

2.0 SITE CONTEXT

2.1 Introduction

Site planning involves the spatial organization of activities on a site including the placement and orientation of buildings, landscaping, parking and pedestrian and vehicular circulation. These building and site design elements must be considered within the broader context of the City’s design objectives for its streets and public spaces.

This section of the document addresses broad urban design topics, such as the public realm and streets, streetscape, heritage, safety and neighbourhood character to create the context for site planning in Hamilton. This approach will ensure that new development is integrated with its surroundings and adds to the attractiveness and livability of Hamilton.

The discussion and guidelines contained in this section of the report will provide the basis for the more specific guidelines in the subsequent sections of the document.

2.2 Built Form, Public Realm and Streetscape

Rationale	Built form and open space are the two elements which together comprise the public realm. The creation of buildings and open spaces, including the streets that link them, helps define the character of Hamilton and establishes a hierarchy of places within the city fabric.
Built Form	<p>Built form should be used to reinforce the character of neighbourhoods within the city and in the definition of streets and roadways throughout the city. Perceptually it is the built edges of the street that transform the two-dimensional pattern of streets on a map into the three-dimensional spatial form of the city. The most dominant element of the streetscape becomes the building and landscaping which frames the street and establishes its character.</p> <p>The spatial enclosure of the street creates the corridors and “rooms” of the city. This sense of enclosure contributes to the human experience of the city: what we do along the street and how we feel while using the street as a pedestrian and a motorist.</p>

Along with buildings, open spaces and natural areas are also found along the streets of the City. Open spaces should be viewed positively and comprehensively as places created and defined by built form. The design and orientation of buildings must therefore take into account the creation of and the character of the adjacent open space and its contribution to the public realm.

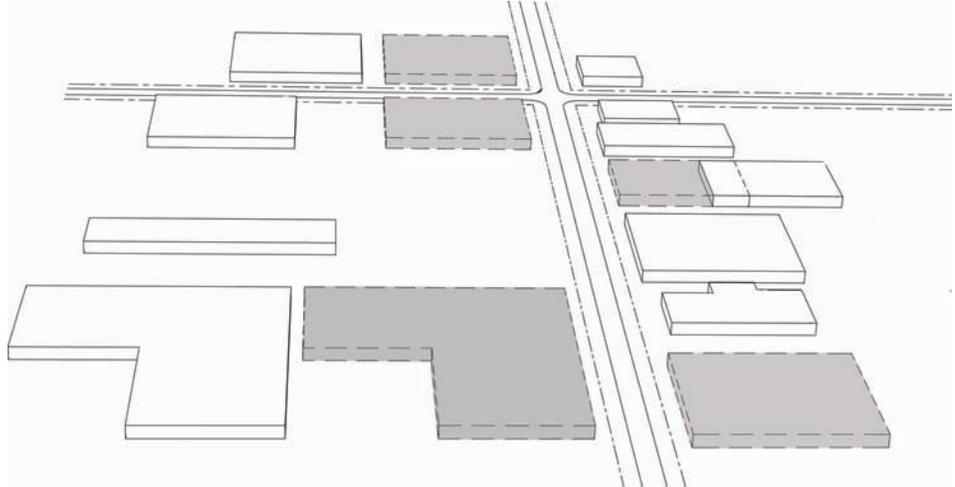
The built form guidelines of this section focus on the street space, from building face to building face. It is the City of Hamilton's objective to create attractive and functional street spaces with a sense of enclosure, activity and attractiveness to create a stimulating and memorable experience for pedestrians, cyclists, transit riders and motorists. This type of street environment is often referred to as being pedestrian-oriented or of a pedestrian scale. The pedestrian-oriented street will have building, street and landscape elements which are intended to promote human use and interaction, and has buildings and landscaping which is of a scale that does not overwhelm a person walking along the street. People will feel comfortable in their surroundings on a pedestrian-oriented street.



Pedestrian oriented streets in Hamilton's downtown areas

Many of Hamilton's major roads have developed with buildings set well back from the street creating a poorly defined street edge and inhospitable pedestrian zone. New development and redevelopment, should achieve street enclosure through building placement, massing and height, and through landscaping along the street.

Street Oriented Design



Buildings massed along the street to define edges and achieve street enclosure

Buildings oriented to the street with the building mass maximized along the street edge supports the life of the street. Building placement near the street creates a sense of enclosure, reduces the apparent width of the street to a more human scale and minimizes walking distance between the public sidewalk and buildings. The activities within buildings provide reasons for people to be walking and visual interest for the pedestrian.

In addition to buildings, street design should consider a range of elements to create the appropriate conditions for each street. Sidewalks, street trees, pedestrian-oriented lighting, transit shelters, on-street parking, textured paving at crossing locations, benches and other elements enhance the pedestrian experience. These elements serve to create a more attractive and safe environment for pedestrians which encourages walking and transit use.



Large retail store located along street, the parking area is beside, not in front of the building, and is edged with trees, shrubs and a pergola

Landscape planting and structures near the street also help To enclose the street and create a more pleasing pedestrian environment at the street edge. Where buildings are not located at the street edge, landscaping plays an important role in providing edges to the street.

The street and building relationships will vary across the City with the age of the neighbourhood, its function, width of street and scale of buildings.

Older neighbourhoods and downtown areas typically have narrower streets (with on-street parking), buildings located close to the street, parking located in side and rear yards and a streetscape which encourages walking. This urban form is often referred to as traditional neighbourhood design.



Traditional main street development with buildings located near the street

In the post war era of development, the automobile has been the principal mode of transportation and has influenced the form and character of development. Generally, many neighbourhoods and commercial corridors built in the past 50 years have wide streets, buildings set back from the street, parking between the street and building, and streetscapes which do not promote walking and transit use.



Major street with buildings set back from street does not promote walking

The more traditional neighbourhood form is the preferred city form for Hamilton. It provides a more attractive streetscape, creates an interesting and supportive environment for people to walk around the city and creates an efficient and compact built form.

New neighbourhoods and individual developments may not fully replicate the older urban neighbourhoods but it is the City's desire to reintroduce to a more traditional and walkable urban environment. It is recognized that there will have to be a balance between modern development requirements, the role of the automobile as the principal mode of travel and the City's urban form objectives. Where it is not practical to site buildings along the street, landscaping should be extensive to create a strong street edge and a pleasant walking environment.

Promoting alternative transportation modes, particularly transit, is a policy objective in Hamilton. A fundamental premise of the Vision 2020 project is to provide an integrated public transportation system that serves the entire City in an affordable, efficient and accessible way. A key to promoting transit use is the establishment of more pedestrian-oriented communities which encourage people to walk to transit routes. Urban development patterns of the post war period have given greater emphasis to the needs of automobile travel and through traffic rather than on the requirements of pedestrians, transit users and cyclists. A better balance must be struck between the needs of all users of the street in order to ensure that transit use is promoted.

**Supporting
Alternative
Transportation
Modes**



Transit stop located at street intersection,
and integrated with commercial development

Many of the major roads in Hamilton were developed in the post-war period with reverse lotted development. This form of street design is at odds with the creation of a pedestrian and transit-oriented urban form, especially when these streets have bus routes. Hamilton encourages a street-oriented form of development along its major roads and reverse lotting is to be avoided where possible.



Reverse lotted development along major road

Arterial roads pose a number of design challenges. They are designed to move high volumes of traffic through the city. Numerous site access points conflict with this objective and are typically discouraged. Noise levels are greater than along roads with lower traffic volume and may require noise attenuation measures which are not pedestrian friendly.

For these reasons, it may be necessary to provide some reverse lotting along the arterial roads but alternatives should be investigated at the community plan or subdivision stage. Where new roads do have reverse lotting and noise attenuation fencing, the public boulevard can be landscaped to minimize the blank walled “canyon effect” of the sound attenuation fencing.

Summary

In summary, the spaces along the street must be properly designed to enhance and encourage pedestrian use, promote transit use and create an attractive environment for people passing along the street. The type and scale of the streetscape will vary across the city, depending on the size of the roadway and the type of uses along the street. Notwithstanding the differences in scale, all streets should be well designed to encourage their use by pedestrians and provide for a pleasant pedestrian experience.

Street design should balance the needs of motorists, pedestrians, cyclists and transit riders. Placing buildings towards the street encloses the street space and assists in creating a more pedestrian friendly public realm which in turn creates a more attractive environment. Consideration of the above noted principles will assist in creating a sense of place in the community and a positive image of Hamilton.

While Site Plan Review under The *Planning Act* provides for the review of development projects on a site-by-site basis, there is a need to integrate development on adjacent properties to create strong neighbourhoods. How a building and site design adds to the quality of the streetscape and defines the street space are factors which transcend individual site planning. Coordination of development is necessary to ensure an integrated and consistent streetscape across the city.

1. Development should acknowledge and incorporate existing and historical patterns of built form and streetscape.

Guidelines



New infill development extends the form and character of existing streetscape

2. Consideration should be given to both the built form and the space it defines to ensure their integration and the creation of positive, functional open space.
3. Within urban areas, spatial enclosure of streets is encouraged by orienting building mass towards the street. All or a part of the main building mass should be located close to the street to maximize the amount of building façade and activity along the street to enclose and animate the street space. Where buildings are discontinuous along the street, the street edge should be defined through the use of such elements as street trees, walls, fences, trellises or planting to extend the building plane along the street.



Apartment building location defines the street edge

4. Development along local and collector roads should be front lotted to create visually interesting streetscapes and pedestrian oriented streets.
5. Development along arterial roads should be oriented to the street. Reverse lotting on arterial roads should be avoided, if possible. Design alternatives to reverse lotting include:
 - Siting less noise sensitive activity along the arterial road;
 - Single loaded local roads or cul-de-sac bulbs abutting the arterial road;

- Maximizing collector road connections with the arterial road and orienting corner lot development to the collector road; and,
- Using rear lanes to service development fronting onto the arterial road.



Internal street provides access to townhouses fronting major public street



Front lotted townhouse development with rear laneway

5. Where reverse lotting is utilized along arterial roads, the boulevard should be landscaped to create attractive streetscapes and break up the continuous solid noise barrier or fencing.



Landscaping softens street edges of reverse lotting

6. Significant views and vistas should be preserved where possible. In the design of new development, consideration will also be given to the creation of new vistas, including views to public and private buildings, open spaces, natural features, landmarks and skylines.
7. Opportunities should be considered to create community landmarks through road alignments, relationships with natural features and the siting of new buildings to provide visual reference points.
8. Special street sections and unique streetscapes should be created by the City and developers in areas of high pedestrian activity, entrances to neighbourhoods or special character areas.



Neighbourhood character is created through integrated public and private streetscape efforts

9. Minimum front yard setbacks, front porches, window bays and maximum glazing in the front elevation of buildings should be used to create social interaction on the street and enhance safety and security of the neighbourhood through informal surveillance.

10. Safe, visible and direct connections should be provided from the public street to building entrances.
11. Parking lots adjacent to public streets should be screened with low level fences, walls or shrub planting. The screening treatment should be low to maintain some visibility to promote safety.



Low wall with shrub plantings provides parking screen and enhances the streetscape

- 12.. Hydro service and other utilities should be located underground, if possible, to minimize streetscape clutter. Where above ground services are required, consideration should be given to the location and design of structures.

2.3 Natural Environment

Hamilton has an abundance of natural features including the Niagara Escarpment, Lake Ontario, Hamilton Harbour and Cootes Paradise as well as streams, wetlands and woodlots. These natural features perform numerous ecological functions necessary for life and health as well as providing for many recreational, aesthetic and economic benefits that enhance quality of life.

The Niagara Escarpment is the most prominent natural feature in the City of Hamilton. It provides a distinctive landscape and performs many ecological functions. Hamilton is the largest urban area located along the Niagara Escarpment and benefits from its influence on the urban form of the city.

Rationale

Trees and woodlands are a significant component of the natural system of the City. Their ecological benefits are many and include the production of oxygen, soil retention, climate moderation and creation of habitat for flora and fauna. Trees can be a significant design feature, a component of a heritage landscape and a defining neighbourhood characteristic as seen in many of the City's older neighbourhoods.

The various municipal planning documents guiding land use and development within the City emphasize the protection and enhancement of the natural environment and the conservation of natural resources. Most of the planning policies and regulations for environmental protection and conservation are contained in other planning documents such as the Provincial Policy Statement, Official Plans, Zoning By-laws, the Niagara Escarpment Plan, Conservation Authority Regulations, the Hamilton Harbour Remedial Action Plan, and sub-watershed plans, among others. However, there are some aspects of planning for natural features which do take place at the site plan level. For example, site planning may have to address tree-saving or development adjacent to woodlots, wetlands, valleylands, ravines, creeks, Lake Ontario, and development on the Niagara Escarpment.

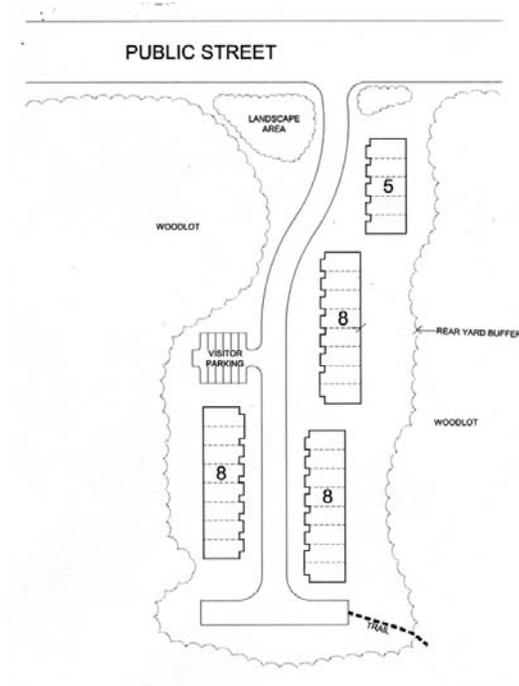
Site planning should consider natural features and systems, including conditions for their continued functioning and integration into new development in a manner which enhances the project's aesthetic, ecological, or heritage value.

There are four Conservation Authorities with jurisdiction across Hamilton. The Conservation Authority boundaries are identified in **Appendix 6**.

Guidelines

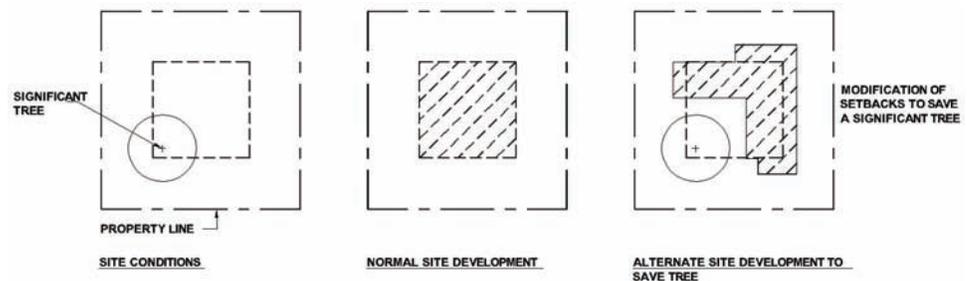
1. Site natural resources should be assessed at the outset of the design process to determine current conditions of trees, woodland, streams or other features and the changes to the environment which may impact their continued health and function.

2. Woodlot fragmentation should be avoided. Woodlots should be incorporated into new developments where possible, and buffer areas should be created around woodlots as necessary, according to any applicable site-specific or sub-watershed study.



Woodlot retention in townhouse development

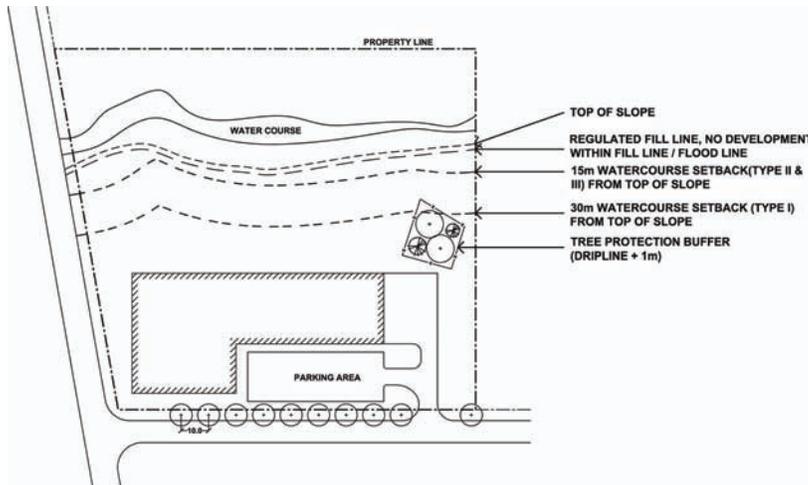
3. Significant trees should be preserved on the site where possible. In some circumstances, preservation may not be possible due to the location of the tree and site configuration. Significant trees should be a large size, and display any one of the following characteristics:
- Environmental – Trees which contribute to the enhancement of the quality of life, for example, providing shade, acting as windbreaks, and providing habitat for wildlife.
 - Prescribed Species (rarity) – Trees which are no longer prolific in the area, but have a value to the natural history of the area or any tree that has been identified as nationally, provincially or regionally rare (identified in By-law R00-054, **Appendix 7**).
 - Aesthetics – Trees which make a visual contribution to beauty of the surrounding environment.
 - Heritage or Historical – Trees which have a cultural value, were planted on a historical site or in commemoration of an historical event.
 - Landmarks – Trees which act as a prominent feature in the landscape.



Tree preservation resulting from sensitive building siting

4. Grading and hydrological changes should be minimized within the dripline where significant trees and woodlands are to be retained in order to minimize disruption to the ecological system supporting their continued health.
5. Building setbacks, site landscaping and other screening should be considered to minimize the visual impact of development on the escarpment landscape.

6. Adequate setbacks and buffers should be provided adjacent to the lakeshore, streams and their associated valley feature and wetlands to prevent flooding and erosion, enhance water quality and provide stream shading to meet the requirements of the applicable Conservation Authority and City. Specific buffers and setbacks are provided in the Standards Section.



Appropriate stable top of bank setbacks and buffer

7. New development should not be permitted within natural valleys, which are directly associated with riverine systems.
8. Building siting should consider views to and from the Niagara Escarpment. Important public views of the Escarpment should not be adversely impacted by new development.
9. Development along Lake Ontario should be sited to protect and create views to the lake and to ensure safe conditions are created. Development siting should also consider requirements for both private and public access to the lakeshore.



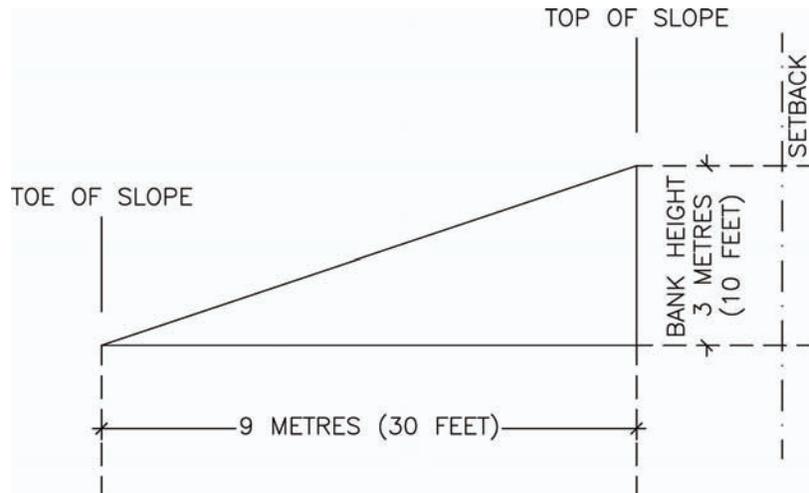
Pedestrian access to Lake Ontario

Standards

1. Conservation Authority minimum setbacks and buffers are identified below, and should be reviewed with the appropriate Conservation Authority staff:

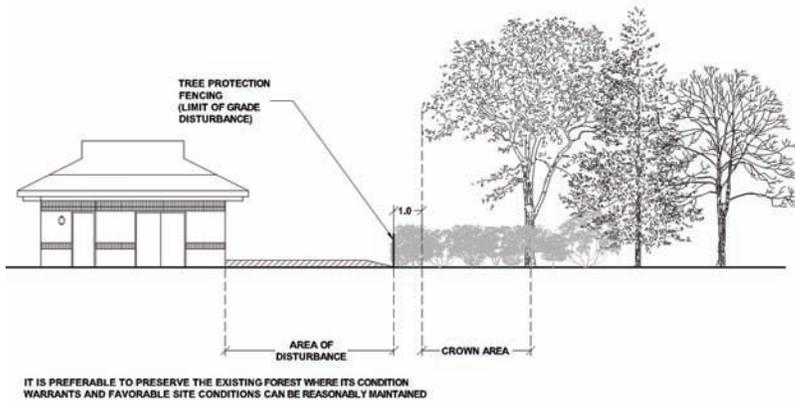
Setback	GRCA	HCA	HRCA	NPCA
Registered Flood line/ Fill line	Permit required.	Permit required.	Permit required.	Permit required.
Valleys, Ravines, Slopes	15m from stable top of slope.	7.62m from stable top of slope.	15m (major) top of slope 7.5m (minor)	7.5m from stable top of slope
Woodlots	NA	10m(ESA)	15m, EIS	NA
Watercourses Type I Type II & III	30m 15m	30m 15m	30m 15m	30m 15m
ESA	EIS	EIS	15m, EIS	PPS
PSW	EIS	50m, EIS	15m, EIS	EIS

2. Development is not permitted within valleylands associated with riverine systems where the bank height is equal to, or greater than 3 metres.



No development is to be permitted on slope

3. Minimum setback from any woodlot is the drip line plus one (1) metre. Based on specific conditions, it may be necessary to increase the setback.



Recommended woodlot protection

4. Minimum setback from a significant tree is drip line plus 1m. The minimum setback will be determined based on the site conditions and the nature of development. The minimum size requirement for a significant tree is a diameter of over 30cm at approximately 1.25m height.
5. Tree preservation requirements (**Appendix 8**):
 - All existing trees to remain on site shall be tagged and fully protected with fencing, erected at least 1m beyond their drip line. Any encroachment will require approval from the Public Works Department.
 - Small lot by lot tree savings shall be protected with paige-wire fencing around the dripline. Filter fabric may be required.
 - Protective fencing should be located at the dripline of individual or clustered trees where possible. Fencing shall be minimum 1.2m high, 9 gauge wire illustrated in **Appendix 8**.

Requirements

1. Some site plan applications will require an analysis of existing natural features. Individual requirements should be reviewed with City staff at the preliminary design stage. An Existing Conditions Plan may be required by City staff to show all existing natural features, general vegetation overview (i.e. ground cover, trees, woodlots, watercourses) and topography.
2. An Environment Impact Study (EIS) will be required for development adjacent to any Environmentally Sensitive Areas or within a 120m of a Provincially Significant Wetland. The EIS will determine appropriate buffers and setbacks.
3. A geotechnical study may be required to determine the stable top of bank, setback and erosion control measures.
4. A Fill, Construction and Alteration to Waterways Permit is required for development within the regulatory floodplain and registered fillline areas.
5. A floodplain study may be required by the Conservation Authority to determine the flood susceptible area or impacts on the floodplain. Projects near a floodplain may be required to demonstrate adequate emergency access and flood-proofing measures.
6. Prior to any development, construction or activity within the dripline of municipally owned trees will require written permission from the City of Hamilton's Director of Operations and Maintenance.
7. A Tree Preservation Plan may be required to identify which trees will be retained and what protection and tree maintenance measures will be implemented to ensure their survival.
8. Areas within the protective fencing shall remain undisturbed and shall not be used for the storage of building materials, structures or equipment. Protective fencing measures shall be completed prior to and site clearance or development.

9. A Notice of Intent to Cut, Burn or Destroy Trees (NIC) application is required to be filed at least 20 days before tree destruction is to occur in a woodlot of 2 acres or more in size or from a street right-of-way. This application and By-law is attached in **Appendix 9**.
10. Tree protection measures should be reviewed with the City’s Parks Department. Permission will be required for any development, construction or activity within the 1m dripline buffer.
11. Any development located within the Niagara Escarpment Plan control area is subject to the Niagara Escarpment Plan, and may require a Development Permit.
12. The plans and requirements of the Provincial Policy Statement, City, Conservation Authority, Department of Fisheries and Oceans, and the Ministry of Natural Resources should be consulted with regard to shoreline protection works and lake filling requirements for development adjacent to Lake Ontario.

1. Conservation Authority Jurisdiction Boundaries, Appendix 6 and references:

References

Conservation Authority	Reference
Grand River Conservation Authority (GRCA)	<ul style="list-style-type: none"> • Information required
Hamilton Conservation Authority (HCA)	<ul style="list-style-type: none"> • HCA Conservation Authority Keeping Soil On Construction Sites, April 1994. • HCA Plan Review Guidelines
Halton Region Conservation Authority (HRCA)	<ul style="list-style-type: none"> • Protecting Resources Naturally: Integrated Land Use Policies, June 1997. • Policies, Procedures and Guidelines for the Administration of Ontario Regulation 150/90-Fill Construction and Alteration to Watercourses, October 1999.
Niagara Peninsula Conservation Authority (NPCA)	<ul style="list-style-type: none"> • Fill, Construction and Alteration to Waterways Regulation, Policies and Procedures, June 1981, revised August 1996. • Plan Input and Review Policies/Guidelines, July 1993 (currently under review).

2. Provincial Policy Statement.
3. Ministry of Natural Environment, Understanding Natural Hazards, 2001.
4. Niagara Escarpment Plan.
6. City of Hamilton Forestry By-law 92-155
7. Hamilton-Wentworth Woodland Conservation By-law (By-law No. R00-054), **Appendix 7**.
8. Hamilton Wentworth Natural Areas Inventory, Hamilton Naturalists Club 1993 (updated).
9. Proposed Tree Preservation Details, **Appendix 8**.
10. Notice of Intent to Cut, Burn or Destroy Trees Application, **Appendix 9**.
11. Ministry of the Environment, Stormwater Management Planning and Design Manual, 2003.

2.4 Heritage Resources

Rationale

The City of Hamilton encompasses a variety of urban, suburban, rural and natural environments. Each environment contains an array of cultural heritage resources, such as built heritage resources and cultural heritage landscapes. The conservation of these resources: contributes to the physical diversity of Hamilton; provides a sense of continuity with the past; maintains and enhances community and neighbourhood character; and stimulates economic development.

Provincial planning policies require the conservation of significant built heritage resources, cultural heritage landscapes and archaeological resources. These terms are defined in the glossary.

Hamilton has a rich variety of heritage resources. Approximately 220 properties are designated under Part IV of the *Ontario Heritage Act*, and seven heritage districts are designated under Part V of the *Ontario Heritage Act*. The City of Hamilton also has an Inventory of Buildings of Architectural and/or Historical Value which identifies approximately 7000 properties of heritage interest.

Built heritage properties comprise a variety of features and include a wide array of structural types such as dwellings, churches, town halls, mills, railway stations and bridges. These forms of built heritage incorporate not only classically designed public buildings and residential structures, but also, more modest reminders of the past including farmhouses, barns, and simple manufactories. Such features usually incorporate a diversity of architectural and stylistic variations, varied construction techniques and building materials.

The primary conservation strategies in the site planning process are typically concerned with following design issues:

- The additional of new structures to existing heritage features;
- The incorporation of new freestanding structures and landscaping on the site of an existing heritage feature; and
- New development that is adjacent to, but not on the same site, as the heritage feature(s).

Conserving built heritage resources can range from preserving buildings and structures intact through to providing additions and new development that are sympathetic to the original structure.



Liuna Centre redevelopment is a successful adaptive reuse of a former train station

General Guidelines

1. When undertaking preliminary site evaluation, consider and evaluate whether the site contains any significant built, cultural landscape or archaeological resources. Significant resources are those which are deemed important to the understanding of the history of Hamilton and its people.
2. Cultural heritage resources should be conserved and protected. Possible techniques may include protecting the resource in situ; adaptively re-using the resource wherever appropriate to the resource; or incorporating the resource into new construction and new uses.

Guidelines

Additions to Heritage Buildings and Sites

1. Exterior additions, including garages, porches and balconies, are encouraged to be located at the rear or on an inconspicuous side of the building, limited in size and scale to complement the existing building and neighbourhood properties. Additions at the rear should always be slightly lower than the existing roofline, and stepped back at the sides to not dominate the existing heritage building and the view from the street.
2. Multi-storey exterior additions should be set back as deeply as possible from the existing front wall plane in order to be unobtrusive in the streetscape and differentiate the addition from the older structure.
3. Additions to structures with symmetrical facades should avoid creating asymmetrical arrangements (in balance) in building form.
4. New additions should be designed in a manner that distinguishes between old and new; and that avoids duplicating the exact style of the existing heritage building or imitating a particular heritage style or period of architecture. This does not preclude the imaginative use and interpretation of historically derived styles.



New addition at left respects the original Hamilton Courthouse Building

5. Contemporary design for additions is appropriate when such additions do not destroy significant architectural, historical, or cultural material and when the design is compatible with mass, ratio of solid to voids, colour, material, and character of the property, neighbourhood or environment.



New addition to John Sopinka Courthouse complements original building massing and facade

6. New additions should be designed in such a manner that the essential form and integrity of the existing heritage building would be unimpaired if the addition were removed in the future.
7. Additions to the height or roof of an existing heritage building should be avoided as changes to the roofline alter the character of a building significantly. Dormers should be located at the side or rear rather than on the principle facade.

New Development Adjacent to Heritage Buildings and Sites

1. New development adjacent to heritage resources should ensure that parking areas, outbuildings, garages and utilities (i.e. utility boxes, storage devices, heat pumps, and satellite dishes) are sited away from heritage buildings and structures.
2. Facades of new buildings adjacent to heritage buildings should respect the vertical articulation and horizontal expression of the older building. The rhythm of the older building design and streetscape should be continued.
3. Appropriate landscape treatments should be used to mitigate any adverse effects of new development.

Features and Spaces Around Heritage Buildings and Sites

1. Traditional views of the heritage property should be maintained. The masking or hiding of prominent building features should be avoided. Every effort should be made to ensure that traditional landscaped area and their distinguishing features such as front yards, tree plantings, hedges and fences, are retained and conserved.
2. Parking areas and outbuildings including garages and utilities should be set at the side or rear of buildings and in those areas historically set aside for secondary activities, uses and structures.
3. The historical means of access to heritage properties, including driveways, paths and doorways, should continue to be used wherever possible. Any required new entrances to be installed either in the heritage building or in an addition, should be placed in secondary elevations located in the side or rear yard. Where external staircases are proposed, they should be located at the rear.
4. The use of standard materials and landscaping elements should be avoided around heritage resources. Unique heritage environments will require specific site planning design solutions.



Pressed and tinted asphalt that resembles a stone surface is a better fit with the heritage building than black asphalt and concrete curbing typically used

1. Where significant built heritage, cultural heritage landscapes or archaeological resources are identified on a site, appropriate heritage assessments of the resource may be required to accurately define their significance, evaluate conservation options and determine a suitable strategy for protection and wise use.
2. If significant built, cultural landscape or archaeological resources are identified of a site, it may be necessary to undertake a detailed study of the resources to evaluate their significance, and determine appropriate conservation strategies.
3. The Official Plans of the former municipalities located in Hamilton contain policies regarding heritage resources. These policies should be reviewed to provide direction for the conservation of heritage resources.

Requirements

References

1. Provincial Policy Statement
2. *Ontario Heritage Act*
3. Former local Official Plans, and existing Secondary Plan Policies
4. Existing Heritage District Policies
5. The City of Hamilton maintains an inventory of structures designated under Part IV of the *Ontario Heritage Act*. The inventory is available from the Heritage and Urban Design Section of the Planning and Development Department.

2.5 Safety and Security**Rationale**

How people use spaces and how people feel when using that space can be affected by site features, nearby buildings and landscape design. Site planning is a contributing factor in making communities safer and minimizing undesirable activity which may occur in public areas. Site and building design should strive to increase personal safety and security of property and reduce fear of using spaces.

The concept of ‘Crime Prevention Through Environmental Design (CPTED)’ is an effective approach to reducing opportunity for crime through design techniques.

An urban form which contains a mix of uses and activities through the day and night, is oriented to the street and encourages casual surveillance can reduce the opportunity for undesirable behaviour to occur. The creation of safe urban environments requires special attention to the spaces around buildings. Ambiguous or poorly planned spaces lacking a clear purpose may be isolated and discourage casual surveillance. This type of space provides an opportunity for undesirable activities to occur within.

It is important that development be properly designed at the outset to create safe conditions. Retrofitting poorly designed spaces and buildings has a far greater public and private cost.

Guidelines*General*

1. Opportunities for natural surveillance around public spaces should be maximized. Where possible, active uses such as restaurants are encouraged to locate along the street to animate public spaces and provide increased opportunities for informal surveillance.



Commercial uses at grade provide surveillance

2. Public outdoor spaces should be designed to provide a clear definition of the purpose of the space and distinguish it from private areas. Landscaping, walls, fences and grade changes can be used to delineate private and public spaces.
3. Clear sight lines should be created to allow people to see and be seen and avoid blind corners, bends, grade changes and other elements which may obscure clear views.
4. Locate all public open spaces and recreational facilities to maximize natural surveillance from buildings, public roads and walkways.
5. Public telephones and call boxes should be provided in highly accessible and well-lit areas of publicly accessible buildings. Panic stations should be considered in central locations of large parking lots and parking structures.

Paths

1. Pathways should be planned to be direct, follow natural desire lines and avoid unobstructed sight lines. Pathways should be located close to buildings and away from schoolyards, woodlots and other open spaces.
2. Pathways and entrances should have good border definition to define public and private space.

Buildings and Building Design

1. Buildings and sites should be designed to ensure potential areas of entrapment are not created. These areas could be at recessed doorways, loading bays, stairwells and other spaces that which are bounded on three sides by walls, planting or fences.



An entrapment area is created where the two buildings meet

2. Cluster buildings around a common parking lot or open space to facilitate monitoring of the space.
3. All building entrances should be well lit, well defined, and visible from the street or parking areas.
4. Doors should not obstruct the circulation path. Where doorways are recessed into the building façade, angle the corners to improve visibility.
5. All buildings and residential units should be clearly identified by street address numbers that are well lit at night. Building address should be at least 5" minimum in height.
6. Building placement and window location should be considered to maximize informal surveillance opportunities by building users, especially with regard to common areas, entrances and laneways. For residential and commercial projects, add windows on all facades to provide visibility outside.



Window placement on the front and side elevations, and directional lighting, promote surveillance

Parking

1. Orient parking spaces so that they are easily visible from adjacent windows, doorways and walkways.
2. Avoid remote parking areas that are not observable from the road or adjacent buildings.
3. Use parking lot islands and internal walkways to accommodate pedestrian movement through parking lots. Mark pedestrian crossings on interior roads and parking islands.
4. Locate bicycle parking areas in highly visible areas near building entrances and well lit areas.
5. Transparent materials should be used in parking garages, stairwells and other isolated areas wherever possible to improve visibility and reduce fear.



Garage is well lit, with white ceilings and walls, and a transparent entrance to the stairs and elevators

Lighting

1. Lighting levels which are appropriate for nighttime visibility should be provided. Only areas which need to be illuminated should be lit in order to avoid creating a false sense of security. Metal halide lighting is recommended, and low pressure sodium lighting should be avoided.



Sodium lighting used in this parking structure provides poor colour definition and should be avoided

2. Place lighting fixtures to provide broad horizontal lighting to reduce hiding places.
3. Illuminate all sides of the building where activity is anticipated.
4. Adequate illumination should be provided outside waste collection and storage facilities, and to the primary routes to/from the adjacent building(s).

Landscaping and Fencing

1. Landscape screening objectives should be balanced with views to spaces and buildings so as to not create potential hiding areas. In some instances, the use of taller shrubs may be used to screen service utility areas.
2. Landscape parking lots so that users may be seen from different vantage points such as building entrances, windows, and sidewalks.



Landscape berms completely screens parking area from any public view

3. Use landscaped planting strips and fencing to buffer residential properties from commercial areas and discourage trespassing. Avoid using solid fences where visibility is desired.

References

1. The Hamilton Police Department will assist in creating safe environments by undertaking a safety audit of an existing or proposed development. For information, contact the Community Services and Crime Prevention Office.

2.6 Barrier-Free Design and Urban Braille**Rationale**

People have a range of physical, mental and sensory abilities. It is the objective of the City of Hamilton to encourage all development to achieve the highest possible standard of site and building accessibility to accommodate people with a range of abilities and impairments. Through proper design, it is hoped that ease of orientation and accessibility can be provided for the majority of Hamilton's residents.

Barrier-free design recognizes that everyone has a right to be fully active and mobile within the City. Barrier-free design provides for ease of access, mobility, comfort, orientation and safety for people both outside and inside buildings. The *Ontario Building Code* provides minimum standards with further design criteria contained in the Canadian Standards Association publication Barrier-Free Design. All projects must meet the Ontario Building Code barrier-free requirements regardless of the City design guidelines.

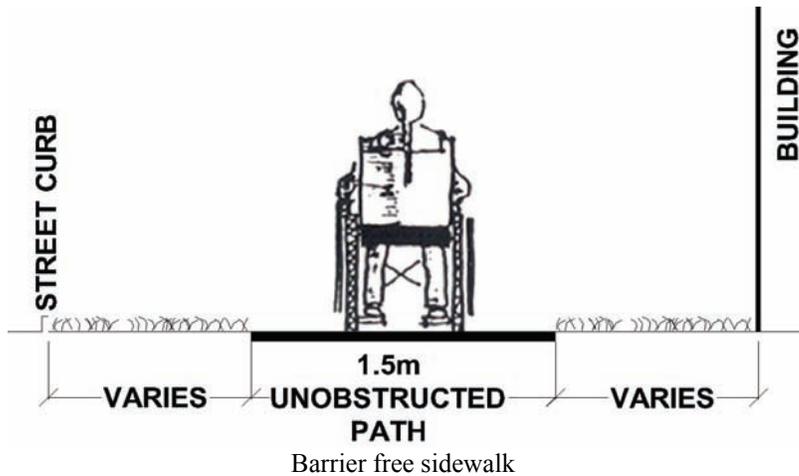
Urban Braille is a system of tactile information serving the needs of the visually impaired and blind. By utilizing both the colour and texture contrast, it provides warning signals and clues related to orientation. The Urban Braille System has been implemented in numerous City projects, and may be appropriate for special public spaces or character areas where seasonal events may attract large numbers of people.

The following site planning principles are applicable for all publicly accessible buildings whether they are in private or public ownership. All City of Hamilton buildings and sites are subject to the City's Barrier-Free Design Standards. The City encourages all builders and developers to use this standard as well.

General Barrier Free Design

Guidelines

1. Sidewalks should have a minimum 1.5 metre unobstructed width to allow for people in wheelchairs to move easily and for snow accumulation in winter months. Where two-way wheelchair traffic may occur, a minimum sidewalk width of 1.8 metres should be used.



2. Site furnishings, including benches, trash receptacles, drinking fountains, telephone booths, tree plantings, bus shelters, kiosks or information signs, should be located adjacent to, or along pedestrian routes, in a manner that does not impeded pedestrian traffic.



Tree pits do not obstruct pedestrian route

3. Pedestrian routes should be level and have non-slip and non-glare textured surfaces. It is preferable to have grades on pedestrian routes between 1% and 3%.
4. Pedestrian crossings should be flush with the adjoining sidewalk and marked with bright white lines or made with contrasting materials and colours.



Driveway crossing is flush and made of coloured concrete

5. Ramped curbs and ramped building entrances should be avoided and minimized through attention to grade changes in site design.
6. Ramps should be provided to *Ontario Building Code* requirements where grade changes cannot be avoided. A clear pathway should be provided with handrails and a non-slip surface.



Ramp parallels steps in shopping centre

7. Common facilities with seating, drinking fountains, elevators, public telephone, washrooms and similar facilities with access for all persons should be provided in public buildings, major outdoor spaces and publicly accessible private buildings.
8. International symbols of accessibility signage should be used in conjunction with identification signs to clearly identify facilities available in the public buildings. Barrier free design standards are provided in **Appendix 10**.

Parking and Drop Off Areas

1. Barrier-free parking spaces should be located as close as possible to main doors, and within 30 metres. These parking spaces should be located so that the user does not have to cross traffic, aisles or travel behind parked cars.
2. Barrier-free parking spaces should be clearly identified through signage, and may include universal symbols on the parking space. Signage requirements are discussed in the Standards Section.



Residential development incorporating clear barrier-free signage

3. A continuous barrier-free path should be provided from the parking spaces to the building entrances.



A continuous barrier-free path is provided from a school parking area to main building entrance

4. The supply of designated parking spaces should be distributed to ensure barrier-free parking is available at the main entrances to multi-entrance buildings such as shopping centres.
5. A drop off area for passengers arriving in paratransit vehicles should be provided as close as possible to the main entrance of public buildings.
6. Parking lot stormwater management systems should be designed to avoid ponding on pedestrian routes through the parking lot.
1. Barrier free parking space dimensions (Zoning By-law requirements):

Former Municipality	Dimension	No. of spaces
Ancaster	Min. 3.5m width	For any C zone, and P zone, minimum of 1 space for up to 50 required spaces, plus 1 space for each additional 75 spaces.
Dundas	Not specified	Not defined.
Flamborough	Min. 4.4m width	General requirements include: <ul style="list-style-type: none"> • 1 space for 1-19 required spaces • 2 spaces for 20-99 required spaces • 3 spaces for 200-299 required spaces • 4 spaces for 300-399 spaces • 5 spaces for 400-499 required spaces. Additional regulations apply for hospitals, medical offices or clinics.
Glanbrook	Min. 3.9m width for single space Min. 3.5m width where two spaces are provided together	1 space per 50 required space up to a total of 200 required spaces, plus 1 space for each additional 100 required spaces. Applies to minimum of 10 required spaces.
Hamilton	Not specified	
Stoney Creek	4.4m x 5.8m	At least 1% of required parking spaces, with minimum of 1 space on any lot with more than 10 parking spaces.

- If not specified in the Zoning By-law, the minimum width shall be 3.9m.
 - To accommodate a van with side loading ramp, the space width should be increased to 4.572m.
2. Barrier free signage **Appendix 10:**
 - Each handicapped stall is to be signed with a metal post and handicapped symbol sign to Provincial standards as provided by the City of Hamilton. Signs are to be installed to a non-moveable structure at a minimum height of 2m to a maximum height of 3m, measured from ground level to the bottom of the sign.
 - The sign background may be of a standard white material. Reflective material may be used.
 - Pavement markings are optional.
 3. Ramps design standards for the City of Hamilton buildings **Appendix 12:**
 - The maximum length of the handicap ramp must not exceed 9 m.
 - Landings used for turning and for rest, are to be 1.5sq.m.. Handrails are needed on at least one side and where the ramp is 1.1 m or more in width, the handrails must be on both sides of a ramp.
 - The slope of the handicapped ramp must not exceed 1:12.
 - The minimum hand rail extension is 30 cm.

1. Barrier free design requires that buildings be accessible to disabled persons and shall conform to the Ontario Building Code.
2. The Zoning By-law regulates the number of barrier free parking spaces required for each type of development.
3. The minimum number of signs is regulated in the City of Hamilton By-law 01-220.

Requirements

References

1. *Ontario Building Code.*
2. Municipal Zoning By-laws.
3. Provincial signage standards (Highway Traffic Act. Regulation 581), **Appendix 10.**
4. Barrier-Free Design, Canadian Standards Association (CAN/CSA-B6501-M90).
5. City of Hamilton Barrier-Free Design Standards, 1994
6. City of Hamilton, Urban Braille System, **Appendix 11**
7. Ramp design standards, **Appendix 12.**

2.7 Public Art**Rationale**

Public art functions as an important tool in site design in a number of different ways. Not only does public art beautify or enliven a space, it also serves as a positive directional viewpoint which focuses the public's attention away from negative viewpoints such as traffic, industry and unattractive site lines. Public art often symbolizes civic pride and introduces additional meaning and interest into the sites in the city. Subject matter can be historical, abstract, social, environmental or political. Public art creates atmosphere and ambience which encourages the public to slow down, reflect and engage in conversation. Public art also plays an essential role in Tourism whereby interesting artwork provides a destination for tourists.

A broad definition of public art allows for a range of public art to be integrated into development. In this way public art should combine visual art, building element design and landscape design as a framework for the organization of ideas in parks, plazas, gardens, courtyards, urban squares, boulevards and streetscapes.

Public Art can be a utilitarian structure such as a bench which is designed or decorated by an artist, or an urban square which acts as a permanent venue for performing artists.

Guidelines

1. The City of Hamilton has a Public Art Policy which should be followed whenever public art is identified as a component of a City of Hamilton building project or public works.



Gateway signage designed to capture the railway heritage of the area

2. The City's Arts Coordinator and Manager of Culture should be involved early in the design process to allow for proper siting and integration of public art in the overall Site Plan. The Arts Coordinator provides the appropriate staff link between City Planners and the Arts Community.
3. Public art is encouraged as a component of major commercial, office and institutional projects. The public art should include a wide range of artist-designed components in publicly accessible indoor areas and outdoor areas and could include fountains, doorways, signage, murals, sculptures, architectural features and landscape elements in addition to traditional art approaches.



Sculpture is incorporated into commercial development



Large mural showing Hamilton's industrial heritage reduces blank façade on parking structure

References

1. Development proponents should liaise with the City of Hamilton Arts Coordinator and the Hamilton Region Arts Council for advice on public art.