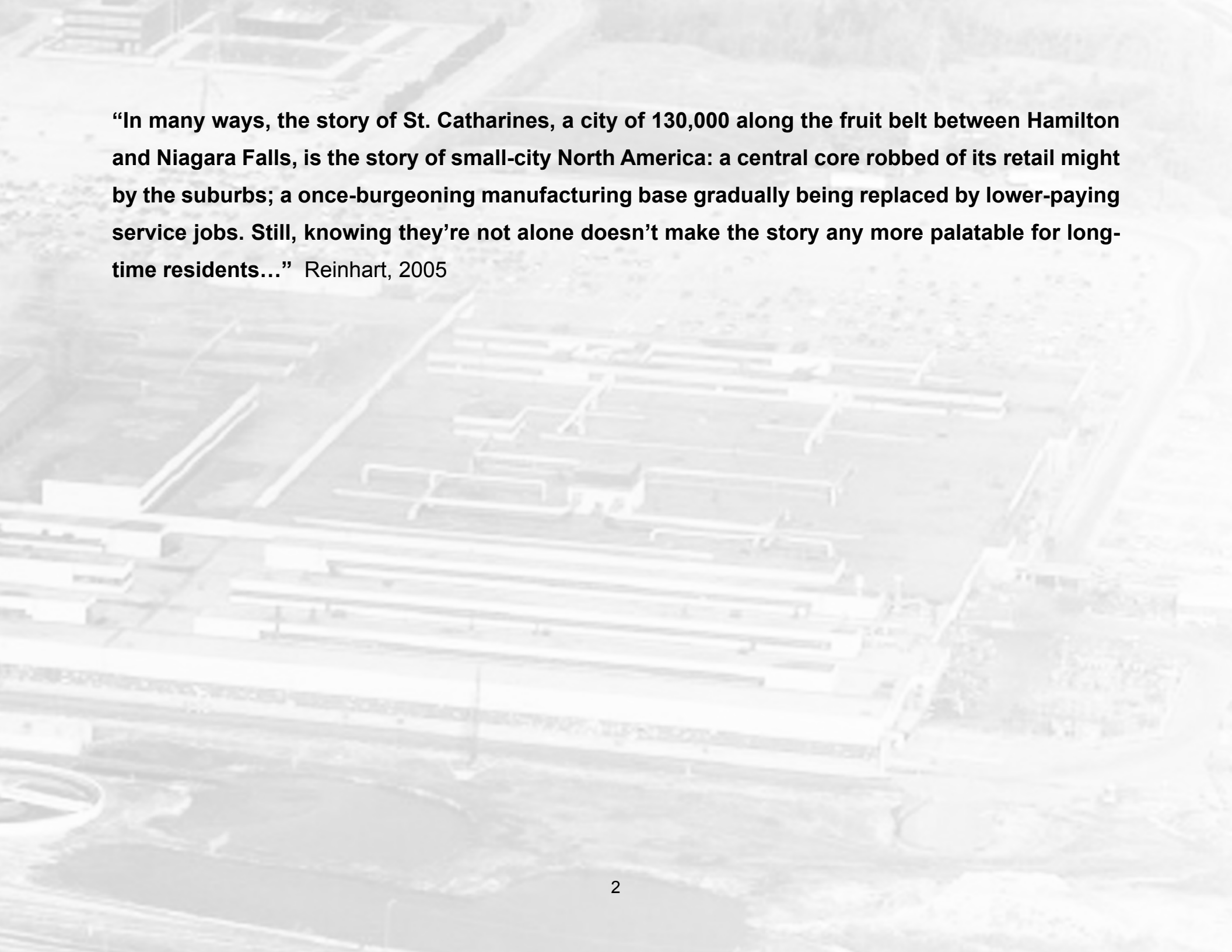
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# I N T R O D U C T I O N



An aerial photograph of a large industrial or manufacturing complex. The facility consists of several large, rectangular buildings with flat roofs, arranged in a somewhat grid-like pattern. There are numerous parking lots and roads interspersed between the buildings. The surrounding area appears to be a mix of industrial and residential land. The overall scene depicts a significant industrial presence in a suburban or semi-urban setting.

**“In many ways, the story of St. Catharines, a city of 130,000 along the fruit belt between Hamilton and Niagara Falls, is the story of small-city North America: a central core robbed of its retail might by the suburbs; a once-burgeoning manufacturing base gradually being replaced by lower-paying service jobs. Still, knowing they’re not alone doesn’t make the story any more palatable for long-time residents...”** Reinhart, 2005

# INTRODUCTION

St. Catharines Ontario, population 132,000, is situated in the heart of the Niagara Region on the southern shore of Lake Ontario. The city was once a prosperous industrial centre with a lively downtown. However, in recent years, St. Catharines has come to face a broad range of social and economic issues related to the contraction of local manufacturing interests. The challenges associated with deindustrialization, including unemployment, economic uncertainty and environmental degradation, have consequently had a devastating impact on the city's physical environment - particularly in the core area. These issues have exacerbated the decline of the city's downtown which has occurred over the past half century due to continual decentralized suburban development.

Mid-size cities, such as St. Catharines, have particularly struggled with challenges associated with post-industrialism and suburbanization. As journalist Anthony Reinhart explains in an article entitled "From Garden City to Garbage City" published in the Globe and Mail in 2005:

*"In many ways, the story of St. Catharines, a city of 130,000 along the fruit belt between Hamilton and Niagara Falls, is the story of small-city North America: a central core robbed of its retail might by the suburbs; a once-burgeoning manufacturing base gradually being replaced by lower-paying service jobs. Still, knowing they're not alone doesn't make the story any more palatable for long-time residents..." (Reinhart, 2005)*

St. Catharines is one of eighty-five mid-size cities in Canada having a population between 50,000 and 500,000. Combined, these communities represent a population of over 11.2 million; approximately 35 percent of Canada's total (Statistics Canada, 2009). Despite this significance in number, medium-sized centres have traditionally received little attention from urban

planning and architecture practitioners and scholars due to prevailing attitudes that they are of less consequence than larger communities (Bunting, et. al., 2007, pp. 27-52). Mid-sized cities are often understood as scaled-down versions of metropolitan centres whereby development is managed accordingly. Recent research reveals, however, that the mid-size city exhibits distinct qualities, including structural dynamics, policy issues, and social concerns. Therefore these cities must ultimately be considered a unique settlement typology (University of Waterloo Mid-size City Research Centre, 2007) (Bowman, 2007, p. 9).

Perhaps the most distinguishing feature of the mid-size city type is the relationship of land use and transportation (Bunting, et. al., 2007, pp. 27-52). Mid-sized cities typically exhibit a low-density profile and dispersed urban form, which are related both in cause and effect, to transportation systems that encourage private and discourage public transit. This condition is consistent in St. Catharines which has a population of 131,989 (2006) distributed over 96.1 square kilometres for a population density of only 1,373.3 people per square kilometre. By comparison, Toronto has a population of 2,503,281 (2006) distributed over a land area of 630.18 square kilometres meaning a population density of 3,972.4 people per square kilometre (Statistics Canada, 2009).

Another characteristic common to mid-sized cities concerns residents' perception. Recent research has shown that residents have generally expressed contentment with the mid-sized city as a place to live (Bunting, et. al., 2008). This response is based on the notion of safety, affordability, and quality of place, on the part of residents who typically favour suburban and rural settings over more urban environments (Bunting, et. al., 2008). This preference of suburban conditions helps to explain another consistent characteristic among the mid-sized city type - core area decline.

The vitality of core areas in cities across North America first began to be challenged around the beginning of the second half of the twentieth century. Changing political, socioeconomic, and demographic circumstances following the Second World War supported the suburbanization of residential and commercial development, the construction of mass infrastructure to accommodate private transportation, and the commission of well-intentioned but flawed urban renewal projects. The downtowns of mid-sized cities such as St. Catharines were particularly affected. Pierre Filion, Professor at the University of Waterloo School of Planning, and Gunter Gad of the University of Toronto School of Geography and Planning explain this reality in their essay, 'Urban and Suburban Downtowns: Trajectories of Growth and Decline'.

*“Over the past 50 years, the evolution of downtowns has taken different trajectories. If they have everywhere lost ground in relative terms (that is, in their proportion of metropolitan area employment, retailing, services, and cultural activities), the downtowns of large metropolitan regions have fared much better than those of medium and small urban areas. In large metros, downtowns have remained vital and still constitute the foremost concentration of activities, whereas in smaller centres they have become but a pale shadow of their former self.” (Filion & Gad, 2006, p. 171)*

The pattern of uniform, low-density decentralized residential and commercial development that has defined twentieth and early twenty-first century urbanism has had a tremendous affect on both the physical and cultural landscape of North America. Suburbanization has not only led to widespread degradation of the natural and cultivated environment, and contributed to core area decline, but has also brought about the pervasive sense, of what Edward Relph terms as “placelessness” which he defines as, “the casual eradication of distinctive places and the making of



standardized landscapes that results from an insensitivity to the significance of place.” (Relph, 1976, p. preface)

Relph suggests that placelessness is product of the general public’s common acceptance of mass values in combination with a universal overvaluation of efficiency (Seamon & Sowers, 2008) which results in an, “undermining of place for both individuals and cultures, and the casual replacement of the diverse and significant places of the world with anonymous spaces and exchangeable environments.” (Relph, 1976, p. 143)

The increasingly placeless quality of the North American landscape (particularly in small and mid-sized cities) serves as evidence that the conventional approach to urban development - which has yielded unprecedented growth in terms of residential, commercial, and industrial expansion over the course of the past half century - has at the same time proven wholly inadequate with regards to the management and preservation of authentic experience of place - which ultimately gives a city it’s individual identity.

Like most-all North American cities, St. Catharines has experienced a lost sense-of-place and weakened local identity due to the universalizing effects of suburbanization and global influence. The issue of identity is compounded due to the loss of local industry which has challenged the community’s understanding of itself. Because industrial activity helped shape the form and character of the city, its sudden obsolescence has left a very real symbolic void in the community.

An insistence on the relevance of local identity and the search for its sources help inform and guide the investigation and proposal in this thesis.

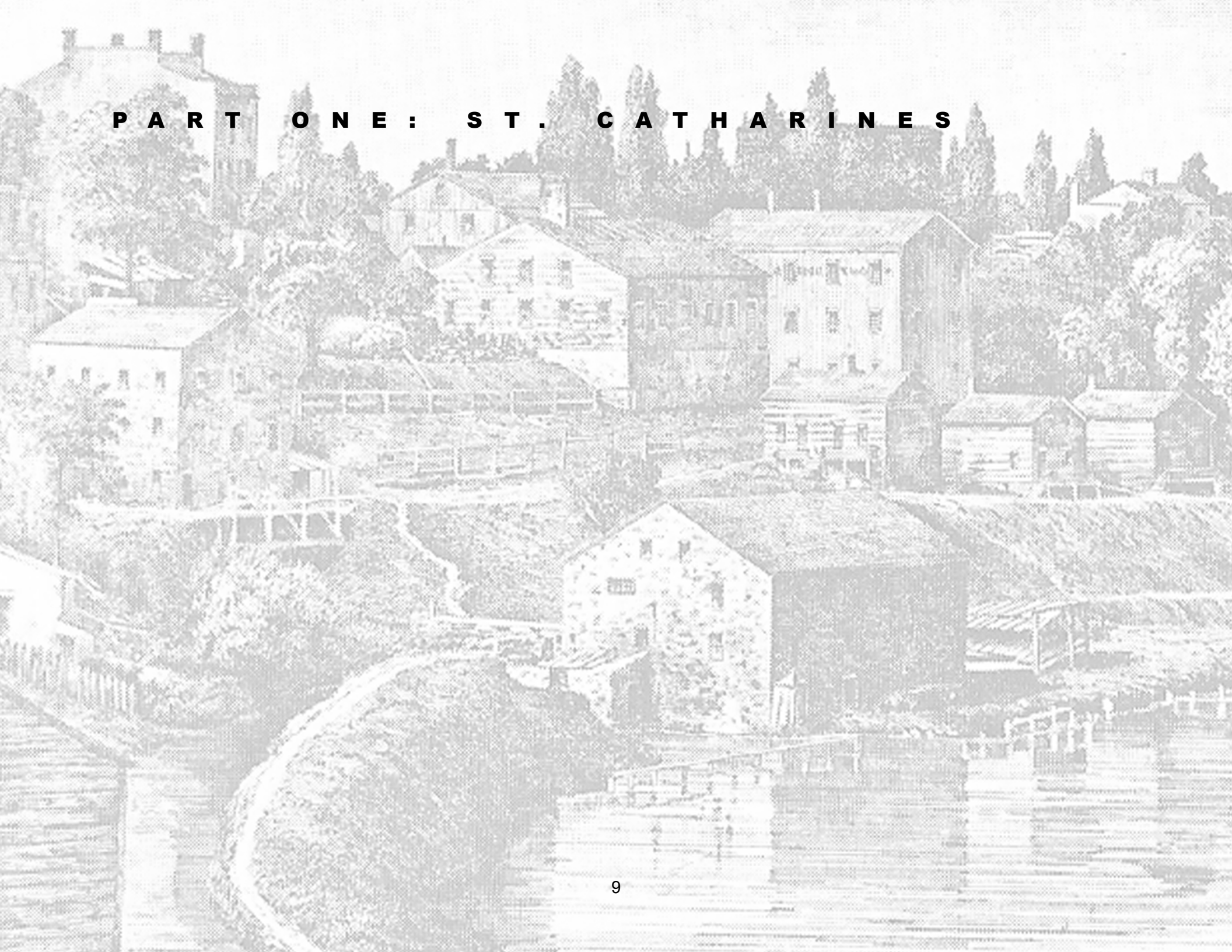
This thesis document is organized into three parts.

Part One presents a case study of the city of St. Catharines, that examines the main issues which have lead to the present circumstance. This part is separated into the following four sections: 1.1 Surveying the Landscape, 1.2 Surveying the Past, 1.3 Surveying the Present, and 1.4 Looking to the Future. The first section situates the city within the landscape of the Niagara Peninsula – discussing how geographic features influenced urban growth. It also emphasizes St. Catharines place within the Niagara Region’s wine country. The second section presents an in-depth exploration of the city’s historical development from the first permanent settlement in the late eighteenth century to the present-day. Particular attention is given to events which have significantly influenced the form of the city and character of the community. The third section describes St. Catharines contemporary circumstances, focusing primarily on the downtown. Finally, in the fourth section, questions are raised regarding how the city may plan for future urban and economic development in conjunction with provincial mandates.

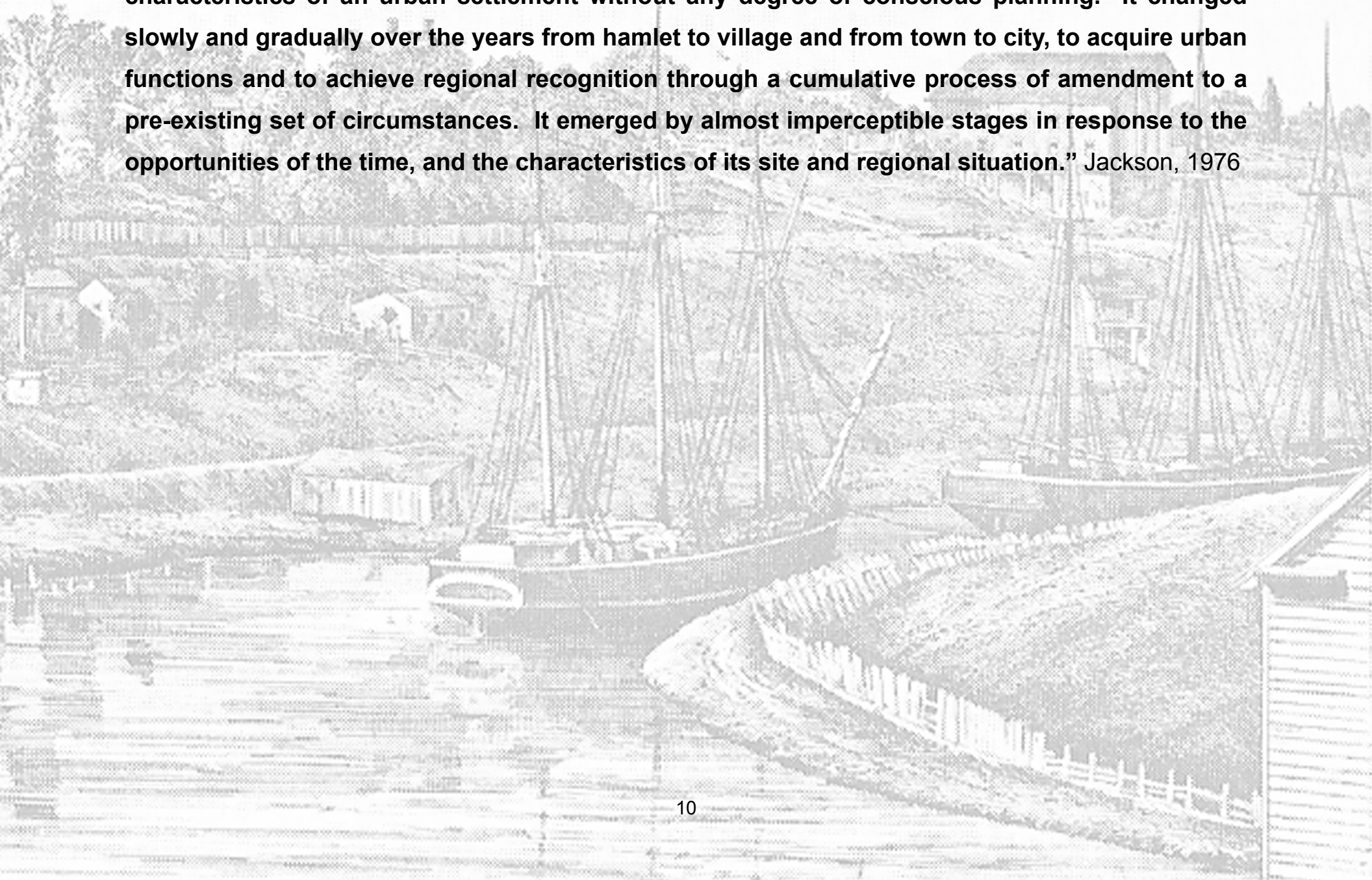
Part Two consists of two sections: 2.1 Terroir as a Lens and 2.2 Landscape as a Medium. The first section presents an alternative understanding of place through the metaphorical lens of ‘terroir’, a concept in winemaking derived from time-honoured agricultural traditions. The unique awareness for the significance of place presented in terroir serves to initiate a discourse regarding the consequence of local character in our contemporary culture. The second section explores an emerging theory of urban development referred to as landscape urbanism. This theory proposes landscape as a medium for both representing and constructing the post-industrial city. Moreover, it suggests it’s potential as a redevelopment strategy that can simultaneously encourage urban renewal and enhance local character.

Part Three is separated into two sections: 3.1 Urban Strategy and 3.2 Urban Proposal. The first section outlines a robust vision for the transformation of St. Catharines' urban environment, that emerges out of the persistent qualities in land and place. The scheme aspires to encourage urban renewal, support economic development and enhance the local sense-of-place. The second section presents the urban design proposal which asserts St. Catharines historic core as a new hub for the Niagara Region's expanding wine industry. Essential to the design is the extensive cultivation of urban vineyards throughout the city and the planning of key pieces of urban armature around which future development will occur. The design aims to improve the overall quality-of-life offered in St. Catharines, and build a broader sense of community by enhancing the unique experience of the place and engaging citizens in the local winemaking enterprise.

**PART ONE: ST. CATHARINES**



**“...St. Catharines is neither a predetermined nor a planned town. It evolved to attain the characteristics of an urban settlement without any degree of conscious planning. It changed slowly and gradually over the years from hamlet to village and from town to city, to acquire urban functions and to achieve regional recognition through a cumulative process of amendment to a pre-existing set of circumstances. It emerged by almost imperceptible stages in response to the opportunities of the time, and the characteristics of its site and regional situation.” Jackson, 1976**



# 1.1 SURVEYING THE LANDSCAPE

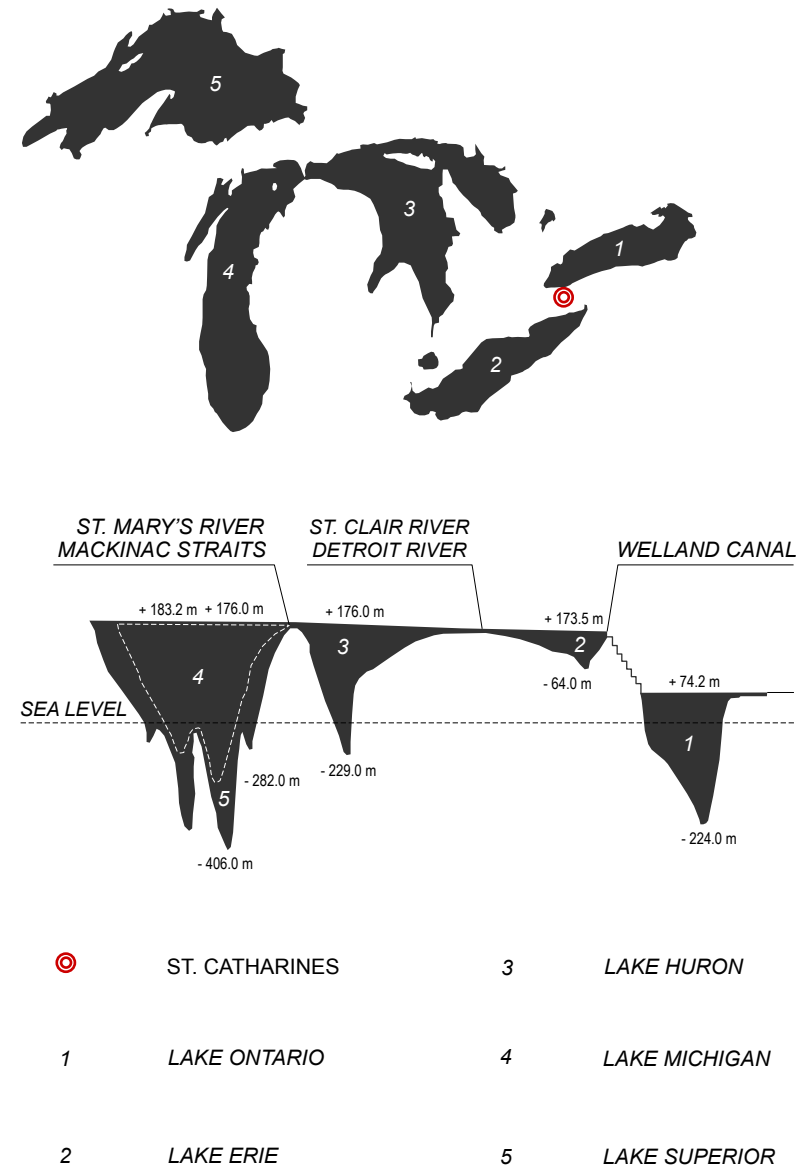
**St. Catharines** is centrally situated on the narrow 1,900 square kilometre promontory of the **Niagara Peninsula**, an appendage of the larger land unit of Southern Ontario that separates Lake Erie and Lake Ontario. The evolution of St. Catharines from a small settlement in the late eighteenth century to a regionally significant contemporary city is fundamentally related with its geographic location on the peninsula and its proximity to these two Great Lakes. The lakes are separated by approximately 100 vertical metres and are linked by the Niagara River and its tributary rivers and creeks which flow north across the peninsula. The Niagara River - which constitutes the international border between Canada and the United States - includes in its course the famous Niagara Falls which prevent it from acting as a means of marine transportation between the lakes.

The possibility of creating a navigable connection between Lake Erie and Lake Ontario was first raised in the early nineteenth century. The Niagara Peninsula was a favoured site because it afforded the most direct means of communication between the lakes and in 1824 construction commenced on a system of locks and channels linking the Welland River to Twelve Mile Creek. The completion of this system, known as **Welland Canal**, positioned the then small village of St. Catharines at the junction of interregional land and marine based transportation routes and provided a source of hydraulic power, which ultimately led to the city's urban industrial development.

**John N. Jackson**, a Professor of Applied Geography at Brock University who has written extensively on the historical development of St. Catharines and Niagara, explains:

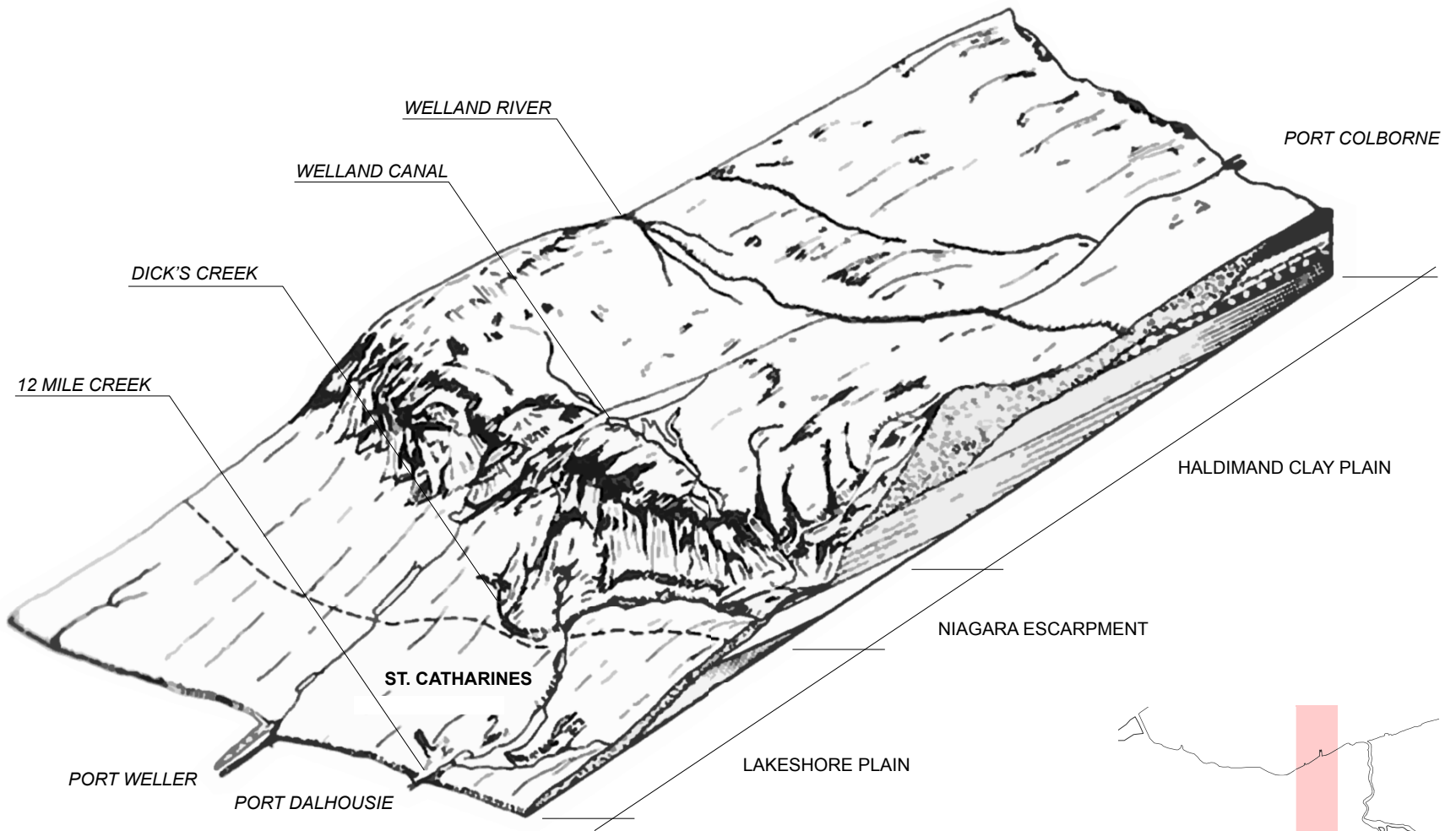
*"...The term 'peninsula' connotes two important yet contrasting locational roles; it exists both as a 'land-bridge' between Canada and the United States, and as a 'water crossing point' in terms*

1.01 GREAT LAKES PLAN AND ELEVATION DIAGRAM



1.02 NIAGARA PENINSULA PHYSIOGRAPHIC SECTION

L A K E E R I E

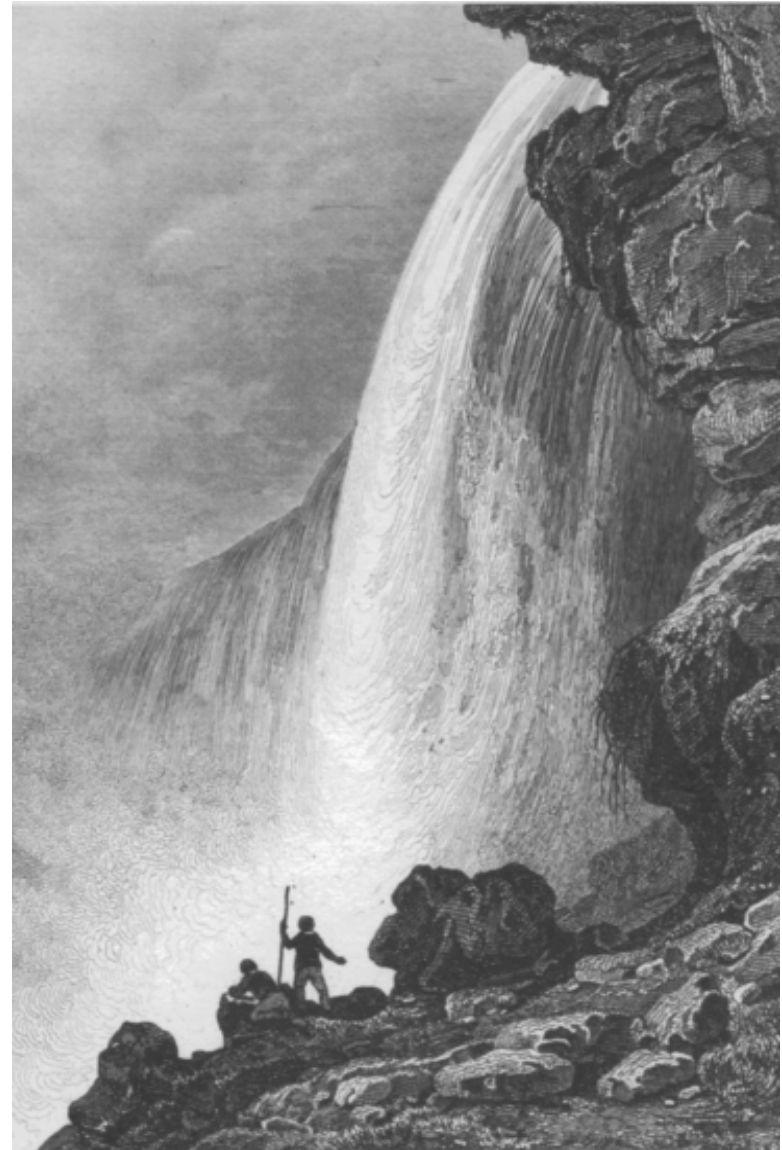


⊙ L A K E O N T A R I O

*of navigation from Lake Erie to Lake Ontario. Its credentials might well be described as 'where land and water routes meet,' a physical location which presents real possibilities for urban destiny and which is of changing importance through time as the modes and means of transportation evolve... The endowment and growth of St. Catharines cannot be separated from its critical position astride interregional water and land routes of passage, and its particular setting at a significant locale where land and water routes crossed one another." (Jackson, 1976, p. 24-26)*

The landscape of the Niagara Peninsula is physically defined by three distinct physiographic units; the Lakeshore Plain which extends along the southern shore of Lake Ontario; the Haldimand Clay Plain which extends along northern shore of Lake Erie; and the Niagara Escarpment, a limestone ridge which runs east-west across the peninsula, separating the afore mentioned plains. The city of St. Catharines rests almost entirely in the Lakeshore Plain. The soil composition of the plain is rich and fertile, ranging from silty clay to sandy loam, developed through a complex glacial history (Shaw, 2009). As a result of the moderating effects of Lake Ontario and due to shelter provided by the Escarpment, the Lakeshore Plain experiences climatic conditions unique in Southern Ontario and Western New York (Jackson, 1976, p. 28). The environment consequently presents opportune conditions for a variety of agriculture, particularly tender fruit cultivation including cherries, peaches, pears, plums, and grapes; earning the region the title as Canada's '**Fruit Belt**'.

The cultivation of vines and the creation of wine has been an important feature of Niagara's cultural heritage since the regions earliest settlement. According to **Simon J, Haynes**, Professor of Earth Science at Brock University;



1.03 Woodcut from *Etats Unis d'Amerique* by Roux de Rochelle: c. 1837





1.04 Vineyards with Lake Ontario in the distance: c. 2009



1.05 Vineyards below the Niagara Escarpment: c. 2009

*“Historically, the first Niagaran wines are believed to have been offerings of fermented wild grape juice by aboriginal tribes to the gods, who lived at the foot of Niagara Falls, in a ceremony known as the ‘Wischgimi’. (Haynes, 1999, p. 67)”*

There is also evidence to suggest that the first permanent settlers of Niagara began cultivation of the wild local grape vines for the purpose of winemaking almost immediately after their arrival in the area (Jackson, 1976, p. 97). As such, one can imagine that in the early nineteenth century guests at the inn and tavern owned by Paul Shipmann (the individual for whom Downtown St. Catharines main street ‘St. Paul Street’ is named) swilled locally crafted wines originating from grapes grown on the terrain of what is now Downtown St. Catharines. For more than two centuries winemaking in Niagara was based upon the fruit of the hardy native species of vine. Beginning in the 1970’s viticulturalists in Niagara first began experimenting with vines of European origins and hybrids resulting in more complex and higher quality wine (Hope-Ross, 2009). The wine industry in Niagara has grown significantly over the past two decades, as the region now produces a product of increasing recognition both domestically and around the world (Hope-Ross, 2009).

Niagara now represents Canada’s primary producer of both *Vitis vinifera* (wine grapes of European derivation) and hybridizations of *Vitis vinifera* with *Vitis labrusca* (North American wine grapes) with over 13,600 acres of vineyard planted in the region as of 2009 (VQA Ontario, 2009).

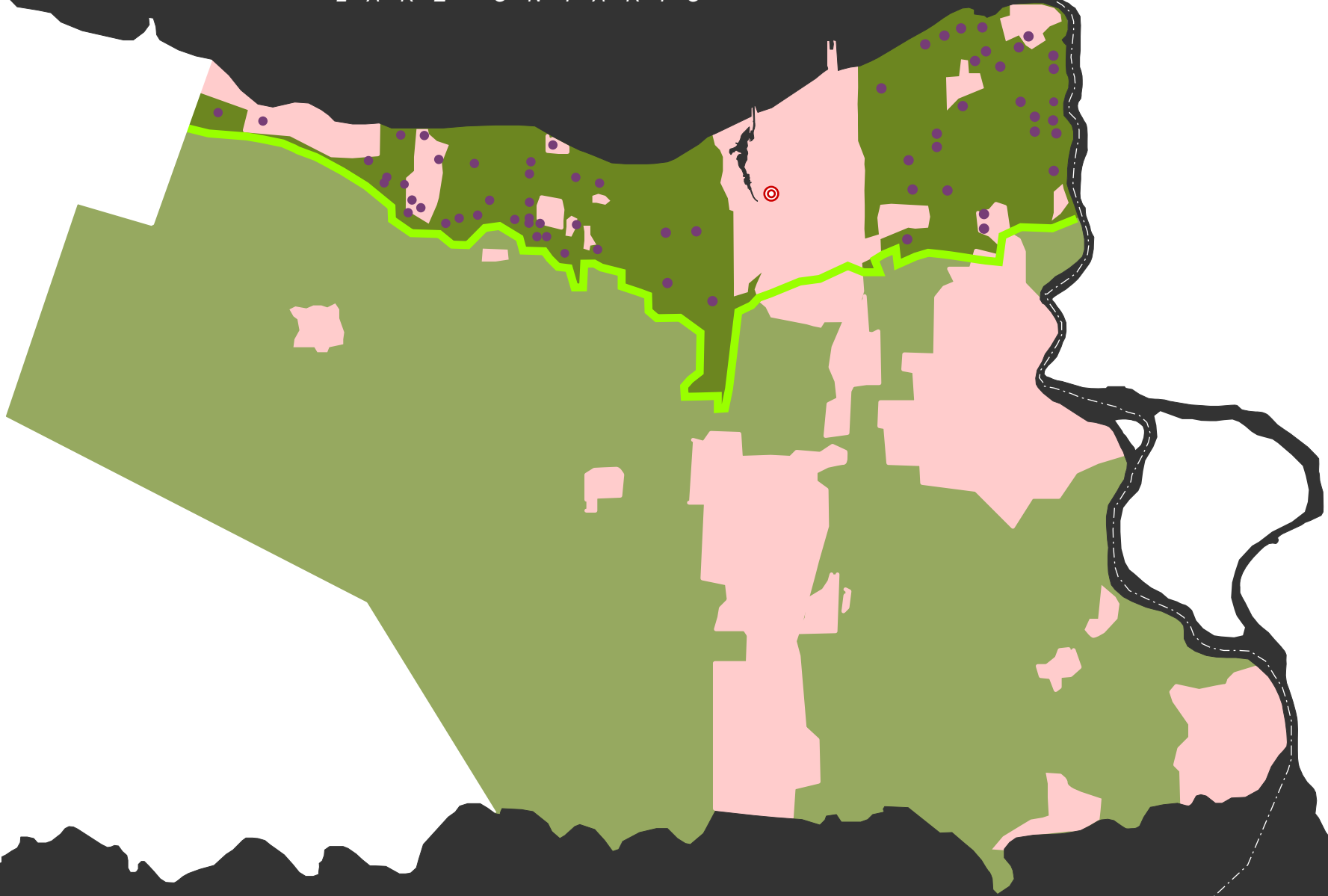
Although St. Catharines is geographically situated in the heart of Niagara's wine country and has long been regarded as the local wine industry's symbolic centre, the city is home to only 3 of the regions 70 estate wineries, as urban expansion has come at the cost of some of the most suitable terrain for wine grape cultivation in Canada.

1.06 NIAGARA PHYSIOGRAPHIC MAP [1:300,000]

-  DOWNTOWN
-  EXISTING WINERY
-  WATER BODY
-  URBAN AREA
-  LAKESHORE PLAIN
-  HALDIMAND CLAY PLAIN
-  NIAGARA ESCARPMENT
-  INTERNATIONAL BORDER

*Note the separation of agricultural areas from urban areas in correspondence with conventional land use planning. As such St. Catharines downtown lies outside of existing appellation regions as designated by the Vintner's Quality Assurance (V.Q.A.) despite offering growing conditions which are comparable to those found elsewhere in the Niagara Region north of the Niagara Escarpment.*

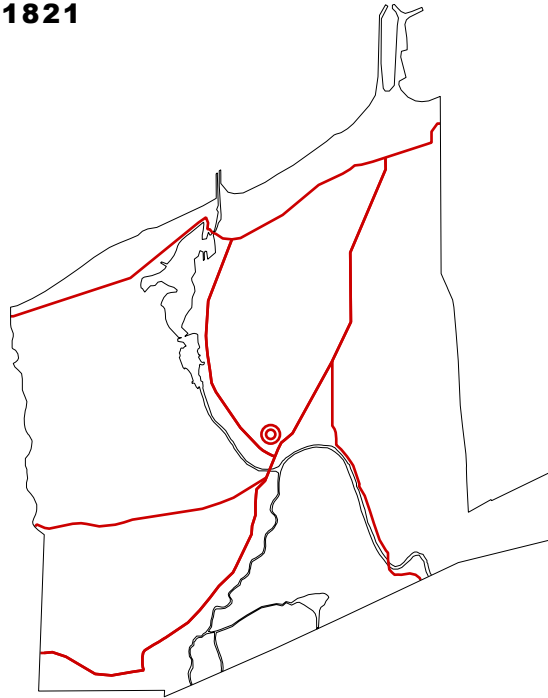
L A K E O N T A R I O



L A K E E R I E

## 1.2 SURVEYING THE PAST

1780 - 1821



1.07 *FORM OF FIRST PERMANENT SETTLEMENT*

⊙ DOWNTOWN

— CONTEMPORARY COMMUNITY BORDER

— PRIMARY REGIONAL / LOCAL ROAD ROUTE

It is the quality of the natural terrain that encouraged the first permanent settlement in the environs of what is now St. Catharines, by a few hundred United Empire Loyalists who emigrated from the United States in the late eighteenth century following American Independence. As agriculturalists early settlers found the locale, then known as **'The Twelve'** (due to the proximity to Twelve Mile Creek), ideal due to the availability of productive land and accessibility of fresh water (City of St. Catharines, 2004). According to Jackson;

*“Considerable hardships and the American War of Independence caused the movement into Upper Canada of agricultural colonists, merchants, officers and disbanded soldiers. With government support and encouragement, the terrain was settled rapidly and soon converted from forest clearings into agricultural land of considerable promise. It was a pioneer pattern of agricultural settlement taking advantage of fertile land, promoted for reasons of military defence, and encouraged by the limited expansion of the rudimentary road network.” (Jackson, 1976, p. 101)*

The arrangement of the first permanent settlement of 'The Twelve' followed precedents set by aboriginal society and corresponded with the natural topography. Jackson claims;

*“Given the long standing appreciation and use of the natural environment by Indian groups, it is important to stress that the British colonial settlements of the late eighteenth century were not wholly in the wilderness... Tribal activities had left their mark on the natural landscape, and the new settlers surely took advantage of the convenience offered by former trails and forest clearings.” (Jackson, 1976, p. 48)*

The first businesses in the settlement, a storehouse and mill founded by prominent businessman Robert Hamilton in 1783 and 1786 respectively, were constructed adjacent to the site of an existing native-built bridge over Twelve Mile Creek on the Iroquois Trail – an aboriginal path which constituted the main east-west road across the peninsula for early settlers. The community's first church constructed in 1796 was also located along this route.

*“Although no definitive answer is possible, the question ‘why this particular site at St. Catharines?’ may be posed. Technically a village site could have emerged in any part of Grantham Township... The emphasis was on ‘natural causes’, with a church, tavern, mills and stores providing the focus around which the community would develop.*

*The location of the emergent village centre illustrates the classic principle of nodality. In other words, the site was ‘selected’ because of its position vis-a-vis the travelled routes of communication across the township. It was at the junction of the major east-west road with lesser north-south connections, where this main road crossed Twelve Mile Creek at its narrowest and most fordable point, and at the confluence point of two streams. St. Catharines was thus to take its roots at the nexus of the main land routes across the peninsula, which, at the same time, formed the principal internal means of communication within Grantham Township...”*  
*(Jackson, 1976, p. 131)*

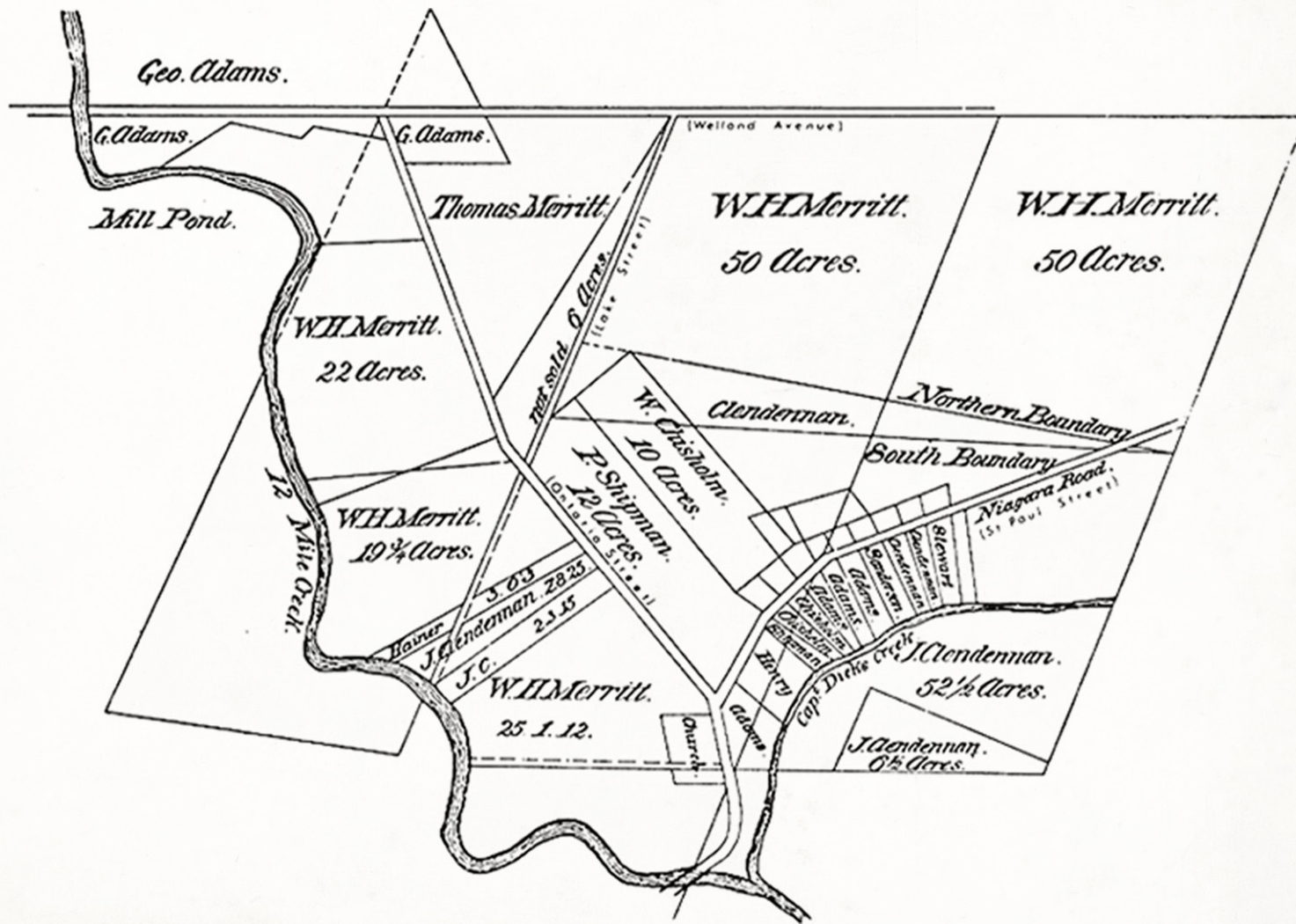
In 1798 the settlement would officially become designated as **‘Shipman’s Corners’** in recognition of Paul Shipman, proprietor of the first inn and tavern in the community. Shipman’s estate was located at the Y-shaped juncture of settlement’s two main roads, which would later become known as Ontario Street and St. Paul Street (named in Shipman’s honour). Through the late eighteenth and early nineteenth century Shipman’s Corners held two main

roles; as a distribution hub where agriculturalists purchased supplies, and as an important stopping point for travelers crossing the Niagara Peninsula via the Iroquois Trail.

During the period of early settlement, irregularly shaped properties corresponding to pre-existing societal and environmental influences contributed to the development of a basic network of streets - independent of the surveyed grid of the township. Beginning in the 1820's, the first conscious attempts were made to adhere to a formalized structure, as a grid was overlaid on the existing organization. New streets were constructed to provide access from the town to the valley of Twelve Mile Creek and to accommodate growing residential needs.

In the early part of the nineteenth century a number of grist and saw mills, as well as a wharf, were constructed beside Twelve Mile Creek in response to increasing grain and lumber production in the surrounding vicinity (City of St. Catharines, 2004). The growth of commercial enterprises and the establishment of religious and cultural institutions in Shipman's Corners elevated the significance of the settlement within its regional context (Jackson, 1976, p. 139).

By 1821 the growing community reached the status of village, and officially became known as **St. Catharines**, likely in recognition of Robert Hamilton's wife Catherine. (Jackson, 1976, p. 134). Decisions made around this time by bureaucrats and businessmen from across Upper and Lower Canada would ultimately determine the **urban destiny** of the then small village.



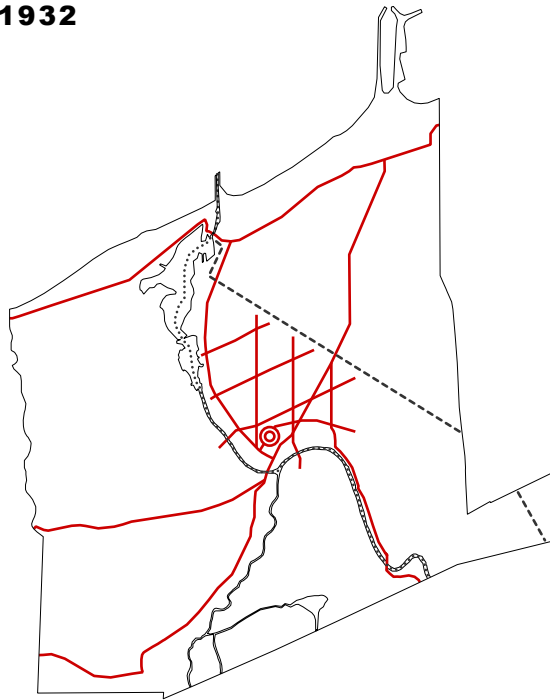
1.08 A legal reconstruction of the village of St. Catharines: c. 1823





1.09 A depiction of the 'The Twelve' from aside Twelve Mile Creek

**1821 - 1932**



1.10 FORM OF EARLY CITY

⊙ DOWNTOWN

— CONTEMPORARY COMMUNITY BORDER

— PRIMARY REGIONAL / LOCAL ROAD ROUTE

..... FIRST / SECOND WELLAND CANAL ROUTE

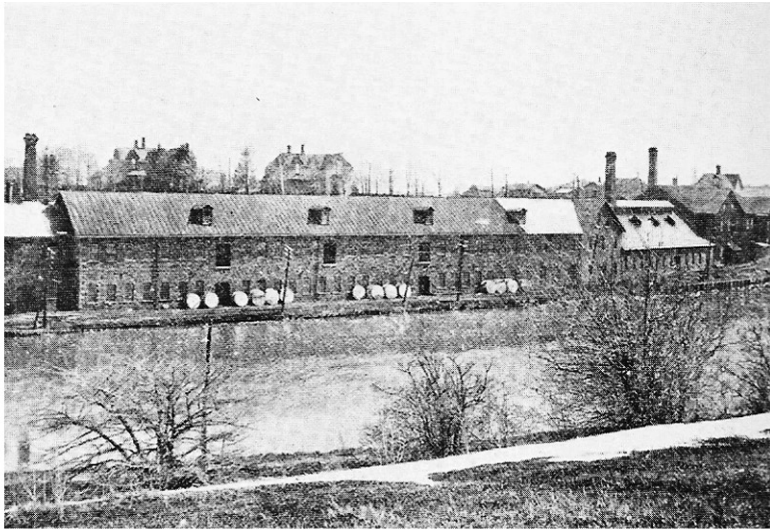
----- THIRD WELLAND CANAL ROUTE



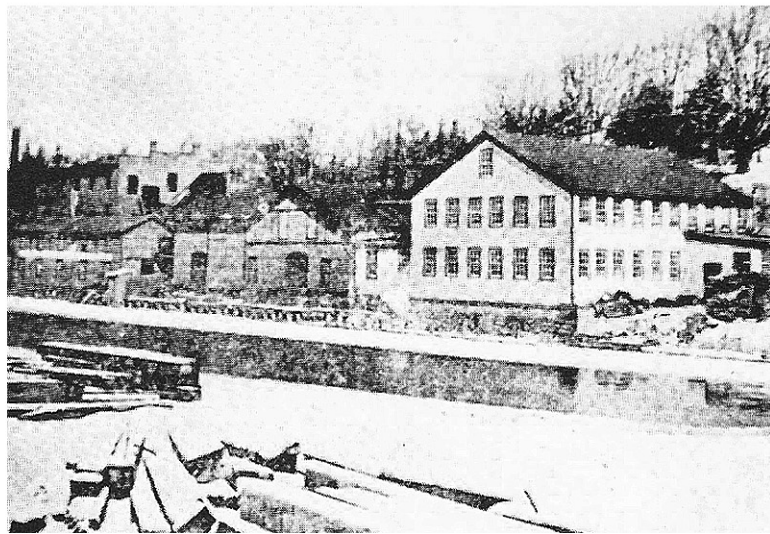
1.11 Illustration of Merritt with his brothers at First Canal



1.12 Second / Third Canal entrance at Port Dalhousie: c. 1908



1.13 Brewery below Yates Street: c. 1900



1.14 Whitman & Barnes on Second Canal: c. 1904

In the early nineteenth century there developed the desire on the part of the Upper and Lower Canada assemblies to establish an entirely Canadian means of transportation from the St. Lawrence River and Lake Ontario to the interior Great Lakes. This aspiration was based on “*purposes of prestige, economic vitality and military necessity.*” (Jackson, 1976, p. 174) Due in large part to endorsement from St. Catharines entrepreneur Captain William Hamilton Merritt, in 1824 the Niagara Peninsula became the chosen site for an inland canal system (Jackson, 1976, p. 179). In addition to linking the lakes to facilitate commercial trade interests, the canal also served to provide a consistent water source to power mills that Merritt operated along Twelve Mile Creek.

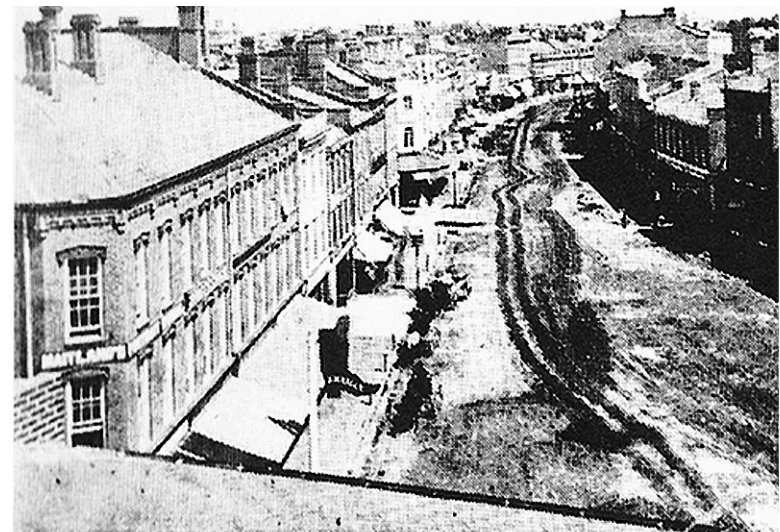
The **First Welland Canal** consisting of 40 wooden locks was constructed between 1824 and 1829, following the natural course of the Welland River north from Lake Erie to Dick’s Creek and on to Twelve Mile Creek, eventually emptying into Lake Ontario at Port Dalhousie. The canal embraced the village of St. Catharines and encouraged its continued development. The presence of the canal led to the expansion of industry including milling and shipbuilding, which brought vitality and prosperity. Depictions of the downtown from this time show tall ships docked before a backdrop of mills, shops, and businesses aligned along the banks of the canal in the valley below St. Paul Street. The identity of the village was wholly based on its relationship with the canal.

The original wooden canal locks rapidly deteriorated and were gradually replaced with stone. The completion of the new canal infrastructure, known as the **Second Welland Canal**, corresponded with St. Catharines incorporation as a town in 1845. In the under 20 years between the completion of the first and second canal, St. Catharines population had increased by nearly ten times; from 384 in 1827 to 3500 in 1845 at the time of incorporation (City of St. Catharines, 2004).

By the middle of the nineteenth century industrial activities in St. Catharines included mills, foundries, machine shops, salt works, a textile factory, tannery, brewery, distillery and other manufacturing enterprises, all of which were located along the Welland Canal at the base of St. Paul Street (Jackson, 1976, p. 255).

Due to various endogenous and exogenous factors grain would eventually decline as the predominant local commodity, and as a result many agriculturalists converted their land to fruit farms; capitalizing on the unique conditions of the region (City of St. Catharines, 2004). With both agricultural and industrial development spurred on by canal and railway infrastructure, St. Catharines rapidly became the dominant community in the Niagara Peninsula, and was subsequently named the administrative centre of Lincoln County in 1862. By 1876 St. Catharines population had grown to 12,870, and was officially incorporated as a city (City of St. Catharines, 2004).

New industries including “electrical, automobile, and automobile parts” manufacturing developed in the later part of the nineteenth century with the establishment of companies like Packard Electric, Whitman and Barnes Manufacturing Company, and Mackinnon Industries (Jackson, 1997, p. 256). The textile industry also became increasingly vital to St. Catharines local economy, with creation of Warren Knitwear on St. Paul Street in 1877 and the Canada Hair Cloth Company situated on the canal raceway in 1884. During this time of rapid urban industrial growth a number of significant building endeavours were initiated in the downtown. The realization of beautification projects including; the construction of St. Thomas Anglican Church at the T-intersection of Church Street and Ontario Street in 1877; and the creation of the city’s first public park, ‘Montebello Park,’ designed by Fredrick Law Olmstead in 1887; indicate the prosperity of the developing city during this era.



1.15 St. Paul Street: c. 1870;  
<http://www.nflibrary.ca/nfplindex/>



1.16 Old Lincoln County Courthouse: c. 1890;  
<http://www.nflibrary.ca/nfplindex/>

*Birds eye view Welland Canal, Humberstone in distance,  
Port Colborne, Ont.*



1.17 Third Canal at Port Colborne: c. 1903



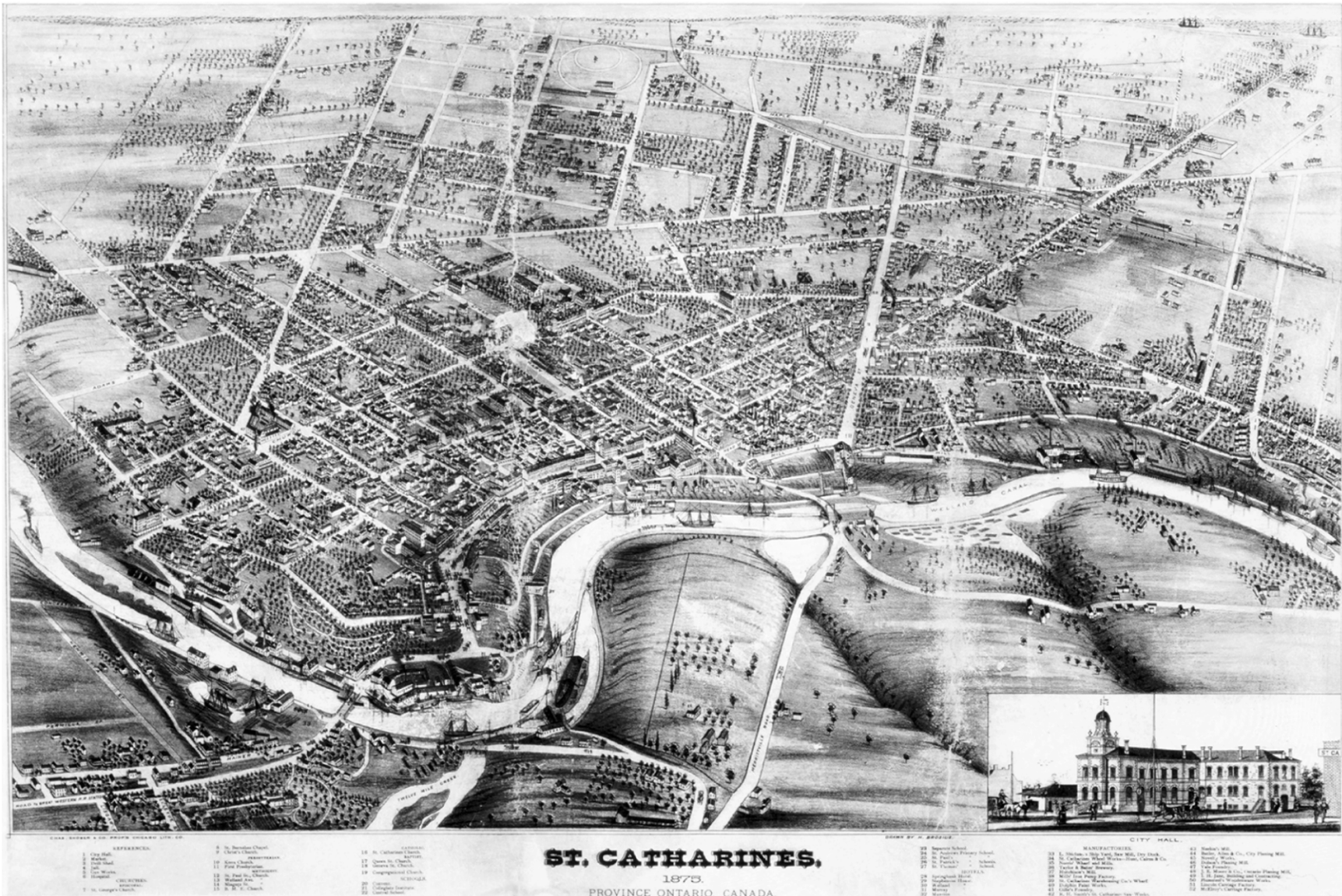
1.18 Fourth Canal construction crew: c. 1920

In time there developed the demand for yet another revision to the canal system as a result of increased marine traffic and due to continual concerns for dependable water supply. By 1887 construction was completed on the **Third Welland Canal**; a channel which differed from its predecessors in that it was entirely man-made and assumed a configuration that circumvented Downtown St. Catharines (Jackson, 1997, p. 270). The realization of the Third Canal effectively changed the character of St. Catharines forever. No longer would tall ships dock in the valley adjacent to the downtown. Jackson explains;

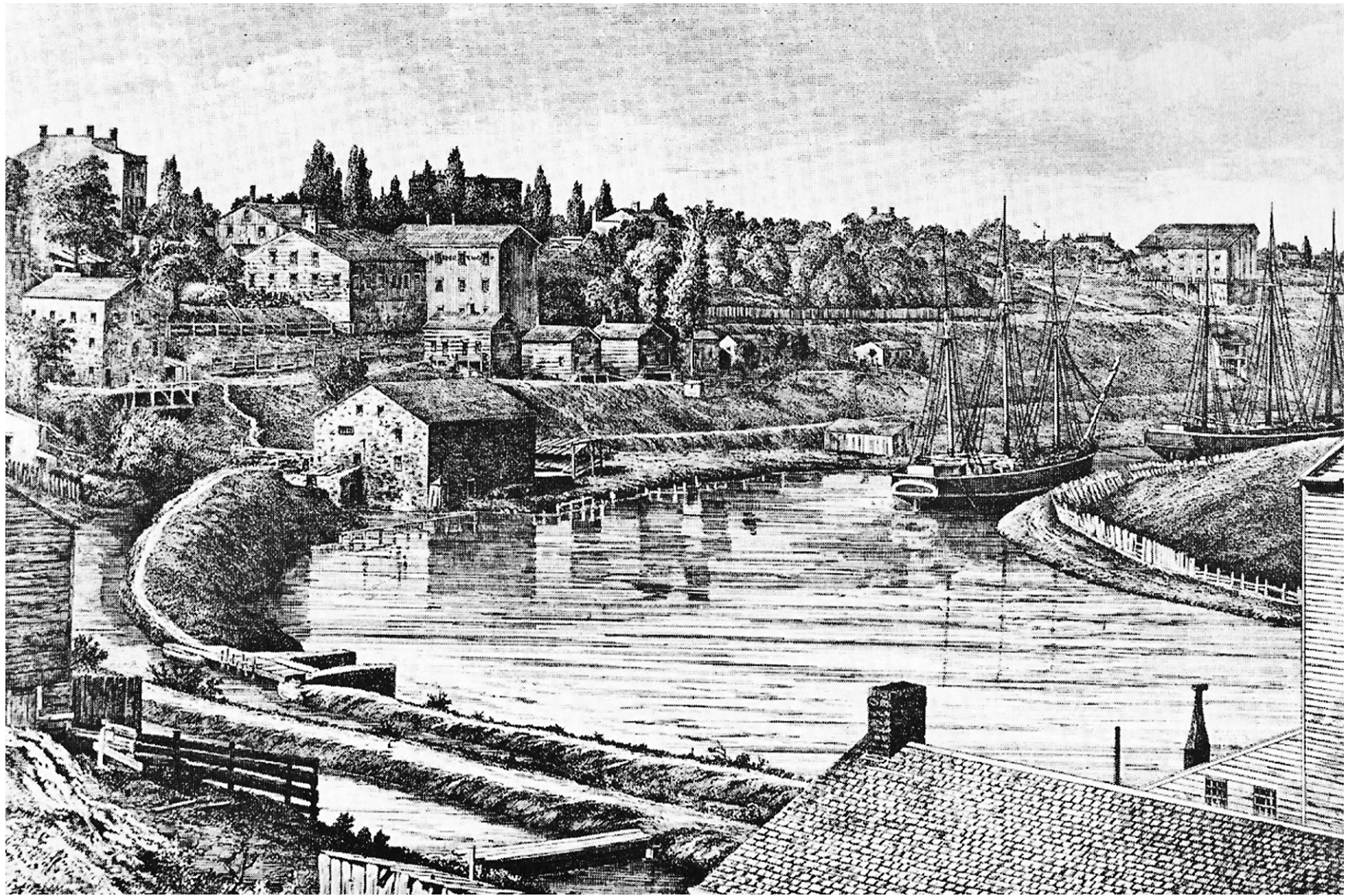
*“... the achieved Third Canal was the outcome of engineering decisions. The impact on the different canal communities was not part of the decision-making process. The form of the canal communities had resulted from the First and Second Canals, and they now had to adjust their character to suit the Third Canal.”* (Jackson, 1997, p. 269)

As a result of the modification to the canal route, the many mills that were situated along the banks of Twelve Mile Creek on the periphery of the downtown would relocate, and the complexion of the local economy changed dramatically. In the early twentieth century manufacturing took on an increasingly important role and by 1911 it accounted for over half of the city's employment (Jackson, 1997, p. 259). General Motors arrived in the city in 1929 (Jackson, 1997, p. 334) and a host of other manufacturing enterprises were also established at this time.

In the pre-war era, influenced by the reconfiguration of the canal route, urbanization increased north and east of the downtown area. The construction of two bridges crossing the valley of the former canal bed, Burgoyne Bridge and Glenridge Bridge, also allowed development to take place south and west of the downtown for the first time following 1914 (Jackson, 1997, p. 264).

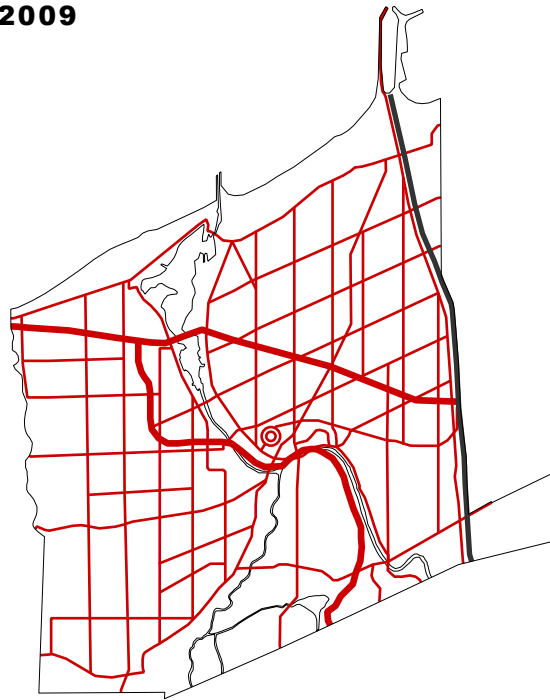


1.19 Map of St. Catharines: c. 1875



1.20 Depiction of St. Catharines adjacent Second Canal: c. 1871

**1932 - 2009**



1.21 FORM OF CONTEMPORARY CITY

⊙ DOWNTOWN

— CONTEMPORARY COMMUNITY BORDER

— PRIMARY HIGHWAY ROUTE

— PRIMARY REGIONAL / LOCAL ROAD ROUTE

— FOURTH WELLAND CANAL ROUTE



1.22 Garden City Skyway over Fourth Canal: c. 1983

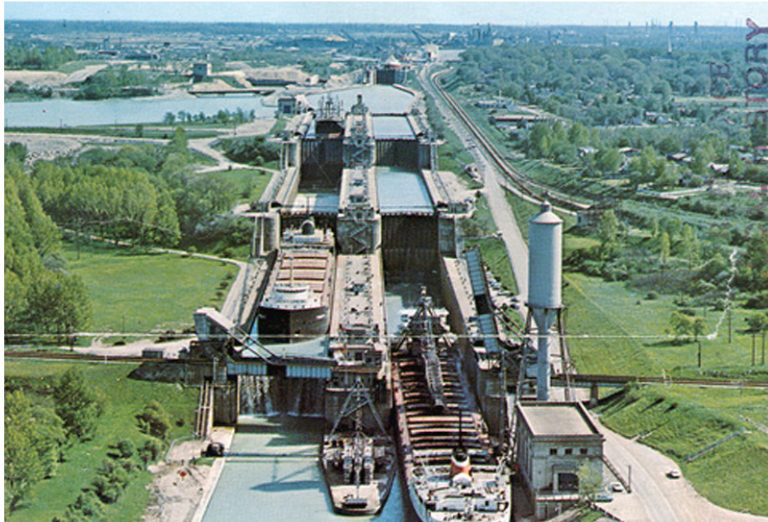


1.23 Entrance to Fourth Canal at Port Weller: c. 1983





1.24 Lock 3 on Fourth Canal in St. Catharines: c. 1983



1.25 Lock 4, 5, 6, and 7 on Fourth Canal in Thorald: c. 1983

The third canal would eventually become inadequate for large commercial ships and consequently another revision would result. The configuration of the fourth and final iteration of the canal completed in 1932, assumed an even more direct north-south route than preceding versions, leading from Port Colborne on Lake Erie to Port Weller on Lake Ontario - completely bypassing St. Catharines downtown.

*“After 1932, much was to change, neither immediately nor suddenly but gradually and imperceptibly. The new and larger vessels passed through without stopping and required less service attention. The channel was wider and more of a barrier than previously. On land, the period of railway dominance in the movement of people and goods was about to end under pressure from the motor vehicle and the construction of modern surfaced highways. (Jackson, 1997, p. 269)”*

The construction of the **Fourth Welland Canal** corresponded to an era of infrastructural development which would drastically alter the form and character of St. Catharines and the surrounding communities of the Niagara Peninsula. Regional roads were improved; highway bridges spanning both the Welland Canal and Niagara River were erected; and perhaps most significantly, the Queen Elizabeth Way, which connected Toronto and Fort Erie, was constructed between 1932 and 1939 (City of St. Catharines, 2004). St. Catharines thus represented an increasingly attractive location for industry due to its proximity to major markets on both sides of the border, accessibility to primary land and marine based transportation routes, and due to the availability of inexpensive hydroelectric power generated at Niagara Falls. In 1953 new employment opportunities were created with the establishment of a second General Motors plant in the city. The new facility was naturally situated aside the reconfigured canal, prompting suburban development in the east end of town.

Following the Second World War, in parallel with North American demographic trends, the city of St. Catharines experienced a population explosion growing from 39,708 in 1956 to 123,350 in 1976 (City of St. Catharines, 2004). Concentric rings of new residential and commercial development emanated out from the city's historic central core.

Continual amalgamation of Grantham Township, including the acquisition of the communities of Port Dalhousie and Merrittton in 1961, also contributed to the cities growth. Supported by the construction of Highway 406, a major north-south artery completed in 1965, suburban residential development accelerated in the city's south end, and in the adjacent towns of Thorald and Pelham on the Niagara Escarpment. This trend was furthered by the construction of Brock University and a regional shopping mall known as the Pen Centre, both established in 1964.

In 1970, the Regional Municipality of Niagara was founded and all the remaining areas in Grantham Township, including Port Weller and the Louth Township east to Fifteen Mile Creek, were transferred to St. Catharines jurisdiction (City of St. Catharines, 2004). St. Catharines would later initiate two new suburban communities on formerly rural Louth Township land west of the city centre; Martindale in 1983 and Vansickle in 1987.

The continual low-density suburban development which has occurred in St. Catharines since the Second World War has both undermined the significance of the city's downtown and resulted in the extensive loss of valuable agricultural land. The downtown is now widely acknowledged as an undesirable location to live and core area businesses struggle to be competitive with suburban shopping malls and big-box retailers. Moreover, suburbanization has diminished the city's unique sense-of-place.



1.26 Aerial view of Pen Centre Mall, Highway 406 and south end suburbs



1.27 Aerial view of Pen Centre Mall, and surrounding suburbs



1.28 Aerial view of GM's Glendale Avenue Engine Plant: c. 1993



1.29 GM's Ontario Street Component's Plant: c. 2009

The community in St. Catharines has come to face hardship over the past two decades due to the collapse of the city's manufacturing sector. Until recently, General Motors of Canada was St. Catharines' top employer, operating an engine plant and components plant in the city. At its peak in the late 1980's, General Motors employed approximately 10,000 workers at its two St. Catharines facilities. St. Catharines was a true '**GM town**'. Today, fewer than 2,300 positions remain at the local plants. In addition, several supporting manufacturing operations have been shutdown accounting for thousands more lost jobs.

On June 1st 2009, General Motors Corporation officially filed for government assisted Chapter 11 bankruptcy protection. According to the St. Catharines local news outlet The Standard, "Under the massive restructuring plan mapped out for the automaker, most of the 2,300 jobs at the city's two GM sites — the Glendale Avenue engine plant and the Ontario Street components plant — seem secure for now." (St. Catharines Standard, 2009). Substantial damage to St. Catharines local economy has however already taken place, and the city struggles with unemployment and the anxiety that comes with uncertainty regarding future economic prospects. Presently, the overall jobless rate in St. Catharines-Niagara sits at 10.6%, amongst the highest in Canada (Statistics Canada, 2009).

Recent trends display a shift towards a service based local economy, with new employment opportunities in the fields of education and medicine. The deindustrialization of the local economy has, nevertheless, had a serious impact on the city's local identity. As automotive manufacturing is no longer the city's dominant industry, citizens of St. Catharines have little left to identify with, and it is unclear how the community will adapt to a post-industrial future.



1.30 Aerial view of GM's Glendale Avenue Engine Plant: c. 1993



1.31 Cargo ship 'Ziemi' on Fourth Welland Canal in St. Catharines: c. 2003

# 1.3 SURVEYING THE PRESENT

## GREAT LAKES REGION

Situated in Ontario's densely populated and heavily industrialized **Golden Horseshoe Region**, which extends around the southwest portion of Lake Ontario from Niagara Falls to Oshawa, St. Catharines is located within 500 km of several large cities in Canada and the United States including Detroit, Cleveland, Pittsburgh, Buffalo, Hamilton, and Toronto.

As a whole the Great Lakes basin is home to approximately 40 million people; 30% of Canada's population and 10% of America's population. Over half of Canada's manufacturing activity and one-quarter of Canada's farming take place within the Great Lakes basin (Environment Canada, 2007).

Situated astride the Welland Canal, a "lifeline of trade and commerce into the heart of North America", St. Catharines constitutes an important node within the marine transportation network of the Great Lakes (Jackson, 2009).

1.32 XL - SCALE CONTEXT MAP [NTS]



ST. CATHARINES



POPULATION 50,000 - 99,000



POPULATION 100,000 - 249,999



POPULATION 250,000 - 499,999



POPULATION 500,000 - 999,999



POPULATION + 1,000,000



WATER BODY



INTERNATIONAL LAND BORDER



WELLAND CANAL



PRIMARY MARINE ROUTE



PRIMARY HIGHWAY ROUTE



PRIMARY RAIL ROUTE



C A N A D A

QUEBEC CITY

TROIS-RIVIERES

MONTREAL

OTTAWA

THUNDER BAY

SAULT STE MARIE

DULUTH

KINGSTON

WHITBY / OSHAWA  
PICKERING / AJAX  
TORONTO  
MISSISSAUGA  
OAKVILLE  
BURLINGTON  
HAMILTON

GREEN BAY

BAY CITY

ROCHESTER

ST. CATHARINES

NIAGARA FALLS

WELLAND

BUFFALO

SARNIA

MILWAUKEE

RACINE

KENOSHA

DETROIT

WINDSOR

ERIE

CHICAGO

GARY

TOLEDO CLEVELAND

U N I T E D S T A T E S O F A M E R I C A




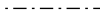







## REGIONAL MUNICIPALITY OF NIAGARA

St. Catharines is one of twelve municipalities that together comprise the **Regional Municipality of Niagara**. The Niagara Region has a total population of 427,421 and includes the cities of Niagara Falls, 82,184; Welland, 50,331; Port Colborne, 18,599; and Thorald, 18,244; the towns of Fort Erie, 29,925; Grimsby, 23,937; Lincoln, 21,722; Niagara-On-The-Lake, 14,587; and Pelham, 16,185; and the townships of Wainfleet 6,601; and West Lincoln, 13,167 (Regional Municipality of Niagara, 2006). With a population of 131,989 people, approximately one-third of the regional total, St. Catharines constitutes the dominant urban centre in the Niagara Region.

The Region stretches across the Niagara Peninsula from Hamilton in the west to the Niagara River in the east comprising a total land area of 1896 sq km. Downtown St. Catharines sits a mere 20 km west of the Niagara River which constitutes the international border between Canada and the United States.

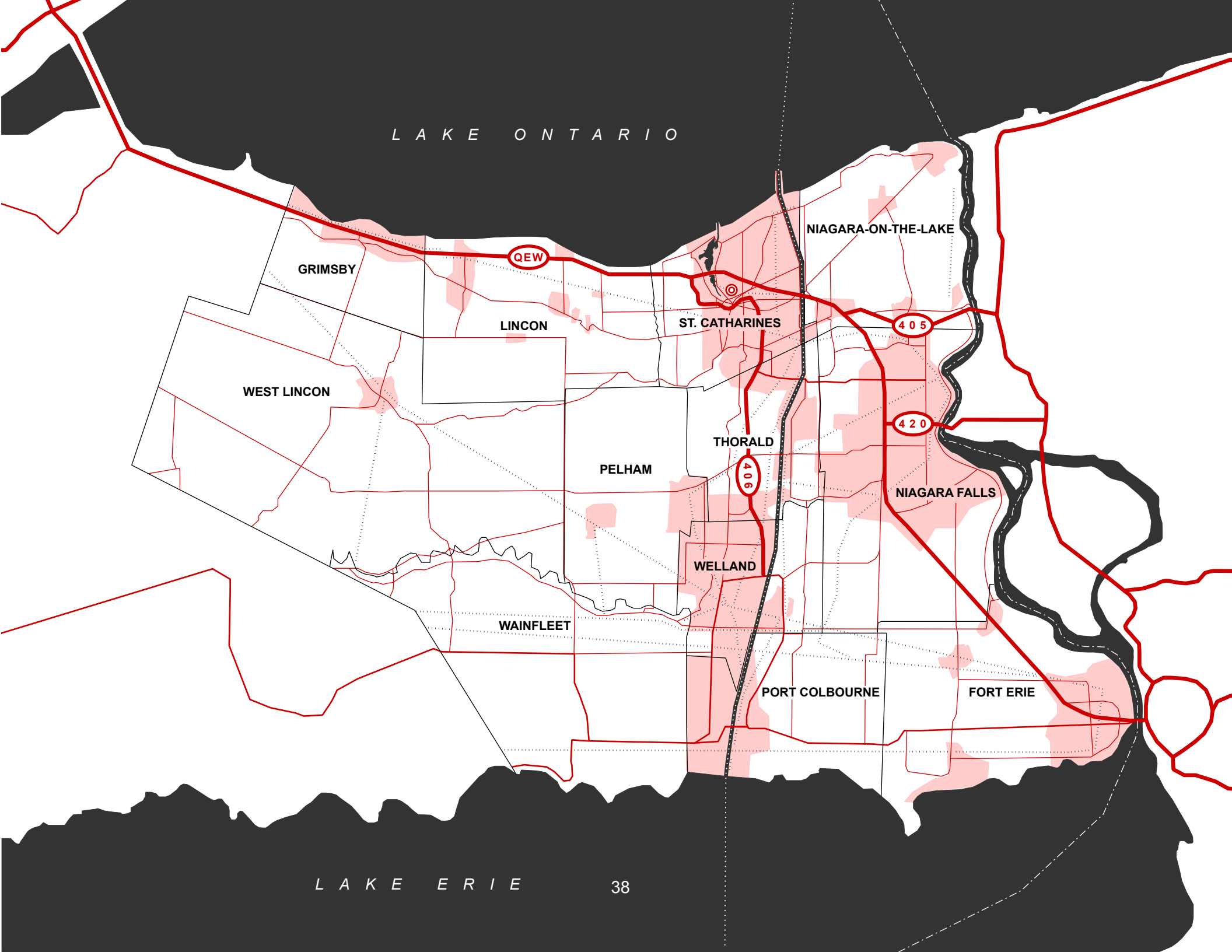
Four major highway routes influence the Niagara Region. The Queen Elizabeth Way (Q.E.W.) which bisects the peninsula running east-west to connect Toronto and Fort Erie, and Highway 406 which stretches north-south connecting St. Catharines and Welland, adjoin in St. Catharines. Highways 405 and 420 serve as arteries from the Q.E.W. to the international border between Canada and the United States of America, which assumes the course of the Niagara River. The region's other major infrastructural element is the Welland Canal, which runs north-south across the peninsula from Port Colborne on Lake Erie to Port Weller on Lake Ontario. Both the highway and canal infrastructure have significantly influenced urban growth patterns across the Niagara Peninsula.

### 1.33 L - SCALE CONTEXT MAP [1:300,000]

-  DOWNTOWN
-  WATER BODY
-  URBAN AREA
-  INTERNATIONAL BORDER
-  COMMUNITY BORDER
-  WELLAND CANAL
-  PRIMARY MARINE ROUTE
-  PRIMARY HIGHWAY ROUTE
-  PRIMARY REGIONAL ROAD ROUTE
-  PRIMARY LOCAL ROAD ROUTE
-  PRIMARY RAIL ROUTE



L A K E O N T A R I O



GRIMSBY

LINCON

ST. CATHARINES

NIAGARA-ON-THE-LAKE

WEST LINCON

THORALD

PELHAM

NIAGARA FALLS

WELLAND

WAINFLEET

PORT COLBOURNE

FORT ERIE

L A K E E R I E

## ST. CATHARINES












St. Catharines comprises a total land area of 96.1 square kilometers and is physically bound by Lake Ontario to the north; the Welland Canal to the east; and Five Mile Creek to the west. To the south St. Catharines borders the satellite city of Thorald.

As the dominant urban centre in the Niagara Region, St. Catharines constitutes a **core mid-sized city** – a sub-classification of the mid-sized typology. Core mid-sized cities are distinguished as primary urban communities within their given geographic area, which are typically functionally interdependent with surrounding communities (Lederer, 2008).

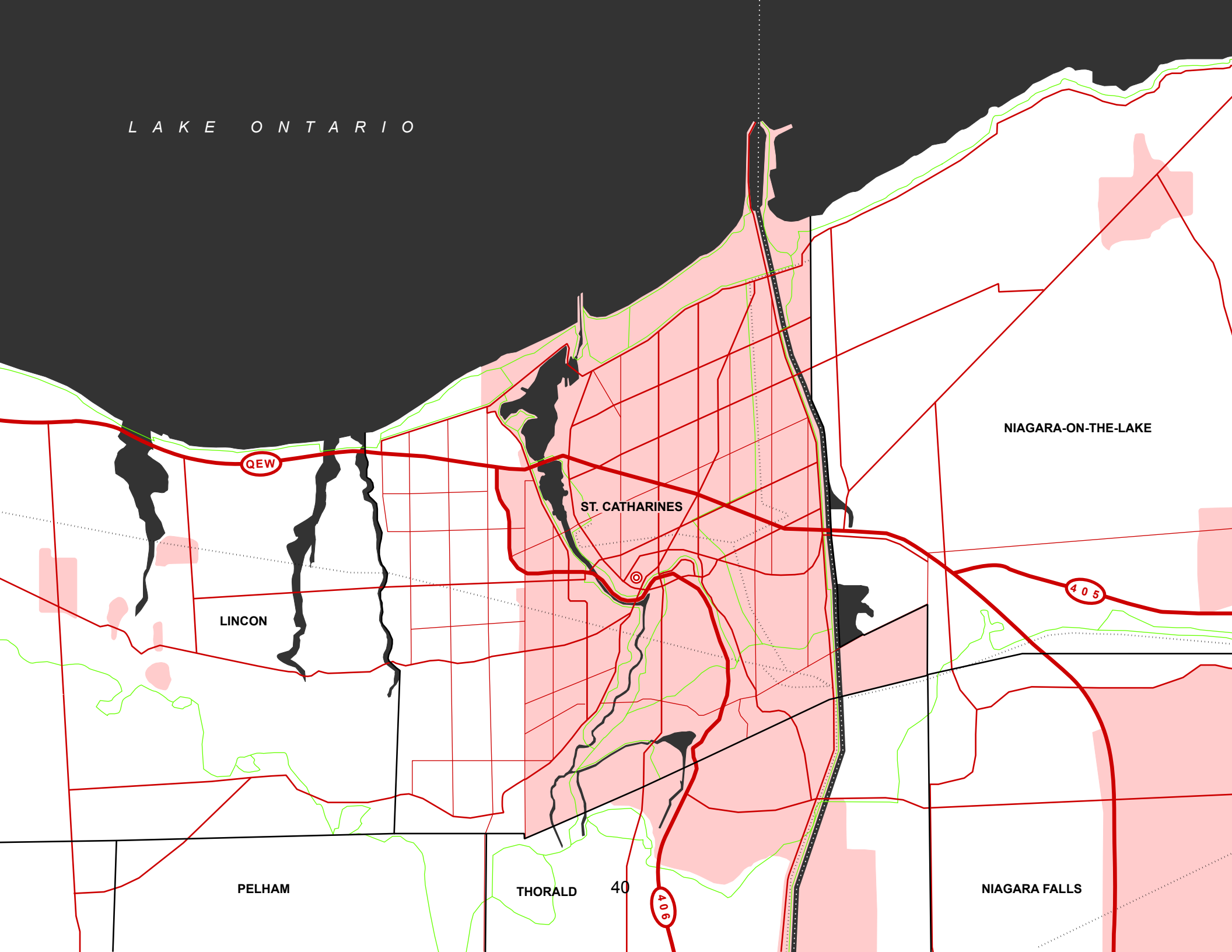
St. Catharines' structural dynamics are characteristic of the mid-sized city type, exhibiting a low-density profile (1373.3 people per square km) and dispersed urban form (Statistics Canada, 2009). Of 54,725 occupied private dwellings in the city 57.8% are single-detached houses while 5.8% are semi-detached; 7.5% are row-houses; 4.1% are duplex apartments; 13.4% are apartments with fewer than five stories; and 10.7% are apartments with greater than five stories (Statistics Canada, 2009). As outlined in the preceding historical review, in correspondence with North American mid-sized city trends, continual suburban expansion has occurred in St. Catharines since the Second World War.

Greater than two-thirds of St. Catharines' land area is now designated as urban. The remaining area in the western part of the city is zoned agricultural and is protected under the Province of Ontario's Greenbelt legislation. The Greenbelt initiative effectively establishes the city's current urban area boundary as a fixed limit which prevents any further expansion. As such, all future development must occur within city's current urban boundary (City of St. Catharines, 2004).

### 1.34 M - SCALE CONTEXT MAP [1:50,000]

-  DOWNTOWN
-  WATER BODY
-  URBAN AREA
-  COMMUNITY BORDER
-  WELLAND CANAL
-  PRIMARY MARINE ROUTE
-  PRIMARY HIGHWAY ROUTE
-  PRIMARY REGIONAL ROAD ROUTE
-  PRIMARY LOCAL ROAD ROUTE
-  PRIMARY TRAIL ROUTE
-  PRIMARY RAIL ROUTE

LAKE ONTARIO



QEW

LINCON

PELHAM

THORALD

ST. CATHARINES

NIAGARA-ON-THE-LAKE

405

406

40

NIAGARA FALLS

## DOWNTOWN











St. Catharines' core area is defined by Welland Avenue to the north; McGuire Street to the south; Geneva Street to the east; and Ontario Street to the west; with St. Paul Street constituting the city's main street. St. Paul Street preserves the winding course of the Iroquois Trail, resulting in a gentle undulation in the built fabric of street. The total length of St. Paul Street from Ontario Street to Geneva Street is less than 1km; roughly a 15 minute walk for pedestrians.

The built form along the western portion of St. Paul Street is primarily two-to-three stories, consisting of ground floor restaurants, bars, and niche retail outlets; and upper storey residential units. The eastern portion of the street in the vicinity of Geneva Street is primarily made up of one and two storey buildings and consists of discount and convenience retailers along with some residential units. In a 2005 Globe and Mail Article entitled From Garden City to Garbage City **Anthony Rienhart** explains: "While a few new restaurants, devoted core merchants and artists stick it out, empty storefronts stand out like teeth missing from a once-gleaming smile" (Reinhart, 2005).

Directly adjacent to the core area stretches the valley of the old Welland Canal. The realms of the city and the valley are physically separated as a rift in the natural topography which creates abrupt boundaries to development.

Despite the fundamental role the Welland Canal played to St. Catharines' urban industrial development, no remnants of the original passage remain. In the place of the original canal stretches Highway 406 constructed in the early 1960's. While the valley terrain is charged with cultural and historical importance, the present environment does not reflect this symbolic significance.

1.35 S - SCALE CONTEXT MAP [1:10,000]

-  CORE AREA
-  WATER BODY
-  COMMUNITY BORDER
-  TWELVE MILE CREEK
-  ORIGINAL WELLAND CANAL ROUTE
-  PRIMARY HIGHWAY ROUTE
-  PRIMARY REGIONAL ROAD ROUTE
-  LOCAL ROAD ROUTE
-  PRIMARY TRAIL ROUTE
-  PRIMARY RAIL ROUTE



LAKE STREET

GENEVA STREET

NIAGARA STREET

ONTARIO STREET

QUEENSTON STREET

WELLAND AVENUE

CHURCH STREET

ST. PAUL STREET

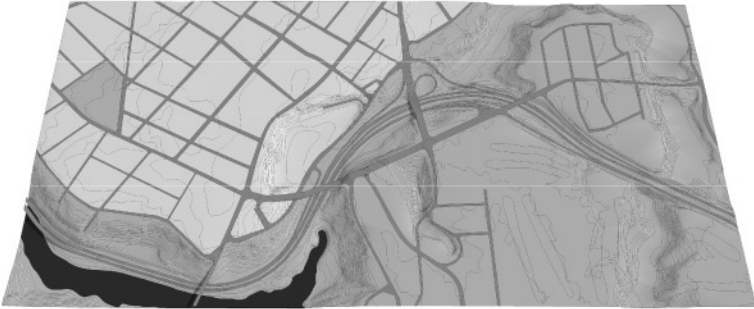
MCCUIRE STREET

WESTCHESTER CRESENT

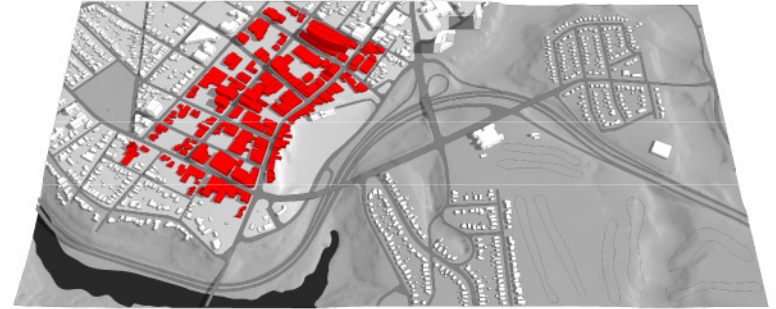
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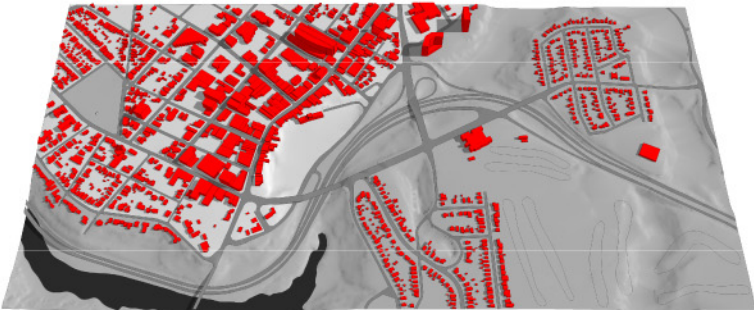
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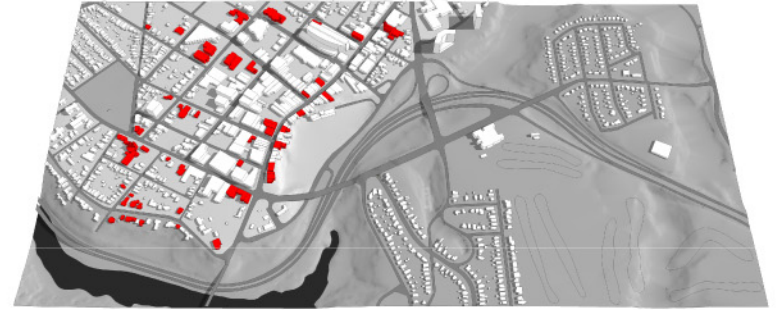
*TOPOGRAPHY*



*CENTRAL BUSINESS DISTRICT*



*BUILT FORM*

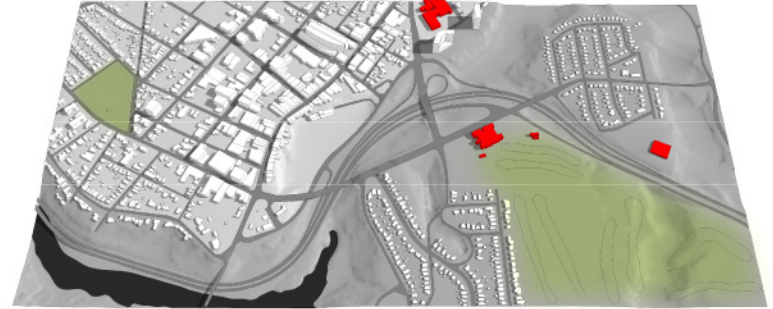


*HERITAGE BUILDINGS*

*1.36 DOWNTOWN MAPPING ANALYSIS*



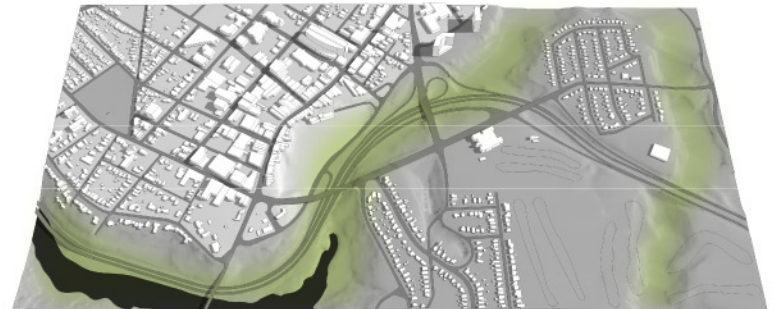
*INFRASTRUCTURE*



*PARKS AND RECREATION*



*PARKING*



*VALLEY OF THE OLD WELLAND CANAL*



1.37 Intersection of St. Paul St. and Ontario Street: c. 2008



1.39 Vacant property on Ontario Street: c. 2009



1.38 Core Block obuilding and farmer's market on King Street: c. 2009



1.40 Road construction on St. Paul Street: c. 2009





1.41 St. Paul Street: c. 2009



1.43 St. Paul Street: c. 2009



1.42 Valley of the buried Welland Canal: c. 2009



1.44 Back-end of St. Paul Street: c. 2009



1.45 A panoramic view of the landscape in the valley of the old Welland Canal along the southern periphery of St. Catharines' historic core: c. 2009

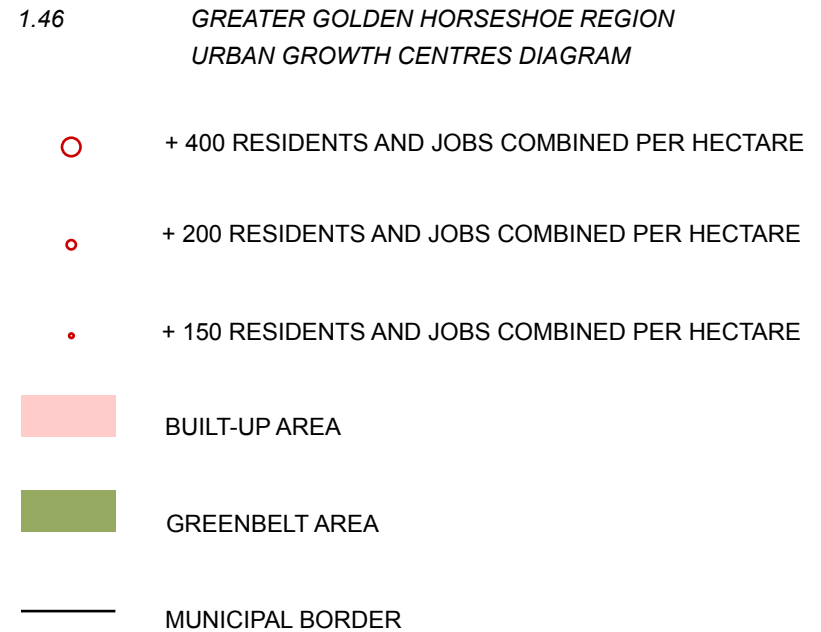


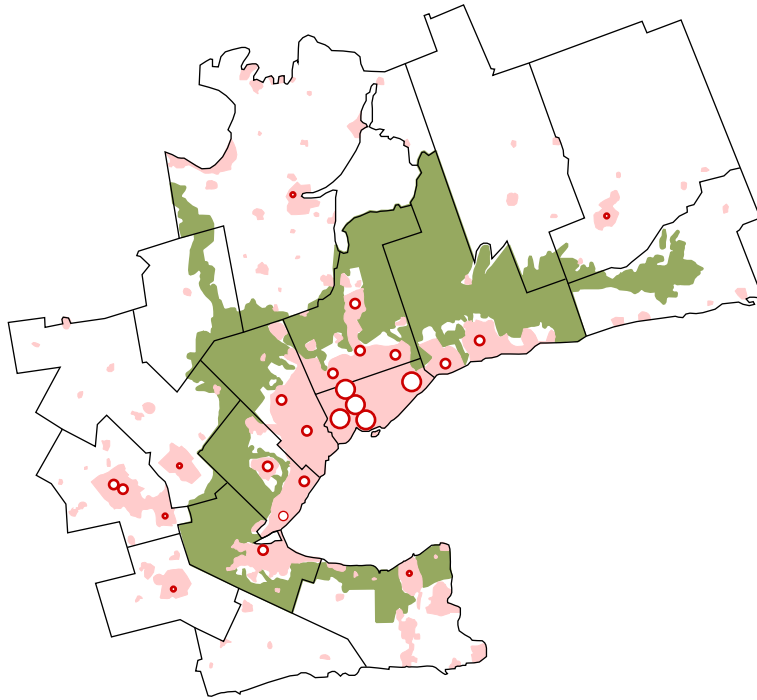
## 1.4 CONSIDERING THE FUTURE

In 2006 the Government of Ontario's Ministry of Public Infrastructure Renewal released the '**Growth Plan for the Greater Golden Horseshoe Region**', a document prepared by the province following the 2005 '**Places To Grow Act**'. The Greater Golden Horseshoe Region is home to over 8.1 million people (2006); approximately two-thirds of the population of Ontario and one-quarter of the population of Canada (Statistics Canada, 2009). The region is expected to grow to 11.5 million people by 2031. In an effort to manage this growth, the plan designates specific urban intensification sites, sets population and employment targets, and offers basic principles to direct policy planning at the municipal level (Government of Ontario, 2006). Downtown St. Catharines is identified in the plan as one of twenty-one 'Urban Growth Centres.' The initiative mandates a density target of 150 residents and jobs combined per hectare in Downtown St. Catharines by 2031 (Government of Ontario, 2006).

Unfortunately the Growth Plan offers little with regards to specific strategies for development in the areas which it identifies as Urban Growth Centres. Moreover, as a top-down approach, the Growth Plan ultimately does not - and can not - adequately address the range of complex issues faced in the communities targeted for intensification, and rather, tends to focus more on infrastructural concerns. The provincially driven Growth Plan ultimately serves to demonstrate the general lack of awareness on the part of public administrators regarding the distinction between simple quantitative urban and economic growth and more elusive qualitative matters of character and sense-of-place.

**Christopher Leo** and **Kathryn Anderson** of the University of Winnipeg address North American misconceptions regarding growth in their entry to the 2006 text 'Canadian Cities in Transition: Local Through Global Perspectives' entitled 'Being Realistic about Urban Growth.'





*“The city is seen, first and foremost, as a ‘growth machine’ and is valued only if it conforms to that image. This growth fixation is a North American peculiarity, and it has deep roots. In both Canada and the United States, the settlement of the West and the Industrial Revolution were marked by boosterism, as expanding cities competed for investment. Within metropolitan areas, a similarly growth-oriented and competitive environment was evident. From the earliest days of suburban development, much of the outward expansion of cities took the form of competition among urbanizing municipalities vying for residential, commercial, and industrial development. Cities that are growing rapidly, or have grown to a great size, are the ‘successful’, desirable, and admired ones, while residents of ‘Nowheresville’ struggle with diminished sense of self-worth.” (Leo & Anderson, 2006)*

While the merits of the provincial mandate for growth may be debated, the reality remains that St. Catharines and other communities of the Greater-Golden Horseshoe have committed to achieving the targets set for them in the plan.

As the Growth Plan offers little direction regarding how the selected Growth Centres are to achieve the set population and employment targets in the intensification areas established, municipalities must ultimately determine their own development strategies.

Some efforts are already underway which aim to encourage new residential and commercial development in St. Catharines core area. Recently portions of St. Paul Street and Ontario Street were converted from one way to two way streets in an attempt to support greater accessibility of the downtown and encourage increased activity along these main streets. Efforts to beautify downtown streets with the addition of signage and banners has also been undertaken.

The City of St. Catharines has also conducted a feasibility study investigating the possibility of constructing a new Performing Arts Centre in conjunction with a new off-campus location for the Brock University School of Fine and Performing Arts in the downtown. The \$97 million proposal includes the creation of a new “concert hall, a dance venue, a studio theatre, cinema and cabaret hall”, in addition to the adaptive reuse of the abandoned Canada Hair Cloth factory building as the new home for the arts school (Cowan, 2009). If this effort proceeds one can expect increased residential and retail development in the downtown, to cater to the demands of both students and tourists visiting the area (Bowman, 2007) (Lederer, 2007). At this point, however, it is uncertain whether or not this initiative will be realized.

Approaches to core area redevelopment in St. Catharines to-date have generally corresponded to conventional ‘urban revitalization’ strategies that have been implemented across North America over past decades. These initiatives have typically focused on physical enhancements including facade improvements, beautification attempts and the creation pedestrian-friendly streetscapes and functional improvements such as business development and promotion (Lederer, 2007). Results of such efforts have varied with regards to their ability to generate renewal and secure lasting quality of the urban environment. Moreover, these strategies have been unable to address the deeper and more persistent dynamics supporting suburban development patterns, which continue apace ultimately resulting in increasing placelessness and diminished local identity (Waldheim, 2006, p. 38). These realities invite consideration for new more holistic means of both understanding and designing cities.

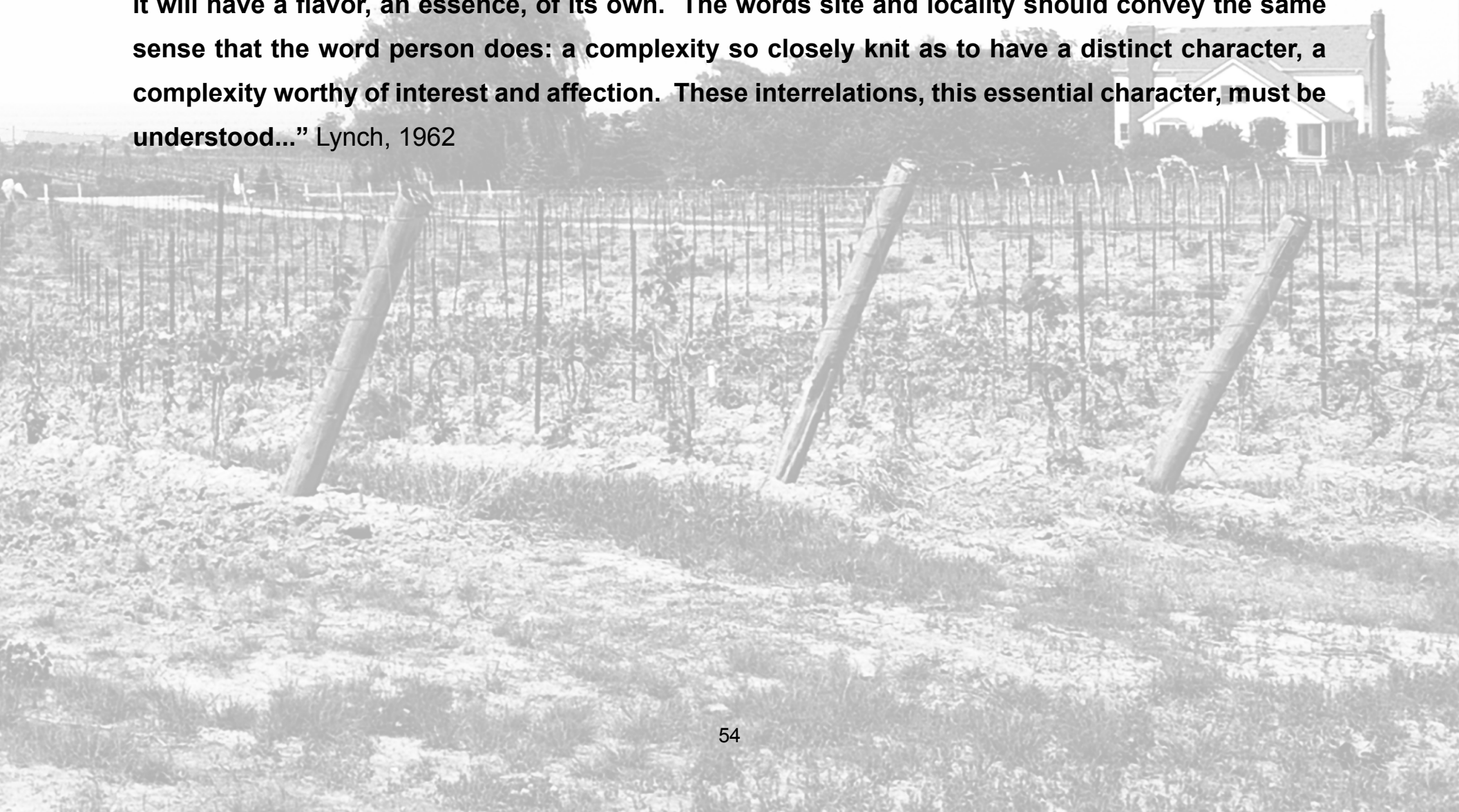


**P A R T   T W O :   T E R R O I R**





**“Any site is composed of many factors – above, below, and at the ground – but all these factors are interrelated, and have achieved some sort of balance, whether it be static or one that is moving toward another equilibrium. Because of the complexity of parts and their intricate patterning together, we find that each site is in some measure unique. While it may fit into some general classification, it will have a flavor, an essence, of its own. The words site and locality should convey the same sense that the word person does: a complexity so closely knit as to have a distinct character, a complexity worthy of interest and affection. These interrelations, this essential character, must be understood...” Lynch, 1962**



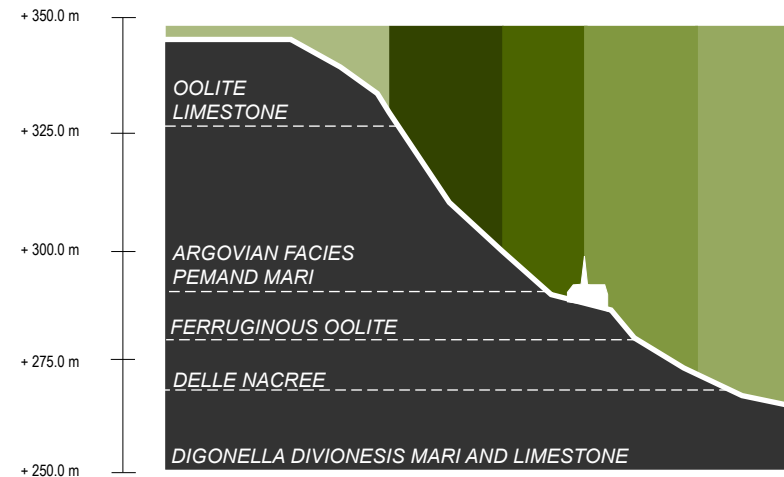
## 2.1 TERROIR AS A LENS

The following section presents an alternative understanding of place that is derived from agricultural custom, which is known as **terroir**. Terroir is said to give wines of different regions their distinctive tastes – their identity. Likewise, the concept might also be used to explore the identity of a city, as both seem to have persistent qualities that emerge out of layers of time and inhabitation.

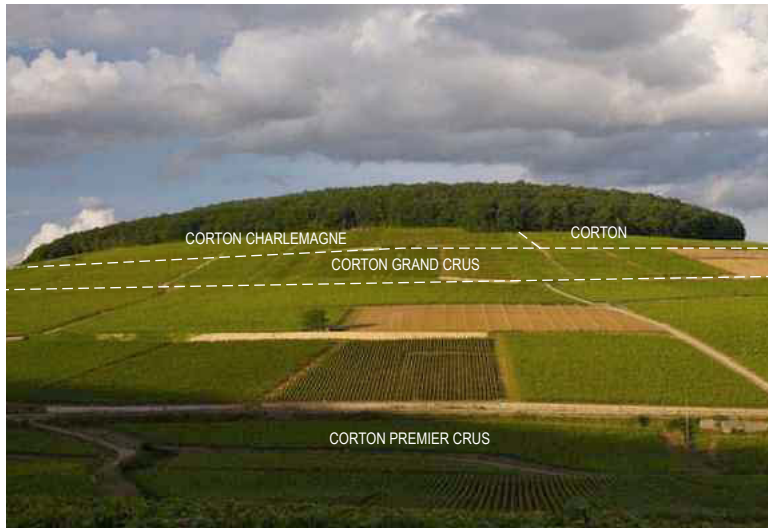
The unique awareness for the significance of place presented in terroir serves to potentially initiate a discourse regarding the consequence of local identity in our contemporary culture; a question which is particularly relevant to architects, landscape architects, and urban planners, who now design for an increasingly globalized world in which traditional notions of physical and conceptual boundaries have been fundamentally challenged. The terroir metaphor is ultimately brought together with analogous concepts from urban design theory to make a case for a greater consideration of place by designers who must now confront what **Alexander Tzonis** describes in 'Critical Regionalism: Architecture and Identity in a Globalized World' as, "the ubiquitous conflict in all fields... between globalization and international intervention, on the one hand, and local identity and the desire for ethnic insularity, on the other." (Lefaivre & Tzonis, 2003, p. 10)

Terroir is a concept derived from time-honoured agricultural traditions in France which has no comparable English equivalent. The direct translation of terroir is 'soil', 'land', or 'ground', however these definitions do not accurately communicate the multi-layered meaning inherent in the French expression. Terroir implies that the complex interactions of all physical and chemical features in a given growing environment ultimately make a place, and that which is produced there, unique.

The concept of terroir is most often associated with the disciplines



2.01 Plan, section and photo of the Hill of Corton, in the Cote d'Or region of France, explaining terroir by showing the relationship of the geology, elevation, and slope to vineyard designations



< legend refers to the plan and section opposite

	CORTON CHARLEMAGNE
	CORTON GRAND CRUS
	CORTON
	CORTON PREMIERS CRUS
	COMMUNE
	WOODS

of viticulture and oenology, which honour place as a fundamental ingredient contributing to the individual characteristics of wines from different regions. (Sommers, 2008, p. 19). **Brian Sommers**, professor and author of 'The Geography Of Wine' explains;

*"[Terroir] is used to describe all the local features of environment and society that have an effect on wine. Many people believe that all the features of a place taken as a whole – its terroir – have a distinctive influence what you can taste in the wine... Terroir tells us that place matters, which geographers have been arguing since the dawn of time... Morphology of landscape tells us that what we see in the world around us is a product of environmental forces and the decisions that people make in that environment. Terroir tells us also what we taste is a product of environmental forces and the decisions that people make in that environment."* (Sommers, 2008, p. 19)

A more poetic understanding of terroir is offered by sommelier and author **Andrew Brooks** who claims;

*"Terroir is the soul of a vineyard. It is what differentiates the fruit character from one vineyard to another just metres away..."* (Brooks, 2005, p. 10)

While some debate regarding the precise meaning of terroir exists amongst individuals in the wine community, what is important to acknowledge is that the basic philosophy underlying the concept, a belief that there exists a fundamental relationship between a wine and the specific locale in which it was created, is almost universally accepted. Furthermore, in France where the concept of terroir originated, it is practically a matter of religious belief that the characteristics of a wine are determined by a vineyards geographic setting, as monastic orders have conducted viticultural study for over a millennium (Haynes, 1999, p. 67).

This effectively expresses the unique appreciation for place – and for the earth – inherent in the art of winemaking. The concept of terroir ultimately presents an interesting alternative to the conventional perception of place which may potentially offer broader applications as well. Through a more comprehensive reading of the composite elements that make up any environment, as implied in the metaphorical example of terroir, each site – whether an individual parcel of land or an entire city – can be understood as the product of a distinct history of complex overlapping relationships and must, therefore, ultimately be considered unique. It is interesting to imagine how such an understanding might influence how we think about design.

A similar sentiment is found in the theory of the late American Urban Planner and Professor **Kevin Lynch**, who is known for his influential contributions to twentieth century urban design based upon empirical research related to the phenomenology of the urban environment.

In the introduction to Lynch's 1962 text 'Site Planning' he contends that every site constitutes a unique situation and insists upon the importance of in-depth analysis by designers. Lynch argues that designers must fully investigate the complex factors that shape the experience of a site – or city – prior to design, to better understand the inherent challenges and opportunities of the place.

*“Every site, however disturbed, has had some time to experience the mutual adjustment of its elements. Surface flow has created drainage pattern, plant and animal life has achieved an ecological balance, neighboring structures lean against each other, shops have arranged themselves in relation to the resident population, climate has weathered all alike. Any site is composed of many factors – above, below, and at the ground – but all these factors are interrelated, and have achieved some sort of balance, whether*



2.02 Malivoire vineyards in Beamsville Ontario: c. 2009



2.03 Kabaca vineyards in Vineland Ontario: c. 2009



2.04 Fielding vineyards in Beamsville Ontario: c. 2009



2.05 Stratus vineyards in N-O-T-L Ontario: c. 2009

*it be static or one that is moving toward another equilibrium. These interrelations, this essential character must be understood by the site designer.”*

*Because of the complexity of parts and their intricate patterning together, we find that each site is in some measure unique. While it may fit into some general classification, it will have a flavor, an essence, of its own. The words site and locality should convey the same sense that the word person does: a complexity so closely knit as to have a distinct character, a complexity worthy of interest and affection.” (Lynch, 1962, p. 15)*

Lynch then expresses frustration with designers of the time for their lack of concern regarding site issues, and points out that in earlier society there existed a far deeper appreciation of place. He states;

*“In the past, an understanding of site was often more advanced than it is today. Since earlier people had less power to change the site, they were perforce more keenly aware of the limitations it presented. Magical beliefs had an even greater influence. If a locality was the home of a local spirit, one avoided disturbing that home without due precaution. These precautions included ritual acts and the anxious study of local configuration. The development was in consequence closely knit to the site. In most cultures land is sacred, a thing not to be violated by any upstart human agency. It is enduring, powerful, extensive; the home of spirits and the dead; the productive mother upon whom human life depends. As we discarded these religious ideas, and as we increased our power to impose site changes, we have tended to lose the useful by-product of those ancient attitudes: we no longer unconsciously produce developments which work in harmony with their setting, nor erect structures expressive of locality.” (Lynch, 1962, p. 14)*

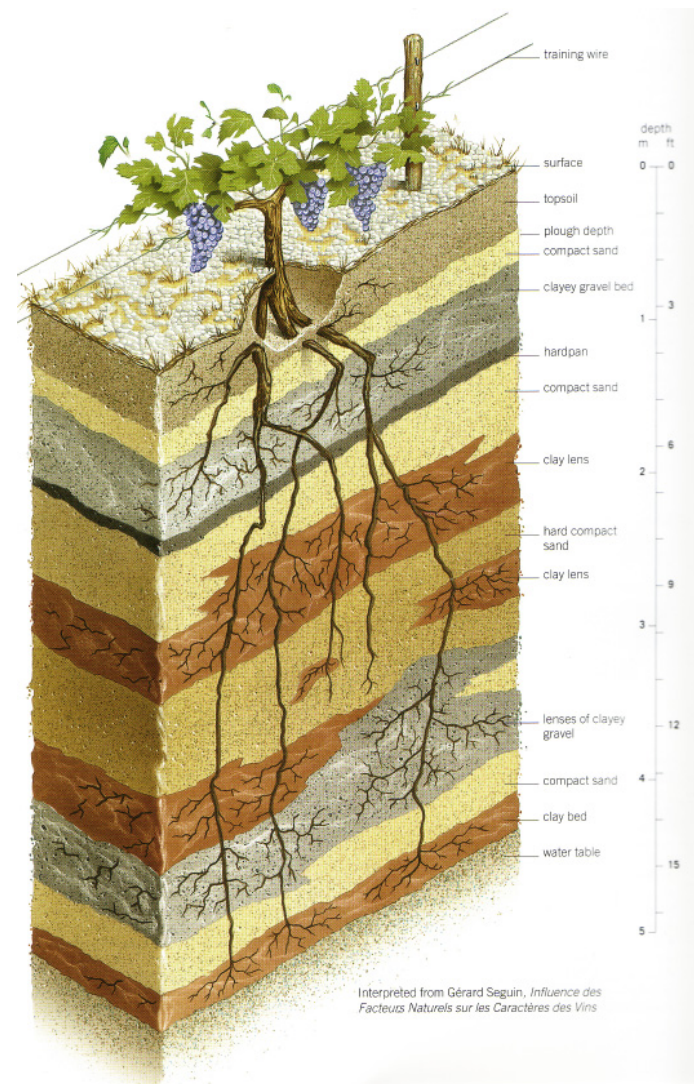
While the modernist design culture to which Lynch was reacting differs from that which exists today, his argument regarding the significance of design which enhances local sense-of-place is perhaps even more salient in the context of globalization - which has simultaneously resulted in an increasingly interconnected yet homogenized world. Moreover, Lynch's discourse regarding the need for a more holistic understanding of site, and the value of design work that emerges out of this awareness to work in harmony with its surroundings, takes on an increased consequence given the current global ecological crisis.

For decades, researchers have warned that the consumptive patterns of human activity exceed that which the earth can sustain. Especially damaging has been the continual expansion of cities which has come at the cost of extensive natural and cultivated environment and has contributed to global climate change.

**Kevin Hanna**, Professor of Geography and Environmental Studies, explains; *"When cities expand, the impact is usually permanent and more intense than most other human processes."* (Hanna, 2006, p. 353)

The unexamined patterns of decentralized development which have defined twentieth and early twenty first century urbanism in North America, serve as evidence that despite growing environmentalism, as a society we are still very much out of balance with the earth. In 'Nature's Economy: A History of Ecological Ideas' **Donald Worster** questions; "...whether nature has an order, a pattern, that we humans are bound to understand and respect and preserve." (Worster, 1985)

Such an appreciation for the natural world (which in some ways parallels the concept terroir) can be observed in many North American aboriginal cultures. In an essay entitled 'Groundwork'



2.06 A section showing vineyard soil profile and vine root structure (above)

2.07 A speculative section exploring St. Catharines many layers (opposite)



included in the 2005 text 'Site Matters: Design Concepts, Histories, and Strategies', architectural theorist and Professor at the University of Virginia **Robin Dripps** explains;

*"The valuation of the ground as part of a larger cultural proposition was an essential characteristic within Native traditions. Speaking to a class of environmental design students, Oren Lyons, the faith keeper of the Onondaga Nation explained his tribe's attitude towards the earth: "What you call resources we call our relatives."*

*His comment puts a different perspective on how to value the ground... The analogy between the ground and the structure of human relationships implies a similarly intelligible pattern of relationships within the ground. It is interesting to think about the increased particularity and character that the earth must assume when imagined with such anthropomorphic qualities. This metaphorical extended family would immediately have a structure that would connect all its members in a recognizable and understandable way, making the ground an intrinsic part of the human condition" (Dripps, 2005, pp. 62-63)*

It is fascinating to consider how such a comprehension of the earth might influence future settlement patterns. If the unique awareness for the significance of place as presented in terror and the associated examples were more broadly applied would unsustainable and inauthentic development continue to be accepted?

## 2.2 LANDSCAPE AS A MEDIUM

The previous section presented an alternative understanding of place through the metaphorical lens of terroir. The question remains how this awareness may inform an approach to urban development in post-industrial cities.

This section explores an emerging theory of urban development referred to as **landscape urbanism** - which proposes landscape as a medium for both representing and constructing the contemporary city - and suggests its potential as a redevelopment strategy which can simultaneously encourage urban renewal and enhance local identity.

**James Corner**, Principle of Field Operations in New York City and Chair of the Landscape Architecture Department at the University of Pennsylvania School of Design, suggests that in the early twenty-first century the seemingly passé notion of landscape is receiving a renewed appreciation. He claims that the reemergence of landscape within the collective culture has arisen in response, "...to the remarkable rise of environmentalism and a global ecological awareness, to the growth of tourism and the associated needs of regions to retain a sense of unique identity, and to impacts upon rural areas by massive urban growth." (Corner, 2006, p. 23)

Corner also asserts that across all disciplines of design - especially architecture and urban planning - landscape has recently received considerable interest. He claims this is due to its vast conceptual scope which offers a, "...capacity to theorize sites, territories, ecosystems, networks, infrastructures, and to organize large urban fields." (Corner, 2006, p. 23) This recent interest in landscape by practitioners and theorists from all branches of design has factored in the early development of a multidisciplinary movement, drawing together architects, landscape architects, urban planners, and engineers, which has come to be known as landscape urbanism.



2.06 Field Operations proposal for Fresh Kills Park in New York City



2.09 Field Operations proposal for Fresh Kills Park in New York City





2.10 Railway Park at Landschaftspark in Duisburg Nord



2.11 Ore Bunker Gallery at Landschaftspark in Duisburg Nord

In 2006 **Charles Waldheim**, formerly the Director of Landscape Architecture at the University of Toronto and now the Chair of the Department of Landscape Architecture at Harvard Graduate School of Design, released what he termed a “reference manifesto” for this new design movement entitled ‘The Landscape Urbanism Reader’. In this text Waldheim, one of the foremost proponents of landscape urbanism, compiles essays from authors across a range of disciplines to “articulate the origins and aspirations of this burgeoning field.” (Waldheim, 2006, p. 15) In the introduction to this important collection of essays Waldheim boldly declares landscape urbanism’s ideological intentions stating:

*“Landscape Urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism. For many, across a range of disciplines, landscape has become both the lens through which the contemporary city is represented and the medium through which it is constructed.” (Waldheim, 2006, p. 11)*

The fundamental proposition supported by Waldheim, Corner, and others is that landscape holds the potential to act as a medium for contemporary urban development appropriately suited to respond to the conditions resulting from the deindustrialization and decentralized urbanization that has defined the past half-century (Corner, 2006, p. 23). Landscape is advocated as an appropriate apparatus for the organization of the vast expanses of abandoned and neglected terrain distributed throughout post-industrial cities including; peri-urban territories, infrastructural corridors, brownfield sites, waterfronts, airports and logistical zones (Waldheim, 2006, p. 38) Corner suggests that landscape urbanism offers the promise of “...a looser, emergent urbanism more akin to the real complexity of cities...” (Corner, 2006, p. 23)

In Waldheim's own entry to the 'The Landscape Urbanism Reader' entitled 'Landscape as Urbanism' he attempts to trace the origins of this emerging theoretical school of design. Waldheim suggests that the roots of the landscape urbanism movement can be traced to post-modern critique of modern architecture's failures with regards to the creation of a "meaningful or livable public realm." (Waldheim, 2006, p. 38). He then explains that, "what postmodern architecture's scenographic approach did not, in fact could not address, were the structural conditions of industrialized modernity that tended toward the decentralization of urban form", which have ultimately resulted in vast environmental destruction and an ever-increasing sense of placelessness (Waldheim, 2006, p. 38).

The notion of landscape as a medium for post-industrial urbanism emerges largely as a response aimed at addressing the structural dynamics supporting suburbanization and defending against the destructive effects of future sprawl. Proponents of landscape urbanism suggest that the ability of landscape as medium to efficiently produce urban effects via the organization of horizontal surfaces and to adapt to the quickly changing demands of contemporary cities, make it appropriate as a model for urban development. Waldheim explains:

*"Today in the context of global capital, post-Fordist models of production, and informal labour relations, urbanization continues to decrease the density of North American settlement. The architectural objects left in the wake of this process are often absorbed by tourism and culture, offering many buildings an alternative post-industrial narrative as a part of leisurely destination environments..."*

*In place of regional and historical destinations, many industrial cities have lost their inhabitants to the suburban surroundings.*



2.12 Waterpark at Landschaftspark in Duisburg Nord



2.13 Blast Furnace Park Landschaftspark in Duisburg Nord



2.14 Gas Works Park in Seattle



2.15 Gas Works Park in Seattle

*In place of traditional dense urban form, most North Americans spend their time in built environments characterized by decreased density, easy accommodation of the automobile, and public realms characterized by extensive vegetation. In this horizontal field of urbanism, landscape has a new found relevance, offering a multivalent and manifold medium for making of urban form, and in particular in the context of complex natural environments, post-industrial sites and public infrastructure.” (Waldheim, 2006, p. 15)*

**Joseph Schilling** Professor of Urban Affairs and Planning at Virginia Tech University and **Jonathan Logan** a design coordinator at the Rochester Regional Community Design Center argue that “existing planning and redevelopment models do not offer a holistic approach for addressing the challenges vacant and abandoned properties create in America’s older industrial cities (Schilling & Logan, 2008).” In their 2008 article entitled, ‘Greening the Rust Belt’, Schilling and Logon propose a model that is based upon a strategy of urban greening which they suggest may “revitalize urban environments, empower community residents, and stabilize dysfunctional markets. (Schilling & Logan, 2008)” The strategy is centred around the conversion of vacant post-industrial sites into public landscapes; and is based on the institution of green infrastructure programs, the management of land banks and collaborative planning (Schilling & Logan, 2008).

The potential of landscape as a remediating agent for post-industrial sites has been demonstrated in many projects over the past quarter-century (Kirkwood, 2001). **Peter Latz and Partner’s** Landschaftspark in Duisburg Nord, Germany and **Richard Haag’s** Gas Works Park in Seattle constitute realized projects which have implemented a landscape programme in the remediation of immensely scaled brownfield sites that have been converted into public park spaces (Waldheim, 2006, p. 44).

In an effort to explain the numerous other potentials of a landscape driven approach to urban development, Corner cites examples from traditional landscape architecture, including **Fredrick Law Olmstead's Central Park** in New York and **Back Bay Fen's** in Boston. With the case of Central Park, Corner points to the tremendous catalyzing influence the park has had on real estate development in its neighbouring context, despite the fact that the original programme was as a place of leisure. The Back Bay Fens are cited, rather, for the significant ecological role they play due to the sophisticated hydrological engineering network which underlies the park system known as the Emerald Necklace. Corner claims that these precedents represent significant potentials of landscape urbanism, namely, "the ability to shift scales, to locate urban fabrics in their regional and biotic contexts, and to design relationships between dynamic environmental processes and urban form." (Corner, 2006, p. 24)

To date, few examples of work fully in the language of landscape urbanism have been realized. Waldheim points to recent international design competition entries, including Field Operations submissions for both Downsview Park in Toronto and Fresh Kills Park in New York, as the best-to-date examples of fully formed landscape urbanism proposals. It is, however, not yet possible to accurately assess the success of landscape as a driver for urban development. The theoretical propositions set forth in landscape urbanism nevertheless invites new imagination regarding the vast and varied potential roles which landscape might play in shaping the future of the post-industrial city.

Some of the functional roles of landscape suggested in landscape urbanism theory include; organizing and promoting development, catalyzing renewal, constructing public recreational spaces, facilitating urban agricultural activities, remediating degraded environments, creating wildlife habitat, and several others.



2.16 Central Park in New York



2.17 Back Bay Fens in Boston



2.18 James Corner and Stan Allen's Downsview Park competition entry

It has also been argued by some that an urban development model based around landscape possesses great inherent potential to resist the universalizing effects of globalization and enhance a locality's unique sense-of-place. This sentiment is supported by **Kelly Shannon**, a Professor of Architecture, Planning, and Urban Design at the Katholieke Universiteit Leuven in Belgium, in her essay 'From Theory to Resistance: Landscape Urbanism in Europe'.

Shannon cites the critical regionalist movement, which championed design reinforcing local sense-of-place, as a precursor to contemporary landscape urbanism. She explains that although **Alexander Tzonis** and **Lianne Lefaivre**, who first termed critical regionalism in 1981, were originally concerned solely with architecture, "the environmental determinism accorded to their argument has recently been extended to critical regionalism in the medium of landscape, in an effort to challenge the internationally imposed generic models of modernisation and urbanization and to resist the homogenizing effects of late capital." (Shannon, 2006, p. 143)

Interestingly, when Tzonis and Lefaivre revisit the subject in 2003's 'Critical Regionalism: Architecture and Identity in a Globalized World', Tzonis suggests that the roots of what he calls the "regionalist revolt defending bottom-up, individualist and liberal values against top-down, absolutist universalism" may be traced to landscape practices (Lefaivre & Tzonis, 2003, p. 13). Tzonis points to the emergence of the English garden in the eighteenth century as an early conscious expression of regionalism, as it favoured the enhancement of the natural aspects of a site and opposed the formal geometries of the French garden architecture. (Lefaivre & Tzonis, 2003, p. 13)

Shannon's argument supporting landscape's potential to oppose the universalist trends of contemporary urban development later draws from theory by **Kenneth Frampton**, in which he campaigns for landscape as mediator between "built form and otherwise placeless surfaces of urbanization." (Shannon, 2006, p. 144)

Shannon asserts, *"The poignant stance of Frampton and his belief in landscape as an operating tool to resist the globalizing and homogenizing tendencies of built environments has provided a platform for the conceptual evolution of landscape urbanism."* (Shannon, 2006, p. 144)

It ultimately seems that landscape as a medium for urban development, holds great potential for preserving and heightening the sensed character of place, furthering it as an interesting response to the redevelopment of North American post-industrial cities.



**P A R T   T H R E E :   V I S I O N**





**“Wine brings to light the hidden secrets of the soul, gives being to our hopes, bids the coward flight, drives dull care away, and teaches new means for the accomplishment of our wishes.”**

Horace



### 3.1 URBAN STRATEGY

The history of St. Catharines displays a community in continual transformation in response to challenges and opportunities presented over time. The community also proves to be one whose identity is constantly changing in correspondence with the evolution of the local economy. St. Catharines began as a small agriculturalist settlement benefiting from the ideal growing conditions offered on the Niagara Peninsula. The community then profited heavily from the development of the canal system and rapidly transformed into a centre of industry. The nature of local industry would change repeatedly over time as a result of both endogenous and exogenous factors; shifting from milling and shipbuilding, to machining and textiles, and eventually to automotive manufacturing.

For much of the second half of the twentieth century, the city prided itself on being a blue collar 'GM town'. The recent decline of the manufacturing industry in the city has been damaging to the local economy and identity; resulting in a functional and symbolic void in the community. St. Catharines presently faces many compound issues related to deindustrialization, and decentralized urbanization, that challenge the well-being of the community and the quality-of-life offered in the city. The persistence of the community suggests, however, that the current economic crisis will in time give rise to new potentials.

The proposal in this thesis constitutes a vision for the next stage in St. Catharines' urban evolution. It develops as a **wholistic response** to the many issues that challenge the community, attempting to simultaneously **encourage urban renewal, support economic development, and enhance the local sense-of-place**. The proposal looks to St. Catharines' terroir as the source of this vision for a new model of settlement in the city that potentially holds the seeds of a more authentic and lasting urban development.



3.01 Postcard c. 1914



3.02 Postcard c. 1914



3.03 Niagara Wine Festival Parade in Downtown St. Catharines c. 2009



3.04 Niagara Wine Festival Parade in Downtown St. Catharines c. 2009

A new accord between the built, natural and cultivated environment of the city is envisioned through the radical reconsideration of the urban landscape. At the heart of the proposal is the cultivation of vineyards in the area around St. Catharines' historic downtown core. Further proposed is the extensive promotion of vineyards on underutilized terrain throughout the city. The vineyards are intended as a catalyst for urban renewal, strategically promoting and organizing future centralized development.

The establishment of vineyards within the city is also related to a larger objective to restructure St. Catharines' local economy around the wine industry in Niagara, which has experienced significant growth over the past two decades, while local manufacturing activities subject to global influence have steadily declined. As the largest city on the Niagara Peninsula, St. Catharines has long been regarded as the symbolic centre of the region's wine industry, and has played host to the **'Niagara Wine Festival'** for 58 years. The festival is a week-long celebration of the regional harvest that takes place in the downtown in late-September each year. Events related to the festival include concerts, awards ceremonies and wine tastings at Montebello Park; as well as a closing parade through the historic core. The proposal intends to build on St. Catharines role as the symbolic centre of the wine industry and use the spirit of the festival as a driver for urban development.

Presently, Niagara's wine country, which stretches approximately 60 km from the eastern extremity of the peninsula in Niagara-On-The-Lake, west through St. Catharines and the smaller communities of Jordan, Vineland, Beamsville, Grimsby and Winona, lacks a true functional centre. Furthermore, the existing **'Niagara Wine Route'**, which directs tourists between the 70 estate wineries of the region, entirely by-passes St. Catharines' downtown despite it's geographic centrality.

This proposal not only suggests Downtown St. Catharines as a destination on the wine route, it envisions the historic core as the hub of the entire wine region.

Centrally located within the region, Downtown St. Catharines is ideally sited to offer accommodations and amenities for the over 200,000 travellers who visit Niagara's wine country annually. Positioning the downtown as the hub of regional wine-based tourism, is intended to generate new central economic development and employment opportunity. In addition to acting as a hub for tourism, the downtown is also proposed as a centre of wine production and education through the establishment of a teaching winery in the core.

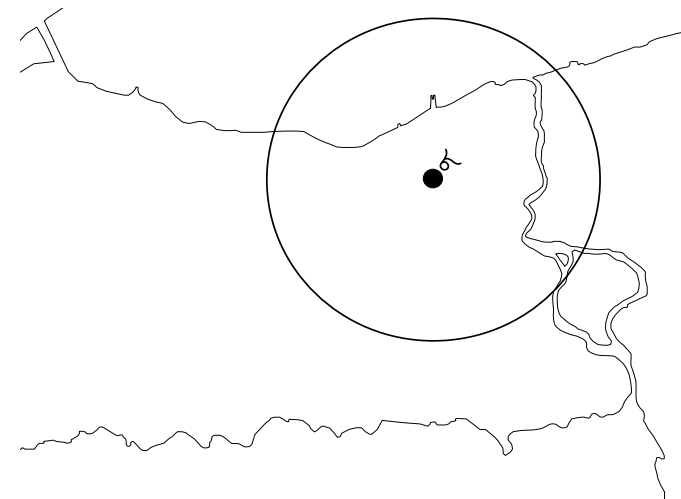
Finally, the proposal envisions that the citizens of St. Catharines take a vested interest in the new local wine industry, by assuming responsibility for the cultivation of vineyards on public and private lands distributed throughout the urban structure in exchange for grants administered by the municipal government. The collective annual harvest would then be contributed to the teaching winery.

The wine produced from the fruit of the vineyards cultivated by citizens across the city would ultimately constitute an authentic expression of St. Catharines' terroir and a product that offers a new source of pride for the community.

This radical proposal intends to improve the overall quality-of-life offered in St. Catharines, and build a broader sense of community by enhancing the unique experience of the place and fully engaging citizens in the proposed local wine enterprise.

3.05 PROPOSED NIAGARA WINE ROUTE MAP [1:300,000]

-  DOWNTOWN
-  EXISTING WINERY
-  WATER BODY
-  INTERNATIONAL BORDER
-  NIAGARA WINE ROUTE
-  PROPOSED CONNECTION
-  NIAGARA WINE REGION







3.06 PART I

L A K E O N T A R I O



L A K E E R I E

3.07 PROPOSED NIAGARA WINE ROUTE DIAGRAM

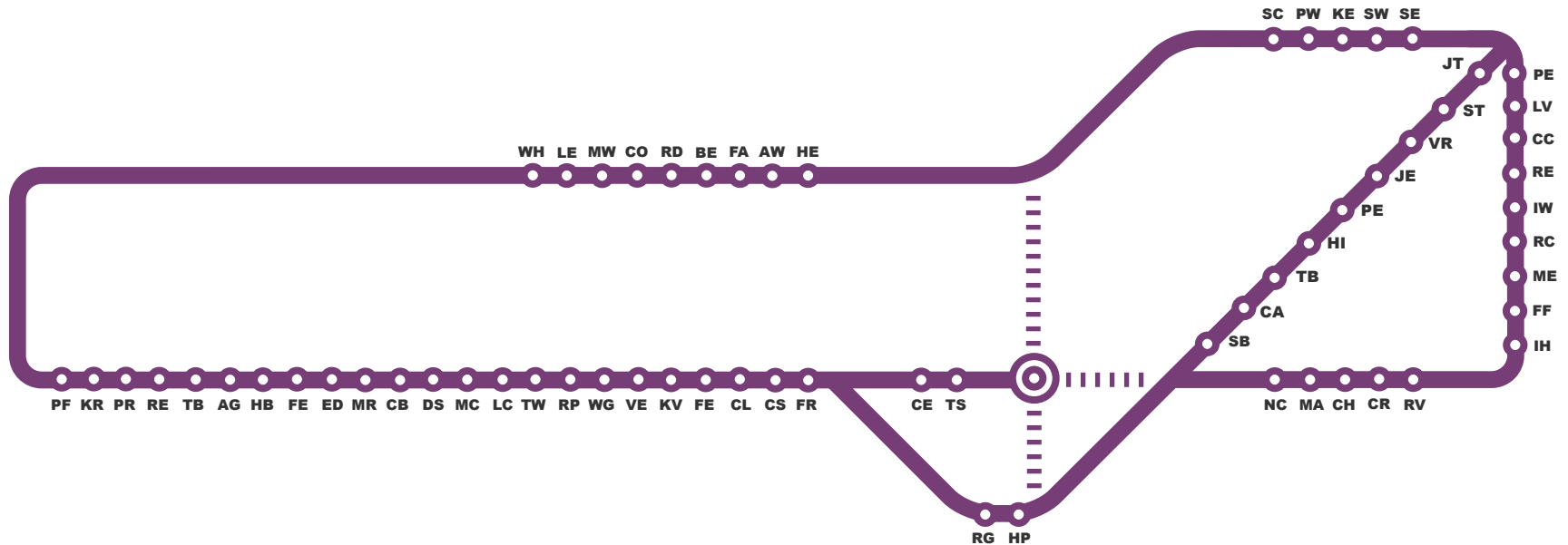
-  EXISTING WINE ROUTE
-  PROPOSED CONNECTION
-  EXISTING WINERY
-  PROPOSED HUB DOWNTOWN ST. CATHARINES



3.08 Downtown St. Catharines is proposed as the starting point for wine tours travelling throughout the region. This vignette depicts one such tour group at Jackson-Triggs winery in Niagara-On-The-Lake.

# PROPOSED NIAGARA WINE ROUTE

WINONA GRIMSBY BEAMSVILLE VINELAND JORDAN ST. CATHARINES NIAGARA-ON-THE-LAKE



WH WALKER HALL WINERY  
 LE LEGENDS ESTATES WINERY  
 MW MAGNOTTA WINERY  
 CO CORNERSTONE  
 BE BIRCHWOOD ESTATE  
 RD ROYAL DEMARIA  
 FA FOREIGN AFFAIR WINERY  
 AW ALVENTO WINERY  
 HE HARBOUR ESTATES  
 PF PUDDICOMBE ESTATES  
 KR KITTLING RIDGE  
 PR PENINSULA RIDGE ESTATES  
 RE ROSEWOOD ESTATES  
 TB THIRTY BENCH  
 AG ANGELS GATE WINERY  
 HB HIDDEN BENCH

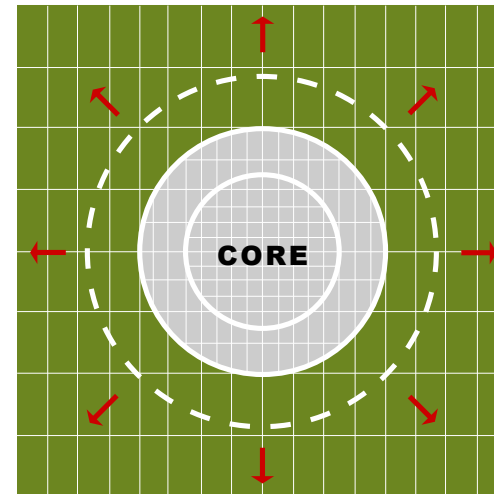
FE FIELDING ESTATE  
 ED EAST DELL ESTATES  
 MR MOUNTAIN ROAD WINE CO.  
 CB CROWN BENCH ESTATES  
 DS DE SOUSA WINE CELLARS  
 MC MALIVORIE WINE COMPANY  
 LC LAKEVIEW CELLARS  
 TW TAWSE WINERY  
 RP RIDGEPOINT WINES  
 WG WAYNE GRETZKY ESTATE  
 VE VINELAND ESTATES  
 KV KACABA VINEYARDS  
 FE FEATHERSTONE  
 CL CALAMUS ESTATE  
 CS CAVE SPRINGS CELLARS  
 FR FLAT ROCK CELLARS

CE CREEKSIDE ESTATE  
 TS 13TH STREET WINERY  
 RG ROCKWAY GLEN WINERY  
 HP HENRY OF PELHAM  
 NC NIAGARA COLLEGE  
 MA MALETA ESTATE WINERY  
 CH CHATEAU DES CHARMES  
 CR COYOTE'S RUN  
 RV RAVINE VINEYARD  
 IH THE ICE HOUSE  
 FF FROGPOND FARMS  
 ME MARYNISSIN ESTATES  
 RC RIVERVIEW CELLARS  
 IW INNISKILLIN WINES  
 RE REIF ESTATE  
 CC CAROLINE CELLARS

LV LAILEY VINEYARD  
 PE PELLER ESTATES  
 SE SUNNYBROOK ESTATE  
 SW STREWN WINERY  
 KE KONZELMANN ESTATE  
 PW PALATINE WINERY  
 SC STONECHURCH VINEYARDS  
 JT JACKSON TRIGGS  
 ST STRATUS  
 VR VIGNOBLE RANCOURT  
 JE JOSEPH'S ESTATE  
 PE PILLITTERI ESTATES  
 HI HILLIBRAND  
 CA CATTAIL CREEK  
 SB SOUTHBROOK VINEYARDS

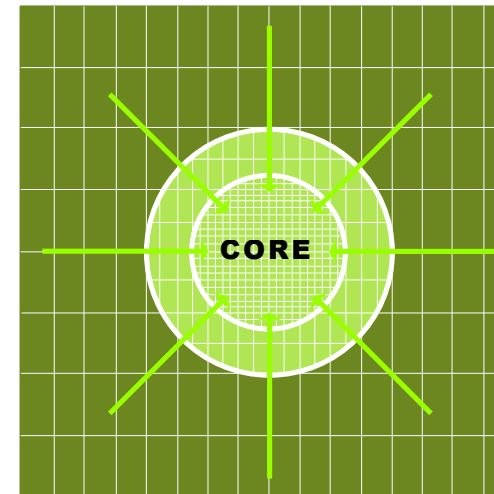
### **EXISTING LAND-USE MODEL**

- Separation of agriculture from the built realm of the city
- Expansion of urban form out from downtown core area
- Loss of productive agricultural terrain in surrounding area



### **PROPOSED LAND-USE MODEL**

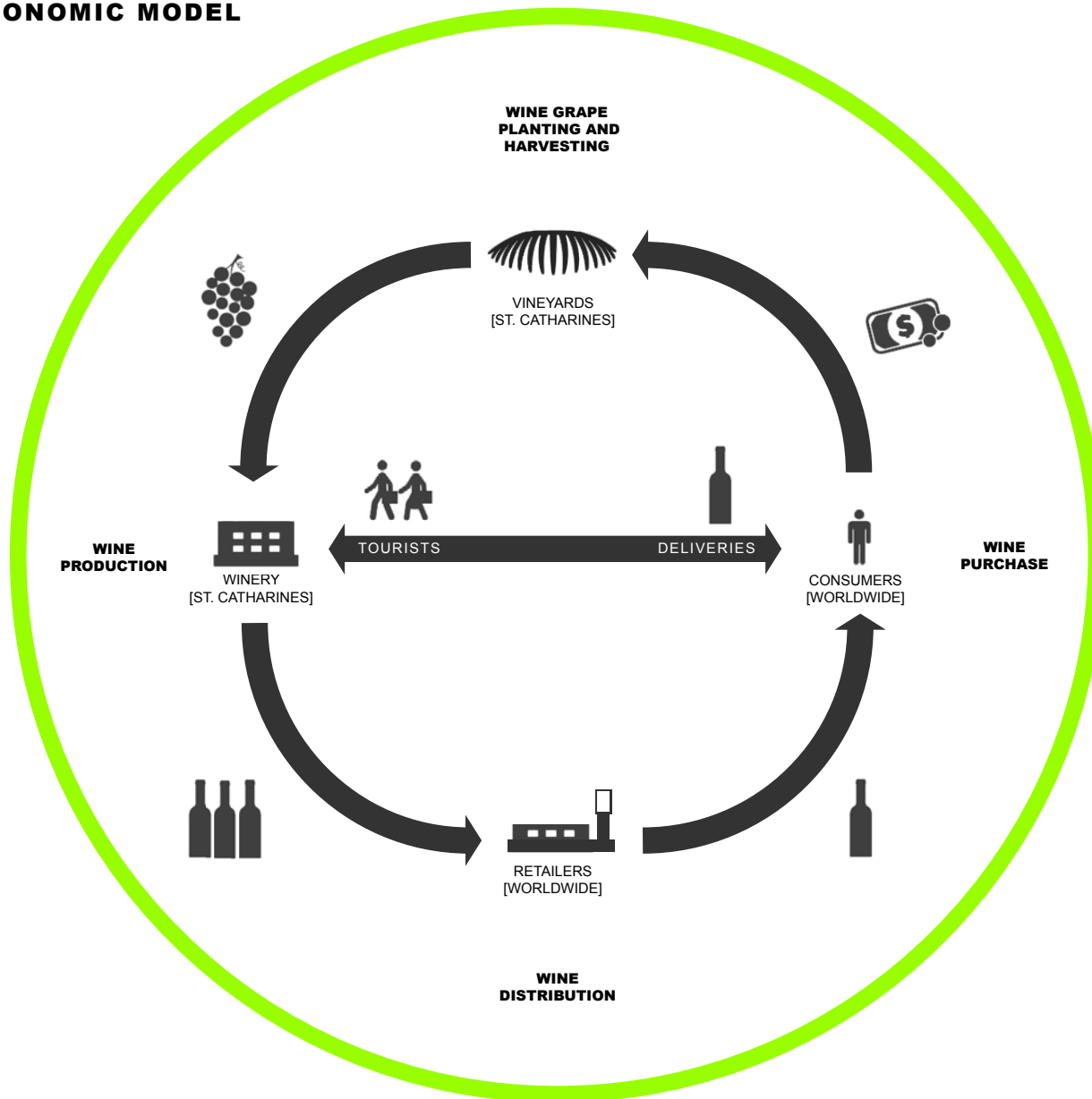
- Dispersion of agriculture throughout the urban structure
- Intensification of urban form centrally in downtown core area
- Conservation of productive agricultural terrain in surrounding area



### *3.09 Existing And Proposed Land-Use Models*



# PROPOSED ECONOMIC MODEL



3.10 Proposed Economic Model

## 3.2 URBAN DESIGN

The principal design interventions supporting this broad vision for the next stage in St. Catharines' urban evolution are focused in the city's historic core in the environs of St. Paul Street and the adjacent valley of the old Welland Canal. St. Paul Street, which acts as the spine of the downtown, is constructed along a rift in the natural topography which effectively divides the built realm of the city from the valley below. The level of the city and the level of the valley lie vertically separated by approximately fourteen metres. This topographic condition has resulted in a unique circumstance for the buildings along the south portion of St. Paul Street, which front onto the main thoroughfare and back onto the valley. The valley site, and the buildings aligned along its embankment, essentially constitute the first image of the downtown for travelers approaching the core. The crux of the design is focused on this historically charged, but previously undervalued site.

The first phase in the transformation of St. Catharines' urban environment involves the reconsideration of the valley landscape through the creation of a series of terraced **urban vineyards** on the site adjacent to the historic core between St. Paul Street and Highway 406. The vineyards effectively represent a symbol of urban transformation while simultaneously making connections to the city's cultural heritage. Eventually the urban vineyards are intended to be connected to a larger system of agriculture, parks, and woodlands in a landscaped corridor stretching alongside the highway and Twelve Mile Creek. This landscaped corridor is considered as a permanent ecological infrastructure around which future development will occur.

In the basin of the valley of the old Welland Canal a series of **constructed wetlands** are planned. The wetlands are intended to act as catchments for surface water runoff from the terraced vineyards in the valley. The wetlands also create new habitat

for indigenous species of flora and fauna and support recreation and leisure activities with pedestrian trails that are proposed to connect into a larger network that extends throughout the Niagara Region.

Through the implementation of landscape as a medium to enhance the image and experience of the valley that surrounds the core, the plan aims to change perceptions of the downtown and direct future development in it's vicinity. Future residential infill development is specifically planned along the back face of St. Paul Street overlooking the valley.

The valley is also the planned location of the **teaching winery** proposed in this urban design programme. This institution is imagined as a fully functioning winery that also includes an agenda of viticultural and oenological instruction - educating students in the craft of local winemaking. The teaching winery is planned as the central facility where wine is made from the grapes grown on vineyards distributed throughout the city.

Located along the base of St. Paul Street, directly adjacent to the uppermost terrace of urban vineyards, the teaching winery is imagined as a vital physical - and symbolic link - between the landscape of the valley and the level of the city. The building is imagined as part architecture, part pedestrian infrastructure, and part urban public space – as it's roof ramps between the valley and St. Paul Street. The ramping roof structure of the teaching winery leads to an opening in the built fabric on the south side of St. Paul Street and becomes a **vista** that offers panoramic views from the downtown to the valley below.

The teaching winery is intended as a part of a concentration of institutions in the downtown that includes the proposed Niagara

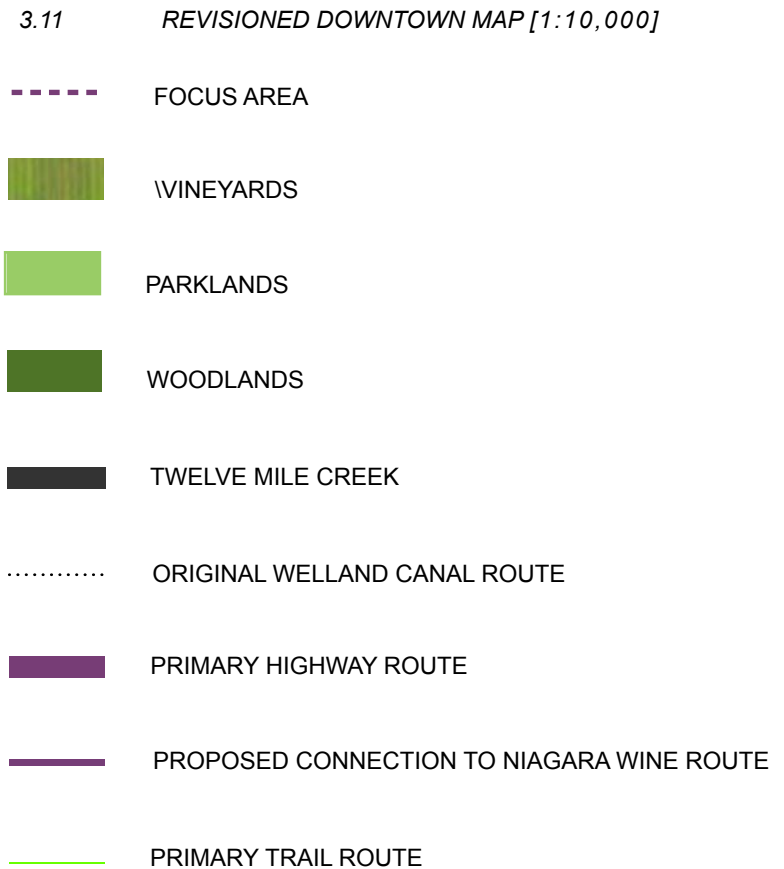
Centre for the Arts and the Brock University School of Fine and Performing Arts. Collectively these institutions are anticipated as catalysts for downtown residential and commercial development.

To accommodate increased tourist activity related to the downtown’s proposed role as a hub for the Niagara wine region, an office tower fronting onto King Street is planned to be repurposed as a **hotel**. The suggested conversion of the existing tower includes the reorganizing of interior spaces along with the recladding of the exterior facade.

An adjacent lot opening onto St. Paul Street is envisioned to be transformed into a new central **public plaza** flanked by shops, restaurants, and a proposed civic museum. The southeast facade of the hotel which fronts onto the public space, and is visible from the valley of the old canal, offers a growing medium supporting vine development – animating the plaza and acting as a visual symbol the cities unique new direction.

The proposed hotel and plaza are envisioned as the terminal for wine tours of the region and as a central location for events of the annual wine festival. The plaza essentially constitutes an important central civic space previously missing in the downtown.

Combined the market, hotel, plaza and schools constitute a new urban armature physically linking the city to the valley landscape. The overall plan attempts to create an experientially rich built urban environment which simultaneously celebrates the present and makes connections with past and with the future.





ONTARIO STREET

MIAGARA STREET

ST. PAUL STREET

406

406

82



10 TONNES / ACRE X 50 ACRES = 500 TONNES  
 500 BOTTLES / TONNE X 500 TONNES = 250,000 BOTTLES



50 ACRES



250,000 BOTTLES



10 TONNES / ACRE X 250 ACRES = 2,500 TONNES  
 500 BOTTLES / TONNE X 2,500 TONNES = 1,250,000 BOTTLES



250 ACRES



1,250,000 BOTTLES

3.12 PROPOSED URBAN VINEYARD PHASING DIAGRAM



10 TONNES / ACRE X 500 ACRES = 5,000 TONNES  
 500 BOTTLES / TONNE X 5,000 TONNES = 2,500,000 BOTTLES



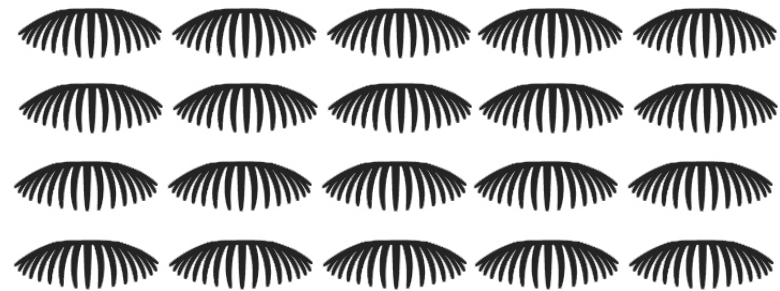
500 ACRES



2,500,000 BOTTLES



10 TONNES / ACRE X 1000 ACRES = 10,000 TONNES  
 500 BOTTLES / TONNE X 10,000 TONNES = 5,000,000 BOTTLES



1000 ACRES



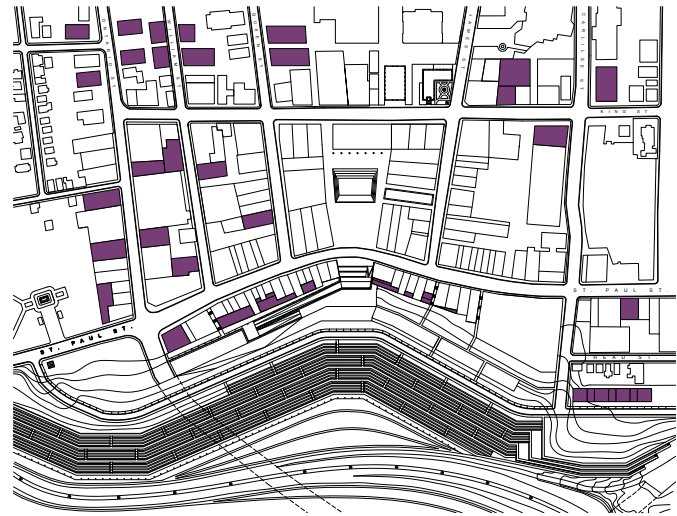
5,000,000 BOTTLES

**PROPOSED URBAN PLAN** 1: 2500 ☉

- 01 PROPOSED URBAN VINEYARDS
- 02 PROPOSED TEACHING WINERY
- 03 PROPOSED VALLEY VISTA
- 04 PROPOSED PLAZA
- 05 PROPOSED HOTEL
- 06 PROPOSED CIVIC MUSEUM
- 07 PROPOSED BROCK SCHOOL OF ARTS
- 08 PROPOSED NIAGARA CENTRE FOR THE ARTS
- 09 PROPOSED WETLANDS
- 10 PROPOSED PARKLANDS
- 11 EXISTING FARMERS MARKET
- 12 EXISTING OLD COURTHOUSE
- 13 EXISTING CITY HALL
- 14 EXISTING HIGHWAY 406



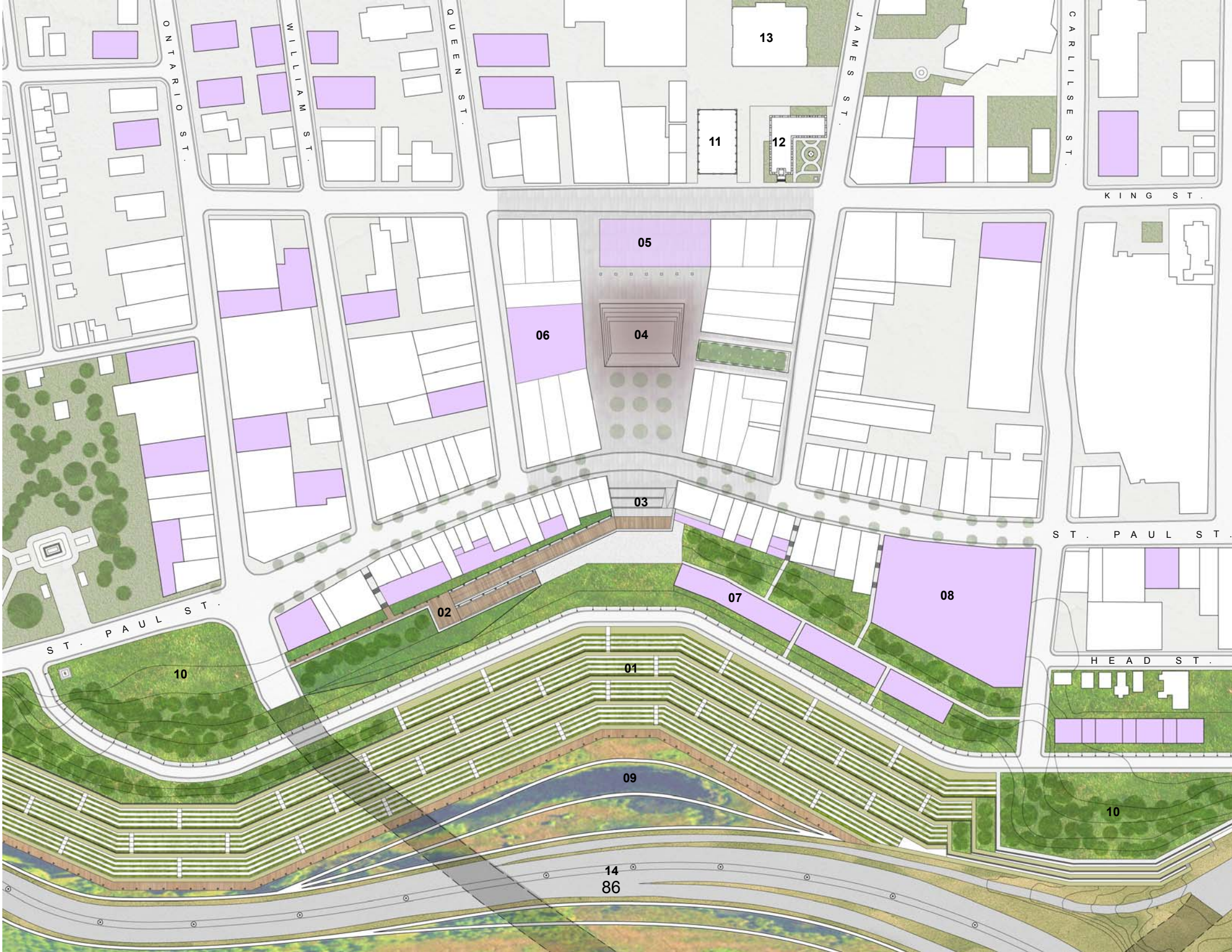
PROPOSED URBAN ARMATURE



PROPOSED URBAN INFILL

*3.13 PROPOSED URBAN PLAN AND DIAGRAMS*





ONTARIO ST.

WILLIAM ST.

QUEEN ST.

JAMES ST.

CARLISSE ST.

KING ST.

ST. PAUL ST.

ST. PAUL ST.

HEAD ST.

13

11

12

05

06

04

03

02

07

08

10

01

09

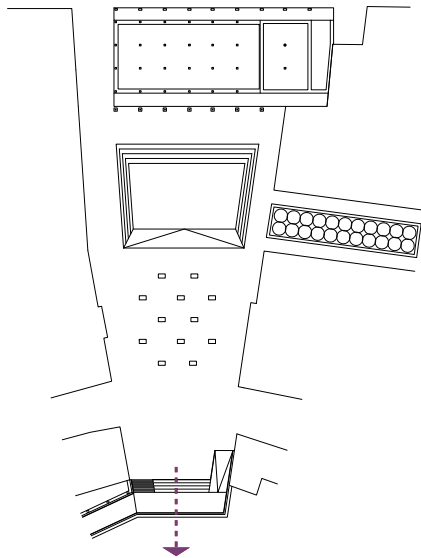
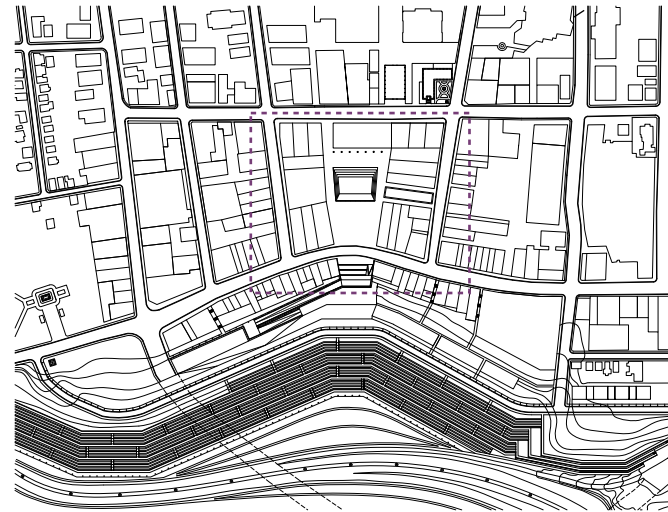
10

14

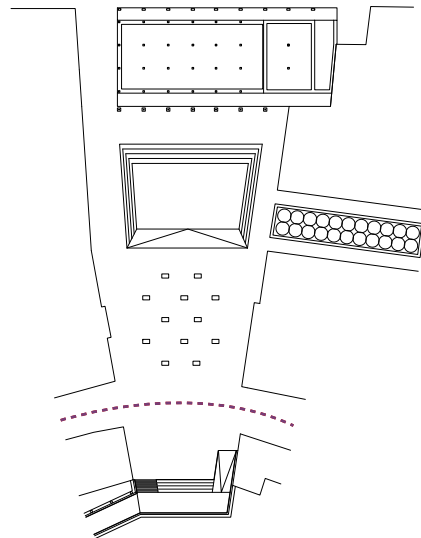
86

**PROPOSED PLAZA PLAN** 1: 1000 ☉

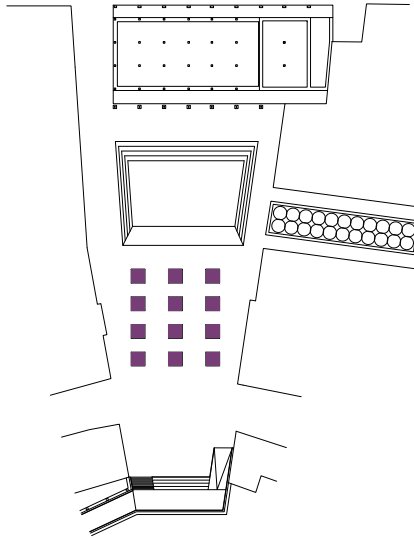
- 01 PROPOSED PLAZA
- 02 PROPOSED HOTEL
- 03 PROPOSED GRAPE CRUSH PIT
- 04 PROPOSED VALLEY VISTA
- 05 PROPOSED TEACHING WINERY
- 06 PROPOSED CIVIC MUSEUM
- 07 PROPOSED RESTAURANT
- 08 PROPOSED RETAIL
- 09 PROPOSED WINE BAR
- 10 PROPOSED BUS STOP
- 11 EXISTING RESTAURANT / BAR
- 12 EXISTING RETAIL
- 13 EXISTING OFFICE / BUSINESS



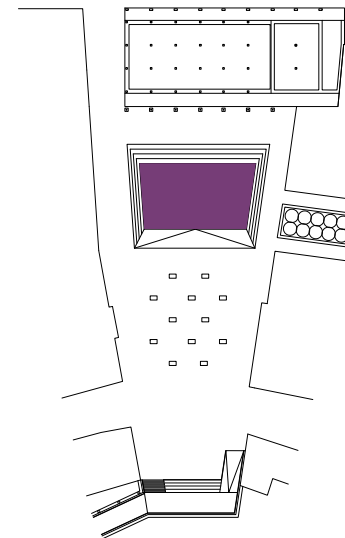
**VIEW TO URBAN VINEYARDS**



**FESTIVAL PARADE ROUTE**



**FESTIVAL KIOSKS**



**FESTIVAL GRAPE CRUSH**

**3.14 PROPOSED PLAZA PLAN AND DIAGRAMS**

K I N G   S T R E E T

Q U E E N   S T R E E T

J A M E S   S T R E E T

S T .   P A U L   S T R E E T

13   13   13

02

12

13

13

07

11

06

08

03

12

01

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11

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11

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04

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88



**PROPOSED CITY - VALLEY SECTION 1: 1000**

- 01 EXISTING FARMERS MARKET
- 02 KING STREET
- 03 PROPOSED HOTEL
- 04 PROPOSED PLAZA
- 05 ST. PAUL STREET
- 06 PROPOSED VALLEY VISTA
- 07 PROPOSED TEACHING WINERY
- 08 PROPOSED BROCK SCHOOL OF ARTS
- 09 PROPOSED URBAN VINEYARDS
- 10 PROPOSED WETLANDS
- 11 EXISTING HIGHWAY 406



3.15 PROPOSED CITY - VALLEY SECTION



*3.16 An interconnected system of agriculture, parks and woodlands form a landscaped corridor alongside Highway 406 and Twelve Mile Creek. Stretching along the periphery of St. Catharines' historic core, urban vineyards symbolize the city's new role as the centre of Niagara's Wine Region and make connections to the city's cultural heritage.*



Wine Route  
↑

*3.17 Vineyards are planned to be dispersed throughout the urban structure in parks, community gardens, and residential yards. Citizens of St. Catharines are encouraged to tend vines and contribute each seasons harvest to the local teaching winery based on a system of municipal subsidies - engaging the community in the proposed local wine enterprise.*





*3.18 Constructed wetlands in the basin of the valley of the old Welland Canal create habitat for indigenous species of flora and fauna and support recreation and leisure activities. A series of pedestrian trails are proposed to connect to a larger regional trail network facilitating events including the Niagara Wine Festival's annual 'Run for the Grapes' marathon and 'Off-Road Squeezer' bicycle race - depicted here.*



*3.19 The proposed 'St. Catharines Teaching Winery' - a fully functioning winery that also includes a programme of viticultural and oenological instruction - is designed as a physical and symbolic link between the landscape of the valley and the level of St. Paul Street.*



*3.20 Depicted here is an imagined communal 'grape stomp' which is imagined as a new event of the annual Niagara Wine Festival taking place in the proposed plaza opening onto St. Paul Street. In the background is the southeast façade of the proposed hotel tower included in this urban programme.*



*3.21 The ground level of the new hotel is intended as a free plane allowing for pedestrian movement between St. Paul Street, the plaza and King Street. This affords a connection to the city's farmer's market which has operated from the same location on King Street for over 150 years.*

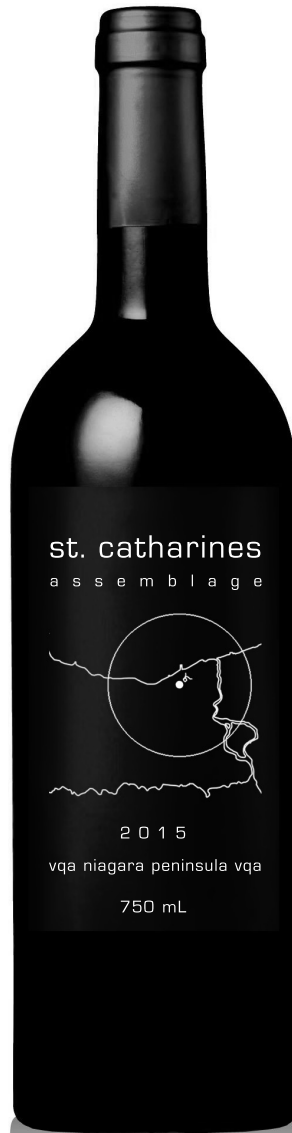




*3.22 On the south side of St. Paul Street, directly across from the proposed public plaza, a belvedere offers panoramic views of the vineyards in the valley below.*



3.23 *St. Catharines Assemblage (2015) première white, red and ice wine.*



3.24 A panoramic view of the landscape along the periphery of St. Catharines' historic core





BROCK

Glendale Avenue  
3 km

Westchester Avenue

3.25 A panoramic view of St. Paul Street during the Niagara Wine Festival







137 st. paul street

# C O N C L U S I O N





## CONCLUSION

An old adage states, 'As goes General Motor's... so goes the nation'. Growing up, I was familiar with a different version of this expression, "As goes General Motor's... so goes St. Catharines." There was a time when both of my parents, two of my uncles and my grandfather were employed at the local GM facilities. Today, due to retirements, resignations, lay-offs, and transfers, none remain. In fact, my generation is the first in my family's history in Canada in which no one is employed at the local factories.

As the nature of employment in the city has changed, it has left citizens to ask; if St. Catharines is no longer a 'GM town' what kind of town is it? And what kind of future do we have? These anxieties are not existential questions. They are real and they are visible to any one who surveys the contemporary city.

This thesis grew and developed as a response to such questions and out of a desire to help St. Catharines understand it's inherent potential to be a truly great mid-sized city. Twenty five years ago no one thought GM would ever declare bankruptcy. With the primary economic engine of development no longer available to generate growth, new models needed to be explored. This thesis looked to make the city aware of the authentic local resources that it has available which it has lost touch with over the years. The thesis is also concerned with exploring a form sustainable urban development that is unwilling to separate issues of place making and economic development.

While the investigation and proposal that comprise the thesis are specific to St. Catharines, the work has broader relevance as it presents a response to contemporary urban issues that are prevalent throughout North America; particularly in cities of the mid-sized type.

An insistence on the importance of local identity and the search for its sources consistently guided the research and proposal in the thesis. By exploring the geographical, cultural and economic forces that shaped the form and character of St. Catharines - the goal was not to repeat historical forms or propose a sentimental view of the city but to draw on the most enduring and persistent lines of character and then project these forward through a robust urban design program that emerges from the city's very core. The proposal ultimately benefited from valuing opportunities for the city's future development that were made evident by consideration of its rich past.

Central to the endeavor to promote new understandings of cities and inspire new possibilities for their redevelopment was the concept of terroir. Through the metaphorical lens of terroir, questions were raised about the significance of place - and design that emerges out of its specifics. What emerged was the possibility that the greatest resource we have for the revisioning of cities is acknowledging the complex qualities of a place that authentically result from the interactions of the environmental and societal features in that place. The terroir metaphor was ultimately used to make a case for a deeper consideration of 'place' by designers.

Landscape urbanism is an ideal framework and strategy for redevelopment because it calls for the inclusion of landscape in any discussion of urban renewal. The theoretical notion of landscape as a medium for urban development provides St. Catharines with an essential component for the proposed plan for the city's renewal.

Working on an urban renewal project set in my hometown proved to be far more of a challenge than I had originally anticipated. While I had a deep desire to present a project that was authentic to the community's character - I knew it must also sensitively emerge

from the city's very core. Ultimately this thesis advocates for the profound importance of authenticity in urban redevelopment.

While the final proposal constitutes a radical approach for the revival and transformation of the city, it does so based upon the understandings gained from in-depth research of the city's unique history, geography and culture. The weaving together of these disparate strands, expresses the unique scope of the discipline of architecture and affirms the potential of realizing a more wholistic renewal of the St. Catharines' urban environment.



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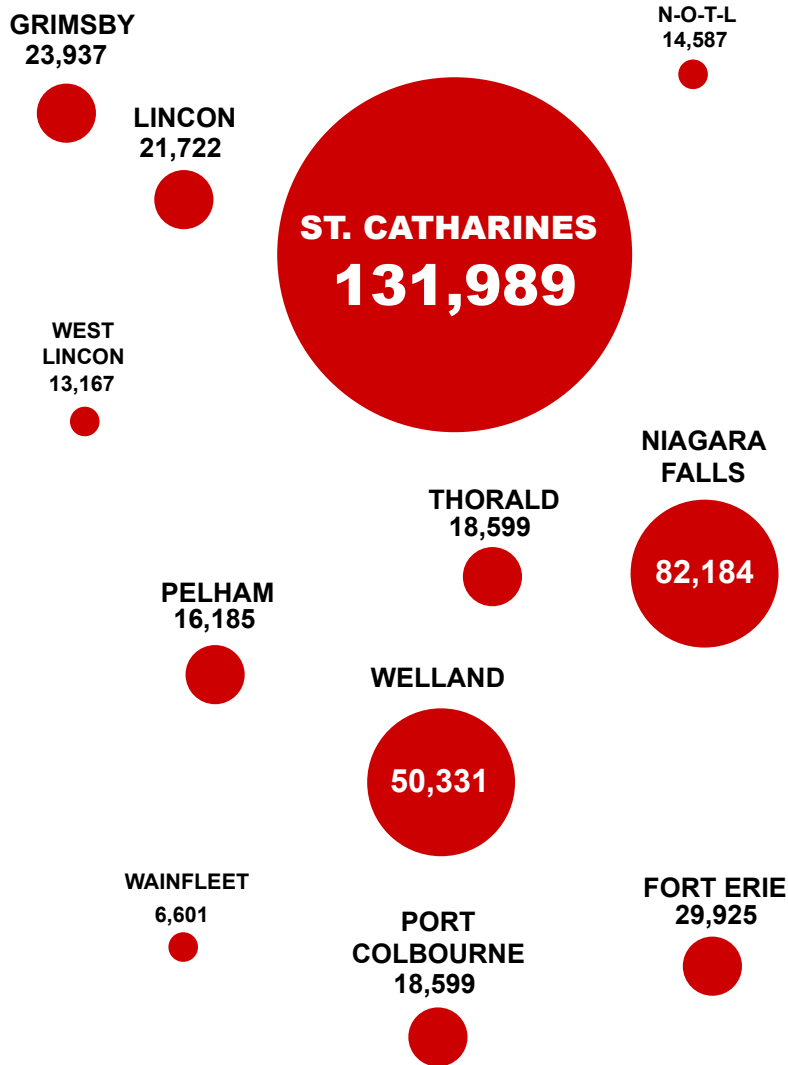
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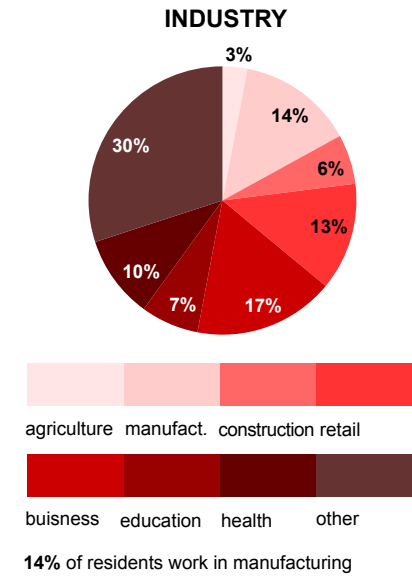
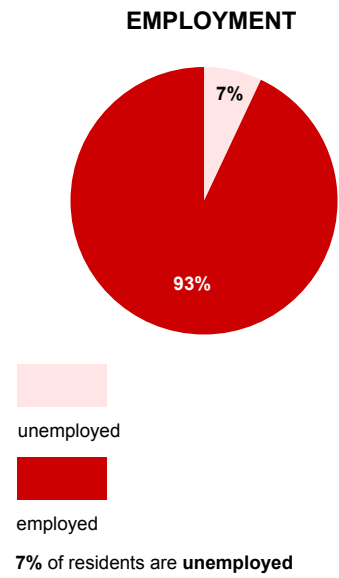
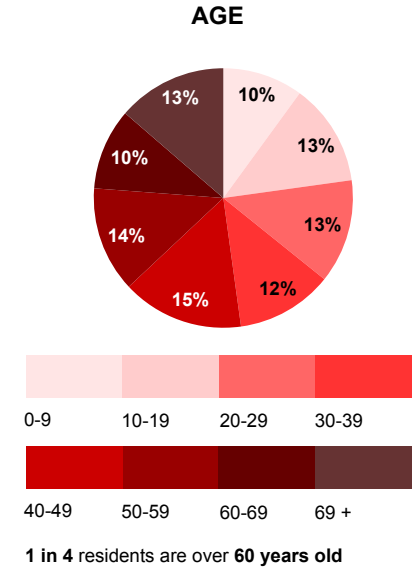
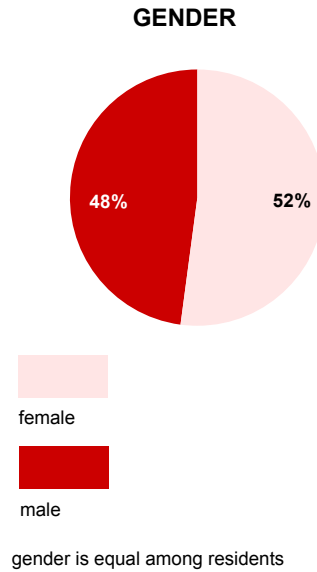
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# APPENDIX A

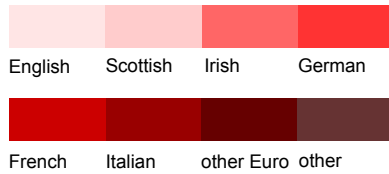
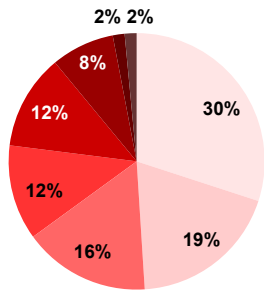
## ST. CATHARINES DEMOGRAPHIC ANALYSIS



Source: Statistics Canada Community Profile 2006 Census

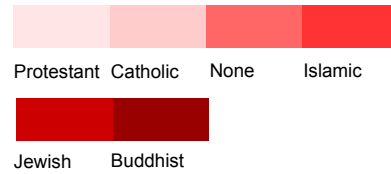
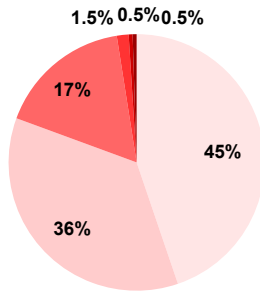


**HERITAGE**



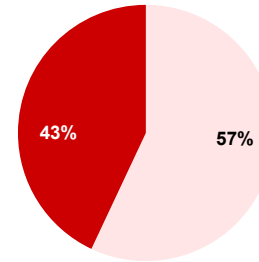
98% of residents are of **European heritage**

**RELIGION**



81% of residents are of **Christian religion**

**HEALTH**



57% of residents are considered **obese**

**HEALTH**



officially **Canada's fattest city** c. 2001

**2009 TOP EMPLOYERS**

- 4,734 District School Board of Niagara
- 4,200 Niagara Health System
- 2,740 General Motors of Canada Ltd.
- 2,537 Niagara Catholic School Board
- 1,784 Brock University
- 1,300 Algoma Central Corporation
- 1,200 Seaway Marine Transport Inc.
- 1,000 SITEL call centre services

**GENERAL MOTOR'S OF CANADA LTD. EMPLOYMENT**



1989



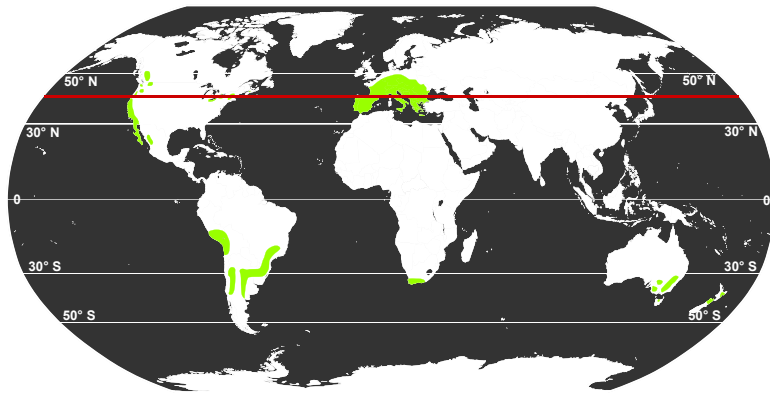
2009



2029

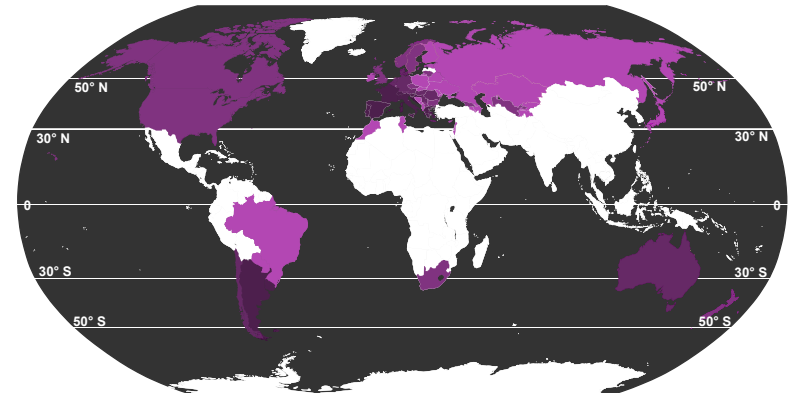
# APPENDIX B


## WINE INDUSTRY ANALYSIS



 WINE PRODUCING REGION  43° N



At 43° N the Niagara Peninsula lies at roughly the same latitude as world famous wine regions such as Bordeaux, France, Rioja, Spain and Tuscany, Italy.



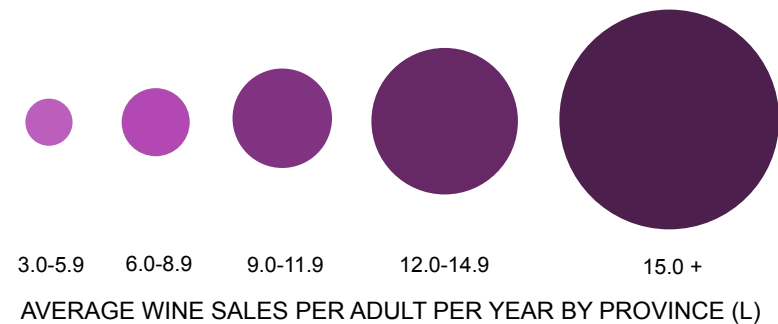
  
1.0-6.9 7.0-14.9 15.0-29.9 30.0 +

In 2005 Canadian adults purchased an average of 14.2 L of wine each. This constitutes an increase of 3.6 L from 10.6 L each in 1993. During this same period beer sales in Canada fell 3.2 L from 91.3 L to 88.1 L.

## CANADIAN WINE: 'A GROWING INDUSTRY'

 PROFITS - DOMESTIC SALE OF CANADIAN WINE (CAD)  
 PROFITS - EXPORT OF CANADIAN WINE (CAD)

Data Source: Penny Hope-Ross (2006) Statistics Canada:  
From the Vine to the Glass: Canada's Grape and Wine Industry:  
[www.statcan.gc.ca/pub/11-621-m/11-621-m2006049-eng.htm](http://www.statcan.gc.ca/pub/11-621-m/11-621-m2006049-eng.htm)



3.0-5.9 6.0-8.9 9.0-11.9 12.0-14.9 15.0 +  
AVERAGE WINE SALES PER ADULT PER YEAR BY PROVINCE (L)

