CITY OF HAMILTON

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Strategic Services/Special Projects Division

and

PUBLIC WORKS DEPARTMENT
Environment and Sustainable Infrastructure Division

TO: Chair and Members
Economic Development and Planning Committee

WARD(S) AFFECTED: CITY WIDE

COMMITTEE DATE: August 9, 2010

SUBJECT/REPORT NO:
Transit Oriented Development Guidelines (City Wide) (PED10181/PW10071)

SUBMITTED BY:
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SIGNATURE:

RECOMMENDATION:

(a) That the Transit Oriented Development (TOD) Guidelines, attached as Appendix “B” to Report PED10181/ PW10071, adopted and approved for use during the development review process and other land use and transportation/transit initiatives.

(b) That the General Manager, Planning and Economic Development be authorized to amend the TOD Guidelines attached as Appendix “B” to Report PED10181/ PW10071.

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EXECUTIVE SUMMARY

The purpose of this report is to request endorsement and approval of Transit Oriented Development (TOD) Guidelines which are to be used to facilitate the integration of land use and transportation initiatives during the development review process or when developing new land use policy. TOD Guidelines can be used to implement both the Transportation Master Plan and the Council adopted Urban Hamilton Official Plan policy direction that land use and transit planning should be better integrated in order to support increased transit ridership and to make transit use more viable. A TOD background paper and Guidelines, attached as Appendices “A” and “B”, provide guidance and information to landowners, developers and City Staff reviewing development proposals and transit improvements near key transit areas.

TOD is compact, mixed use development near transit facilities with high-quality walking environments. TOD promotes increased access and use of transit through mixed use development, clustering of higher densities, and providing a high level of amenities in a pleasant, walkable area. TOD is a form of development that recognizes and facilitates the important relationship between land use and transportation planning. Integrating land use and transportation (especially transit), and clustering density near transit areas, are important themes in both the City’s Transportation Master Plan and the Urban Hamilton Official Plan.

The proposed TOD guidelines will create a framework to assess, promote and achieve Transit Oriented Development across the City of Hamilton, for both conventional and proposed rapid transit areas. Using visual representation of how TOD can be applied and showing what TOD areas can look like, guidelines can be used during rapid transit implementation, development of secondary plans and for reviewing development applications. While the sample TOD illustrations show potential development scenarios, it should be noted that TOD Guidelines do not override existing Official Plan policy and zoning. TOD Guidelines can be used for direction when reviewing or developing new policy or zoning permissions, but ultimately, permitted uses heights, densities etc. will be dictated by Official Plan policy and zoning.

Alternatives for Consideration – See Page 12

FINANCIAL / STAFFING / LEGAL IMPLICATIONS

Financial: NA

Staffing: NA

Legal: NA

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HISTORICAL BACKGROUND  (Chronology of events)

In 2007, the Transportation Master Plan (TMP) was adopted by the City as part of the Growth Related Integrated Development Strategy (GRIDS) process to accommodate the transportation needs of the planned population and employment growth to 2031. The intent of the TMP was to address transportation requirements for the City while providing a balanced/multimodal transportation (auto, transit, cycling and walking) network system. The TMP targeted reducing single occupant vehicles, reducing congestion and improving the quality of the environment. Several transportation policies and implementation strategies were adopted to increase the transit and alternative transportation modal split from 5% to 12% and 6% to 15% by 2031, respectively. The Hamilton TMP also identified a decline in transit usage from 12% in 1986 to 6% in 2001. In order to reverse this trend, the TMP recommended aggressive transit improvements to address the needs of an ageing population, potential uncertainty in fuel prices and costly road improvements.

The policies and strategies of the TMP were adopted to support increased transit ridership in combination with travel demand management (encourage alternative transportation) and road capacity optimization. Transit use is also supported by active transportation modes (cycling and walking), which are more effective when developments are designed with those modes in mind by seamlessly integrating connections between land uses and transit.

In 2009, the Urban Hamilton Official Plan was adopted by City Council. Some of the core elements of the Plan include promoting better integration between land use and transportation, as well as encouraging the use of public transit through enhanced focus on urban design and promoting transit and active transportation as equal modes of transportation. The high level policies of the Official Plan provide a framework for ensuring land uses are compatible with transit and create efficient, attractive and complete communities. The policies of the Official Plan implement the direction set out in GRIDS and the associated master plans such as the TMP, to create an urban structure based on nodes and corridors and better overall transit access. Transit supportive land uses and better amenities for active transportation (walking and cycling) are key components to meeting the objectives of facilitating greater transit use. More detailed application of the Official Plan direction will be implemented through various mechanisms and tools such as guidelines.

In addition to the TMP and Official Plan policies, there has been significant direction by the Province to improve regional transportation with emphasis on a rapid transit system through Metrolinx. City of Hamilton rapid transit development is proposed within Metrolinx’s first fifteen-year plan. Therefore, urban structure, land use, and urban design to support the rapid transit system in Hamilton need to be integrated into the planning of the rapid transit.

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As the City of Hamilton works toward its goal of improving transit service/ridership, there will need to be additional attention paid to creating transit supportive areas by facilitating the relationship between land use and transit. Transit supportive areas should include well designed, walkable communities, transit supportive land uses and provide efficient access to transit service. In order to more efficiently encourage transit supportive areas, and to focus development near transit, municipalities across North American have increasingly been utilizing a development approach called Transit Oriented Development (TOD) as a means of encouraging more transit supportive development in their communities. Such cities include the City of Ottawa, the City of Calgary and the City of Portland, Oregon. In addition, the recent Canadian Urban Institute (CUI) Economic Uplift Study included findings that the most successful TOD areas include those where land use and transit plans are well integrated. By endorsing the TOD Guidelines, TOD principles can form a key component for assessing the land use along the B-Line during the B-Line Land Use Study or for any other developments near conventional transit.

POLICY IMPLICATIONS

TOD Guidelines can be used to address and maintain consistency with several Provincial and City policies.

Growth Plan (2006)
The Growth Plan provides requirements which relate to TOD. Specifically the Growth Plan requires municipalities to:

- Coordinate transportation and land use planning (Policy 3.2.2.2)
- Offer a balance of transportation choices reducing the reliance on any single mode and promote transit cycling and walking (Policy 3.2.2.1 b)

TOD Guidelines assist in meeting the direction detailed in the Growth Plan by promoting the increased and clustering of development and providing direction for design which facilities better transit and pedestrian access.

Policy 1.6.5.4 states that the land use pattern density and mix of uses should be promoted that minimize the length and number of vehicle trips and support the development of viable choices and plans for public transit and other alternative transportation modes, including commuter rail and bus. Thus, TOD principles are consistent with the transportation policies outline in the PPS by promoting non-vehicle trips and promoting a land use pattern that supports transit.

The Big Move: Regional Transportation Plan (2008)
In 2008 Metrolinx released the “The Big Move”, a regional transportation plan for the Greater Toronto and Hamilton area (GTHA). Metrolinx identified ten strategies which
are needed to achieve the vision goals and objectives of the regional transportation plan. TOD guidelines are consistent with several strategies including:

- Strategy #1 Build a Comprehensive Regional Rapid Transit Network
- Strategy #2 Enhance and Expand Active Transportation
- Strategy #4 Create an Ambitious Transportation Demand Management Program
- Strategy #5 Create a Customer-First Transportation System
- Strategy #7 Building Communities that are Pedestrian, Cycling and Transit supportive

Transportation Master Plan
The TOD Guidelines are consistent with the TMP policies for transit supportive development.

Some of the key policies in the TMP include:

- Focus development in targeted nodes and corridors serviced by transit, to reduce the need for additional infrastructure development. Intensify uses and activities in these areas.
- Cultivate opportunities for mixed-use at the scale of neighborhoods and buildings, to balance out the use of existing infrastructure, and increase the potential for shorter trips.
- Develop key nodes and links as higher–density, transit-supportive and pedestrian friendly areas and corridors.
- Design streets to create a pedestrian and transit supportive environment. Streets should provide mobility to all modes concurrently, with emphasis on active transportation modes and transit.
- Evaluate all future land use decisions in terms of their impacts on reducing automobile dependence and improving modal choice, including decisions on the location of new communities, establishment of minimum densities to support transit and provision of a mix of uses that bring activities closer together thereby making walking, cycling and transit viable alternatives for most trips.
- Plan communities to make walking and cycling convenient, safe and comfortable, lessening the demand for auto trips and improving community health.
- Adopt off-street parking policies, including required parking ratios established through zoning, that attempt to balance the need to supply sufficient parking to support residential and business while avoiding excess parking supply that can discourage transit use.

Public Works Business Plan
The TOD Guidelines are also consistent with Public Works Business Plan, ‘Innovate now’ to be recognized as the centre for environmental and innovative excellence in Canada. The TOD guidelines project is consistent with the processes strategic priority driver by ensuring that we promote smart processes that match our needs.
Urban Hamilton Official Plan (Council Approved)

The TOD Guidelines and principles are consistent with the policies of the Official Plan which promotes transit, active transportation, and greater integration of land use and transportation infrastructure. The TOD guidelines can help implement some of the direction detailed in the Official Plan and GRIDS relating to the integration of transit and land use planning. The following policies and Official Plan Goals are applicable to implementing TOD:

- A.1.6 This Official Plan relies on legislation, strategies, plans and guidelines as implementation tools to move the City’s Communities forward to meet, not only City Directions, but also provincial requirements. Examples include subject based guidelines.

- B.3.3.1.4 Create communities that are transit-supportive and promote active transportation.

- B.3.1.1 c) Encouraging improved urban design and quality architecture as well as improving urban design elements of the public realm.

- C.4.1.2 Recognize the relationship of transportation and land use planning in connecting communities, land uses and activities and the role of integrated transportation network in creating complete communities and improving overall quality of life.

- C.4.1.4 Plan urban areas so that travel by automobile is an option not a necessity.

- C.4.2.8 New secondary plans and designs for major transit generators shall incorporate the following design directions:
  
  c) organization of land uses in a manner that reduces automobile dependence and improves modal choice;

  d) placement of higher density land uses near existing and planned transit stop/station locations.

- C.4.2.11 The City shall encourage new development to be located and designed to minimize walking distances to existing or planned transit.

- E.1.0 c) Develop compact missed use urban environments that support transit and active transportation.

- F.3.2 Council adopted guidelines and technical studies provide the necessary guidance for the preparation of specific studies. Certain guidelines will require adoption by Council. The requirements of the studies identified in Section F.3.2 shall be considered as minimum requirements. These requirements may be expanded upon.

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RELEVANT CONSULTATION

A workshop was held with City Staff on February 1, 2010. The purpose of the workshop was both to introduce the concepts of TOD and to obtain feedback on the strengths and opportunities associated with TOD in the City of Hamilton. The workshop included representatives from Hamilton’s Public Works Department, Planning and Economic Development, Public Health Services, Community Services Department and Fire and Emergency Department, in order to gain a wide spectrum of opinion of the opportunities and challenges associated with TOD in Hamilton. Issues and opportunities raised at the meeting were used in the refinement of the TOD Guidelines.

Drafts of a TOD Background Paper and Guidelines were circulated to City Departments and Divisions in March, 2010. Comments received on the draft documents were used to modify and revise the TOD guidelines. A follow-up circulation was completed in June 2010 so that staff could review the revised version of the guidelines.

On May 6, 2010 a stakeholder consultation meeting was held with groups who will be most directly involved in the implementation of TOD. The stakeholders workshop consisted of various groups such as the Hamilton Halton Home Builders Associations, Hamilton Chamber of Commerce, several BIA’s and Environment Hamilton. Similar to the staff workshop, an overview of what is TOD was given. Staff received valuable feedback regarding constraints and opportunities for implementing TOD in Hamilton and how TOD can fit into the broader City planning process.

Following the development of the draft guidelines, the background paper and guidelines were put on the City’s website along with a short description and overview of what is TOD.

ANALYSIS / RATIONALE FOR RECOMMENDATION
(include Performance Measurement/Benchmarking Data, if applicable)

TOD guidelines can be an effective tool in which to implement some of the direction and policies of both the Transportation Master Plan and the Urban Hamilton Official Plan. However, TOD will likely not occur without some guidance and supportive planning. TOD guidelines can provide the direction and rational for making planning and design decisions in transit supportive areas. Having guidelines with a clear set of principles can ensure developments are consistent with a set standard, and meet expectations of TOD.

The purpose of the TOD guidelines will be to build on existing policy direction and provide more detailed and transit specific guidance for developments and new planning initiatives. Using visual representation of how TOD can be applied, guidelines can be used during projects such as rapid transit implementation, development of secondary plans and for reviewing development applications. The proposed TOD guidelines will
create a framework to assess, promote and achieve TOD across the City of Hamilton, for both rapid transit corridors, nodes and station areas and conventional transit.

New investments in transit infrastructure (such as rapid transit) will be costly, thus the City should not allow development that does not support transit whether in scale, design or function. TOD guidelines can be an important component of the set of tools used to ensure a consistent application of policy and provide for development near transit that encourages, rather than discourages, transit use. TOD Guidelines can also ensure the scale of the development is consistent with the level of transit service.

In addition to TOD serving as an effective tool to implement City policy, encouraging TOD areas in the City has advantages. TOD areas generally are rich in amenities and are overall attractive places to live and work. The easy access to reliable transit, pedestrian friendly environments and amenities, are especially attractive to segments of the population looking for an urban lifestyle. Having TOD areas available in the City may help in attracting and retaining key segments of the population in the City. In addition to attracting different segments of the population, TOD areas have had additional benefits when applied in other municipalities including:

- the potential to revitalize neighbourhoods;
- improving the quality of urban design;
- adding a potential increase in value to those who own land and businesses near transit stops;
- attracting employers to attractive and amenity rich areas with good transit access;
- increased variety of housing choice and,
- increased supply of affordable housing (by providing a variety of tenure types).

**TOD Components**

TOD is an overall approach to development. Simply locating developments adjacent to transit does not make an area oriented towards transit. Developments and transit need to be integrated. TOD encourages better use of transit through guiding the combination of appropriate land uses, clustering increased density around transit stations and stops, and using design to tie together all the elements of a transit oriented area. TOD also consists of other non-physical elements such as managing parking and promoting cooperation and partnerships between various stakeholders.

Given the core elements which make up TOD, a set of ten TOD principles has been developed based on best practices but applicable to Hamilton’s land use context. The ten principles form the foundation of the TOD Guidelines and are applied to create TOD areas. The ten TOD principles include:

1. Promote Place Making – Creating a Sense of Place
2. Ensure A Mix of Uses/Appropriate Land Uses
3. Address Parking Management
4. Focus on Urban Design
5. Create Pedestrian Environments
6. Require Density and Compact Urban Form
7. Respect Market Considerations
8. Take a Comprehensive Approach to Planning
9. Plan for Transit and Promote Connections (for all modes)
10. Promote Partnerships and Innovative Implementation

TOD Application and Structure of the Guidelines

The Guidelines have been developed to illustrate how the ten principles can be applied in various scenarios and context in Hamilton. Using TOD Guidelines will aid in realising the benefits noted above and implementing the general direction of the TMP and Urban Hamilton Official Plan as it relates to meeting transit goals. TOD guidelines can be applied in highly urban areas to less intensive, newer community's, or wherever transit is available or planned.

To classify the types of areas where TOD may be applicable, a set of TOD typologies was developed. Four types of TOD areas/types were identified, with sub-classification for each typology area. The table below details the four typology areas and the sub-areas with their general characteristics. The difference in typologies is a matter of scale and intensity, as the ten TOD principles are applicable in all TOD areas. Any transit area across the City may be applied to a typology which best suites existing characteristics and intended function. There can be flexibility in the application of which TOD typology gets applied to any given area. Over time, an area may evolve from one typology to another.
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| Urban, Downtown and Sub-Regional Node | · Nodes area around corridor  
· Employment and civic centre of City  
· Potential park-n-ride area (outside of Downtown) |
| Urban, Corridor Area             | · Area with development potential along RT corridor                                      |
| **Suburban Areas**               |                                                                                          |
| Suburban, Primary Corridor Area  | · Mixed use area but may be constrained by shallow lots                                   |
| Suburban Arterial Road Area      | · Good potential area for greyfield intensification  
· potential to facilitate bus travel                                                   |
| **Greenfield Areas**             |                                                                                          |
| Greenfield Node                  | · Undeveloped area identified as a community node (identified in Urban OP, future secondary plan to follow)  
· New areas to be built around transit                                                |
| Greenfield Non-node              | · Same as above but non-node context – residential and local scale commercial             |
| **Other**                        |                                                                                          |
| Major Activity Centre            | · High level of major institutional uses, with significant transit ridership               |

The proposed TOD Guidelines have been prepared in two separate volumes. A Background Paper, attached as Appendix “A”, forms Volume 1 of a two volume document and discusses the principles of Transit Oriented Development (TOD). Common practices/elements of TOD are detailed, as well as a summary of the challenges and opportunities associated with implementing TOD.

Volume 2 forms the actual guideline document presented in this report for endorsement, is attached as Appendix “B”. The TOD Guidelines present a visual representation of TOD principles, provides more detailed guidelines applicable to specific types of TOD areas and discusses implementation. The Guidelines include the following components:

- An introduction of what is TOD and how to use the guidelines
- A description of the Ten principles
- A description of the TOD Typology areas
- Detailed guidelines for the different TOD areas (including more detail on function, application, design components and scale for the specific type of TOD area)
- How TOD should be implemented

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Real sites were used as examples of what a full build-out of TOD may look like, and how the principles of TOD may appear in practice (showing one potential outcome of many). However, while full build-out of sample sites were shown for illustrative purposes, actual implementation of TOD will likely occur incrementally and over time. The timing of development is dependent on market conditions and may be tied to phasing of transit upgrades or level of existing service. It could take many years to achieve the full potential and ultimate development. An example of a sample site includes the intersection of Ottawa Street North and Main Street East. The Ottawa Street area was used as an illustration of how TOD can be applied in an urban corridor setting. The sample shows how the ten principles can be applied including using the transit station as the focal point of the area, integrating existing uses such as the grocery store and clustering the density to the corridor and station area. The buildings in this example show transition from the corridor area to the surrounding neighbourhoods. The density in this example can be accommodated in three to four storey buildings which is consistent with the zoning (see pages 37-41 of Appendix “B”.

While the sample TOD illustrations show potential development scenarios, it should be noted that TOD Guidelines do not override existing policy or zoning. TOD Guidelines can be used for direction when reviewing or developing new policy or zoning permissions, but ultimately, permitted uses heights, densities etc. will be dictated by Official Plan policy and zoning. As the new Comprehensive Zoning By-Law is developed and adopted, new zoning requirement will be transit supportive. The TOD Guidelines will provide flexibility and direction to transit supportive areas in the context of the new zoning regulations which will be implemented across the City.

Next Steps
The implementation of the TOD Guidelines will involve a multi-faceted approach. The TOD guidelines will be made publicly available so that they can be consulted when considering developments near transit areas. The guidelines are intended to be used by the City, developers and the broader community. From a staff perspective, TOD Guidelines can be used to:

- Provide direction in the development of future secondary plans;
- Provide direction on planning around transit stations;
- Serve as a tool to review development applications located near key transit areas to ensure principles of TOD are addressed (in conjunction with site plan review, TOD Guidelines can be integrated into Section 5, Areas of Special Character of the Site Plan Guidelines);
- Maintain consistency with TOD principles when updating policy and zoning;
- Guide implementation of new transit infrastructure including rapid transit;
- Guide to design or retrofit streets and other public spaces to be more pedestrian, bicycle and transit friendly; and,
- Serve as an education tool to educate the public and industry about the benefits of TOD.

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TOD Guidelines will also be used to provide input into the B-Line land use study now underway and any similar potential A-Line studies.

From a public/developer perspective, TOD guidelines will be part of the development formal consultation process and reviewed during the site plan review process. Thus, developers and the public can use the guidelines to:

- Design projects that take advantage of a transit presence;
- Meet policy objectives of the Official Plan and other planning requirements;
- Work with the City on potential public private projects;
- Be used as a marketing tool for transit-oriented projects;
- Learn more about the benefits and principles of TOD; and
- Advocate for walkable, transit-oriented neighbourhoods

As part of ongoing communication, the TOD Guidelines can be presented to interested groups and organizations to further explain the implementation and the intended use of the guidelines. Also, a future next step may include modifying the TOD Guidelines from time-to-time to reflect new policy criteria, technical studies or when additional design direction is required.

**ALTERNATIVES FOR CONSIDERATION:**

Committee could decide not to endorse the TOD Guidelines. Meeting Council targets for transit ridership and direction on land use would be met by existing tools and programs. This option is not recommended because guidelines allow the combination of more detailed direction on implementing Council adopted policy while still allowing flexibility to accommodate site specific needs. While the directions of the TOD guidelines are similar to those of the urban design guidelines of the Official Plan and Site Plan Guidelines, TOD guidelines are a tool that are specific to transit priority areas such as rapid transit corridors or along key conventional transit locations.

By providing a clear outline of accepted transit supportive land use principles early in the development review and site design process, the attached TOD Guidelines will improve transit access and integration with land use in key areas in Hamilton.

The recent Canadian Urban Institute (CUI) Economic Uplift Study included findings that the most successful TOD areas include those where land use and transit plans are well integrated. By endorsing the TOD Guidelines, the ten principles can form a key component for assessing the land use along the B-Line during the B-Line Land Use Study.

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1.0 INTRODUCTION

Transit Oriented Development (TOD) guidelines have been developed for the City of Hamilton. These guidelines have been prepared in two separate volumes. This background paper is Volume 1 of a two volume document and discusses the principles of Transit Oriented Development (TOD). Common practices/elements of TOD are detailed, as well as a summary of the challenges and opportunities associated with implementing TOD. Finally, this paper presents a set of implementation tools and strategies to facilitate the application of TOD in Hamilton.

The accompanying guidelines form Volume 2 and present a visual representation of TOD principles and how they may be implemented in Hamilton. Real sites have been used as examples of what a full build-out of TOD may look like. However, while full build-out of sample site is shown for illustrative purposes, actual implementation of TOD will occur incrementally and over time. TOD guidelines from many jurisdictions were reviewed and referenced in the development of TOD guidelines for Hamilton.

1.1 What is Transit Oriented Development?

As municipalities concentrate efforts on increasing transit ridership, the connection between land uses, built form, and transit is gaining attention. Research and practical experience from jurisdictions across North America highlight the positive impact transit supportive land uses can have in facilitating transit access, thereby incorporating transit into the urban fabric. Integrating transit and land use facilitates increase connectivity and encourage overall transit ridership bringing many potential benefits, such as reduced traffic congestion.

While several strategies for incorporating transit and land use exist, a common method employed by several jurisdictions is Transit Oriented Development (TOD). Although there is no one definitive definition of TOD, it is generally accepted that the core components of TOD include “compact, mixed use development near transit facilities with high-quality walking environments”. Another key component that sets TOD apart from traditional/regular development is an increased emphasis on denser mixed use areas with a high degree of activity.

The application of TOD may vary across different jurisdictions but should always include the core components of compact, mixed use, highly pedestrianized areas with connections to transit. Civic and public spaces are also key components of TOD areas. TOD should not simply be an assembly of buildings around a transit node. It is important that TOD contribute to creating a community by enhancing a neighbourhood, thereby creating an environment which allows people to drive less and offers them the choice to take transit.

TOD is an overall approach to development. Simply locating near transit does not make an area oriented towards transit. Areas which are simply located adjacent to transit without adhering to TOD principles are know as Transit Adjacent Development (TAD). Unlike TOD areas, TAD areas do not integrate land uses and transit facilities well. Merely locating beside a transit line does not promote vitality or a pleasant walking area. Land uses have to interact with the transit and provided direct access to and from station areas. For example, Figure 1 highlights the differences between Transit Oriented Development and Transit Adjacent Development.
1.1 What is Transit Oriented Development? (Continued)

Figure 1: Example of Transit Oriented Development vs. Transit Adjacent Development

TOD: compact, dense, and walkable
(Ontario Growth Secretariat, Ministry of Energy and Infrastructure)

TAD: not pedestrian friendly, limited connectivity

In the TOD example above, people can step out from their place of business and have direct access to the transit stop. In the TAD example people must cross a parking lot in an unpleasant pedestrian environment to access the transit station.

The components of TOD are not new; several areas built prior to World War II were built with elements supportive of TOD. These include a range of residential densities, building layouts, and pre-existing transportation options. It is only during the post WWII era where a car dominant culture emerged encouraging development which was less transit supportive. The movement to encourage transit supportive land use is to provide more balanced transportation choices so that travel by transit or active transportation (e.g. walking, cycling, etc.) can be as viable as driving.
1.2 Function of TOD Guidelines

Several municipalities have chosen to encourage TOD as a means of promoting development which is more transit supportive, and to support larger transit investments such as rapid transit. To communicate the goals and principles of TOD, municipalities often create TOD guidelines which serve to illustrate what and how development should proceed to encourage a better integration of land use and transportation. While policies and regulation already exist in Official Plans and Zoning By-laws, TOD guidelines serve as a user friendly guide showing the components that should be part of developments and redevelopments. Guidelines are a useful tool to implement existing policy.

The accompanying TOD guidelines (Volume 2) will complement existing City land use policies and programs. In addition to the Urban Hamilton Official Plan, comprehensive secondary planning and node and corridor studies will need to be completed for some of the node and corridor areas identified in the Official Plan. The accompanying TOD guidelines (Volume 2) will serve as a reference and guideline document to help inform future secondary plans, and the design of future location of transit station areas. For areas outside of new secondary plans, these TOD guidelines can also aid in the review of development applications to ensure transit supportive land uses are applied consistently across the City.

1.3 Why Implement TOD Policies/Guidelines?

Municipalities across North America are adopting TOD guidelines as a means of encouraging better development in their communities and enhancing the liveability and quality of life for their residents. Because of the wide range in forms of TOD, even traditionally car-dominant cities have moved to implement TOD guidelines.

To attract appropriate forms of development and increased transit ridership, supportive policies and zoning must be in place. Good TOD will likely not happen without proper planning thus, TOD guidelines can serve as tool to guide implementation of existing policy in a transit specific context. The presence of guidelines ensures that the appropriate questions are asked and the development of new policies is based on proper principles.

Financial Opportunities

New transit services and stations are often constructed ahead of the market. TOD guidelines can help facilitate and send a signal to the market about the kinds of development that are appropriate for creating a transit supportive environment. Furthermore, as municipalities invest in transit systems, especially higher order systems, it is important that the municipality leverage the benefits of such systems due the high cost of new transit services. Such benefits can include increased property values or more efficient delivery of transit service. Ensuring appropriate land use near transit can help ensure that new and existing transit lines will be well used and that the full potential benefits are realized. TOD focusses transit supportive land uses around transit stations to best capitalize on public investment.

Also important are quality of life and liveability considerations. What is best financially, is not always the best use for a neighbourhood. Thus, a balanced and fair approach must be taken for TOD implementation. Guidelines can provide the balance needed in informing development and policy decisions.
1.3 Why Implement TOD Policies/Guidelines? (Continued)

Demographics

There is a growing demand for people wishing to have the option to walk more and drive less\textsuperscript{11}. There is also an increasing interest from various segments of the population to live closer to the centre of the city. For example, in Portland Oregon, TOD areas are attracting older adults who want to live in walkable accessible areas in close proximity to many amenities\textsuperscript{12}. TOD guidelines encourage additional housing and walkable areas which can satisfy both of these demands. TOD has also been a key component in several American cities for stabilizing growth or even leading to population increases in areas near rapid transit\textsuperscript{13}. Maintaining or enhancing several of the neighbourhoods near proposed new transit routes in Hamilton is supported by new policy and zoning directions. TOD will help achieve these goals.

Demographic shifts are also leading to a change in demand for a wider variety in housing forms. It is anticipated that growing elderly/senior age cohorts and trends towards smaller household sizes will drive the demand for smaller housing units and make the achievement of higher densities possible. Encouraging TOD can help accommodate a growing market for a more urban style housing product in mixed use, walkable areas in close proximity to transit\textsuperscript{14}. Ultimately, TOD is about providing option, and choices, TOD guidelines can help provide further direction and encourage compatible development.

1.4 Goals of TOD

The goals associated with TOD are often similar to the city wide goals and direction many cities would like to achieve. Hamilton, like many other cities, details its goals though a city-wide strategic plan. Key goals include growing the economy and creating healthy communities. Similarly, the goals and principles of the Urban Hamilton Official Plan include creating compact complete communities and the integration of land use and transportation. The Urban Official Plan further details targets for greenfield density as well as residential intensification. The general principles and goals of TOD are consistent with what the City of Hamilton would like to achieve and offers tools and strategies to help achieve them.

The most common and prominent goals of TOD include:

- Increase overall transit use (make transit more attractive);
- Promoting mixed use environments;
- Encourage increased density and compact urban form;
- Creating vibrant, attractive and “complete communities”\textsuperscript{15};
- Encouraging a mix of incomes\textsuperscript{15};
- Strengthen property values; and,
- Increasing non automobile modes of transportation.

\textsuperscript{1}The Provincial Places to Grow Plan defines compete communities as “A land use pattern that encourages efficient use of land, walkable neighbourhoods, mixed land uses, proximity to transit and reduced need for infrastructure. Compact urban form can include detached and semi-detached houses on small lots as well as townhouses and walk-up apartments, multi-story commercial developments and apartments for office above retail.
Ultimately an important goal of transit oriented development is to create places that function differently from traditional development. TOD projects should capitalize on interactions that result from integrating land use and transit\textsuperscript{16}. Eventually such integration can result in reduced auto dependency, which in turn leads to other benefits.

1.5 Benefits of TOD

There are several reasons why a municipality would want to develop TOD guidelines and encourage TOD in a city. One of the primary benefits of TOD is the potential to increase walkable communities and better access to other non-automobile modes of transportation (this can also help alleviate some traffic congestion)\textsuperscript{17}. Other primary benefits include:

- The potential to revitalize neighbourhoods;
- Improving the quality of urban design;
- Adding a potential increase in value to those who own land and businesses near transit stops;
- Increased variety of housing choice; and,
- Increased supply of affordable housing (by providing a variety of tenure types).

These potential benefits are a result of bringing together enough people to create a ‘critical mass’ and demand for transit. It is also important to note that many of the people who live in TOD areas are not transit dependent\textsuperscript{18}. Increasingly, people are choosing to live in transit supportive areas so that they can walk and meet most of their daily needs without the daily use of automobiles. The compact nature of TOD allows for amenity rich areas. The same compact urban form helps make transit more attractive and viable. People are drawn to these areas because of the convenient access and high level of services offered in one convenient place.

Studies have shown that locations near transit can increase property values, demand rent premiums, and can create an increased potential for development opportunities\textsuperscript{19}. Furthermore, compact development can contribute to better overall quality of life, less automobile dependency, and promote pedestrian oriented areas\textsuperscript{20}. Fewer cars and more people walking will have direct environmental and health benefits. However, TOD will not replace automobiles (nor is that the goal) as they will still be necessary for some activities. TOD areas with a concentration of amenities do, however, provide more choice and variety for neighbourhoods.

While there is often fear of compact urban form, many of the perceived attributes of density can be addressed through good quality design and good planning. Proper siting of uses, appropriate scale, and compatibility can mitigate many of the concerns people have of higher density or compact design. Such mitigation factors are further discussed in Section 7.0, Implementation of TOD Guidelines.
1.6 Application of TOD in Hamilton

TOD can be applied in Hamilton to support new transit infrastructure investments or to support existing transit. In conjunction with existing policy, TOD guidelines add additional direction for reviewing development applications and will inform future secondary planning projects. TOD guidelines will be a flexible reference document rather than a regulatory document.

New investments in transit infrastructure (such as rapid transit) will be costly, thus the City should not allow development that does not support transit whether in scale, design, or function. TOD guidelines can be the tool used to ensure a consistent application of policy and ensure development proposed near transit facilitates encourages, rather than discourages, transit use. TOD guidelines can also ensure the scale of development is consistent with the level of transit service provided or proposed in the future.

Volume 2 of the TOD guidelines shows illustrations of how the principles of TOD may appear in practice. Sample sites were chosen to provide examples of how TOD may look in Hamilton. However, TOD implementation will occur incrementally and at times sporadically. Benefits may only be realized in pockets or very localized areas rather than region wide. Timing of development is dependent on market conditions and may be tied to timing of transit upgrades. While this document (Volume 1 and 2) displays full build-out of potential TOD areas, it will take many years to achieve full TOD potential.
TOD guidelines are an extension of the direction in existing policy rather than a replacement. While policy and regulations are more prescriptive (what must be done), guidelines offer more flexibility. In addition to common practices and other research related to TOD, the TOD guidelines are also based on direction from the existing policy framework. Detailed below are some of the policies and concepts which informed the development of the TOD guidelines.

2.1 Provincial Directions

2.1.1 Growth Plan for the Greater Golden Horseshoe (2006)
The Growth Plan for the Greater Golden Horseshoe is the Province of Ontario’s long range plan for growth in the Greater Golden Horseshoe area. The Plan establishes high-level policy on transportation, infrastructure, land use planning, urban form, housing, natural heritage, and resource protection in the interest of promoting economic prosperity for Ontario’s future. The Growth Plan does not have specific TOD policies, but calls for a greater integration between land use and transportation. For example transportation is a key component of facilitating the anticipated growth in the GTHA and can be used to accommodate the higher densities and more compact urban form which is required throughout the Growth Plan. The Growth Plan also requires that, by 2015, 40% of new residential development is to occur within the built-up area. TOD can be used as a tool to both encourage intensification as well as a guide to direct intensification projects (i.e. provide direction on what components should be included in intensification projects). TOD is thus an appropriate means to implement Growth Plan requirements for various areas throughout the City.

2.1.2 Provincial Policy Statement (2005)
The Provincial Policy Statement (PPS) provides policy direction in land use planning that is of provincial interest. Transportation related policies in the PPS (Section 1.6.5) require municipalities to provide a transportation system, using existing and planned infrastructure, that is safe, efficient, and has high connectivity. Further policies state that transportation should be a consideration at all stages of the planning process. Furthermore, the PPS states that the land use pattern, density, and mix of uses should be appropriate to allow for transportation mode choice and to facilitate public transit. Thus, TOD principles are consistent with the transportation policies outlined in the PPS.22

2.1.3 Metrolinx
In 2008, Metrolinx released the “The Big Move”, a Regional Transportation Plan (RTP) for the Greater Toronto and Hamilton area (GTHA). Increasing transit and access to transit is a primary focus of the (RTP). The plan outlines priority areas for future and existing transit. The RTP identified new rapid transit lines for Hamilton running east-west and north-south in the City, coinciding with the corridors identified in Hamilton’s new Urban Official Plan. The Big Move was directed in part by several ‘green papers’ highlighting best practices in various aspects of transportation planning. One of these papers focused on the integration between land use and transit. To facilitate development of transit in GTHA the Big Move highlights the need to integrate transportation and land use. Further more, the Plan itself conforms to and implements many provincial land use related policy documents such as the Provincial Policy Statement 2005 and the Growth Plan for the Greater Golden Horseshoe.
2.2 Municipal Directions

2.2.1 Vision 2020
The implementation of TOD guidelines is consistent with Vision 2020’s theme of “Changing Our Mode of Transportation”. This theme identified two transportation related goals:

1. To develop an integrated sustainable transportation system for people, goods and services, which is environmentally friendly, affordable, efficient, convenient, safe, and accessible.
2. To encourage a shift in personal lifestyle and behaviour towards transportation choices that enhance personal health and fitness, save money, and have the lowest environmental cost.

Developing TOD areas helps meet these goals by providing opportunities for people to choose alternative modes of transportation. TOD offers more sustainable choices in housing and facilitates healthier lifestyles by providing walkable neighbourhoods and reducing air pollution from cars.

2.2.2 Corporate Strategic Plan
Encouraging the development of TOD is consistent with the City’s Corporate Strategic Plan. The Corporate Strategic Plan focusses on ‘Growing our Economy’. TOD addresses that focus area by encouraging areas of the City to be more attractive to investors and helping to achieve the growth targets of GRIDS and the Provincial Growth Plan.

TOD also contributes to the ‘Healthy Community’ focus area by increasing the activity of City residents through the creation of pedestrian focused areas. TOD also directly contributes to increasing the “alternative transportation” usage by promoting transit and active transportation.

2.2.3 Urban Hamilton Official Plan & Growth Related Integrated Development Strategy (GRIDS)
Policies of the Urban Hamilton Official Plan encourage development around transit and land use and transportation planning integration. The various sections and policies that address transportation and transit are further detailed in Appendix A.

In general, the future urban structure described in the Urban Hamilton Official Plan refines the nodes and corridors identified in GRIDS, the City’s growth management strategy. The urban structure policies outline the relationship between a more compact urban form and transit within the urban nodes and corridors structure of the City. Density ranges are provided which support TOD and transit use in general. The densities and heights identified in the Official Plan will be refined during various secondary planning processes though the minimums are transit supportive.

In addition to the node and corridor areas, the Urban Hamilton Official Plan also provides policy direction for all land uses where TOD principles could apply. Furthermore, the urban design policies (Section B.3.3) are also consistent with many TOD principles such as:

• Creating pleasant pedestrian environments;
• Bringing buildings up to the street front; and,
• Encouraging parking to locate at the rear of buildings.
While the design policies apply across the City, the TOD guidelines build on the Official Plan policies and provide a transit focused context of design to identified TOD areas (See section 4.0). The transportation policies of the Official Plan are also consistent with the TOD guidelines promoting transit, active transportation, and greater integration of land use and transportation infrastructure. The TOD guidelines take direction from various parts of the Official Plan and details what is required for TOD in a user friendly format. Thus the TOD guidelines can help implement some of the direction detailed in the Official Plan and GRIDS relating to the integration of transit and land use planning.

In conjunction with the Official Plan, TOD guidelines and can help inform the final decision on heights, density, and design. Such final decisions are often made in Secondary Plans which provide more detailed and specific policy on land use and other matters for a defined geographic area. While the TOD guidelines are generally consistent the Official Plan policies, future amendments can be implemented, if necessary, to achieve the heights, density, and design required for TOD. A further analysis of implementation is discussed in Section 7.0.

2.2.4 Transportation Master Plan
The Transportation Master Plan (TMP)(2007) outlines the overall vision and implementation plan for all modes of transportation over the next 25 years. The Plan emphasises a better integration of land use and transportation planning, consistent with TOD principles. The implementation of TOD would improve access to transit and provide more transportation options by making areas in the City more walkable and bikeable.

2.2.5 Zoning
Zoning will be among the most effective means of implementing TOD. As the new Zoning By-law is being completed, it will take direction from the new policies of the Urban Hamilton Official Plan as well as implementing transit supportive regulations. Zoning is very important as it serves as the “on-the-ground” application of the City’s policies.

2.2.6 Site Plan Guidelines
The Site Plan Guidelines are used to ensure that sites are developed in a consistent and appropriate manner across the City. The Site Plan Guidelines address a wide spectrum of issues including site design issues involving pedestrian and traffic movement and access issues. The guidelines also contain provisions for design elements which make a site more attractive and contribute to place making such as public art. The Site Plan Guidelines address and provide direction on several topics including site context, site design, building design, and areas of special character. The guidelines are thorough and address various aspects of site design from pedestrian access and circulation, to the placement of parking and building design. Figure 2 further details the relationship between TOD guidelines with other City land use policy documents.
2.0 EXISTING POLICY FRAMEWORK

Figure 2: Role and Function of Different Planning Documents/Tools

**Role and Function**

- **Official Plan**: OP sets high level land use policy and direction for all other planning documents. Other planning tools must be in conformity with the OP.

- **TOD Guidelines**: TOD guidelines set direction and objectives for TOD related land use; a transit specific refinement of OP policy. Sets principles and objectives to be implemented in corridor studies and/or secondary plans.

- **Corridor Studies**: Based on direction from the OP - refines specific land use (density, height, uses, etc.) along RT corridor. TOD guidelines provide transit related direction for land use. Corridor studies can be part of a secondary plan or a stand alone study.

- **Secondary Plan (node)**: Secondary Plans provide detailed and community specific direction for defined areas of the City. Detailed policies on land uses, density design, infrastructure requirements, etc., make up the secondary plan (additional non-land use policies may also be included). Direction can come directly from the OP or can be further informed by studies and TOD guidelines.

- **Zoning**: Zoning is the implementation tool for land use policy. Details such as uses, parking requirements, density, heights, setbacks, etc., are implemented through zoning. Direction comes directly from the OP or secondary plans, where applicable.

- **Site Plan Control/Site Plan Manual**: Provides direction of site layout for a particular site - TOD can inform direction in manual.
2.3 Other Strategies and Studies

Various other strategies, studies, and implementation activities provided further direction to the TOD Guidelines.

2.3.1 Rapid Transit Planning

The City is engaged in planning for higher order rapid transit service along key corridors in the City. Several studies have been completed or are underway as part of this rapid transit initiative. The need to integrate land use direction with transportation planning is a common element of several of the rapid transit background studies. For example, the Rapid Transit Feasibility Study (May 2008) indicates that the success of the transit system not only depends on the transit services, but on the policies that support it such as those governing land use planning.

Other rapid transit studies completed for the City have found that there are several social and environmental benefits to increasing transit use and creating pedestrian-centric environments. TOD is a viable and proven method of creating such environments which contribute to the benefits of reduced urban sprawl and promoting compact attractive environments.

2.3.2 Other Strategies

In addition to the Transportation Master Plan, the City is also involved in several Transportation Demand Management (TDM) initiatives. TDM can be used to shift transportation demand from automobiles to other forms of transportation. Initiatives that encourage more walking or carpooling reduce the demand on automobile traffic. TOD can be a component of TDM by promoting environments where transportation options are realistic, thus reducing the demand for automobile based travel. Programs and initiatives such as TDM, in conjunction with the comprehensive Zoning By-law and TOD Guidelines, will work together to create the physical built form aspects that encourage non-automobile based travel. Having the proper built-form and land uses allows programs such as “Smart Commute” and other TDM programs to work more effectively.
At times, TOD can take on various forms depending on location and site context. It can become difficult to differentiate between a transit oriented development and a conventional development. Therefore, all TOD areas should be developed according to a common set of principles to ensure consistency in the application of the core elements of TOD\textsuperscript{24}. As long as new TOD developments are based on the core principles, minor modification and context specific changes can still be made when developing TOD areas\textsuperscript{25}.

Success in TOD can also be subjective. While some view mixed uses as a measure of success, others may view an increase in transit use to be a better measure\textsuperscript{26}. Adherence to TOD principles can be the ultimate test to determine if a particular development or new policy is supporting transit and improving the living environment. While TOD will not solve all issues in the City, higher densities coupled with a transit focus will allow users easier transit access and better connections to walking and cycling, thus providing greater choice and flexibility\textsuperscript{27}.

A set of TOD principles forming the foundation of the TOD Guidelines has been developed. The principles are based on research, best practices, and applications in other municipalities. The principles are framed to be applicable in Hamilton’s context. Based on best practices, a set of ten principles is presented for Hamilton as the basis of the TOD Guidelines. The ten TOD principles are:

1. **Promote Place Making - Creating a Sense of Place**
   - TOD areas should be memorable and of a human scale
   - Focus on promoting liveability, quality, and uniqueness of each space

2. **Ensure A Mix of Uses/Appropriate Land Uses**
   - Mixed uses, but not necessary in the same building
   - Appropriate range of uses fitting for each particular spot
   - Get the “bones” right - plan for long term and multiple uses

3. **Address Parking Management**
   - Control how much and location of parking
   - Ensure appropriate balance

4. **Focus on Urban Design**
   - Orientation of buildings
   - Manage look, feel, and scale
   - Ensure high quality and attractive design

5. **Create Pedestrian Environments**
   - Related to urban design (improve connectivity)
   - Ensure accessibility and mobility for all
   - Easily walkable, safe, and attractive streets
6. **Require Density and Compact Urban Form**
   - Ensure sufficient density to make transit viable
   - Compact form improves walkability (related to pedestrian movement)
   - Density and compact form improves efficiency (services, infrastructure, etc.)

7. **Respect Market Considerations**
   - Plans should be ambitious but feasible
   - TOD areas should promote value recapture (utilize increased land value)
   - Promote private sector ‘buy-in’ and investment

8. **Take a Comprehensive Approach to Planning**
   - TOD plans, and areas should be aligned with greater regional goals
   - Contribute to greater connectivity
   - Local TOD areas layered to create a larger system linked to greater planning objectives and transportation plans

9. **Plan for Transit and Promote Connections (for all modes)**
   - TOD principles should be applied in station areas and corridor planning
   - Transit is the key driver in TOD planning and should be addressed and accommodated in all aspects of TOD planning/design
   - TOD areas should make connections to other modes where appropriate and improve connectivity to the larger City-region

10. **Promote Partnerships and Innovative Implementation**
    - Partnerships leverage different groups (private, public, community) strengths
    - Promote community/investor “buy in”
    - Ensure sensitivity/compatibility with surrounding uses

By ensuring that new developments adhere to the above principles, the City can be sure that TOD areas will be meeting the goals of TOD. The principles promote liveable and attractive environments. TOD areas that follow the principles allow the best opportunities for people to easily access work near transit in amenity rich areas.
Generally, TOD can be applied across the entire urban area of Hamilton where transit service is offered (or planned in the future). However, there are specific areas where TOD principles are most appropriate and have the greatest impact. Typically, targeted TOD areas are located in an influence area comprised of an approximate 5-10 minute walk of transit stations/stops and corridors. Targeted TOD areas are further defined based on a hierarchy of TOD of differing scales relating to nature and function of the given area. These different TOD areas or TOD typologies have slightly different standards in order to implement TOD according to function. TOD typologies typically range from dense highly mixed land uses of a Downtown, to the transit focused but low level of transit service of suburban or greenfield areas.

An example of these types of TOD areas based on a hierarchy system are summarized below in Table 1.

Table 1: Five Classifications of TOD Areas Applicable to Hamilton

<table>
<thead>
<tr>
<th>Type of TOD</th>
<th>Description/Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Downtown</td>
<td>• Civic, cultural, and employment centre</td>
</tr>
<tr>
<td></td>
<td>• Primary transfer point</td>
</tr>
<tr>
<td></td>
<td>• Greatest variety of uses</td>
</tr>
<tr>
<td></td>
<td>• Many transit routes</td>
</tr>
<tr>
<td>Urban Neighbourhood</td>
<td>• Historic neighbourhood, surrounding the downtown - (e.g. the</td>
</tr>
<tr>
<td></td>
<td>neighbourhood TOD's along the B-line)</td>
</tr>
<tr>
<td></td>
<td>• Moderate to high density housing and shopping along a central road,</td>
</tr>
<tr>
<td></td>
<td>schools and parks intergraded along the way - affordability,</td>
</tr>
<tr>
<td></td>
<td>convenience, and vitally of more urban (Downtown) areas (i.e. a</td>
</tr>
<tr>
<td></td>
<td>transit corridor)</td>
</tr>
<tr>
<td></td>
<td>• Well connected block system (well connected local streets)</td>
</tr>
<tr>
<td></td>
<td>• Several transit routes</td>
</tr>
<tr>
<td>Suburban Town Centres (suburban nodes)</td>
<td>• Significant employment, shopping and connections to nearby</td>
</tr>
<tr>
<td></td>
<td>suburban areas</td>
</tr>
<tr>
<td></td>
<td>• In proximity to subdivisions people can still take transit</td>
</tr>
<tr>
<td>Suburban Neighbourhood</td>
<td>• Intensification around the stop but in proximity to more single</td>
</tr>
<tr>
<td></td>
<td>family detached dwellings</td>
</tr>
<tr>
<td></td>
<td>• Neighbourhood or community retail</td>
</tr>
<tr>
<td></td>
<td>• Access comes from fewer larger roads (collector and arterial road</td>
</tr>
<tr>
<td></td>
<td>systems that provide the majority of access in and out of</td>
</tr>
<tr>
<td></td>
<td>neighbourhood)</td>
</tr>
<tr>
<td></td>
<td>• Two or more transit routes</td>
</tr>
<tr>
<td>Neighbourhood Transit Zone</td>
<td>• Typically a local transit stop - limited retail</td>
</tr>
</tbody>
</table>
The TOD typology areas are generally consistent with the hierarchy of nodes, corridors, and neighbourhood areas detailed in the Urban Hamilton Official Plan, forming the urban structure as described in Section 2.2.3.

Generally, TOD areas across the City of Hamilton can be classified into four main types of TOD areas - Urban Areas, Suburban Areas, Greenfield Areas, and Other. These four categories are further subdivided into more specific TOD areas with slight differences between them in scale and function. Table 2 (below) details the types of TOD areas and their general characteristics and function.

<table>
<thead>
<tr>
<th>TOD Typology</th>
<th>General Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Areas</td>
<td>• Node areas around corridor</td>
</tr>
<tr>
<td>Urban, Downtown, and Sub-Regional</td>
<td>• Employment and civic centre of City</td>
</tr>
<tr>
<td>Urban, Corridor Area</td>
<td>• Potential park-n-ride area (outside of Downtown)</td>
</tr>
<tr>
<td>Suburban Areas</td>
<td>• Area with development potential along RT corridor</td>
</tr>
<tr>
<td>Suburban, Primary Corridor Area</td>
<td>• Mixed use area but may be constrained by shallow lots</td>
</tr>
<tr>
<td>Suburban Arterial Road Area</td>
<td>• Good potential area for greyfield intensification</td>
</tr>
<tr>
<td></td>
<td>• Potential to facilitate bus travel</td>
</tr>
<tr>
<td>Greenfield Areas</td>
<td>• Undeveloped area identified as a community node (identified in Urban OP, future secondary plan to follow)</td>
</tr>
<tr>
<td></td>
<td>• New areas to be built around transit</td>
</tr>
<tr>
<td>Greenfield Non-node</td>
<td>• Same as above but in non-node context - residential and local scale commercial</td>
</tr>
<tr>
<td>Other</td>
<td>• High level of major institutional uses, with significant transit ridership</td>
</tr>
</tbody>
</table>

**Urban Areas**

The ‘Urban Areas’ include some of the urban corridors and nodes identified in the Urban Official Plan as “Primary Corridors”, “Downtown”, “Sub-Regional Nodes”, and “Community Nodes”. See Appendix B for a map of the Urban Structure and associated urban structure components. These areas overlap in many cases with the proposed rapid transit route known as the B-line and part of the A-line. Some of the proposed rapid transit corridors included in this classification are King Street and Queenston Road along the B-Line and parts of James Street in the lower city along the A-Line. The B-line primary corridor will have the highest order transit in the City and should be the focus for the largest scale TOD. Nodes, such as Eastgate, will be among the highest order transit stations (as a multi-modal location) and will
likely attract the most development outside the downtown. Along the corridor, various station areas may also be potential development/redevelopment sites, although some station areas may not have a high demand for new development.

Community Nodes include traditional downtowns of former municipalities as well as areas that are currently made up of primarily community scale retail uses and a greenfield area, still to be planned. It is the intent that these non-traditional and future community nodes transform over time to contain a full range of services and functions found in the traditional community nodes. Thus the principles for urban nodes must be applied to these non-traditional and greenfield nodes. Although the Community Nodes may not be directly connected to higher order rapid transit, it is essential that TOD principles be applied at the appropriate scale to ensure these nodes develop to support local transit and achieve their planned function in the urban structure.

Suburban Areas
The ‘Suburban Areas’ grouping includes areas along the proposed A-line rapid transit route along Upper James Street which are more suburban compared to the lower city. Non-rapid transit routes such as those along Upper Ottawa or parts of Mohawk Road are also grouped into this type of TOD area. The design of the suburban TOD will be similar to those of the urban TOD but at a lesser scale. The long term goal is to use TOD principles to bring suburban rapid transit corridors up to a similar scale and level of transit use as presently exists in the lower city rapid transit corridor. Suburban area transit corridors can benefit from TOD at key locations such as where two main transit routes intersect.

Greenfields
‘Greenfield Areas’ such as new nodes or new undeveloped areas have the opportunities of being planned, designed, and developed according to TOD principles from the start. Applying TOD principles early in the planning and development of greenfield areas may help transit service and use become established sooner. With TOD principles applied, new greenfield areas can develop around transit, thus transit service is more feasible as the population and density needed to support transit becomes established over time. Greenfield areas include new neighbourhoods, including the planned greenfield Community Node. The greenfield Community Node will have the benefits of being planned according to TOD principles. Those principles will be applied to create a Node larger in scale than the greenfield neighbourhood areas.

Other Areas
The final category where TOD may be applied is in special nodes and includes areas called “Major Activity Centres” in the Urban Hamilton Official Plan. Major activity centres have many potential transit riders due to the presence of health centres, colleges, and universities, thus TOD principles should be applied in these areas at a scale similar to other urban or suburban nodes. Each activity area is unique and will need to apply TOD principles according to their specific function and needs. Other important areas in the City which can benefit from the application of TOD principles include the West Harbour and airport areas. These activity areas are very unique. Specific TOD principles can be applied as these areas evolve. Similarly, other areas of the city may become prominent activity areas where TOD will be desirable.
The TOD principles and typologies are the key components of the TOD guidelines which can be applied at varying scales throughout the City of Hamilton.

5.1 Design Considerations
A key component of successful TOD is good design and integration between transit and urban form within the surrounding community. Generally, design, as it relates to TOD, involves integrating form and function to increase the viability and vitality of development near transit. What will set one TOD area apart from another, are elements that create a sense of place. While good design should be applied to all developments, design for TOD (transit specific context) should pay particular attention to considerations of scale, sense of place, balance, and public realm areas including pedestrian facilities, street design, and buildings.

5.1.1 Scale and Context
TOD areas can vary widely from a Downtown transit hub, to a bus stop along an arterial street. While these two stops may share some common elements such as transit shelters and transit information, the design, scale, and function of the surrounding land uses are quite different. Thus, the goal of the TOD Guidelines is to address the diversity of situations and varying scales while still allowing sufficient flexibility in design.

The constant components across the various scales of TOD are the ten principles identified in Section 3.0. For example, while increased density (compared to the surrounding area) will be a feature in all TOD areas, the required density in a suburban transit area would be less than that in a primary node where two corridors intersect. Design can be used as a tool to implement and rationalize the principles within an appropriate scale so that there is the appropriate amount of parking, density, and variety of uses for each TOD typology.

5.1.2 Creating a Sense of Place
TOD areas should strike the right balance between common elements and unique features. There should be enough common elements and land uses between TODs so that people can easily identify the areas as a TOD area. Common elements can include similar transit shelters, bicycle and pedestrian amenities, walkable pleasant streets, and a mixture of uses. With the common elements in place, there can be variation within individual designs. This variation creates a ‘sense of place’. A sense of place is not limited to the rapid transit stops themselves. The entire look and feel of the surrounding development further contributes to the sense of place. Ultimately, transit stops are the gateway into the surrounding community. Thus passengers should easily understand where they are when they leave the transit vehicle.

Civic uses and public/open spaces are another key element of creating a sense of place. Civic and public spaces are shared by all and often have easily identifiable features or landmarks. Civic and public/open spaces share the elements of being accessible to the public and can provide important amenities to the surrounding communities. Because these areas are open to all, there may be a sense of ownership and are often the locations where diverse groups gather and form connections. Such locations are frequently where public art is predominately located. Transit often becomes the backdrop in civic and public space areas such as at larger transit terminals or public squares with nearby transit stops.
5.0 COMPONENTS OF TOD

5.1.3 Balance
Good design in TOD areas is all about creating balance, whether it is a balance between uses, balance between transportation modes, or balance in scale. For example, people can be more comfortable with higher density uses and higher lot coverage as long as the buildings remain “human scale” and not too large. The densities required to achieve TOD, can often be met with medium rise buildings, thus there is a balance between the scale and the density required for TOD.

There is also a need to strike a balance between being overly prescriptive with regulations and allowing appropriate levels of flexibility and market-led decisions. Policies and regulations should outline the main parameters and key requirements while allowing for creativity and flexibility. Striking the correct balance ensures key requirements are in place without encouraging uniformity in design.

5.1.4 Pedestrian Facilities
When planning for transit and transit supportive areas, an important consideration is that all transit users start and end each trip as pedestrians. By planning and designing efficient/useable pedestrian connections and facilities, transit access and use can be enhanced. There are additional advantages to encouraging pedestrian facilities, such as improving the visual appeal of an area, street-level amenities and other structural and façade elements that encourage pedestrian interaction. Having attractive pedestrian friendly amenities can increase the appeal of an area and contribute to promoting a sense of vibrancy and life to an area. This vibrancy and street activity also creates a feeling of safety and security.

Pedestrian features are an important common element regardless of scale of the TOD area. Several components go into designing good pedestrian areas. Table 3 outlines several of the features that improve the pedestrian realm and thus improve access to transit.

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ii Note: not all features will necessarily be implemented in TOD areas. Pedestrian realm features listed here are to provide options. Specific features may be implemented in TOD areas where feasible and appropriate.
The features detailed above not only make TOD areas more attractive and accessible, they also contribute to improving the liveability of the surrounding community. Opportunities for increased walking have both societal benefits (decreased emissions from vehicles) to personal benefits (increased physical activity). Overall, increasing walkability of an area is among the most simple yet biggest payoff features of TOD.

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5.1.5 Streets/Public Areas
While pedestrian areas consist mainly of sidewalks along streets and buildings, streets and public areas encompass all public spaces in TOD areas. Implementing good design in streets and public areas is an excellent opportunity to create unique spaces and improve the overall visual appeal of TOD areas. All the principles of good TOD design can be manifested in streets and public areas.

Important design features which contribute to good TOD design and meet the ten principles of TOD include safe areas, accessibility, and high quality of design. Features which contribute to streets and public areas are further detailed in Table 4.

Table 4: Key Public Realm Features

<table>
<thead>
<tr>
<th>Street/Public Area Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good lighting</td>
<td>• Essential for public safety and encouraging longer hours of activity</td>
</tr>
<tr>
<td>Landmarks and public art</td>
<td>• Contribute to creating a sense of place and creating an identity</td>
</tr>
<tr>
<td></td>
<td>• Useful in way-finding, especially for visitors or new riders unfamiliar with the area or transit network</td>
</tr>
<tr>
<td>Promote civic spaces in mixed use</td>
<td>• Creates a public connection area within communities</td>
</tr>
<tr>
<td>Promote easy access from public areas to private spaces</td>
<td>• Promotes integration of uses and facilitates pedestrian movement</td>
</tr>
<tr>
<td>Avoid blank walls</td>
<td>• Enhances pedestrian walking environment and promotes visual interest and safety</td>
</tr>
<tr>
<td>Where possible, create smaller blocks</td>
<td>• Allows for better connectivity and more opportunity for pedestrian access</td>
</tr>
</tbody>
</table>

Creating viable and inviting streets and public spaces promote pedestrian connections by creating compact blocks, pleasant walkways, and comfortable, well-marked, and continuous street-front experiences. The appeal of the pedestrian environment strengthens the sense of place and can support retail spending. People generally like to spend their time and money in attractive areas. Unique and/or attractive business areas encourage people to linger longer and may result in more retail activity.
5.1.6 Buildings

The manner in which buildings interact with the street and pedestrian realm can contribute greatly to the success of a TOD area. In keeping with the ten principles of TOD, buildings can play a role by adhering to design standards. Several of the same guidelines already detailed within the City’s Site Plan Guidelines are also applicable to TOD areas. Some common considerations for buildings typically include:

- Buildings oriented to the street (entrances and windows) with minimal setback
- Corner buildings are important - have a “build to” line rather than a setback for more uniformity
- Promote “place making elements” (unique signs, public art, landmark buildings, etc.)
- Provide ground floor windows and attractive building façades
- Minimize parking in front of buildings

Other good design features include ensuring there is a minimum ratio (40%-70%) of windows and doors to the overall building wall\(^1\). A minimum amount of openings promotes a more pleasant walking environment and more attractive buildings. Buildings should also be designed to accommodate a range of uses over time; this will also encourage a variety of building and design solutions\(^2\).

Guidelines should provide broad direction on building design such as ensuring buildings relate appropriately to the street and fit in context with the surrounding buildings. The focus should be on overall good building design rather than particular details.

5.1.7 Other Design Considerations

Several other design aspects must also be taken into consideration in TOD. For example, in the older urbanized areas of the City, there are several heritage buildings and landscapes to be managed. New developments and redevelopments should consider local context and heritage features and work with them rather than against. In fact, incorporating heritage features can be an asset to some TOD projects, providing a unique sense of place, and often a more attractive product. Even when building along new transit lines, the intent is not to replace all existing buildings and build on an empty site. Rather, TOD can be incorporated in existing built landscapes and incorporate heritage features into the overall design and appeal of the area. Preservation of existing heritage buildings is an important consideration for TOD.

While all the aforementioned aspects of design would make for an ideal TOD area, in reality, it is not always possible to incorporate all features of design. Often, site constraints or other obstacles prevent a completely ideal development. When unable to provide all design elements, development of TOD should focus on amenity-rich varied areas with weather protection and safe design\(^3\). ‘Amenity-rich’ may include several service retail/personal services and in some cases civic uses. Such uses form the bare minimum needed to make TOD areas viable. As long as there are sufficient densities, good transit connections, and attractive amenities, people will still want to live, work, and travel to those areas.
5.0 COMPONENTS OF TOD

5.2 Uses and Location

In addition to design, the uses within TOD are what can help differentiate these developments from other types of development. The uses permitted in TOD can encourage or discourage the use of transit. Therefore, it is important to get the correct mix and balance of uses. The mixture of land uses available in TOD areas not only can contribute to increasing transit ridership, but can also help create vibrant and attractive places with enhanced liveability.

Typically, uses associated with TOD include mixed use, affordable housing, civic uses, and stand alone residential and commercial uses\(^\text{42}\). Many other uses can also make up a TOD area. The make-up of uses, and how those uses interact and integrate with transit is what makes TOD an important component of successful transit, and differentiates one TOD area from others.

Activities should be balanced between daytime activities (e.g. office, daycare, some retail) and evening activities (e.g. restaurants, coffee shops, residential areas)\(^\text{43}\). A balance of day and evening activities will support all day transit use and even two-way transit service at sustainable and reliable levels. A high level of transit service is vital to maintaining transit as a viable option for people’s transportation choice.

5.2.1 Mixed Use

A mixture of uses is the core element and key theme of TOD and enhances the liveability of an area. Ensuring a mix of uses meets most of the ten TOD principles either directly or indirectly. Mixed use ensures constant activity and increases the vitality of an area.

The Urban Hamilton Official Plan defines mixed use development as:

“a development or area made up of mixed land uses either in the same building or in separate buildings. The mix of land uses may include commercial, industrial or institutional uses but must contain residential units.”

Mixed use spreads out the transit demand to include both origins of trips (homes) and destinations (employment, retail, office, landmarks, etc.)\(^\text{44}\). The important consideration for mixed use is to get the implementation right. For the purposes of TOD, “mixed use” does not need to be applied to every single individual building\(^\text{45}\). The mixture of uses should be viewed corridor or node-wide and not at the parcel level\(^\text{46}\). Essentially this means it is perfectly acceptable and often advantageous to have a series of TOD stations of different uses. There are opportunities for specialized TOD areas such as station areas where the predominant use is residential, followed by predominately commercial/industrial uses at another. Mixed-use and TOD can be analogous to a “string of pearls” where each TOD area can be specialized, thus the entire corridor becomes a mixed use corridor\(^\text{47}\).

Furthermore, studies in the United States have found that developers are often more comfortable with horizontal mixed use rather than vertical mixed use. This simply means that each building does not always have to have multiple uses as this often leads to more complexity in the development\(^\text{48}\). Stand alone and single-purpose buildings are acceptable as a collection of individual uses inherently makes mixed use.
In addition to mixed use, certain uses are more advantageous in particular areas. For example, personal service uses such as banks, daycare, professional businesses, and retail establishments are preferably located nearest the station or stop area. Thus allowing people to “hop-on” and “hop-off” the transit area.

For accessing transit from their homes, a general rule of thumb is approximately a 5 min walk or approximately 400m. For accessing employment, people will tend to walk a littler further and for accessing special events (sporting, concert venues) they may be able to acceptable an even greater distance given it is a special or one-time event plus the ability to avoid paying for parking or sitting in traffic after the event. Thus uses should be placed in a hierarchy with those that benefit the most from being close to transit nearer the station or stop area.

TOD areas outside of a main corridor or crossing into more neighbourhood type areas should concentrate on providing uses such as grocery stores, drug stores, banking, personal services, daycare and retail. These uses are part of the daily needs of a neighbourhood area but can also benefit from having good access to transit. For example, people can get to and from work on transit and stop off at the bank or grocery store on the way home. The benefit of these neighbourhood scale uses near transit is convenience - allowing people to take transit rather than drive.

### 5.2.2 Immediate Station Area

The area where TOD guidelines have the greatest impact is in the immediate station areas of future potential rapid transit. Immediate station areas include the closest 100 - 200 metres to a transit station or stop. However, TOD impacts can be beneficial up to 400 - 500 metres. In the immediate station area, particular considerations should be made for parking which should not be directly next to the station or stop station. The land near stations would be best used for mixed use or commercial uses. An exception may be park-and-ride areas, but even in these locations, parking should not be overly dominant. Passenger drop-off zones may also be appropriate though they are generally found at major inter-modal stations or end points rather than at neighbourhood transit stations. For areas along rapid transit routes with existing or planned auto related uses (gas stations, car washes, etc.), proper design can be utilized to ensure pedestrian movement and access to transit is maintained and enhanced.

Overall, development in the immediate station areas should ensure that the design of the station is of a high quality and reflects the character of the surrounding communities. The goal is to have the most convenient, transit supportive, and densest uses in the closest proximity to the station areas as possible. As gateways into the community, TOD in station areas should facilitate passenger travel and not discourage it.
5.2.3 Other Land Uses
While mixed use and transit focussed uses form the ideal TOD land use, it is recognized that in certain areas, due to exiting urban form, non-transit oriented uses may be permitted. Hamilton is an older city with great diversity in land uses. In some areas where transit is in operation or proposed, the dominate land use may be more auto-oriented rather than transit oriented. A balanced city requires a variety of uses, thus, the intent of TOD Guidelines is not to exclude uses already permitted, but to inform the planning for a transition away from auto-oriented uses over time. The Official Plan, Secondary Plans, and the comprehensive Zoning By-law direct permitted land uses. Where transit is present in proximity to auto-oriented land uses, TOD principles and design can be used as a mitigation tool. Auto-oriented uses can be permitted, but the design should not impair walkability and transit access. Good design practices should be used to improve pedestrian and transit movement.

5.3 Parking
Managing parking is among the most important aspects for creating successful TOD areas and requires balance. Too little parking can undermine the viability of a development, while providing too much can work against promoting high levels of transit use. Generally, parking is oversupplied and under priced, especially near transit served areas. Thus the closer to transit, and the higher level of transit offered, the less parking should be supplied.

TOD allows opportunities to reduce parking requirements which supports transit and encourages people to make other choices in modes of transportation other than the automobile. Furthermore, reducing the amount of parking can allow additional and greater uses of land, especially as land values rise. Generally, TOD offers significant opportunities to reduce the number of parking spaces below conventional parking requirements for retail, office, and residential land uses. However, there is a need to also balance the impact on neighbourhoods as removing too much parking may cause spill over of parking onto residential streets.

Residential Parking
Using TOD can facilitate reduced parking requirements due to the type of units and households attracted to such areas. A variety of households from singles, young couples, and retired persons, are most often attracted to TOD. These types of households do not demand as much parking based on their housing preferences and thus can benefit from reduced parking supply. In residential developments, the price of parking is often tied into the cost of the unit. By removing the price of a parking space from the cost of a unit, people will see the true cost of that parking space and make a decision if they still want to purchase. Removing the price of parking from the unit will also help to make the cost of the residential unit more affordable. Furthermore, tying parking with the unit inadvertently encourages people to drive since they will automatically own a parking space once they own their unit.
Parking Reduction Strategies
Strategies exist for reducing the amount of parking required in new developments including:

- Shared parking facilities;
- Offering transit passes with new homes and businesses;
- Transportation Demand Management measures;
- Requiring higher rates for parking;
- Providing for carpool parking, car sharing programs;
- Parking management (restricted parking hours); and,
- Unbundling the cost of parking from the cost of housing.

Alternative methods for providing parking, such as shared spaces, often works best when land uses have significantly different peak parking characteristics. Furthermore, overall parking management may not be best implemented through a single approach, but management should be tailored to each particular and unique circumstance. A mix and match approach to various parking strategies may allow for flexibility to find creative solution at the site plan level.

Parking Supply
Several challenges remain in restricting parking or reducing parking standards. For redevelopments or existing uses, applying some of the above mentioned alternative parking strategies is less feasible than in newer developments. Market conditions need to be factored into decisions on parking provisions. In a market such as Hamilton, parking reductions can only go so far if carried out by the public sector. There must be private sector buy-in for reduced parking requirements as well as a market rise in the price of parking. The price of parking will likely only rise along with land values as artificially raising prices (i.e. raising municipal prices) will transfer parking to the private sector. Ultimately there may be equilibrium where the price of land causes the price of parking to rise as well. Until then, there may be some growing pains where parking pricing is higher in municipally owned lots than in private lots.

The City can play a role by restricting the amount of new parking supply. Eventually the market pricing for parking will reflect the rising land prices. At the same time, demand for parking will be reduced as transit service to the area is improved and utilized. Parking restriction and/or requirements can also be used to leverage other uses beneficial for TOD such as bicycle parking. For example the amount of parking required can be reduced based on the number of bicycles spaces or facilities provided. The description of TOD typologies outlines typical parking rates for various land uses (see Volume 2).

To strike the right balance of parking, the amount allowed should be tied to the scale and function of the given TOD area. For example, a park-and-ride facility may be appropriate in a suburban or end point TOD, but not necessary in an urban corridor area. On-street parking may be appropriate in certain areas but should come with restrictions such as strict time limits. Overall, reducing the over-supply of parking is intended to avoid large expanses of parking lots which can be detrimental to walkability, pedestrian environments, and the viability of transit.
5.4 Densities

5.4.1 Why is Density Important in TOD?
TOD area densities will ultimately determine the viability of the area and whether TOD will be successful. In order to maintain vitality, a “critical mass” of density is required to make the development work and attract more amenities and services. Density also supports the clustering of buildings which promotes pedestrian activity. Conversely, if densities are too low, transit cannot be supported. Thus sufficient density is needed to bring people together, to help local businesses by attracting sufficient potential customers, and to provide potential transit ridership. Some of the most successful and attractive places in urban areas are those with sufficient densities to support amenity rich, walkable streets and where transit has enough people to use the service.

The density of a project is often among the most contentious issue, likely due to the misconception that density must result in tall buildings, increased automobile traffic, and parking. In reality, higher transit-supportive densities can be achieved while maintaining buildings of human scale and mitigating traffic impacts by increasing foot traffic. This can be accomplished through good design and following clear TOD principles. For example, higher lot coverage but shorter buildings can have the same density as taller buildings on smaller footprints. Figure 3 shows that it is possible for mid-rise buildings to achieve higher densities than taller buildings.

Figure 3: Example of Achieving Higher Density in Lower Story Buildings

24 Mountain Avenue South
Height: 7 storeys
Density: 167 units per hectare

1 Hamilton Street South
Height: 10 storeys
Density: 117 units per hectare

The level of density required will be dependant on the scale of the TOD. Densities are determined by the Official Plan, Secondary Plans, and/or Zoning By-law.
5.0 COMPONENTS OF TOD

5.4.2 Where and How Much Density Should be Applied to TOD

Applying transit supportive densities does not necessarily mean high density is uniformly applied across the entire area. Typically in TOD areas, the highest density is applied closest to the transit station\textsuperscript{67}. Lower density uses can be applied to areas adjacent to single family or lower density neighbourhoods further away from the transit station or stop. Encouraging appropriate levels of density is important to allow the most number of people and employees to access fast, frequent, and reliable transit. The higher the level of transit (e.g. LRT vs. Bus) the more density should be encouraged to locate around the transit stations and in larger node areas. Furthermore, density should not be applied uniformly in all TOD areas. TOD areas such as those in node and corridor areas (where rapid transit is present) will be made up of a mixture of high, medium and possibly even higher level low-density uses. Commercial density and lot coverage will also vary based on the scale of the TOD area.

When applying densities to TOD areas, the target should be an overall transit and amenity supportive density for the entire area rather than a target on a per site basis\textsuperscript{68}. For example, a typical transit supportive density for an urban transit node is approximately 150 people and jobs per hectare\textsuperscript{69}. This figure should be applied to an entire area rather than to any one given use. Some buildings will have higher or lower densities throughout the TOD area. As long as the overall density for the TOD area remains near 150 people and jobs per hectare, than transit service levels and other amenities should be maintained. Site level density is directed by the Official Plan and implemented by residential, commercial, or mixed use zoning.

Knowing where density should be applied, it is also important to know how much density is required. Most TOD guidelines do not specifically identify density requirements for TOD. Rather, most municipal guidelines describe how and where densities should be applied to TOD but leave the actual density figures to their respective Official Plans and Zoning By-laws.

The Urban Hamilton Official Plan provides direction on densities for various land uses. The densities of residential areas, for example, are sufficient to be transit supportive and encourage the clustering of amenities. Table 5 details the required minimum densities for residential areas as outlined in the Urban Hamilton Official Plan.

**Table 5: Minimum Residential Densities as Detailed in the Urban Hamilton Official Plan**

<table>
<thead>
<tr>
<th>Scale of Residential use</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Density Residential</td>
<td>Up to 60 units per hectare</td>
</tr>
<tr>
<td>Medium Density Residential</td>
<td>60-100 units per hectare</td>
</tr>
<tr>
<td>High Density Residential</td>
<td>100-200 units per hectare</td>
</tr>
</tbody>
</table>
5.4.2 Where and How Much Density Should be Applied to TOD (Continued)

TOD areas will have a mixture of different scales of residential uses. The densities in the Official Plan are consistent with the densities required for various forms of TOD. The commercial density is also an important factor. The density of commercial areas is usually determined by the ratio of lot coverage by the building. Furthermore, the urban structure policies detail the scale for node and corridor areas. For example, urban nodes should have an overall density of 100 - 150 people and jobs per hectare, which is sufficient for mixed use node areas and is transit supportive. Future secondary plans and zoning will also refine the broad direction in the Official Plan and apply TOD supportive densities to residential and commercial areas. The Official Plan policies are already consistent with TOD required densities. The TOD Guidelines can simply inform future secondary plans and zoning by suggesting minimum residential and commercial densities which are consistent with the Official Plan. Any densities detailed in the Hamilton TOD Guidelines should be read as a minimum for overall density and not applied on a site by site basis.

5.5 Zoning

The zoning within designated TOD areas is very important to the overall success of TOD. The zoning regulations are what will ultimately permit or not permit the uses, densities, and broad design features that will allow TOD to be viable. In fact, while financial incentives are often used to encourage TOD, simply allowing appropriate uses and regulations though zoning may do more to encourage TOD than giving cash incentives70.

Some jurisdictions have created specific TOD zoning while others have simply ensured that the zoning applied to identify TOD areas is consistent with the principles and design features discussed previously71. For example, Washington DC has created a special mixed-use/transit-supportive zone that grants special use permits to any of the following services that are sited near transit stops: banks, professional businesses, retail stores, offices, and child-care centres72. Alternatively, zoning in TOD areas simply has to allow compatible uses and sufficient densities to make transit viable. Whichever approach is taken, the ultimate goal is to ensure zoning in TOD areas is consistent with TOD principles and design ideals. Hamilton currently does not have TOD specific zoning. However, a new comprehensive zoning by-law is being created which is generally consistent with the principles of TOD, allowing TOD supportive land uses and densities.
A strengths, weaknesses, opportunities, and constraints (SWOC) analysis assesses the overall potential of TOD to become an attractive development option for development throughout the City and at representative TOD sites. Strengths include existing aspects that can facilitate TOD development, while opportunities highlight the potential a given area may have. Conversely, weaknesses highlight exiting barriers that need to be overcome before development can capitalize on the opportunities. Constraints include larger factors which may prevent the success of a TOD if not addressed.

This method of analysis allows both the strengths and weaknesses of the site to be compared against the opportunities and challenges in order to maximize the overall TOD potential of the representative sites while minimizing problems.

6.1 Overall Citywide SWOC

The general concept of implementing TOD brings with it overall strengths, weaknesses, opportunities and constraints. Common elements such as supportive policies (a strength) and overall high automobile use (a constraint) apply to all types of TOD regardless of the scale. Table 6, highlights some of the City-wide considerations that exist highlighting the potential for TOD as well as the limitations for all types of TOD areas.

Table 6: Summary of Overall Strengths, Weaknesses, Opportunities and Constraints to implementing TOD in the City of Hamilton

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Urban Structures supportive of transit (grid network, etc.)</td>
<td>· Traditionally, supply has outweighed demand for multiple unit buildings and intensification overall</td>
</tr>
<tr>
<td>· City was originally transit supportive - a long standing history in lower City of TOD</td>
<td>· Existing densities in some locations are lower than what is required for TOD</td>
</tr>
<tr>
<td>· Scale of Urban Neighbourhoods</td>
<td>· Personal automobile is still the preferred mode of transportation in the City</td>
</tr>
<tr>
<td>· Supportive polices already exist (new OP, pending secondary plans, etc.)</td>
<td>· Parking considerations</td>
</tr>
<tr>
<td>· Potential for new investment in transit (new rapid transit being built in Hamilton, e.g. LRT)</td>
<td>· Market (i.e. economic viability)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Many redevelopment opportunities along primary corridors</td>
<td>· Redevelopment subject to market conditions - some areas have traditionally had weaker retail and housing markets</td>
</tr>
<tr>
<td>· Changing demographics may result in a shift in demand for TOD related housing and built forms</td>
<td>· Little experience in developing TOD forms within the City</td>
</tr>
<tr>
<td>· Minimum densities required through legislation and increased focus on intensification</td>
<td>· Potential for greater risk in TOD projects compared to 'traditional' developments</td>
</tr>
<tr>
<td></td>
<td>· Historically low transit ridership</td>
</tr>
</tbody>
</table>
6.2 SWOC Analysis by Typology

Given the scale, function, and existing built form of each TOD typology area, there are several differences in the strengths, weakness, opportunities, and constraints when developing TOD. A SWOC analysis is further provided below for each TOD typology area. For illustrative purposes, representative example sites were chosen based on the four types of TOD typology areas. The following is a description and analysis of the strengths, weakness, opportunities, and constraints of the representative sites. The analysis of the SWOC can be applied to similar sites under the TOD typology categories.

Typology Area: “Urban Rapid Transit Area” (Urban Corridor and Urban Sub Regional Node)
Sample representative area: Intersection of Main St. and Ottawa St. and the Eastgate Node

Urban Rapid Transit areas such as urban nodes and urban corridors have several advantages, making these types of areas attractive for TOD and the priority areas for implementing TOD principles. Urban areas such as those in the lower city where rapid transit will likely first be implemented, have strengths such as historic development already oriented towards the street front, and existing high frequency bus service. From a policy perspective, several of the urban areas of the lower city are designated for TOD supportive mixed use and higher density. Furthermore, infill development is directed through policy for urban areas which promotes clustering of uses and density supportive of TOD. Also, as high frequency bus service already exists, residents and businesses have already become accustomed to using transit. Utilizing TOD would simply facilitate an already proven demand rather than creating one.

Several opportunities exist as well. Urban areas, such as those along proposed rapid transit corridors and nodes in Hamilton, have land prices which may be attractive to new development in light of investments in rapid transit. Furthermore, an increased focus on intensification in this area already exists, and due to the mix of historic and new development, there are good opportunities for real place making. Regarding parking issues, opportunities exist at some sites such as Eastgate for shared parking areas including park-and-ride opportunities.

Conversely, there are weakness and constraints that may need to be overcome for successful TOD development to take hold. Given that the rapid transit corridor areas are among the oldest parts in the City, several of the lots are small and narrow and held by a variety of land owners. In order to make some projects more feasible, land assembly may need to be completed.

One of the main constraints includes market demand. While rapid transit investment may be a powerful catalyst for new urban development, it can not create demand for housing and retail space in of itself. The demand must first be present. Rapid transit investments play the role of facilitating and directing the demand toward the rapid transit corridor.
Typology Area: “Suburban Area” (Suburban Primary Corridor, Suburban Arterial Road Area)
Sample representative area: Upper James St. and the intersection of Mohawk Rd. and Upper Ottawa St.
Implementing TOD in more suburban areas, including rapid transit and non-rapid transit lines, has its own set of strengths, weakness, opportunities, and constraints. In suburban areas, the density and spacing of buildings is less than in the older, more urbanized areas. While initially this can make transit more difficult, it does provide potential for infill and intensification opportunities. Through development in vacant or at underutilized properties, a more compact urban form consistent with TOD principles can be developed. Furthermore, in many locations along suburban bus or future rapid transit routes, lot sizes are large and deep enough to allow for creative and easier developments - a further strength for potential TOD redevelopment. Also, similar to the urban corridor areas, policies are supportive of intensification along rapid transit lines and arterial roads.

Other opportunities exist for suburban rapid transit corridor areas such as Upper James Street to connect suburban neighbourhood areas to the rapid transit network and the Downtown though the use of connecting bus lines. In non-rapid transit areas, TOD principles have the potential to improve transit services and access to crossing routes by placing people and business near key transit hubs.

Some of the weakness of transit and TOD in suburban areas include the current infrequent service of transit. Furthermore, many suburban corridors are not built with a pedestrian first design. However, by improving on the strengths and opportunities, these same weaknesses can be overcome. Constraints to redevelopment along suburban corridors and arterial roads hinge on expansion of transit as well as larger market forces. For the proposed rapid transit routes, demand may not pick up until rapid transit and the mode of transit (BRT vs. LRT) is confirmed. The balance between development and transit ridership is one of the key constraints. It is a matter of what comes first, improved transit service or new development; ideally they would be implemented together.

Typology Area: “Greenfield Areas” (Greenfield Node, Greenfield Non-Node Area)
Sample representative areas: Elfrida Node and the South Waterdown Area
Implementing TOD in greenfield areas has its own challenges, but there are many overlooked advantages and opportunities to implementing TOD in greenfield areas. The primary strength for greenfield TOD is due to the undeveloped nature of greenfields which allows for greater flexibility in design and layout. New greenfields built according to TOD principles, can be designed in a more ideal manner than trying to incorporate or work around existing uses and buildings when implementing transit and TOD. A great opportunity exists by having transit available within new communities from the beginning. The level of transit ridership can rise and grow within a community rather than implementing transit in an established area that is not accustomed to using transit.

The weakness and constraints are similar to some suburban areas where the population may not be available at first to support transit at acceptable levels. However, planning for transit expansion in the future means that transit can move in as soon as a critical mass of development and density is reached.
6.2 SWOC Analysis by Typology (Continued)

Typology Area: Major Activity Centre
Sample representative area: McMaster University

The final type of TOD area includes major activity centres such as areas around McMaster University or Mohawk College’s main campus. While these areas may function similar to those along primary corridors or nodes, there is the added element of a high degree of institutional uses. This added feature presents additional strengths and opportunities as well as weakness and constraints.

One of the main strengths of these major activity centres is the potential large number of transit riders. The students, faculty, staff, and visitors coming to and from these institutions are a potential large draw for transit. Major activity centres are also key destination points to anchor a transit line or serve as a hub and connection point. These strengths translate into opportunities both for growth as well as for attracting new development. The presence of transit can be even more attractive for such developments especially when access is facilitated by good transit oriented development and design.

Some of the weakness and constraints are similar to those in urban corridors and nodes including lot sizes and ownership issues. Also, the need for providing transit will need to be balanced against the demand for short term parking and deliveries for the larger institutional uses such as hospitals and schools. Major activity centres have the added constraint that they are already highly built-up. There are fewer infill opportunities and redevelopment may need to take place on existing buildings. Also, transit ridership may already be high in these areas thus there is less of an opportunity to further grow transit use.

Overall, while challenges and weakness exist, knowing what they are upfront will help in finding solutions to overcome these obstacles, by converting challenges into advantages that will help create and sustain better functioning TOD areas.
Using TOD Guidelines can be an effective way to encourage transit supportive development to help implement the policies of the Official Plan and facilitate new investments in transit. There are several strategies available to make TOD Guidelines an effective tool to encourage transit and ensure overall success. TOD guidelines should be used as a reference tool to help guide future land use decisions and during the review of development applications when near transit. Overall, TOD guidelines are intended to be used as a tool to help implement City policy. Thus the guidelines can be used to:

- Provide direction in the development of future secondary plans;
- Provide direction on planning around transit stations;
- Serve as a tool to review development applications located near key transit areas to ensure some principles of TOD are addressed;
- Incorporate TOD principles when updating policy and zoning;
- Guide implementation of new transit infrastructure including rapid transit;
- Guide to design or retrofit streets and other public spaces to be more pedestrian, bicycle, and transit friendly; and,
- Serve as an education tool to educate the public and industry about the benefits of TOD.

TOD can lead to land value premiums around transit, but the payoffs are not always automatic or immediate. In fact, full build-out of TOD areas should be a long term goal, with benefits occurring over time. It will be important for the City to become a champion of TOD in order to leverage any investments in transit accordingly. Ultimately it will be market forces that decide how successful TOD will be, which is why change will not be immediate. TOD will occur incrementally and, at times, sporadically depending on market conditions. Even within TOD station areas, development will likely occur in phases and with one or a few properties at a time. The overall goal is to achieve TOD principles at transit station areas of various scales over the planning period of Official Plan and Transportation Master Plan, approximately 20 - 30 years. To encourage short term progress, strategies could focus on smaller projects which are more likely to be implemented, rather than larger projects. A strategy of ‘quick wins’ may also help get more stakeholder “buy-in” of TOD and demonstrate its effectiveness.

The first step to creating TOD is clearly outlining where TOD should be applied and at what scale. Clearly outlining where TOD applies will ensure consistency and a common set of standards for the different TOD typologies. In the case of Hamilton, a series of TOD hierarchy as described in Section 4.0, details the various areas where different scales of TOD may be applicable. Official Plan policy has provided the broad urban structure and policy to direct the locations for TOD. In addition to the urban structure policies, rapid transit planning will further define specific locations for TOD development through the establishment of station locations.
7.1 Tools for Implementation
There are several tools available, which already exist, that can complement and help implement TOD Development.

City as an Active Partner
The City may have a role to play in participating in projects that can be early examples of TOD. Participating in TOD projects is consistent with Principle 10, Promoting Public/Private Partnerships. Another common capacity in which municipalities may have a role is in land assembly and property acquisition. As is the case with Hamilton, often times the land fabric in older areas are made up of small lots with various ownerships, thus making redevelopment a more complex proposition. If a municipality would like to see change in a particular area such as in the immediate vicinity of a transit station, there may be a role to play by assembling the land and either developing according to TOD directly or partnering with the private sector in a joint venture.

Site Plan Guidelines (existing tool)
In addition to Hamilton’s Site Plan Guidelines, TOD Guidelines can be used as another tool at the site plan level. For areas where TOD would be most applicable, TOD guidelines could be used in conjunction with the site plan guidelines to ensure developments facilitate transit use and access.

Zoning (existing tool)
An additional more common and efficient tool to implement TOD is through zoning. As discussed above, zoning can either be specifically designed for TOD (i.e. a TOD Zone), or simply TOD supportive by allowing/requiring TOD friendly uses and regulations. For example, many municipalities allow bonuses for a greater Floor Area Ratio (FAR) for tradeoffs such as structured parking rather than surface parking. Other zoning tools include parking strategies such as reduced parking requirements, or parking maximums along with requirements for specific TOD related infrastructure such as bicycle parking facilities and pedestrian amenities. Provisions for affordable housing are also common in many US cities as tradeoffs for density bonus. The justification for all the above strategies is the presence of higher levels of transit service or higher order types of transit.

Policy and Zoning Review
While overall, the Official Plan and the Zoning By-Law are consistent with TOD principles, in some situations, the existing policy and/or zoning in place may need some modification. As policy and zoning is reviewed due to regular updates, special studies, or secondary plans, the policies and zoning should be amended to be consist with TOD principles.

Tax and Fee Policy
Apart from directly developing areas and zoning, municipalities have other policy tools available to them. One example is Tax Increment Financing (TIF) which is a mechanism that allows the public sector to “capture” growth in property tax (or sometimes sales tax) resulting from new development and increasing property values. Another fee/tax based tool is a special Developer/Impact Fee which is a fee assessed on new development within a jurisdiction as a means to defray the cost. A fee structure should not be put in place which detracts from development that the City is trying to attract.
Station Area Plans
The TOD guidelines can be directly applied when developing detailed station areas plans for the immediate station areas. Most likely these station area plans will be an outcome of rapid transit planning. The ten principles of TOD should be used to guide the look, feel, and function of the station areas. As gateways for the transit system, transit station areas should follow the TOD principles as closely as possible to serve as the model of TOD.

Parking Strategy
While parking can be managed on a site-by-site basis, there is a need for a more comprehensive parking strategy (either City-wide or in select corridors). An overall parking strategy can review parking needs in the context of TOD as well as the supply and demand issues forecasted in light of potential expansions of transit. Parking strategies should include potential mitigation approaches, pricing considerations, impact on revenue, and supply and demand issues. Parking is important in all forms of transit, transportation, and land use planning. Thus, a comprehensive strategy would be beneficial in properly managing parking and striking the right balance in supply.

Secondary Planning/Corridor Studies
Future secondary plans or secondary plan review should be consistent with the TOD guidelines in placing transit as a core value and key focus areas. Secondary planning offers unique opportunities to provide detailed planning policy and zoning which can directly affect access to transit. By following the TOD guidelines and adhering to the ten principles, secondary plans can ensure that land uses are sited in the appropriate areas with proper densities and scale (to achieve TOD/transit ridership goals). While direction for secondary plans comes from the Official Plan among other areas, TOD guidelines can further inform secondary planning to increase the prominence of transit in the given community.

Whatever the tool employed, municipalities have a role in encouraging and often actively participating in the implementing of TOD. Especially when TOD is new to a community, there may be a public sector role in taking the lead or partnering with other groups to initiate some projects to highlight the benefits and mitigate any of the potential initial risks. Overall, TOD guidelines can serve as an education tool to inform what transit supportive developments look like, as well as how TOD areas should function. The implementation of TOD areas will be accomplished though the participation of the public, and private sectors and the community combined.
7.2 Remaining TOD Barriers

While there are several benefits to developing TOD, there are also barriers which must be overcome to turn policy guidelines into implementation. One of the primary barriers to developing TOD areas is risk. The risks in TODs are similar to those of other infill developments - fear of density by the community, financial constraints, coordinating actors, etc. The City’s role may be to streamline the review and approval of projects that fit. Pre-zoning and allowing TOD compatible uses will aid in streamlining the processes as will providing a TOD guideline document to provide direction.

Other barriers exist which the municipality should be aware of. These barriers include:

- Local neighbours’ fears that new developments such as TOD will harm the character of their neighbourhood or depress property values;
- Perceptions that TOD entails higher risks and costs;
- The failure of existing land-use patterns to support TOD;
- A lack of a market for TOD;
- Difficulties of financing;
- Poor transit design; and,
- An unsupportive regulatory framework.

The best way to mitigate these fears is to show visual examples of new developments and how they interact with existing uses and buildings. Even better than visual representation, is actual projects. Showcasing some early projects as demonstration practices can be the best tool in mitigating fears. The use of guidelines is also helpful in articulating what TOD should and can look like and how to manage existing buildings and uses. Finally, the adoption of a set of principles is to always have a reference and a common set of practices to fall back on.
7.3 Transit Oriented Development Guidelines

This paper forms Volume 1 of the TOD Guidelines which includes background and justification of TOD in Hamilton. The accompanying guideline document (Volume 2) details more specific direction for design, scale and implementation strategies for various types of TOD areas described in this discussion paper. The ten principles identified in Section 3.0 are detailed along with more specific guidelines providing direction on the components of TOD.

The accompanying TOD guidelines provide examples of the ten TOD principles though photos and diagrams from other jurisdictions. Also, the guidelines provide sample potential TOD areas from Hamilton with sketches to illustrate what TOD can look like at various TOD typology areas.

The TOD Guidelines include a description of what is TOD and how and why TOD should be implemented in Hamilton. This outline is followed by the ten TOD principles with additional detail on how the ten principles should be applied, followed by a description of the TOD typologies in Hamilton. More specific detail on design, function, and application is provided for each TOD typology area (urban corridor, greenfield area, etc.). The final component of the TOD Guidelines is a description of implementation strategies to make TOD a reality in Hamilton.


8 Moore, T; Thorsnes, P and Appleyard, B. (2007).


REFERENCES


28 Dunphy R. et. al. (2003)


33 Dunphy R; Deborah Myerson and Michael Pawlukiewicz (2003)

34 Ewing, R. (1999)

36 SeaTac Municipal Code, ch. 15.36 - Design Standards for High Capacity Transit Facilities, ch. 15.38 - Special Standards for the South 154th Street Station Area.


39 SeaTac Municipal Code

40 SeaTac Municipal Code

41 Ewing, R. (1999)


43 Canadian Mortgage and Housing Corporation. (2009)


50 Dunphy R. et. al. (2003)


52 Dunphy R et. al. (2003).


56 Brinckerhoff et.al. (2002)

57 Wilson, R. (2005)

58 Canadian Mortgage and Housing Corporation. (2009)


61 Dunphy R; Deborah Myerson and Michael Pawlukiewicz (2003)

62 Re-Connecting America. (2009)


64 Dill, J. (2006)

65 Fogarty, N; Eaton, N; Belzer, D; Ohland G. (2008)


67 Canadian Mortgage and Housing Corporation. (2009)


74 Fogarty, N; Eaton, N; Belzer, D; Ohland G. (2008)


78 Re-Connecting America. (2009)


81 Fogarty, N; Eaton, N; Belzer, D; Ohland G. (2008)

82 Fogarty, N; Eaton, N; Belzer, D; Ohland G. (2008)


Transit Policies and the Urban Hamilton Official Plan

Policies that are supportive of the implementation of rapid transit are detailed throughout new Urban Official Plan. Transit supportive policies are an important component of the new Official Plan and serve as a tool in the overall goal of community improvement and intensification.

The following Urban Hamilton Official Plan policies directly and indirectly address Rapid Transit and/or are supportive of rapid transit development:

Chapter A - Introduction

The introduction of the Plan clearly identifies that the Plan supports transit as a component of the development of the urban area. Both the underlying principles of the new Plan and the direction guiding the new Plan both promote transit and transit supportive policies. As stated in the Plan:

- **1.4 Principles of the Official Plan**
  - “balanced transportation networks that offer choice so people can walk, cycle, take transit, or drive, and recognize the importance of goods movement to our local economy;
  - compact and healthy urban communities that provide opportunities to live, work, play, and learn;”

- **2.1 Vision 2020 (and the nine directions to guide development decisions).**
  - Development of RT would meet three of the nine directions including direction 1 (“encourage compatible mixed use…””) direction 4 (“design neighbourhoods for access to community life”) direction 6 (“expand transportation options”) and Direction 7 (“maximise the use of existing buildings infrastructure…””) – direction 7 met by encouraging intensification.

Chapter B - Communities

Transit and transit-supportive policies are referenced directly and indirectly in several locations within Chapter B, indicating the important role transit can and will have in shaping the community.

B.2.0 Defining our Communities

Transit in general and rapid transit specifically will be an important component of achieving the City’s intensification goals. As further detailed below, higher order or rapid transit is envisioned for the urban corridors and nodes, which are among the areas in the City where intensification is to be directed. As stated in the Plan:

- **B.2.4.1.2 General Residential Intensification Policies - “Residential intensification directed to nodes and corridors…”** Residential intensification will promote transit use and allow for redevelopment opportunities.

- **B.2.4.1.4 Residential intensification developments shall be evaluated based on the following criteria:...e) infrastructure and transportation criteria”**
If the City is promoting greater intensification, than transit, especially rapid transit will need to be available both to provide riders and to provide options to new employees and residents along the corridors.

- **2.4.7 Facilitating Residential Intensification** “The City shall consider the creation of new, or expansion of existing programs including public transit to encourage and/or facilitate residential intensification”

Higher order transit is an effective means of encouraging and promoting good intensification and redevelopment opportunities.

**B.3.0 Quality of Life and Complete Communities**

One of the overall goals of the new OP is to create “complete communities” of which transit plays a key component. The Plan states:

- **B.3.0** “…Complete communities provide convenient access to a mix of jobs, local services and shops, a full range of housing and community facilities such as schools, recreation facilities, open space, health care facilities, cultural facilities, and more. Complete communities enable residents to meet most of their daily needs within a short distance from their homes, facilitating ease of access and use of public transit and active modes of transportation.”

**3.3 Urban Design Policies**

Urban design policies are a key component to the new urban Official Plan and have a direct role in promoting transit and rapid transit. The Plan states:

- **3.3 Urban Design Policies** “…The intent of this Plan is to create compact and interconnected, pedestrian-oriented, and transit-supportive communities within which all people can attain a high quality of life.”

- **3.3.1.4 Urban Design Goals** - “Create communities that are transit supportive, and promote active transportation”

- **3.3.2.5** “Places that are safe, accessible, connected and easy to navigate shall be created by using the following design applications, where appropriate:
  d) integrating conveniently located public transit and cycling infrastructure with existing and new development;

- **3.3.2.9** “Urban design plays a significant role in the physical and mental health of our citizens. Community health and well-being shall be enhanced and supported through the following actions, where appropriate:
  c) encouraging development of complete and compact communities or neighbourhoods that contain a variety of land uses, transportation, recreational, and open space uses; and,...”
Chapter C.4.0 - Integrated Transportation Network

The new Urban Official Plan contains an expanded transportation section of which transit, and specifically rapid transit, is predominantly detailed. Various subsections of the transportation section are detailed below:

- **Preamble** - “The function of the integrated transportation network and overarching objective of the Official Plan is to safely and efficiently move people and goods seamlessly and effectively, and serve as an economic enabler. ...The transportation network and land uses are mutually inclusive; land uses are connected and accessible through the transportation network. Equally, transportation is made more efficient when complemented by appropriate locations and densities for various land uses.”

### 4.1 Policy Goals

- **4.2.1** - Recognize the relationship of transportation and land use planning in connecting communities, land uses and activities and the role of the integrated transportation network in creating complete communities and improving overall quality of life.

- **4.1.5** - Work in cooperation with other levels of government and government agencies to further develop inter-regional travel plans including expansion of GO Transit in the Hamilton area, proposals for rapid transit within the City and other inter-regional transit and highway, marine, and airport initiatives.

- **4.1.6** - Provide a convenient, fast, frequent and affordable public transportation service that features adequate carrying capacity and serves all residents and businesses.

### C.4.2 Integrated Transportation Network Policies

General transportation policies stress the importance of transit in shaping the community and highlight that transit is a basic component of the urban structure of the City. The Plan states:

- **4.2.2** - Transportation infrastructure shall be designed and implemented to support the growth objectives and urban structure as described in Section E.2.0 - Urban Structure.

- **4.2.5** - Public transit shall be an integral component of planning for new development and redevelopment of residential uses and all new commercial, employment, institutional and mixed use centres within the urban areas of the City...

### 4.4 Public Transit Network

Rapid transit will increasingly become a key component of the City’s overall transit network. The Plan states:

- **Preamble** - Public transit entities under municipal jurisdiction include conventional, specialized and rapid transit networks. Inter-regional networks are under the jurisdiction of provincial/federal authorities.

- **4.4.2** - Transit service levels shall be increased incrementally, in conjunction with other policies to improve the viability of transit, with a goal of increasing annual transit ridership per capita. Service level increases shall be primarily directed to:
a) urban nodes and urban corridors as identified on Schedule E - Urban Structure;
b) areas developed according to transit orientated development principles; etc

An entire sub-section of the public transit policies is focused on the development of rapid transit in the City.

- **4.4.8** - The City shall evaluate the potential to establish rapid transit within the Primary and Secondary Corridors identified on Schedule E - Urban Structure, and the proposed corridors identified as Potential Rapid Transit Lines on Appendix B - Major Transportation Facilities and Routes.

- **4.4.9** - Rapid transit may operate on its own right-of-way, as a separate system or in shared corridors, where possible, to ensure that it is not delayed in general traffic. The rapid transit network shall consist of an interconnecting network of existing and planned rights-of-way along corridors in which a rapid transit facility may be located.

- **4.4.9.1** - Rapid transit may be developed in a staged manner whereby various transit-priority measures may be implemented to improve the quality of transit service in terms of speed and reliability as an interim stage in the long-term development of a full rapid transit network.

- **4.4.10** - The City may require park-and-ride facilities to enhance accessibility to rapid transit services at selected stations and other appropriate sites outside of the Downtown Urban Growth Centre. In this regard, the City shall encourage the proponents of major developments at existing or planned rapid transit stations to provide sufficient land for park-and-ride facilities, for which the City may enter into agreements for purchase, lease, and operation or shared use.

- **4.4.11** - Rapid transit services shall be integrated with other transportation modes and with the conventional, specialized and inter-regional transit networks where feasible.

- **4.4.12** - Prior to the construction and in conjunction with implementation of rapid transit in Hamilton, corridor studies shall be undertaken and shall consider the following:
  a) compatible and transit supportive land uses along the selected corridor;
  b) urban design considerations;
  c) accessibility concerns;
  d) redevelopment impacts;
  e) environmental and social/community impacts; and,
  f) potential impacts and connections to other modes.

**C.4.7 Rail Network**

- **4.7.1.1** - The City shall encourage ...**potential light rail transit corridors** where feasible to increase the connectivity between modes.
Chapter E - Urban Systems and Designations

Chapter E contains the urban structure policies which serve as the basis for all urban area land use designations. Rapid transit plays a prominent role in these policies given rapid transit’s function in linking nodes, employment areas and activity centres together.

2.1 Urban Structure

Urban nodes detailed in the Urban Official Plan are generally intended to be linked via urban corridors with higher order transit (rapid transit). The plan states:

- **2.1 Urban Structure Principles**
  - c) Nodes and corridors are connected to each other and are internally served by various modes of transportation, including higher order transit.
  - e) Nodes and corridors evolve with higher residential densities and mixed use developments to achieve their planned functions and support transit.

2.3 Urban Nodes

- **Preamble:** Urban Nodes are intended to provide for a broad range and mix of uses in an area of higher density and activity than surrounding Neighbourhoods. Most Urban Nodes will have access to higher order transit and will exhibit a wide variety of land uses and densities designed and oriented to support and facilitate transit and active transportation.

- **2.3.1.8 -** The Downtown Urban Growth Centre shall function as a major transit hub for the City with a GO rail station and higher order transit systems extending out from the Centre.

- **2.3.2.2 -** Sub-Regional Service Nodes shall provide a range of uses that allow for access to housing, jobs, services, and recreation in close proximity to each other and may be accessible by higher order transit.

- **2.3.3.6 -** Community Nodes shall be linked to the higher order transit system through connecting conventional transit or by rapid transit, where possible. Where possible, the City shall direct local routes through the Community Nodes.
2.4 Urban Corridors

Similar to urban nodes detailed above, the Urban Official Plan envisions corridors eventually containing higher order transit (rapid transit). The Plan states:

- **2.4.3** - Urban Corridors shall be the location for a range of higher density land uses along the corridor, including mixed uses where feasible, supported by higher order transit on the Primary Corridors.

- **2.4.8** - *Primary Corridors shall be served by the higher order of transit service. Secondary Corridors may be served by a higher order transit service.*

Further policies outline the types of development permitted in the corridors which are also transit supportive.

2.5 Major Activity Centres

- **2.5.4** - Major Activity Centres shall be linked by Primary Urban Corridors to other Urban Nodes including the Downtown and shall be served by the higher order transit service in recognition of the high ridership rates by students and employees.

Section F - Implementation

The urban Official Plan details that further direction and implementation of transit related initiatives will be through the Transportation Master Plan. The Plan states:

- **F.3.1.8.5** *The Transportation Master Plan shall be the primary tool to implement operational based transportation policies including:*

  c) undertaking significant improvements to the public transit network to address changes in travel demand occurring from increased densities along nodes corridors.
Chapter G - Glossary

**Complete Communities:** Complete communities meet people’s needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided (Growth Plan, 2006).

**Higher Order Transit/Rapid Transit:** Transit that generally operates in its own dedicated right-of-way, outside of mixed traffic where possible, and therefore can achieve a speed and frequency of service greater than conventional transit. Higher order transit can include heavy rail (such as subways), light rail transit (such as streetcars), and buses in dedicated rights-of-way and is typically referred to as rapid transit (Growth Plan, 2006).

**Light Rail Transit (LRT):** means a lightweight rail car rapid transit service operating on fixed rails in the right-of-way, usually at street-level, is typically propelled by overhead electrical wires, and offers a frequent, fast, reliable, comfortable and high quality service that is sustainable. Light rail transit (LRT) excludes heavy rail.

**Rapid Transit:** Transit service separated partially or completely from general vehicular traffic and therefore able to maintain higher levels of speed, reliability and vehicle productivity than can be achieved by transit vehicles operating in mixed traffic. Rapid transit can include light rail transit and/or bus rapid transit (adapted from Metrolinx, 2008).

**Transit:** Includes public buses, streetcars, subways, and commuter light rail lines. In this document transit also encompasses public trains; ferries; buses (including intercity buses) operated by private companies and available to the public; Board of Education transportation systems; private company/institutional vans made available to employees, customers, or residents; taxis; and related pedestrian activities, as well as specialized transit services.
Transit-Supportive: Makes transit viable and improves the quality of the experience of using transit. When used in reference to development, it often refers to compact, mixed-use development that has a high level of employment and residential densities to support frequent transit service. When used in reference to urban design, it often refers to design principles that make development more accessible for transit users, such as roads laid out in a grid network rather than a discontinuous network; pedestrian-friendly built environment along roads to encourage walking to transit; reduced setbacks and placing parking at the sides/rear of buildings; and improved access between arterial roads and interior blocks in residential areas (Growth Plan, 2006).

Transportation Corridor: A transportation corridor includes any or all of the following:
   a) major roads, arterial roads, and highways for moving people and goods;
   b) rail lines/railways for moving people and goods;
   c) transit rights-of-way/transitways including buses and light rail for moving people.
   (Growth Plan, 2006)

Schedules and Appendices
In addition to the policies of the Urban Official Plan, Schedule E and Appendix B further provide direction for rapid transit.

• Schedule E - Urban Structure. This schedule shows the location of the urban corridors where rapid transit will be implemented and where they connect to urban nodes etc.

• Appendix B - Major Transportation Facilities and Routes. This map shows the proposed rapid transit lines (B.L.A.S.T) and other transit related facilities. Major rapid transit stations will be added to the map when a rapid transit line gets implemented.
A joint project by the City of Hamilton’s Planning and Economic Development Department and Public Works

All photos, sketches and graphic representations of Transit Oriented Development areas are courtesy of Joseph Bogdan Associates Inc. unless otherwise noted.
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5.0 **Implementation**
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1.1 What is Transit Oriented Development?
Transit Oriented Development (TOD) is generally defined as compact, mixed use development near transit facilities with high-quality walking environments. What sets transit oriented development apart from traditional/regular development is an increased emphasis on providing access to transit through mixed use areas with higher density, degree of activity and amenities. TOD encourages transit supportive land use with the intent to provide more balanced transportation choices so that travel by transit or active transportation (e.g. walking, cycling, etc.) can be as viable an option as driving.

TOD guidelines can be used as a tool to guide development that recognizes the important relationship between land use and transportation planning. Integrating land use and transportation, especially transit, is an important theme in both the City’s Transportation Master Plan and the Urban Hamilton Official Plan. The overall goal of TOD is to encourage development with specific forms and features that facilitates easier access to transit and create attractive pedestrian-focused areas rich in amenities and providing a mixture of uses.
1.2 How to use these Guidelines

The TOD Guideline Study consists of two parts. Volume 1 provides a background and context for TOD. Volume 2 (TOD Guidelines) identifies and illustrates the ten TOD principles and what TOD may look like in the City of Hamilton.

The purpose of the City of Hamilton’s TOD Guidelines is to support and facilitate current and future transit use while further guiding the implementation of the City’s Official Plan goals and policies and Zoning By-law provisions. Overall the Guidelines complement existing City land use policies and programs but also provide further guidance on implementing land use policies and zoning. The Guidelines may provide direction on where land use policy and zoning can be strengthened and what future planning and program initiatives should be developed. Future secondary planning, corridor studies and/or transit station planning in the City will be informed by these Guidelines with this document serving as a reference and guideline document to help inform future secondary plans, or the design of future transit station areas. For areas outside of new secondary plans, the TOD Guidelines can also aid in the review of development applications to ensure transit supportive land uses and site designs are applied consistently across the City. TOD Guidelines will also serve as an education tool to advance the City’s goals of better integrating land use and transportation planning.

1.3 Structure of the TOD Guidelines (Volume 2)

The TOD Guidelines are divided into three components. The first component presents ten key principles of TOD that are applicable to Hamilton. These principles provide the core Guidelines and key themes of TOD. Detailed guidelines are provided for each of the ten principles.

The second component of the Guidelines is a description of TOD typologies that are applicable in Hamilton. TOD can occur at varying scales: from large-scale downtown areas to smaller infill situations. The TOD typologies section describes each typology and where such typologies are applicable in Hamilton. Examples of where such typologies are found are presented in this section.

The third and final component of these Guidelines is a detailed discussion on the application of the TOD principles within the different typologies. Using sites within Hamilton as case studies, this section shows detailed application of TOD principles and Guidelines through a series of development scenarios. The representative sites shown are illustrative only and used to explore TOD forms at various scales and intensities in areas with varying function.

Following the TOD typology section, an implementation section provides further discussion on implementation mechanisms for TOD in Hamilton.
Transit Oriented Development (TOD) facilitates transit and improves walkability. In differing contexts and locations, the approach and implementation may differ. No two TOD areas are the same or have the exact same function. However, there is a standard set of principles that are common in all TOD areas regardless of the size, scale and function.

The following list presents ten TOD principles and associated Guidelines to be applied in Hamilton. These principles are based on best practices from around the world, including Canada. While the ten principles are listed individually, they are inherently interrelated. Successful TOD areas blur the line of where one principle begins and the other ends. For example, TOD can start in an area with compact urban form which helps create a pedestrian-focused street by bringing density of activity to an area. Successful pedestrian-focused streets are created through good building and street design in conjunction with parking management. Street design supports existing transit and allow opportunities for transit connections to be realigned to serve the area. With all these elements in place, the area and its developments becomes truly transit oriented.

Note: TOD areas include locations where transit and land uses interact. TOD areas can include nodes and corridors as identified in the Urban Official Plan.
1. Promote Place Making - Creating a Sense of Place

- TOD areas should be memorable and of a human scale
- Focus on promoting livability, quality and uniqueness of each space
Guidelines

1. Transit stations/stops should form part of a focal point within a neighbourhood
   a) Orient uses and activities towards the centre of the station/stop area

2. Utilize unique buildings or unique designs as focal points and a source of identity for TOD areas
   a) Use key features such as gateways, landmark buildings or design to make individual TOD areas stand out from each other and be attractive places for residents and pedestrians
   b) Allow flexibility in design to meet key parameters and regulations

3. Transit and TOD areas should encourage public spaces and public interaction
   a) Use public squares or incorporate open, useable space near the transit station
   b) Strike a balance between public and private spaces

4. Buildings and public spaces should be oriented to the street
   a) Buildings that front onto a street allow for better pedestrian environments and attractive street fronts
2. Ensure A Mix of Appropriate Land Uses

- An appropriate range of uses should be part of each particular station/transit stop area
- Get the “bones” right - plan for longer term land use transitions and multiple uses
- Mix of uses will promote 24 hour activity, pedestrian interest, convenience and safety
Guidelines

1. Ensure a mixture of land uses, but not necessarily all at the same location
   a) TOD areas will have either a vertical or a horizontal mix of uses
      ▪ Uses can be mixed in one building or as several single purpose buildings clustered together to make mixed use areas
   b) Mixed use should apply to an entire corridor or node
      ▪ A mixture of uses should be available across an entire corridor or within significant nodes
      ▪ Station areas with one predominant land use are appropriate depending on function of the station area

2. Encourage travel in both directions at all times along a transit line
   a) Allow and promote uses that facilitate all day activity at all station/stop areas
   b) Specialized activities at different TOD areas/nodes may allow for more balanced travel patterns provided a good mixture of station areas is achieved along a corridor or transit route

3. Encourage a diversity in housing types/tenures around transit
   a) Access to transit should be available for a range of income levels
   b) TOD areas provide opportunities to offer choice in housing types/tenures to meet the need of new and changing demographic demands

4. Discourage auto-oriented uses on higher order transit corridors and at transit station areas.
   a) Uses such as carwashes, gas stations and drive-throughs should be discouraged within 400 m of rapid transit stations areas
   b) Where existing auto-oriented uses exist, plan for land use transitions over time to improve pedestrian environment
   c) Compensate for potential automobile-pedestrian conflicts where auto-oriented uses exist and are permitted through careful attention to building placement and site design

5. Encourage both daytime and nighttime activities near transit
   a) Ensure a mix of offices and retail/services (shops, restaurants, cafes, day care, dry cleaners, tailors, etc); retail activity can occur during the day and at night time
      ▪ All-day activity helps facilitate a more balanced level of transit service
3. Require Density and Compact Urban Form

- Plan for and build sufficient density to make transit viable
- Compact form improves walkability
- Density and compact form improves efficiency (services, infrastructure, etc.)
Guidelines

1. **Density ranges should be in conformity with the Official Plan and appropriate for the scale of each particular type of TOD area**
   a) Highest densities will occur in the Downtown, in parts of primary and secondary corridors, and in node areas
   b) Suburban and Greenfield areas may be lower scale overall, but the higher densities in these areas should be focused near transit areas
   c) Maintain highest densities closest to station areas and corridors mean-while transitioning to lower densities in the internal areas of a neighbourhood

2. **Densities required for TOD can be provided by a variety of building types**
   a) Medium mid-rise buildings in particular are appropriate for TOD areas
   b) Density and building height go together but TOD does not necessarily require very tall buildings
   c) TOD appropriate densities can be achieved with good design and smaller scale buildings
   d) Taller buildings may be appropriate in the Downtown, other node areas, and some station areas in urban corridors

3. **Cluster mixed uses and densities within a 400m (five minute walk) of the transit station area**
   a) Encourage a grid-like pattern of buildings and streets
      - Grid patterns promote walking and cycling as well as facilitating easy access to buildings
   b) Provide connections between travel modes around station areas that are easily navigated by pedestrians to promote walkability
      - On larger sites, design for interconnectivity
      - Pedestrian walkways, bicycle paths, and clear directional and wayfinding signage will promote connectivity to transit
4. Focus on Urban Design

- Orientation of buildings
- Manage the look, feel and scale of an area
- Ensure high quality and attractive design
Guidelines

1. Design of TOD areas should be context-specific and respecting existing character and heritage
   a) New and retrofit buildings should complement, but not necessarily duplicate, existing built forms
   b) Design should integrate all components of a compact neighbourhood to create a unified environment
2. Employ a high degree of urban design and variety in architectural styles
   a) Design is key to creating a sense of place
   b) Design must address the arrangement of, and transition between, public and private spaces
3. Create positive pedestrian environments and transit access through design
   a) Promote pleasant pedestrian environments through good urban design
      ▪ Avoid buildings with blank walls along sidewalks and walkways
      ▪ Buildings should be oriented to the public street
      ▪ Arrange buildings to allow easy access and connections to transit
   b) Incorporate public art in developments whenever possible
      ▪ Art should be provided in public spaces and private spaces that are publicly accessible to create interest and sense of place
5. Create Pedestrian Environments

- Closely related to urban design and improved connectivity
- Accessibility and mobility for all
- Easily walkable, safe, and attractive streets
- A pedestrian-oriented area is a transit oriented area
Guidelines

1. Ensure sidewalks are accessible to all and allow ease of movement
   a) Remove physical and perceived barriers to pedestrian movement and access
   b) Utilize urban braille, where appropriate

2. Create safe and inviting places for pedestrians
   a) Encourage safety and perception of safety with a high degree of pedestrian traffic, good use of lighting and signage, and encouraging movement through open public areas
   b) Use shelters in pedestrian and transit areas, where possible
      ▪ Transit shelters should be used at transit stations and stops
      ▪ Awnings, arcades, and other weather protection can be provided in pedestrian areas
   c) Provide attractive spaces to invite more pedestrians
      ▪ Promote public spaces to encourage people to gather and linger
      ▪ Busy, active spaces promote safety and security

3. Plan for pedestrians when planning transit stations and new developments
   a) Provide a high degree of pedestrian amenities and comfort, such as street furniture, wayfinding and directional signage, and wide sidewalks
      ▪ Sidewalk width should be proportional to the scale of the TOD area and planned pedestrian level
   b) Building orientation should be to the public street with a high degree of visual interest, such as building articulation, windows, and landscaping along the streetfront and walkways
      ▪ Loading areas, utilities and parking should be located away from the street front
   c) Streets and buildings should be in a grid pattern and clustered close to transit stations to encourage pedestrian movement and promote easier access to transit
6. Address Parking Management

- Control the amount and location of parking
- Ensure appropriate balance between automobiles and other modes of transportation

Photo Source: City of Hamilton
Guidelines

1. Encourage innovative parking management strategies
   a) Apply parking strategies to prevent an oversupply of parking in TOD areas
      ▪ Opportunities include the use of shared parking area spaces, reduced parking requirements with TDM measures, offer transit passes, ensure appropriate parking rates, allow for carpool parking, promote car-sharing programs, and restricted parking hours
   b) Establish parking maximums or reduced parking requirements
      ▪ Parking minimums should only be applied in low-scale TOD areas
      ▪ Generally, the higher the level of transit service offered, the lower the amount of parking that should be provided

2. Promote an appropriate balance of parking
   a) Balancing automobile access with transit and active transportation should be the goal of parking management
   b) Allow on-street parking in appropriate TOD areas, such as greenfield areas, to buffer pedestrians from traffic
   c) Some parking may be appropriate if well designed and fitting to the scale of the TOD area
      ▪ On street parking can buffer pedestrians along main street areas, in suburban and greenfield TOD areas, improving the pedestrian environment
      ▪ Perimeter and interior landscaping of parking lots will help the pedestrian environment

3. Parking should not be the focus within TOD areas, even when available
   a) When parking is provided, it should not dominate or be overly prominent in TOD areas
   b) Parking should be moved away from the main station/stop areas and moved to the rear of buildings whenever possible
   c) Design of parking facilities should minimise/mitigate negative aspects associated with parking lots; Park-n-ride facilities also require careful attention to design
   d) Parking areas should have a high degree of landscaping and facilitate pedestrian movement from the parking areas to the sidewalks, storefronts, and transit stations and stops
7. Respect Market Considerations

- TOD areas should promote value recapture (utilize increased land value)
- Promote private sector “buy-in” and investment
Guidelines

1. Leverage increased land values
   a) As land prices increase, ability to obtain more value from land also increases. Community benefits such as affordable units and public art should accompany increased land values
   b) TOD should be implemented in areas with potential for greatest payoff

2. Transit alone will not drive market demand
   a) Transit alone is unlikely to create a market demand, but it can act as a catalyst and direct the demand. Transit is to be used as a City building tool to direct commercial, residential, and commercial demand to the appropriate areas
   b) Plans should be ambitious, but feasible. Plans can provide the opportunities, but uptake will ultimately be a market-based decision
8. Take a Comprehensive Approach to Planning

- Alignment of TOD plans and areas with greater community goals
- TOD’s contribution to greater connectivity
- Local TOD areas should be layered to create a larger system linked to greater planning objectives and transportation plans

Diagram:
- Secondary Corridor
- Primary Corridor
- Mixed use Medium Density
- Mixed use High Density
- Transit Route
Guidelines

1. Transit and land use planning decisions should be made in conjunction with each other
   a) Transit should be a key goal and motivator when assessing land use planning decisions
   b) Land uses should be transit supportive

2. Coordinate the development of individual station areas based on their role in the broader urban structure and City-wide initiatives
   a) Different rapid transit station areas have a role in the larger City structure; from the main mobility hub of the downtown to the smaller suburban TOD areas
   b) Various levels of TOD all form part of the transit network which is connected to other transportation modes and land use goals and objectives
9. Plan for Transit and Promote Connections (for all modes)

- TOD principles should be applied in station area and corridor planning
- Transit is the key driver in TOD planning and should be addressed and accommodated in all aspects of TOD planning/design
- TOD areas should make connections to other modes, where appropriate, and improve connectivity to the larger City-region
Guidelines

1. TOD areas should have a high degree of connectivity
   a) TOD areas should have opportunities for active transportation (walking and cycling), transit, and should allow for the movement of vehicles
   b) Transit routes should be well connected and viewed as a network. Conventional transit should service rapid transit by acting as a feeder system to the higher order system. TOD areas should serve as the transfer point where applicable

2. Higher order TOD areas provide for integration and transfer between modes
   a) Higher order TOD areas can provide specialized facilities such as Park-and-ride, drop-off areas, and bicycle parking areas
10. Promote Partnerships and Innovative Implementation

- Promote community/investor “buy in”
2.0 TOD PRINCIPLES/ELEMENTS

Guidelines

1. Establish partnerships when developing TOD areas to leverage the strengths of different groups (private, public, community)
   a) Involve stakeholders to make TOD areas successful including businesses, land owners, community groups, governmental organizations, and transit operators
   b) Involve diverse groups in the decision making processes
   c) Promote initiatives such as transportation demand management or other pilot programs in both the public and private sector
      - “Buy in” is required by all groups for widespread benefits to be realized

Photo Source: Ontario Growth Secretariat
The ten TOD principles should be applied to all types of TOD’s from major transit areas to local neighbourhood transit areas. The difference in application will be a matter of scale, intensity, and approach and must be consistent with the function and objectives for different areas described in the urban structure. Higher level TOD areas include key nodes and corridors planned for rapid transit lines. These areas should receive the most intense application of the principles and Guidelines. However, the application of the principles and guidelines in smaller, more local scale areas, including greenfield areas is important in order to achieve compact urban form and create walkable and transit-supportive neighbourhoods.

The following section presents a descriptive system of classifying different scales and forms for TOD. The classification is based on the existing characteristics of various areas in the City and their planned function in the overall urban structure as set out in the Urban Hamilton Official Plan.

These typologies are not to be systematically applied to particular areas of the City. In some examples, the typologies describe existing areas with specific land use and built form characteristics. Other areas of the City are planned to transform over time into other types of TOD areas. For example, the Meadowlands area in Ancaster is currently a commercial area with residential uses along an arterial street. One could consider it close to a “suburban arterial” typology. However, over time, as described and planned through the Urban Hamilton Official Plan, this area is intended to transform to a community node, providing a wider range of housing types and amenities and enhanced transit services to serve the surrounding community. Thus, the ultimate end state of this area is closer to the “Urban Node” typology. Therefore, the application of the Guidelines for future development should consider design elements from both suburban arterial and node typologies in this example.

Generally, TOD areas across the City of Hamilton can be classified into four main types of TOD areas: Urban Areas, Suburban Areas, Greenfield Areas, and Other. These four categories are further subdivided into more specific TOD areas with the differences between them primarily in scale and function. Table 1 (below), details the types of TOD areas and their general characteristics and function. Any transit area across the city may be applied to a typology which best suites existing characteristics and intended function. There can be flexibility in the application of which TOD typology gets applied on a given area. Overtime, an area may evolve from one typology to another.
3.0 TOD TYPOLOGIES - WHERE TO APPLY TOD

Table 1: TOD Types and Characteristics

<table>
<thead>
<tr>
<th>TOD Typology</th>
<th>General Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Areas</td>
<td></td>
</tr>
</tbody>
</table>
| Urban Node Areas: Downtown, Sub-Regional Node, Community Nodes* | • Node areas around corridor  
|                                    | • Employment and residential functions as well as civic uses varying by scale of a node  
|                                    | • Different levels of services for different types of nodes |
| Urban Corridor Area                 | • Area with development potential along RT corridor        |
| Suburban Areas                      |                                                            |
| Suburban Primary Corridor Area      | • Mixed use area but may be constrained by poor pedestrian connections |
| Suburban Arterial Road Area         | • Good potential area for greyfield intensification  
|                                     | • Potential to facilitate bus travel                       |
| Greenfield Areas                    |                                                            |
| Greenfield Node                     | • Undeveloped area identified as a community node  
|                                     | • New areas to be built around transit  
|                                     | • Will evolve over time to have the same characteristics and similar functions as an urban node* |
| Greenfield Neighbourhood            | • A node in the neighbourhood context incorporating residential and local scale commercial supported by local transit |
| Other                               |                                                            |
| Major Activity Centre e.g. Universities, Colleges, Hospitals, etc. | • Activity Centre example, with many potential transit riders |

A note about Urban vs. Suburban in the context of the typologies...
Urban is generally used in the Guidelines to describe the older area of the City, primarily below the mountain (Dundas, Hamilton, Stoney Creek), but also in the community cores of Ancaster and Waterdown where historic community centres were developed. Urban areas are characterized by walkable, denser development, traditional streetscapes, and neighbourhoods. Suburban areas are generally those areas built in the post-war period and are characterized by larger lot patterns, lower densities, and automobile-oriented commercial and residential areas. Planning policy and land use regulation aims to transform some of these suburban areas into a more “urban” character to achieve compact, transit-supportive development patterns to support broader City goals of urban growth and sustainability.
3.0 TOD TYPOLOGIES - WHERE TO APPLY TOD

Figure 1: Location of Sample TOD Typology Areas in Hamilton

Activity Centre
Greenfield Node
Greenfield Non-Node
Suburban Corridor
Suburban Arterial Road
Urban Corridor
Urban Node
3.0 TOD TYPOLOGIES - WHERE TO APPLY TOD

3.1 Urban Areas
The “Urban Areas” include some of the urban corridors and nodes identified in the Urban Official Plan as “Primary Corridors”, “Downtown”, “Sub-Regional Nodes”, and “Community Nodes”. These areas overlap in many cases with the proposed rapid transit route known as the B-line and part of the A-line. Some of the proposed rapid transit corridors included in this classification are King Street and Queenston Road along the B-Line and parts of James Street in the lower city along the A-Line. The B-line primary corridor will have the highest order transit in the City and should be the focus for the largest scale TOD. Nodes such as Eastgate will be among the highest order transit stations (as a multi-modal location) and will likely attract the most development outside the downtown. Along the corridor, various station areas may also be potential development/redevelopment sites, although it is unlikely that every station area will have a high demand for new development.

Community Nodes include traditional downtowns of former municipalities as well as areas that are currently made up of primarily community scale retail uses and a greenfield area, still to be planned. It is the intent that these non-traditional and future community nodes transform over time to contain a full range of services and functions found in the traditional community nodes. Thus the principles for urban nodes must be applied to these non-traditional and greenfield nodes. Although the Community Nodes may not be directly connect to higher order rapid transit, it is essential that TOD principles be applied at the appropriate scale to ensure these nodes develop to support local transit and achieve their planned function in the urban structure.

TOD guidelines applied to urban areas will be of the highest scale. A description of how to apply TOD in the urban areas (Urban Corridors and Urban Nodes) is detailed in Section 4.0.

3.2 Suburban Areas
The “Suburban Areas” grouping includes areas along the proposed A-line rapid transit route along Upper James Street which are more suburban compared to the lower city. Non-rapid transit routes such as those along Upper Ottawa or parts of Mohawk Road are also grouped into this type of TOD area. The design of the suburban TOD will be similar to those of the urban TOD, but at a lesser scale. The long term goal is to use TOD principles to bring suburban rapid transit corridors up to a similar scale and level of transit use as presently exists in the lower city rapid transit corridor. Suburban area transit corridors can benefit from TOD at key locations such as where two transit routes intersect.
3.0 TOD TYPOLOGIES - WHERE TO APPLY TOD

3.3 Greenfield Areas

“Greenfield Areas” such as new nodes or new undeveloped areas have the opportunities of being planned, designed, and developed according to TOD principles from the start. Applying TOD principles early in the planning and development of greenfield areas may help transit service and use become established sooner. With TOD principles applied, new greenfield areas can develop around transit, thus transit service is more feasible as the population and density needed to support transit becomes established over time. Greenfield areas (as with all TOD areas) should have an overall mixture of densities which may include low density.

Greenfield areas include new neighbourhoods, including the planned greenfield Community Node. The greenfield Community Node will have the benefits of being planned according to TOD principles. Those principles will be applied to create a Node larger in scale than the greenfield neighbourhood areas.

3.4 Other Areas

The final category where TOD may be applied is in nodes that include “Major Activity Centres” in the Urban Hamilton Official Plan. Major activity centres have many potential transit riders due to the presence of health centres, colleges, and universities. Thus TOD principles should be applied in these areas at a scale similar to other urban or suburban nodes. Each activity area is unique and will need to apply TOD principles according to their specific function and needs. Other important areas in the City which can benefit from the application of TOD principles include the West Harbour and airport areas. These activity areas are very unique. Specific TOD principles can be applied as these areas evolve. Similarly, other areas of the city may become prominent activity areas where TOD will be desirable.

The following section (Section 4.0) illustrates the application of TOD principles and the Guidelines for each of the typologies in a hypothetical case study.
4.0 DETAILED GUIDELINES FOR TOD AREAS

The Ten TOD principles will apply to all types of transit areas. However, the scale of development and the application of the principles will differ between TOD types. The following hypothetical development scenarios showcase design and function aspects for the different TOD typologies as described in Table 1.

An overview and description of the functions and objectives for each TOD area is provided, as well as more detailed guidelines on scale and design components specific to the particular TOD areas.

The densities and standards listed (heights, parking, etc.) in the following section are typical ranges and standards for TOD only and are not meant to replace zoning permissions. The following illustrative sites are meant to show examples and one of many potential development approaches to achieve TOD in these areas. Standards and sample sites shown are intended to be an example of how TOD principles can come together in overall development. Development approaches can be applied to similar TOD typology areas and are not specific to the example sites chosen. Actual densities and development standards may vary on a site by site basis and are directed by Official Plan policy and zoning.

The following images are illustrative only, showing one potential development scenario for these areas. These images do not imply that development will occur or can be approved exactly as shown in these examples. TOD areas will develop and evolve over time and in phases. The sample TOD areas shown, detail a full build out of the sample sites. In practice, TOD areas will develop over time (one or a few sites at a time) in an incremental manner. In the long term, TOD occurs in phases, or incrementally, on a site by site basis. Ultimately, not all the changes shown in the examples may occur, but the illustrations show the potential. The samples shown do not preclude additional heights or uses as long as they conform to policy and zoning.

The figures below show an example of the gradual change of a street; moving from the current state, to a more transit supportive streetscape.

Photo Source: Sierra Club and Urban Advantage
Urban Areas: Urban Nodes

Overview
This example shows the Eastgate Node area, a larger scale node, second only to the Downtown area. This Sub-Regional node area will ideally have rapid transit as well as conventional transit. The station area should be at the centre of the node as well as be part of the primary focal area. The TOD around the node will be applied to the highest degree, given the scale of development anticipated. The following concept may be applicable in an urban area such as other Sub-regional nodes, parts of the Downtown, or at a smaller scale in a Community Node. For the purposes of this section, only a Sub Regional Node example is shown.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Sub Regional Node-Eastgate Village
Queenston Rd. and Centennial Pkwy. N.

The illustration shown details one potential development scenario of a Sub-Regional Node. The sample typology shows how several TOD principles can be implemented throughout the TOD area.
Urban Areas: Urban Nodes

Function
A Sub-Regional Node serves as a retail, office, service, and institutional centre for the area with a variety of housing forms. These TODs are the main transit transfer point, while containing the greatest variety of uses. These TOD areas have the greatest scale and intensity outside of the Downtown.

Goals
The goals for this type of TOD area is to increase densities, maximize the level of access to transit, and to make the area as pedestrian and cycling friendly as possible. This TOD type aims to have a good level of street activity and good integration with transit.

Application
Urban Sub-Regional Nodes will have the highest density areas outside of the downtown. The density for these Sub-Regional Nodes will be directed by the Urban Hamilton Official Plan and implemented by zoning. Typical density will range between 120-150 people and jobs per hectare. This density will be applied over the entire area, not necessarily to any one given site. Residential density may include high to low density uses. Typical TOD developments will have several housing densities from 60-120 units/hectare or more.

TOD in Urban Sub-Regional Nodes offer opportunities for public/private partnerships and the most connectivity between modes of transportation. Parking should be controlled in these TOD areas and accompanied by higher investment in pedestrian and cycling amenities. The planned land uses should be diverse in these TOD areas and uses should be clustered near the transit stations.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Residential Density Range:
Min 60-120+ units/hectare

Typical Commercial Density Range:
Min 1-1.5 Floor Area Ratio

Typical Land Use:
Mixed Use (vertically or horizontally), Residential

Scale of Development:
6-12 storeys
Min 3 storeys
Min 12 m building height

Typical Parking Standards:
Low to no parking minimum
Discourage surface lots
- Res: 0.75-1.2 max
- 1-2/300m² (commercial)
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Design Elements
• A high degree of focus on creating a sense of place, by locating unique and visually appealing buildings, public art, etc. within the TOD area
• Commercial uses to be located at grade with doors and windows oriented towards the street. Blank walls are to be avoided
• Lot coverage of 50-70%
• Sidewalks should be wide - 1.8m -2.5m min to 4.5m in high traffic areas (3.5m or larger is ideal)
• The ideal height to width ratio of the buildings to the street 1:1 (may be appropriate to go higher in some areas)
• The transit station should be the prominent feature easily accessible from all part of the node
• Utilize small blocks where possible
• Create a “transit village” - develop entire node as a village focused around transit

Other Considerations
• Given location as a transit hub, this may be an appropriate area to enter a partnership for park-n-ride facilities etc.
• Many other transit lines and modes of transportation intersect and connect to this type of area
• Good location for public spaces as amenity for residential population
• Higher order cycling facilities (secured bike storage, etc.) are appropriate
• Cluster highest density uses within 400m of the transit station
• Retail uses should not be mandatory, but permitted (although retail is mandatory on the 1st floor of pedestrian predominant streets)
• Encourage daytime and evening uses
Sub Regional Node-Eastgate Village
Queenston Rd. and Centennial Pkwy. N.

The image below shows one possible development scenario. In this TOD area example, a large lot commercial area has been redeveloped to include a clustering of buildings around a transit station area. There are a mixture of building heights and uses. The highest densities and buildings are located toward the corridor and transit hub. Lower scale buildings are situated toward the existing residential areas.
Urban Areas: Urban Corridor

Overview
Urban Corridor areas such as parts of King Street, Queenston Road, and James Street North are higher scale TOD areas. However, rather than being concentrated in one station area (as in a larger node), various TOD station areas will be located along the corridor. While some individual TOD/station areas will be more developed than others, overall, the entire corridor will be representative of a highly urban corridor that supports higher order transit such as LRT.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Urban Corridor
Main St. E. and Ottawa St. N.

The illustration shows how an urban corridor can develop according to the principles of TOD. The TOD area is smaller and more linear than a node, but the patterns can generally be repeated at other transit stops along the corridor.

TOD PRINCIPLES
1. PROMOTE PLACE MAKING - CREATING A SENSE OF PLACE
2. ENSURE A MIX OF USES - APPROPRIATE LAND USES
3. REQUIRE DENSITY AND COMPACT URBAN FORM
4. FOCUS ON URBAN DESIGN
5. CREATE PEDESTRIAN ENVIRONMENTS
6. ADDRESS PARKING MANAGEMENT
7. RESPECT MARKET CONDITIONS
8. TAKE A COMPREHENSIVE APPROACH TO PLANNING
9. PLAN FOR TRANSIT AND PROMOTE CONNECTIONS (FOR ALL MODES)
10. PROMOTE PARTNERSHIP AND INNOVATIVE IMPLEMENTATION
4.0 DETAILED GUIDELINES FOR TOD AREAS

Urban Areas: Urban Corridor

Function
Urban Corridors are a focus for neighbourhoods and joins together other nodes and activity centres. Some station areas will have moderate to high densities. Station areas and TOD uses that surround them are to be access points to higher order transit for the neighbourhood.

Goals
The goal for this type of TOD area is to provide access to higher levels of transit from the surrounding neighbourhoods. TOD along corridors can develop into pockets of higher density with neighbourhood amenities.

Application
Urban Corridor TOD’s will have higher density uses compared to the surrounding neighbourhoods. Residential densities will be directed by the Urban Hamilton Official Plan and implemented by zoning, though generally the highest density uses should be located nearest to the transit stations. Medium and low density uses will be applied gradually moving away from the transit stations.

TOD along urban corridors offers opportunities for public/private partnerships and a high degree of connection between nodes. Limited to no on-street parking will be provided along corridor areas and parking requirements will be reduced in areas adjacent to the corridor. TOD in corridor areas should have a high degree of pedestrian and cycling amenities clustered near the transit stations.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Residential Density Range: Min 60-120 units/hectare

Typical Commercial Density Range: Min 1.5 Floor Area Ratio

Typical Land Use: Mixed Use, Local Commercial, Neighbourhood Scale of Development: Up to 8 storeys

Min 3 storeys

Typical Parking Standards: Low to no parking minimum
Discourage surface lots
- Res: 0.75-1.2 (max)
- Retail: 1-2/300m²
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Design Elements
- Achieve higher density with medium rise buildings (up to 8 storeys). An increase in lot coverage permitted to achieve this density
- Limit parking in front of buildings directly fronting onto the rapid transit corridor
- Require main entrance to front on the street
- Building Setback: encourage a continuous streetwall of built form
- Ensure connectivity of sidewalks
- Encourage loosely spaced shade trees, where feasible, to improve walking environment

Other Considerations
- TOD related uses (mixed use, retail, residential, institutional) to be clustered within 400m of the rapid transit station
- Some specialized TOD areas are acceptable (e.g. some station areas mainly residential, some station areas mainly commercial, etc.)
  - Individual station area work together to make a viable TOD corridor
- Transit stop located to create optimal walking distance of 150-300m to access work and 400-800m for residential areas, where feasible
- Incorporate connections to other transit routes into design of station areas (sidewalks, bus layover, fully accessible transfers, etc.)
Three and four storey buildings, shown below, are located in close proximity to a transit stop area at the intersection of two arterials. The east-west corridor, in this example, is a primary corridor and a rapid transit corridor. Higher density buildings are located along the street front within walking distance of the transit stop.

The Official Plan and zoning permit mixed use/medium density uses in this sample location.
Suburban Areas: Suburban Corridor Area Overview

TOD in Suburban Corridor areas such as parts of Upper James Street are corridors which can have higher order transit. These areas have potential for more intensification owing to direct access to higher order transit and developed as the urban corridor areas yet. These areas have potential for more intensification owing to direct access to higher order transit.
Suburban Corridor
Mohawk Rd. E. and Upper James St.

The Suburban Corridor TOD area balances several TOD principles. Several principles overlap such as managing parking, ensuring a mixture of uses, and promoting partnerships to develop streetscaping elements.
Suburban Areas: Suburban Corridor Area

Function
TOD’s along Suburban Corridors will be the primary access point for transit for the surrounding neighbourhoods. Various TOD’s may become specialized in the services offered. As a primary corridor, higher scales of development and intensification are appropriate.

Goals
To allow for land use that is compatible with higher order transit. The goal is to increase the density in suburban corridors to function closer to those of urban corridors thereby maximizing transit use on a rapid transit system.

Application
Suburban Corridor areas will direct higher density uses to locate nearest to the transit stations. Actual density amounts are directed by the Urban Hamilton Official Plan and implemented by zoning. Medium and low density uses will be applied gradually moving away from the transit stations. The density and intensity of uses near TOD areas in Suburban Corridor areas should increase over time.

There is currently limited pedestrian and cycling connection in Suburban Corridor areas; connections and amenities will increase over time. Application of the TOD principles should increase the overall land use mix and create enhancements to the public realm. Increased transit connections to higher order transit along the corridor will further enhance TOD development. Parking may be oversupplied early on, but will be reduced as intensity increases along the corridor and at TOD transit areas. An example may include developing surface parking sites into new developments.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Residential Density Range:
Min 60-120 units/hectare

Typical Commercial Density Range:
Min 0.5-1.5 Floor Area Ratio

Typical Land Use:
Mixed Use, either vertically or horizontally, Neighbourhood, stand alone commercial

Scale of Development:
Up to 8 storeys
Min 3 storeys

Typical Parking Standards:
Lower standard at station area
- Res: 1-2/unit
- Office: 1/100m²
- Retail: 2/300m²

Photo Source: City of Hamilton
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Design Elements
- Medium level scale and intensity of buildings
- Larger lots allow for more opportunities for redevelopment - new development should be street orientated
- Wider sidewalks should be placed within 400 m of the station area. Create new connections with adjacent neighbourhoods if not currently present
- Cycling facilities required at transit stations - secured facilities preferable
- Create a positive pedestrian environment, utilize wider ROW to expand sidewalks, plant shade trees, and encourage a large proportion of on-street windows
- Create smaller blocks during redevelopment where possible (90m are best, 120m -150m may also be appropriate)
- Parking areas for new development should be located to the rear of the building, limit the building setback, and limit parking in front of the building to one or two rows

Other Considerations
- Design and land use should be realistic to the existing uses, but also plan for more intensity in the future given access to higher order transit on the corridor
- Should have lower parking requirements than other arterial road areas
- Discourage new auto related uses within 400 m of a RT station area
- There may be provisions for secured bike storage, but regular cycle storage may also be appropriate
- Connections to other modes of transit should be clearly marked and have easy to read/understand signs
Suburban Corridor
Mohawk Rd. E. and Upper James St.

The TOD example below shows residential and commercial uses of varying scales integrated with parking and transit facilities. Streetscaping enhancements are shown throughout this example. Clustering occurs at the intersection of two arterial roads. Parking is provided, but is not the dominate feature.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Suburban Areas: Suburban Arterial Road

Overview
Suburban Arterial Roads have access to conventional transit but not rapid transit. TOD can be applied to areas without rapid transit with the recognition that TOD in these areas will be at a lower scale and intensity. Suburban areas with bus service can act as a feeder system to the higher order system. At the appropriate scale, TOD along these arterial intersections can further facilitate increased transit ridership in the areas not serviced by rapid transit directly. Official Plan policy already directs higher density uses toward arterial streets. TOD related uses would be appropriate at key intersections; where two or more bus routes intersect or at key suburban transit hubs.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Suburban Arterial
Mohawk Rd. E. and Upper Ottawa St.

TOD at the intersection of two arterial roads are at a lower scale than other areas, but TOD principles still apply.

- Medium density residential building (seniors potential) provides transition to adjacent neighbourhood
- Street related convenience commercial uses focused at intersection
- Developer receives incentives for enhanced public realm
- Wide sidewalks at intersection create comfortable bus stop waiting areas
- High density residential reinforces intersection and complements nearby high density residential cluster
- Mixed densities and built form to maximize site usage and respond to local market
- Transit stop as focal point. Distinctive paving for support pedestrian movement and streetscape beautification
- Potential shelter area for bicycle secure facilities
- Shared rear parking for retail, residential uses and park/ride
- Reinforce existing walkway with landscaping
- Develop intersection as compact, higher density mixed use cluster to serve surrounding residential neighbourhoods

TOD PRINCIPLES

1. PROMOTE PLACE MAKING - CREATING A SENSE OF PLACE
2. ENSURE A MIX OF USES/APPROPRIATE LAND USES
3. REQUIRE DENSITY AND COMPACT URBAN FORM
4. FOCUS ON URBAN DESIGN
5. CREATE PEDESTRIAN ENVIRONMENTS
6. ADDRESS PARKING MANAGEMENT
7. RESPECT MARKET CONDITIONS
8. TAKE A COMPREHENSIVE APPROACH TO PLANNING
9. PLAN FOR TRANSIT AND PROMOTE CONNECTIONS (FOR ALL MODES)
10. PROMOTE PARTNERSHIP AND INNOVATIVE IMPLEMENTATION
Suburban Areas: Suburban Arterial Road

**Function**
TOD along suburban arterial roads are primarily where two bus routes intersect or meet. TOD in these areas are to enhance bus service by promoting greater density and transit friendly uses near the transit stops. Given the scale, bus stops will have limited amenities though basic elements such as a bus shelter and seating are preferable.

**Goals**
To increase the ridership of non-rapid transit and make conventional transit easy to access and more attractive to nearby neighbourhoods and business.

**Application**
Suburban arterial roads will not have higher order transit but do offer conventional transit. The Urban Hamilton Official Plan directs higher density uses toward arterial roads. TOD areas such as those at the intersection of two arterial transit routes should have higher densities than that of the surrounding neighbourhood areas. Upper end, low-density and medium-density residential densities detailed in the Official Plan are transit supportive.

Pedestrian and cycling connections and amenities should be provided at lower scales than in urban areas. Application of the TOD principles should increase the overall land use mix and create enhancements to the public realm. Conventional transit serving neighbourhood areas should provide connections to higher order rapid transit. Parking may be provided in suburban areas though it should not be the dominant land use feature.
Typical Residential Density Range:
Min 60 - 100 units/hectare

Typical Commercial Density Range:
Min 0.5-1 Floor Area Ratio

Typical Land Use:
Neighbourhood
Local Commercial

Scale of Development:
3-6 storeys

Typical Parking Standards:
Lower than interior of neighbourhoods
- Res: 1-2/unit
- Retail: 1-4/100m²
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Design Elements

- Maintain and/or enhance sidewalks from neighbourhood areas to the transit stops
- Promote sidewalks on either side of a bus stop with a minimum of 1.5m width
- Careful attention to pedestrian realm to mitigate presence of automobile related uses
- Amenities such as bus shelters, seating areas, and good lighting should be part of the immediate bus stop area
- Where feasible, on-street parking can be used to buffer pedestrians from on street traffic
- Bus shelters near larger commercial areas should promote good pedestrian environments and safe connections between the building and the bus stop
  - Pedestrians should not have to cross an open parking lot to access between the bus stop and building (e.g. create pedestrian connections through parking lot areas)

Other Considerations

- Connections to other modes, such as cycling, can be promoted with bicycle locking areas or other cycling facilities such as bike ramps at stairs, etc. where appropriate
- Bus signs and stops should be clearly marked and highly visible
- Locate bus stops to provide maximum access to as many residents/business as possible
- Encourage convenience uses such as service shops and retail to locate near bus stops to promote local market activities
- Information on connections to other bus routes should be clearly marked and made easy to understand
Suburban Corridor
Mohawk Rd. E. and Upper James St.

The Suburban Arterial road example is a smaller scale TOD area compared to the Sub-Regional nodes and Urban and Suburban corridor’s. Therefore, fewer buildings are shown in the example. The intent is to cluster higher densities than the surrounding neighbourhood areas near the intersection of two conventional transit lines. Shown below is the ultimate build-out of the four corners. This and other similar TOD type areas will develop incrementally one building and one corner at a time.
Greenfield Area: Neighbourhood Centres

Overview
Planning for TOD is important in areas where transit (or development) may not yet be in place. Further greenfield developments, such as Elfrida, are identified to be a future node area of the City. TOD principles can be applied early in the planning process for this node in recognition that, in the future, transit should be at the centre of the node and a key component to all future developments. Planning for TOD early allows new residents of the future community to be accustomed to transit from the beginning. TOD principles can be implemented ahead of transit so that transit can be incorporated easily and successfully.
Neighbourhood Centre
Waterdown South area

The illustration shows the TOD principles applied at a new Greenfield Centre. The principles are lower scale than other types of TOD but the elements that make this area transit supportive are all present.
Greenfield Area: Neighbourhood Centres

**Function**
TOD principles in greenfield areas, such as nodes and other areas, mainly serve as a guide to promote transit supportive uses and behaviours from the beginning. Transit TODs in greenfield areas can be the focal point for new developments, growing around the transit centre.

**Goals**
To increase the ridership of local/conventional transit and make conventional transit easy to access and more attractive to nearby neighbourhoods and business. Transit should be well integrated from the beginning in new communities.

**Application**
Greenfield densities are detailed in the Urban Hamilton Official Plan and will be refined by secondary planning. Greenfield TOD areas may have a mixture of low to high density uses ranging from a min 60 units per hectare and upwards. Sufficient transit supportive densities may take time to develop, but greenfields should be designed to accommodate transit from the beginning. Example areas may include greenfield areas in Waterdown or potential new greenfields in the Elfrida area.

Greenfield TOD offers an opportunity to establish pedestrian and cycling connections early on. Pedestrian and cycling amenities may only consist of a bus shelter and a bike rack, but these amenities should still be provided. A mixture of land uses and clustering around transit stops will evolve over time. On street parking can serve as a buffer between the sidewalks and the roadway.
Typical Residential Density Range: 
Min. 60 - 100 units/hectare

Typical Commercial Density Range: 
Min 0.5 - 1 Floor Area Ratio

Typical Land Use: 
Neighbourhood Mixed Use (either in commercial greenfield area or industrial greenfield area)

Scale of Development: 
2-6 storeys

Typical Parking Standards: 
Lower than interior of neighbourhoods
- Res: 1-2/unit
- Retail: 1.4/100m²

Photo Source: City of Hamilton
Typical Design Elements

- Plan for clustering of uses and buildings from the beginning
- Create a focal point for new communities near the centre, with good transit access
  - Greenfield and Suburban areas can benefit from public art just like urban areas - the transit or bus stop could incorporate public art
- Plan for walkways and pedestrian paths early in the process to improve long-term connections
- Where parking lots are required; promote smaller lots or shared lots in the rear or side of buildings or structures
- On-street parking is appropriate
- Ensure good pedestrian connections between buildings and bus stops (avoid crossing large parking lot areas)

Other Considerations

- Plan future transit and location of higher density areas concurrently
- When planning for and assigning new land use designations and zoning, think transit from the beginning
- Plan for buildings and uses which may change over time. Allow buildings which can be converted at a later date if necessary (e.g. first: surface parking, second: structure parking, third: Mixed Use buildings, etc.)
TOD in a new greenfield community will generally be the lowest scale of all TOD areas. By clustering development, conventional transit may be supported for the neighbourhood. As the area evolves, additional uses and density will increase transit viability. Parking is part of the area but is managed by locating it behind buildings or limiting it to a couple of rows.
Major Activity Centre

Overview

TOD for Major Activity Centres will have a special role. TOD in Major Activity Centres will be specialized for the surrounding areas. TOD at locations near McMaster University and Mohawk College will be geared towards students and the hospitals located adjacent to the schools. In addition to the draw of students and staff as transit riders, these facilities also receive many visitors which should also be accommodated by transit and create a demand for services near the TOD area.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Major Activity Centre
Main St. W. and Emerson St. (McMaster University)

The illustration shows TOD principles can be applied to a unique area such as a Activity Centre with a University, College or hospital.

TOD PRINCIPLES

1. PROMOTE PLACE MAKING: CREATING A SENSE OF PLACE
2. ENSURE A MIX OF USES: APPROPRIATE LAND USES
3. REQUIRE DENSITY AND COMPACT URBAN FORM
4. FOCUS ON URBAN DESIGN
5. CREATE PEDESTRIAN ENVIRONMENTS
6. ADDRESS PARKING MANAGEMENT
7. RESPECT MARKET CONDITIONS
8. TAKE A COMPREHENSIVE APPROACH TO PLANNING
9. PLAN FOR TRANSIT AND PROMOTE CONNECTIONS (FOR ALL MODES)
10. PROMOTE PARTNERSHIP AND INNOVATIVE IMPLEMENTATION
Major Activity Centre

Function
The TOD of Major Activity Centres will primarily serve the needs of the students and staff of the adjacent education and health centres. Major Activity Centres are located on urban corridors, thus are on the same scale as urban corridors.

Goals
To maximize the level of access for these large transit ridership generators. Major Activity Centres can be a key designation for visitors to the City’s universities, colleges, and health centres.

Application
Major Activity Centres will have higher densities as directed by the Urban Hamilton Official Plan. This density will be applied over the entire area, not necessary to any one given site. Residential density may include high to low density uses as per the Official Plan. The highest density areas should be applied to areas closest to the transit stations.

TOD in Major Activity Centres offer opportunities for public/private partnerships (ie. between the City and major institutions). Parking should be controlled in these TOD areas accompanied by higher degrees of investment in pedestrian and cycling amenities. The planned land uses should be diverse in these TOD areas.
4.0 DETAILED GUIDELINES FOR TOD AREAS

Typical Residential Density Range:
Min 60-120 units/hectare

Typical Commercial Density Range:
Min 1-1.5 Floor Area Ratio

Typical Land Use:
Mixed Use, Educational and Health related services, Neighbourhood

Scale of Development:
6-10 storeys

Typical Parking Standards:
Discourage surface lots, preference for underground or structure parking, where feasible
- Res: 0.75-1.2 (max)
- Retail: 1-2/300m²

Photo Source: City of Hamilton
Typical Design Elements

- Medium to high level scale and intensity of buildings
- Wider sidewalks should be placed within 400m of the station area. Create new connections within adjacent neighbourhoods and buildings if not currently present
  - A high degree of pedestrian amenities should be available
- Cycling facilities required at transit stations, secured facilities preferable
- Create a positive pedestrian environment, utilize the ROW to expand sidewalks, plant shade trees, and encourage a large proportion of street façade windows
- Create smaller blocks during redevelopment where possible (90m are best, 120m -150m may also be appropriate)
- The preferred location for parking in new developments is at the rear of the building with a limited setback. If there are no alternatives and a small setback is required, parking in front of the building should be limited to one or two rows

Other Considerations

- Design and land use should be realistic to the existing uses but also plan for more intensity in the future given access to higher order transit on the corridor
- Should have lower parking requirements than other arterial road areas
- Discourage new auto related uses within 400m of a RT station area
- Connections to other modes of transit should be clearly marked and have easy to read/understand signs
- Opportunities to partner with institutions for better transit integration - promote direct access
- Integration with inter-regional transit should be factored into decisions
Suburban Corridor
Mohawk Rd. E. and Upper James St.

The example shows a hypothetical station area across from a university. Buildings heights across from the transit station allow transit supportive density, but are consistent with existing Official policy.
5.0 IMPLEMENTATION

5.1 How To Use These Guidelines
These TOD guidelines describe ten key principles to developing TOD and provide example sites and scenarios where they may be implemented. The various TOD typologies illustrate the physical elements that make up an ideal TOD area based on site context. Between Volume 1 and 2 of these guidelines, strategies for TOD are outlined, TOD built form standards are provided, and implementation issues such as parking are addressed.

The TOD guidelines are meant to complement the existing Official Plan policy, zoning restrictions, and to serve as a tool to help translate policy into action. While the TOD guidelines are targeted to transit areas, the principles can be used as a tool to implement the existing policy. The TOD guidelines can be used by planners to articulate existing policies and design standards within a transit specific context. The guidelines are intended to be used by the City, developers, and the broader community.

City Staff can use these guidelines to:
• Provide direction in the development of future secondary plans and updates;
• Provide direction on planning around transit stations;
• Serve as a tool to review development applications located near key transit areas to ensure some principles of TOD are addressed;
• Incorporate TOD principles when updating policy and zoning;
• Guide implementation of new transit infrastructure, including rapid transit;
• Provide direction to local area transportation master plans, cycling projects, and other municipal initiatives;
• Guide the design or retrofit of streets and other public spaces to be more pedestrian, bicycle, and transit friendly; and,
• Serve as an education tool to educate the public and industry about the benefits of TOD.

Developers can use this guidebook to:
• Design projects that take advantage of a transit presence;
• Meet policy objectives of the Official Plan and other planning requirements;
• Work with the City on potential public/private projects;
• Be used as a marketing tool for transit-oriented projects.

Community groups can use these guidelines to:
• Learn more about the benefits and principles of TOD; and
• Advocate for walkable, transit-oriented neighbourhoods.

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• Learn more about the benefits and principles of TOD; and
• Advocate for walkable, transit-oriented neighbourhoods.
5.0 IMPLEMENTATION

5.2 Additional Policy (if necessary)
Currently, the Urban Hamilton Official Plan and new Zoning By-law are consistent with TOD. Thus, the broader policy planning framework already exists to enable transit supportive development including the design guidelines already detailed in the Official Plan. The TOD guidelines provides further direction and guidance to help implement the direction already detailed in the Official Plan and through Zoning. As plans for rapid transit become more refined, slight modifications to the Official Plan and/or Zoning may be appropriate. The TOD guidelines will assist in providing direction to any future modifications.

5.3 Implementation Tools/Frameworks
The TOD guidelines will most likely be used during the site plan stage of development review as an additional resource to determine if developments are transit supportive. The intent is to help guide the development to meet the existing policy framework. Ideally, these guidelines will be consulted before the site plan review process is underway. These TOD guidelines could potentially become part of the site plan guidelines and part of the site plan review process.

One of the most influential places to implement TOD will be in the development of new Secondary Plans. New Secondary Plans should follow principles of the TOD guidelines and implement many of the design elements during the development of Secondary Plans for existing and planned transit expansion areas.

Finally, many of the most successful TOD projects involve partnership between different groups within community organizations, and private and public sectors. TOD guidelines and principles should be followed when such groups collaborate to implement TOD.