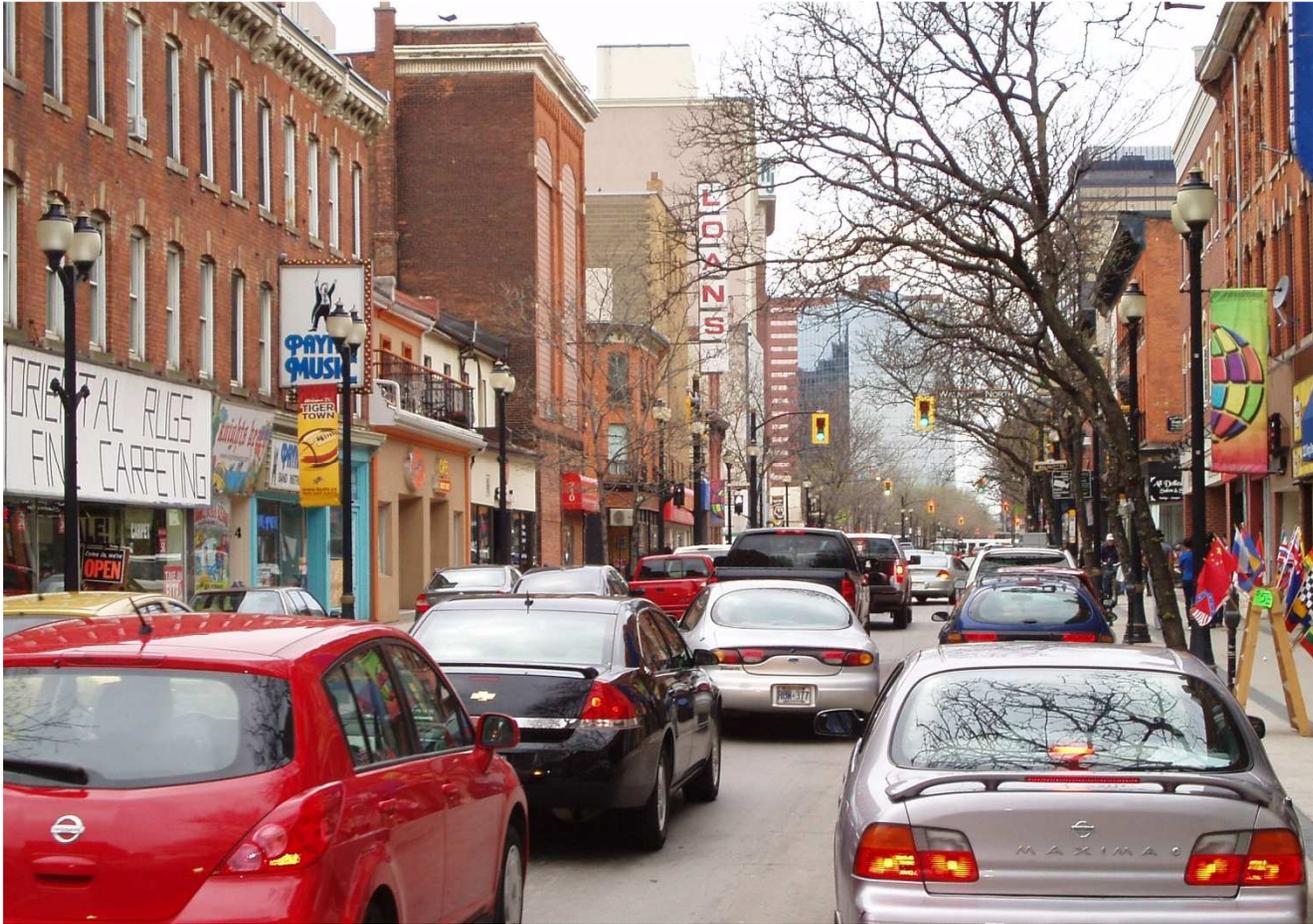


Downtown Hamilton Transit Terminal

TRANSIT-SUPPORTIVE URBAN DESIGN GUIDELINES



ALISSA GOLDEN

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ACKNOWLEDGEMENTS

Completion of this report marks the end of a two-year commitment to living and breathing all things Hamilton. I thank my friends and family for their continued support and tolerance of my planning diatribes. I thank my supervisor, Andrejs Skaburskis, and everyone at the School of Urban and Regional Planning for their guidance. I dedicate this report to:

*My second home/office, C&Co.; my muse; and,
Hamilton- you continue to inspire and surprise me around every street corner.*

ACRONYMS

CBD – Central Business District
CMA – Census Metropolitan Area
CT – Census Tract
CUTA – Canadian Urban Transportation Association
DPA – Development Permit Area
DPS – Development Permit System
DUA – Dwelling Units per Acre
G.I.S. – Geographic Information System
GTHA – Greater Toronto Hamilton Area
GTTA – Greater Toronto Transportation Authority
HPL – Hamilton Public Library
HSR – Hamilton Street Railway (Company)
LRT – Light Rail Transit

NIMBY – Not In My Backyard
OHA – Ontario Heritage Act
OP – Official Plan
PPS – Provincial Policy Statement
RTP – Regional Transportation Plan
TBL – Triple Bottom Line
TDM – Transportation Demand Management
TH&B – Toronto, Hamilton & Buffalo (Railway)
TMP – Transportation Master Plan
TOD – Transit-Oriented Development
TRB – Transportation Research Board
UDG – Urban Design Guideline

Executive Summary

INTRODUCTION

Hamilton has been presented with the monumental opportunity to develop a sustainable, multi-modal, integrated transportation network through the MoveOntario 2020 initiative and subsequent funding from Metrolinx. The implementation of light rail transit has the potential to: optimize existing infrastructure; lead to revitalization of the Downtown Urban Core; foster connections to a diverse set of cultural amenities; increase transportation options and decrease dependency on private automobile transportation; facilitate sustainable development; and, increase quality of life. Provincial policies have identified Hamilton as an Urban Growth Centre, controlled by an Urban Growth Boundary. Hamilton has developed a variety of initiatives and strategies to further sustainable growth and development. With progressive policies in the Downtown Secondary Plan, such as surface parking as a non-conforming use, Hamilton has taken steps in the right direction.

Urban design guidelines (UDGs) are an instrument available to municipalities to guide development within the framework of the policies and objectives outlined in their Official and Secondary Plans. The formation of a comprehensive set of UDGs, specifically transit-supportive urban design guidelines, has the potential to shape development in Downtown Hamilton in order to ensure it supports the expansion of transit infrastructure and future employment and residential growth in the City. Development within Hamilton's Downtown should facilitate a healthy, safe, and comfortable environment where people can live, work and play, and where people will CHOOSE to walk and use alternative forms of transportation and to leave their cars behind.

ROLE OF THE GUIDELINES

The following transit-supportive urban design guidelines are meant to act as the necessary resource text to provide inspiration and the framework for public and private development initiatives in Downtown Hamilton. The Secondary Plan for Downtown Hamilton (2005) presents the community's vision for the future of the Downtown by outlining the priorities for the City and guiding public and private decision making.

The vision for Downtown Hamilton outlined in the Plan is as follows:

"The Downtown Hamilton of the future will be a vibrant focus of attraction where all our diverse people can live, work and play. The future Downtown must be built on a human scale, with streetscape offering comfort, access and safety for pedestrians. The future Downtown will combine the best of our heritage with new commercial and domestic architecture and use. The future Downtown will redirect our gaze from the urban core to the surrounding neighbourhoods, the Waterfront and the Escarpment, seamlessly linking commerce, housing and recreation."

(Putting People First, 2005, 4)

Putting People First (2005) has laid the basis for the following Transit-Supportive Urban Design Guidelines by outlining specific policies and objectives for growth and development in Hamilton's Downtown. Five key themes are investigated within the Plan: respecting design and heritage; carving out a distinct economic role; creating quality residential neighbourhoods; enhancing street and public spaces; and, establishing a new system for planning approvals. The Plan outlines the following principles for the future of Downtown Hamilton (p 5):

- Use public realm improvements as the catalyst for revitalization;
- Strengthen the connection to neighbourhoods, the Waterfront, the Escarpment and other surrounding features or attractions;
- Make downtown living attractive;
- Build on existing strengths;
- Recognize the value of modest improvements and changes; and,
- Pursue a limited number of carefully designed and executed major projects.

Expanding on the policies and objectives dictated in the Plan, the UDGs outlined in this report draw from extensive literature on transit-supportive development to create a comprehensive set of guidelines that are both true to the policies and vision for Downtown Hamilton and, that reflect accepted best practices for transit-oriented development (TOD). The guidelines cover the three main elements of urban design: the *public realm*, *parking management* and *built form*.

The guidelines are meant to act as an aid for deciphering relevant policies and regulations related to the development and redevelopment of private and public property within Downtown Hamilton. It is meant to be used in conjunction with other relevant City of Hamilton municipal documents.

The report is meant to act as a catalyst for the establishment of a strategic approach to transit planning and development in Hamilton, involving the creation of transit-oriented development policy and guidelines for future transit terminal planning. The guidelines reflect the logical coordination of transportation and land-use planning and, once reviewed by the City of Hamilton, the community and local advocacy groups, the subsequent recommendations have the potential to shape TOD and transit planning policy and practice in Hamilton, and to actualize the community's vision for the area.

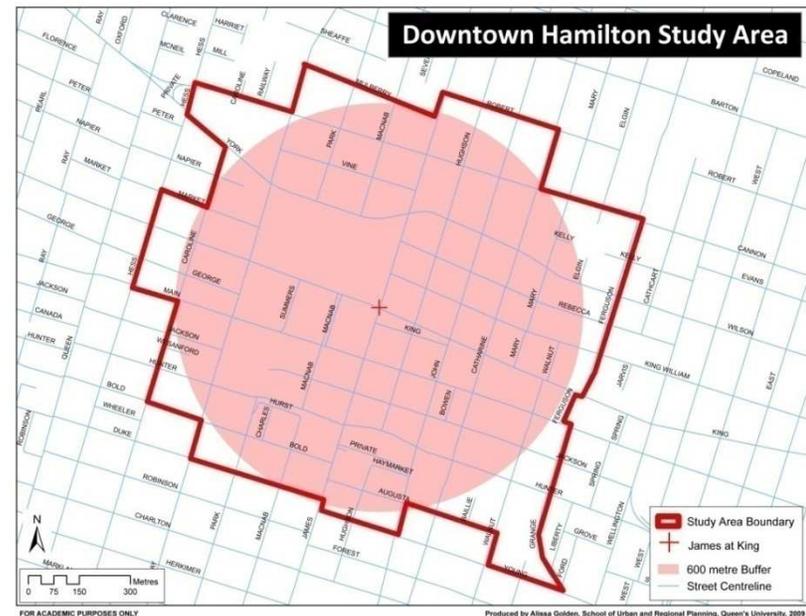
STRUCTURE OF THE DOCUMENT

This report begins by providing an overview of the relevant policy and legislation that affect transportation and planning in Downtown Hamilton, a comprehensive review of Hamilton's history, and the existing character of the study area. Following this, a strategic analysis outlines the strengths, challenges, opportunities and threats related to these guidelines and planning recommendations. Once the context has been defined, this report provides a brief summary of transit-oriented development and design before outlining specific transit-supportive urban design guidelines, broken down by *public realm*, *parking management* and *built form*. Building from the general guidelines, specific planning recommendations are provided for the study area. Finally, the implementation section presents avenues through which the guidelines and the vision for Downtown Hamilton can be actualized. The three sections of the report include:

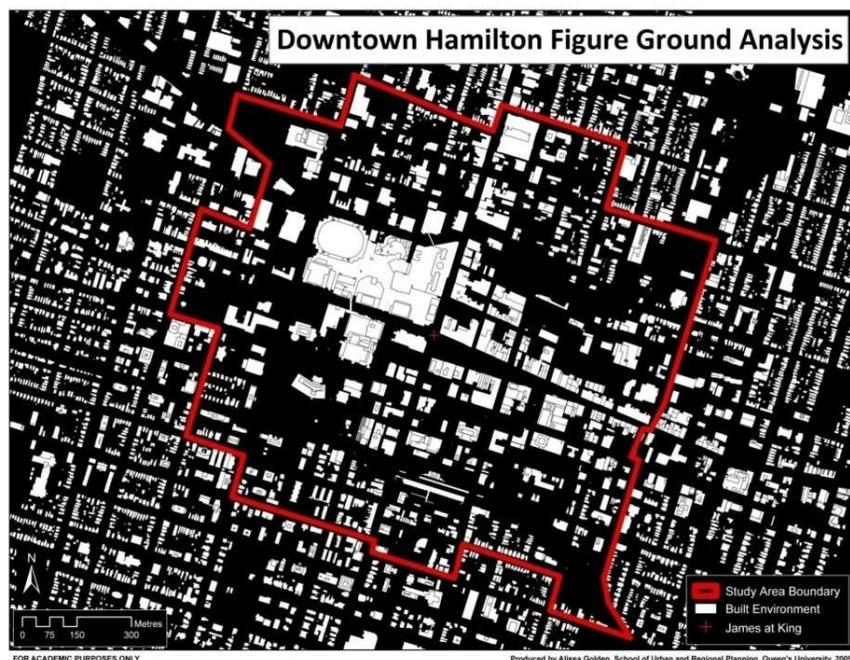
- Section One: Introduction & Context
- Section Two: Transit-Supportive Urban Design Guidelines
- Section Three: Planning Recommendations

DOWNTOWN HAMILTON STUDY AREA

The study area for the report has been determined by transit-oriented development theory, wherein transit terminals or mobility hubs are not stand alone; they are defined and analyzed by a catchment area. Typically, a 10- to 15-minute walk is used to categorize the catchment area for light rail transit, signifying the commonly accepted distance people are willing to walk to use the rapid transit service. This translates into a catchment area with a 600 m radius from the transit terminal. The study area used in this report encapsulates Hamilton's GO station, the core commercial/retail district, surrounding residential areas, and a variety of key civic amenities within the downtown. It also contains and overlaps with numerous boundaries for other relevant policy documents, including Downtown Hamilton's Urban Growth Centre (Places to Grow Plan, 2006), Downtown Hamilton's Secondary Plan (Putting People First, 2005), and the City of Hamilton's *Downtown Heritage Character Zone Design Guidelines* (2006).



Downtown Hamilton has been subject to a variety of urban renewal schemes over the years, most of which involving the removal of dilapidated buildings to make way for more parking space, rather than reconstruction or restoration of historically significant buildings. The formation of one-way street systems within the downtown, specifically the east-west multiple-lane expressways on King and Main Streets, were meant to revitalize the downtown by making travel easier for automobiles. However, they have only made it easier for commuters, further promoting suburban expansion and an increase in automobile dependency. The subsequent increased speed and quantity of traffic has shifted the priority from pedestrians and bicyclists to motorized vehicles, further segregating the surrounding residential neighbourhoods from the core by making travel unsafe and uninviting.



TRANSIT-SUPPORTIVE URBAN DESIGN GUIDELINES

The transit-supportive urban design guidelines for Downtown Hamilton are grounded in a comprehensive research strategy. The background research consisted of three components: a literature review, a contextual review, and site analysis. The multiple sources of data were triangulated to develop reliable and externally valid guidelines and planning recommendations for Downtown Hamilton; by conducting comprehensive research, the methodology for the report could be repeated for other transit terminals in Hamilton and for transit-terminal planning in general.

Transit-Oriented Development

The transit-oriented development (TOD) movement is built from, and works in conjunction with, sustainable development movements, such as Smart Growth and New Urbanism. Transit-oriented development has come to be seen as a viable alternative to suburban sprawl and the subsequent issues of decentralization and increased dependence on unsustainable personal automobile travel. Sprawl is defined as automobile-oriented, leapfrog, low-density development of separated land uses, while transit-oriented development is characterized as compact, mixed-use development centered around transit.

Typically, transit-oriented development has a rail or bus station at its centre surrounded by high-density human-scale development with a mix of land uses that are connected by pedestrian-friendly streets. Five major characteristics of transit-oriented development include:

- Sufficient density to encourage the use of public transit;
- Housing, jobs and retail destinations located close to public transit facilities;
- Mixed uses, with retail and employment locations, within walking distance of residential areas;
- A grid transportation network; and,
- Urban design guidelines and design features that encourage pedestrian-friendliness.

A variety of economic, social and environmental benefits have been associated with transit-oriented development. TOD has the potential to act as a catalyst for urban redevelopment and help create more accessible communities. Studies

have shown that plans to invest in transportation infrastructure can have positive effects on property values, even before infrastructure is in place. Transit service efficiency may increase because of transit-oriented development, resulting in improved performance and cost effectiveness. Transit-oriented development also helps create more livable communities by developing neighbourhoods that are physically and socially more desirable places to live, as research suggests that transit use promotes physical activity.

While the majority of North Americans may be able to afford private automobile travel, not everyone can, and those not served by automobile travel are sorely disadvantaged. Owning and operating personal vehicles is expensive and time consuming, but has become somewhat of a necessity in order to function in North American cities. Transit-oriented development has the potential to provide transportation choice, making private automobiles a choice rather than a necessity for personal mobility.

Transit Terminals – Mobility Hubs

In general, successful transit stations should accommodate pedestrians with sidewalks and convenient walking distances, be surrounded by legible street patterns, have relatively high employment and housing density, and an appropriate mix of commercial uses. The concept of mobility hubs, essentially large-scale urban TODs, have recently emerged as a way of categorizing transit-oriented development. The six key ingredients of successful mobility hubs outlined by Metrolinx (2008) sum up some of the most important aspects of transit-oriented development:

- Multi-modal transportation allowing transportation choice;
- Urban density and use intensity, a critical mass of people to work, live, shop and enjoy themselves;
- High levels of pedestrian priority, including spaces and connections designed for pedestrian priority;
- Embedded technology, such as access to real time transit information, internet use and seamless transfers between transportation modes;
- Economic vitality and competitiveness, consisting of significant development potential and strong economic anchors; and, a
- Strong sense of place – a vibrant and vital place to support the transportation experience.

Urban Design

In general, Hamilton's Downtown Secondary Plan (2005) states that new development and redevelopment will address the following urban design principles:

- Achieving a comfortable and intimate pedestrian environment;
- Ensuring new development is compatible with existing adjacent structure and streetscape in terms of design, scale, massing, setbacks, height, integration with the build form and use;
- Eliminating street-level parking lots and vacant properties along major streets;
- Creating a sense of place through the incorporation of public art and interpretive media;
- Providing “eyes on the street” and an interesting pedestrian experience by ensuring that the ground floors of all buildings have windows and doors opening onto the street or public laneways where appropriate. Entrances are to be provided at grade;
- Ensuring barrier-free access from grade level;
- Eliminating expanses of blank walls along street frontages;
- Preparation of streetscaping plans for streets identified as of interest.

The public realm – streets, parks and plazas - is the foundation of a city; it is the glue that binds together the various aspects of the private realm. Pedestrian-friendly design is paramount to transit-oriented development. Providing safe and convenient pedestrian transportation choice within transit-oriented development is vital to inciting people to use non-motorized travel and transit instead of driving. Transit-supportive design balances motorized and non-motorized traffic, while maintaining a pedestrian-friendly environment and destination accessibility. Physical design features are what bring transit-oriented built form to fruition by turning compact, mixed-use development into pedestrian-friendly, accessible destinations with a sense of place and livelihood. Urban design elements, such as street design, physical arrangement and proximity of land uses, an interconnected street system, location of transit stops and intersection design for transit vehicles, can profoundly impact a transit-oriented development's outcome. Important aspects of transit-supportive public realm design can be grouped into three main topics: *connectivity*, *sense of place*, and *linkages*.

Parking is a pivotal aspect of urban design related to transit-supportive development. The expanses of parking space found in most cities are one of the main inhibitors of pedestrian-friendly development. The “dead space” created by surface parking causes displacement of active land uses. When parking lots are placed between buildings and the street, they impede access for pedestrians and transit users and make sidewalks less inviting by reducing natural surveillance, human interaction, and protection from incremental weather.

However, there is still a need to accommodate automobile traffic in transit-oriented developments. If private vehicle traffic accessibility is limited in areas such as downtowns, it can often lead to a shift in customers and visitors to more vehicle accessible destinations in peripheral locations, rather than a shift from private vehicle use to public transit. As well, insufficient parking around stations may lead to a spill over of parking into surrounding neighbourhoods, causing problems for residents and businesses. For these reasons, transit agencies and municipal planners must find a balance between providing parking and allocating the proper land uses of adjacent development that will generate walk-on transit users. It is recommended that parking be placed a five- to seven-minute walk from transit stations to free up prime real estate for development. As well, the provision of on-street parking buffers pedestrians from traffic, offers short-term parking for retail customers, and reduces the amount of land needed for surface parking lots.

Built form plays a vital role in creating a comfortable and appealing pedestrian experience. The main elements associated with built form include: *land use, density, quality of frontages, vehicular access, heights & massing, design & architectural quality, and heritage considerations*. In general, private development will be designed to complement the public realm by providing direct connections between private and public spaces and locating buildings and structures so that they frame boundaries of public areas, while conforming to the public realm guidelines. Ultimately, new development and redevelopment in the Downtown is required to be at a scale and density that supports public transit.

Housing mix is a vital aspect of transit-oriented development form. Income diversity is said to be important because cities that are diverse on multiple levels enjoy higher rates of innovation and high-wage economic growth. TOD and transit infrastructure investments have been shown to increase property values, even before development has taken place. Significant new investment in neighbourhoods resulting from TOD may cause property values to rise, driving low-income tenants out. For this reason, affordable housing needs to be a

component of TOD and planning should include measures to preserve existing affordable housing, along with incentives to build a range of housing alternatives.

IMPLEMENTATION

All development and redevelopment initiatives within the study area will be at a scale and density that support public transit within the framework of the urban design principles of these guidelines and the municipal and provincial policy that dictate them. The primary avenue for redevelopment shall be adaptive reuse of existing buildings, specifically in Hess Village and the King William Street Commercial Area. Adaptive reuse projects shall be consistent the policies outlined in this report, especially as they relate to heritage considerations. Development initiatives shall be facilitated through the intensification of vacant and underutilized properties. The study area has been subject to a variety of urban renewal schemes that have cut out large sections of built form for paved parking lots. These underutilized parcels shall be the priority for redevelopment as they isolate the Downtown from the surrounding neighbourhoods, further compounding issues of safety, convenience and visual interest for pedestrians. A great deal of consideration should be shown for the development of the vacant commercial properties that separate the residential neighbourhoods from the Downtown as they will function as a transition between the two and will most likely result in a reduction of available parking for residents, workers and visitors.

In summary, priorities for development and redevelopment in Downtown Hamilton include:

- Development that incorporates buildings or groups of buildings with historic character or architectural value; and,
- Proposals that utilize buildings or lands that are underutilized or vacant.

All intensification and infill projects will be consistent in design with the grid street pattern and architectural character of existing residential areas in the Downtown and adjacent neighbourhoods.

Executive Summary

Design guidelines alone are often not enough, as they are seldom binding on development. For this reason, a comprehensive, multi-faceted strategy is necessary to ensure the successful implementation of light rail transit and appropriate transit-oriented development to support it.

The three components of a comprehensive urban design strategy are financial, social and physical plans. This report focuses on the physical plan component of the urban design strategy.

To encourage and guide TOD development properly, certain governmental initiatives can be taken, such as zoning and design codes, and TOD supporting policies and objectives in general plans, transportation plans and station area plans.

MacNab Transit Terminal

The design and development of mobility hubs is critical to creating an attractive and environmentally sustainable urban structure that allows for fast, frequent and well-connected movement. Transit stations are identified as the key element of a mobility hub, as they are the key point of contact between the traveler and the transit system and can have a significant impact on customer service and the travelling experience. Well designed mobility hubs, and their transit stations, have the potential to become vibrant places of human activity with a sense of place, and not just a transportation node.

Provincial and municipal policies dictate that Downtown Hamilton's transit facility be planned and designed to provide transportation choice and access from various modes – including considerations of pedestrians, bicycle parking and commuter pick-up and drop-off areas – to the facility. The integrated transportation system is required to provide balanced transportation choices in order to reduce dependency on automobile travel and promote the use of sustainable forms of transportation, such as transit, cycling and walking.

The design and placement of the transit terminal in Downtown Hamilton is critical to the success of the proposed rapid transit system and the redevelopment of the core as a vibrant transit-supportive community. The Downtown transit terminal needs to be convenient, safe, comfortable and integrated into its surroundings to

ensure a high level of connectivity to the adjacent neighbourhoods, retail and commercial areas and civic amenities. It is also important to create a destination with a sense of place and not just a transit node, which can prove to be a difficult task. The design and redevelopment of the surrounding infrastructure and public right-of-way is also critical to the success of the transit terminal.

SUMMARY

Urban design guidelines key to implementing transit-oriented initiatives, but are seldom binding on development. The major challenges to implementing transit-oriented development include: real and perceived financial risk to the developer, high initial public investment costs, an unsupportive land regulatory framework, and community resistance, especially concerning development density. A comprehensive strategy for the implementation is needed to ensure the principles and goals of transit-oriented development are upheld.

In summary, a comprehensive strategy for transit-oriented development should include:

- Creating a vision for an attractive community;
- Integrating transit and land use planning;
- Providing high-quality pedestrian and cycling facilities around transit stations, based on Universal Design;
- Managing parking to minimize the amount of land devoted to vehicle parking around stations;
- Encouraging car-sharing to reduce the need to own automobiles;
- Creating compact, mixed-use communities;
- Creating complete communities, with shops, schools, and other services within convenient walking distances within the TOD neighbourhoods;
- Structuring property taxes, development fees and utility rates to reflect the lower public service costs of clustered, infill development; and,
- Understanding and expanding the market of TOD by identifying the types of households and businesses that are most amenable to TODs, and by educating the public officials, planners, developers, residents and business managers concerning the potential benefits of locating in a TOD.