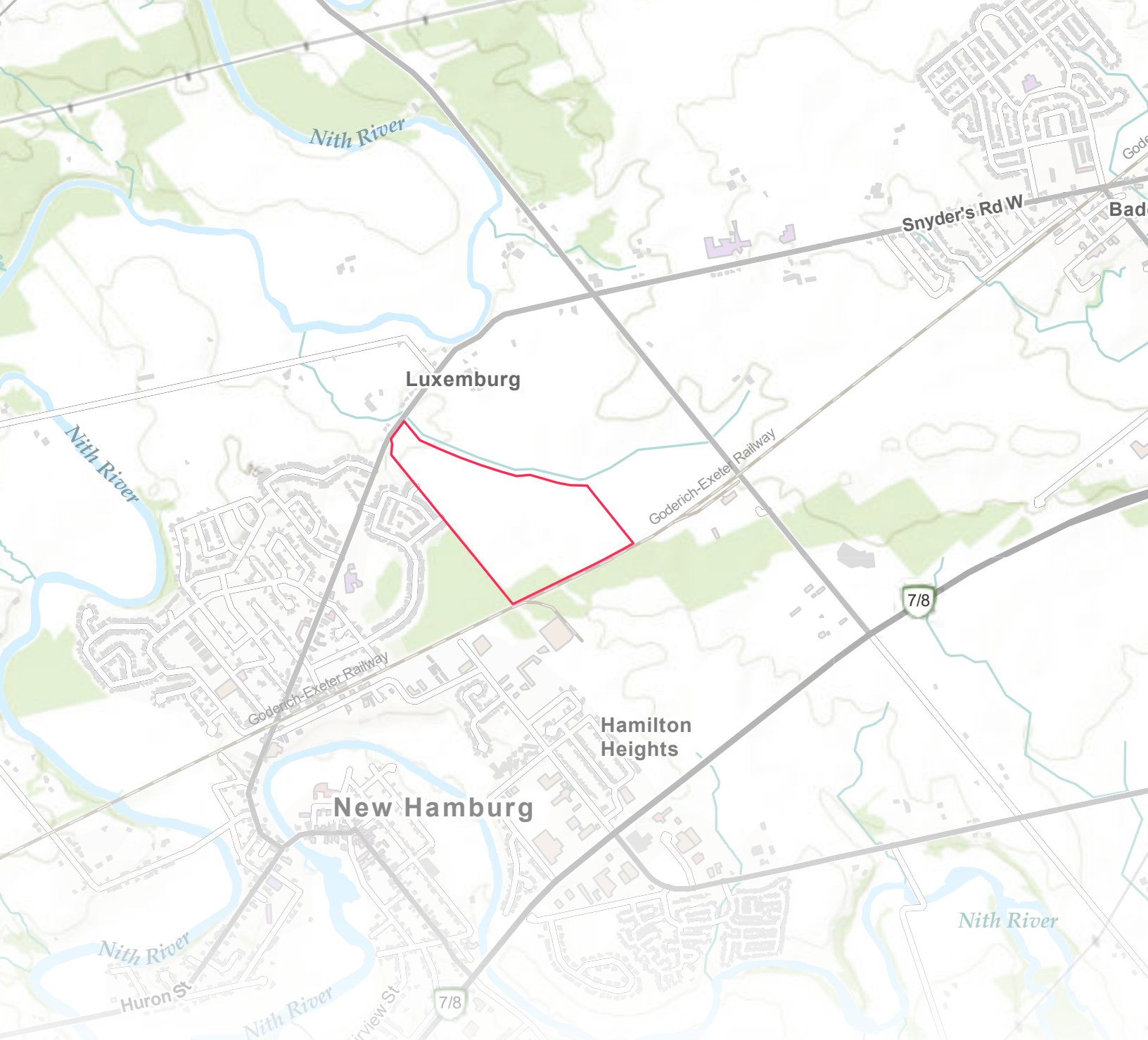




WILMOT WOODS NEW HAMBURG, ON

URBAN DESIGN BRIEF

File No. 2123A

FEBRUARY
2022



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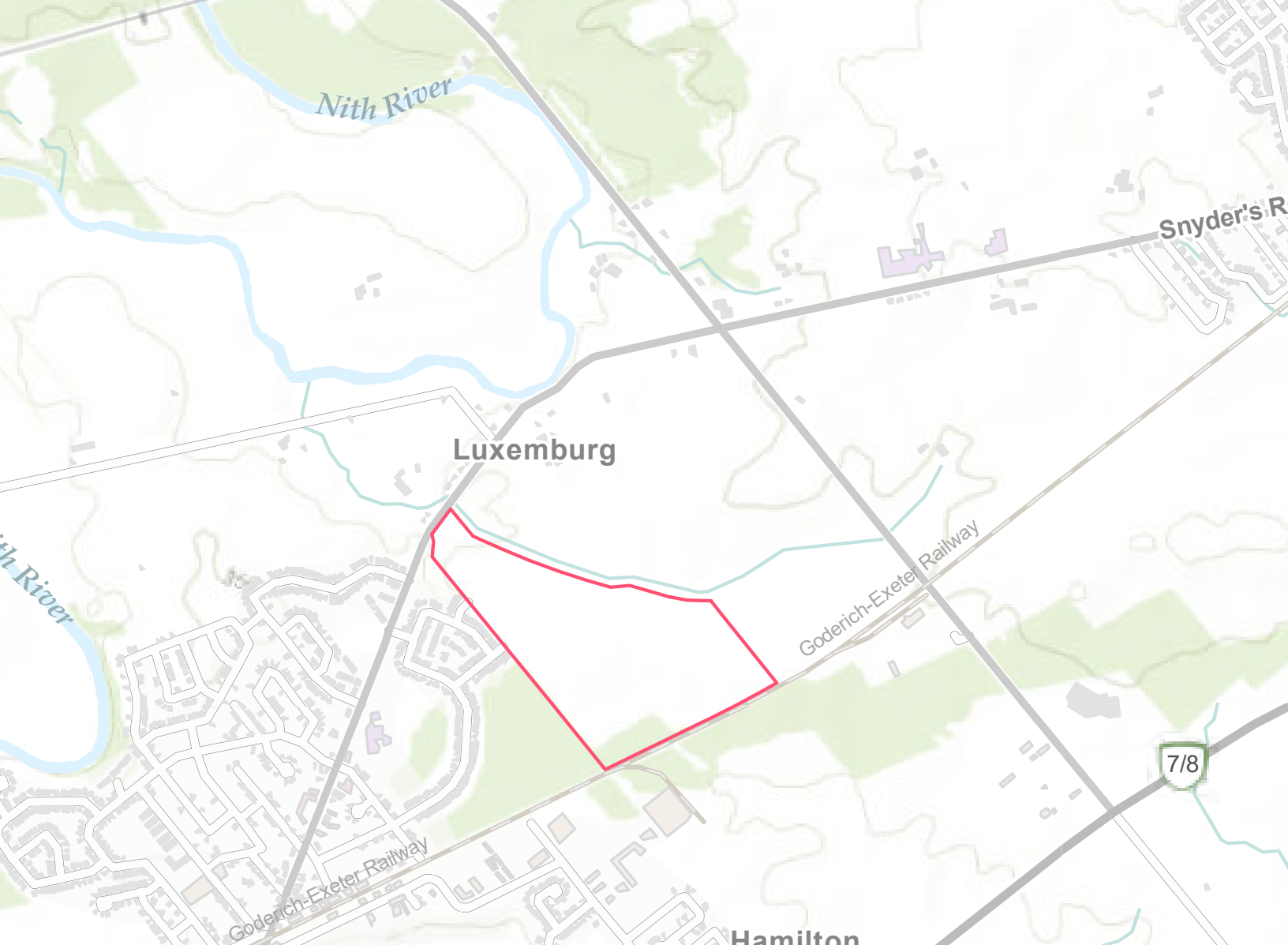
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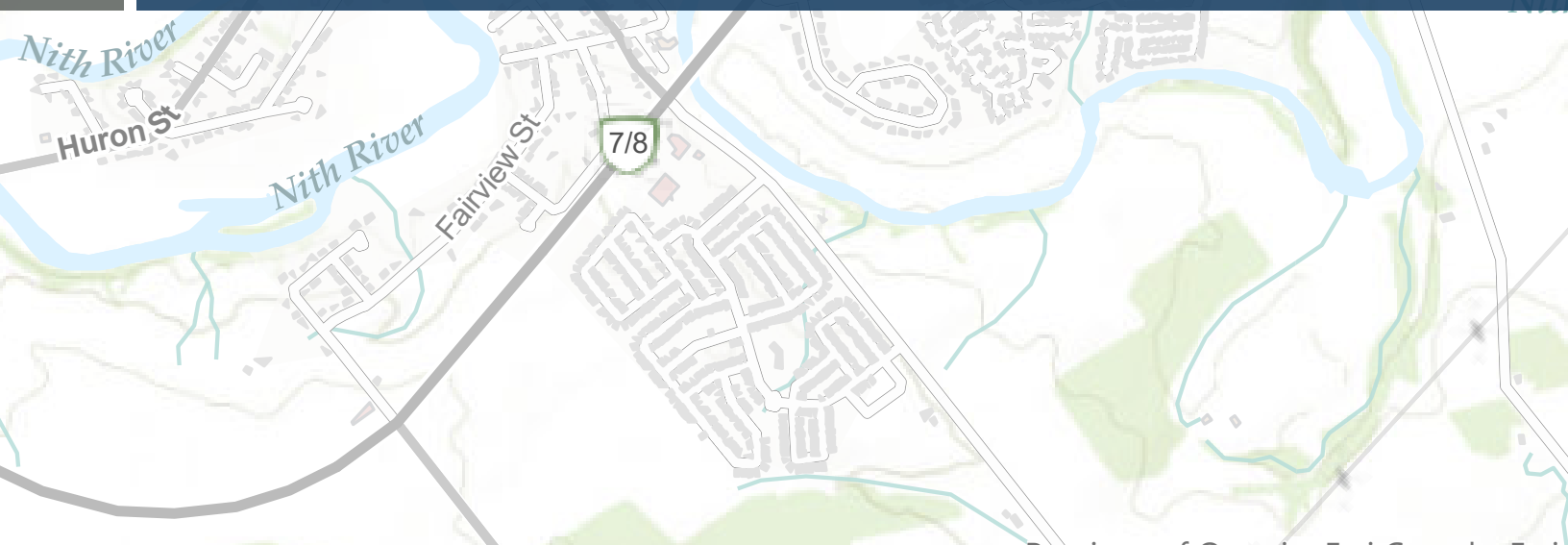
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Note: All building placements and lot lines are for conceptual purposes only and will be finalized through subsequent processes.



INTRODUCTION & SITE DESCRIPTION



1.0 | INTRODUCTION

MacNaughton Hermesen Britton Clarkson Planning Limited (“MHBC Planning”) has been retained by Wilmot Woods Development Inc. to prepare a design brief and related guidelines in support of zoning by-law amendment and plan of subdivision applications. The lands subject to the plan of subdivision and zoning by-law amendment are legally described as Part of Lot 20, Concession South of Snyder’s Road, Township of Wilmot, Regional Municipality of Waterloo, herein referred to as (the subject lands”). These guidelines are intended to provide direction to the design of the subdivision, landscape features, architecture and the public realm with an overall objective of achieving a high standard of design. These guidelines have been prepared to support the proposed subdivision and zone change applications.

The subject lands are located south of Waterloo Street at the east end of New Hamburg within the Township of Wilmot, Regional of Waterloo. The property is currently used for interim agricultural purposes. The proposed subdivision includes a number of residential blocks that provide for a mix and range of unit types, a neighbourhood park, community trail, two stormwater management blocks, connected by a grid pattern of streets and sidewalks.

This Urban Design Brief:

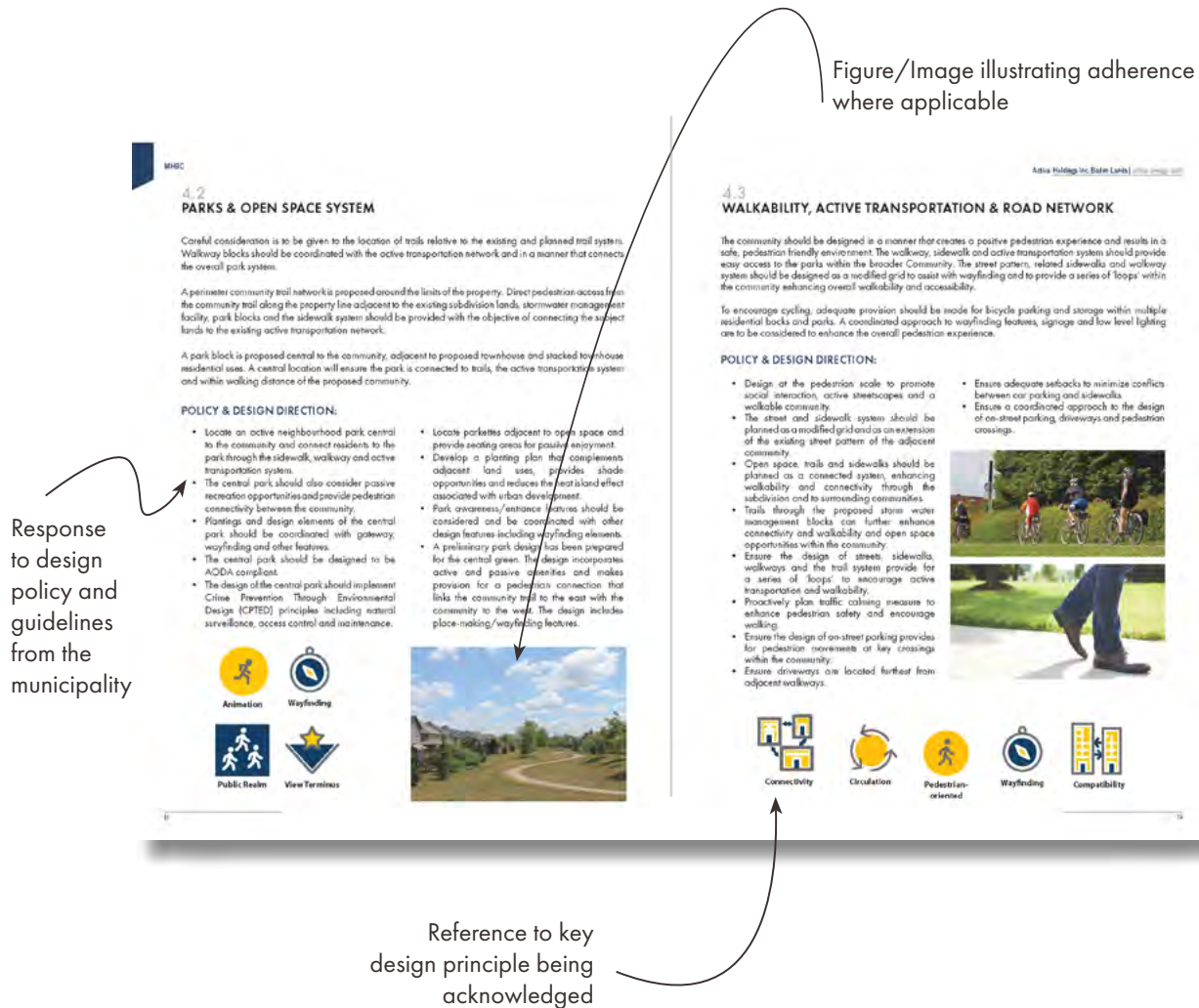
- Describes the locational context of the subject lands;
- Confirms an overall design vision and objectives;
- Confirms design principles relating to trails and open space, walkability, active transportation, public realm/placemaking, sustainability, built form, priority lots, accessibility, universal design and CPTED considerations.

This design brief recommends a preferred community concept plan that will be further refined through the more detailed subdivision design process. Recommendations also give direction to the subdivision design and more detailed planning such as site plan design.



Figure 1.0 - Aerial View of Subject Lands in relation to its surroundings.

2.0 | HOW TO READ THIS BRIEF



Key urban design principles have been organized into categories with a written summary that confirms how that principle has been addressed or the overall design intent has been maintained.

Well-designed developments can help to connect people with places, balance the protection of the environment with built form and achieve development that promotes a sense of place and local identity within a community.

3.0 | BACKGROUND & EXISTING CONDITIONS

3.1

DESCRIPTION OF EXISTING ON-SITE CHARACTERISTICS & CONSIDERATIONS

The subject lands are located in the eastern portion of New Hamburg and are located within the designated Baden and New Hamburg Township Urban Area. The subject lands have a total land area of 37.19 hectares (91.89 acres) and have historically been used for interim agricultural purposes pending development. A portion of the property is affected by the flood plain associated with the Ivan Gingerich Drain which defines the eastern and northern boundaries. A woodlot and the Canadian National Railway (CNR) define the southern boundary of the property and Waterloo Street defines the northern limit of the property.

The subject lands are located within the Baden and New Hamburg Township Urban Area which serves as a township focal point for social, cultural and economic activity.

The subject lands are intended to accommodate future residential growth needs of the township and are intended to contribute to a complete Baden and New Hamburg Community.

3.2

DESCRIPTION & ANALYSIS OF LOCATIONAL CONTEXT

The subject lands are well located relative to the established provincial, regional and local transportation network with frontage on Waterloo Street (Regional Road 1) which links to Nafziger Road (Regional Road 5) located to the east.

The subject lands are approximately 20 kilometres west of the City of Kitchener and 5 kilometres southwest of Baden. Previous planning contemplates the extension of Charles Young Avenue and Ingold Avenue which currently terminate as street stubs on the western property line.

These linkages provide an opportunity to connect the subject lands to the broader Baden and New Hamburg Community.

Surrounding land uses are characterized by an existing low rise residential community to the west, agricultural lands and rural uses to the east and existing and planned employment uses to the south with additional details summarized on the following page.

NORTH:

The northwest limit of the subject lands is coincident with the Township Urban Area Boundary. Open space associated with the floodplain of the Ivan Gingerich Drain is included within the northern portion of the property. Agricultural uses including the Riverside Farm is located further to the north and extended to the Nith River.

EAST:

The Ivan Gingerich Drain defines the east limit of the subject lands as well as the eastern extent of the designated Township Urban Area. Agricultural uses are located beyond the Urban Area Boundary and east of the Ivan Gingerich Drain and associated floodplain.

SOUTH:

The CNR rail line and a designated woodlot/wetland define the southern limit of the proposed subdivision. Lands further to the south consist of a large woodlot that is owned by the township as well as existing and planned employment uses.

WEST:

A woodlot and existing low rise residential community are located to the west. The existing community is comprised primarily of single-detached dwellings and low rise residential development. A mix of neighbourhood servicing uses are located further to the west including a public school (Forest Glen Public School), wooded areas, parks and community trails.

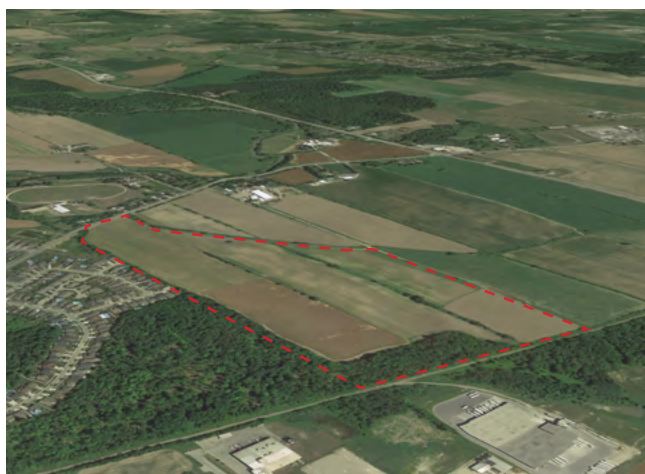


Figure 3.1.1 - View looking north across the Subject Lands.



Figure 3.1.2 - View looking south across the Subject Lands.



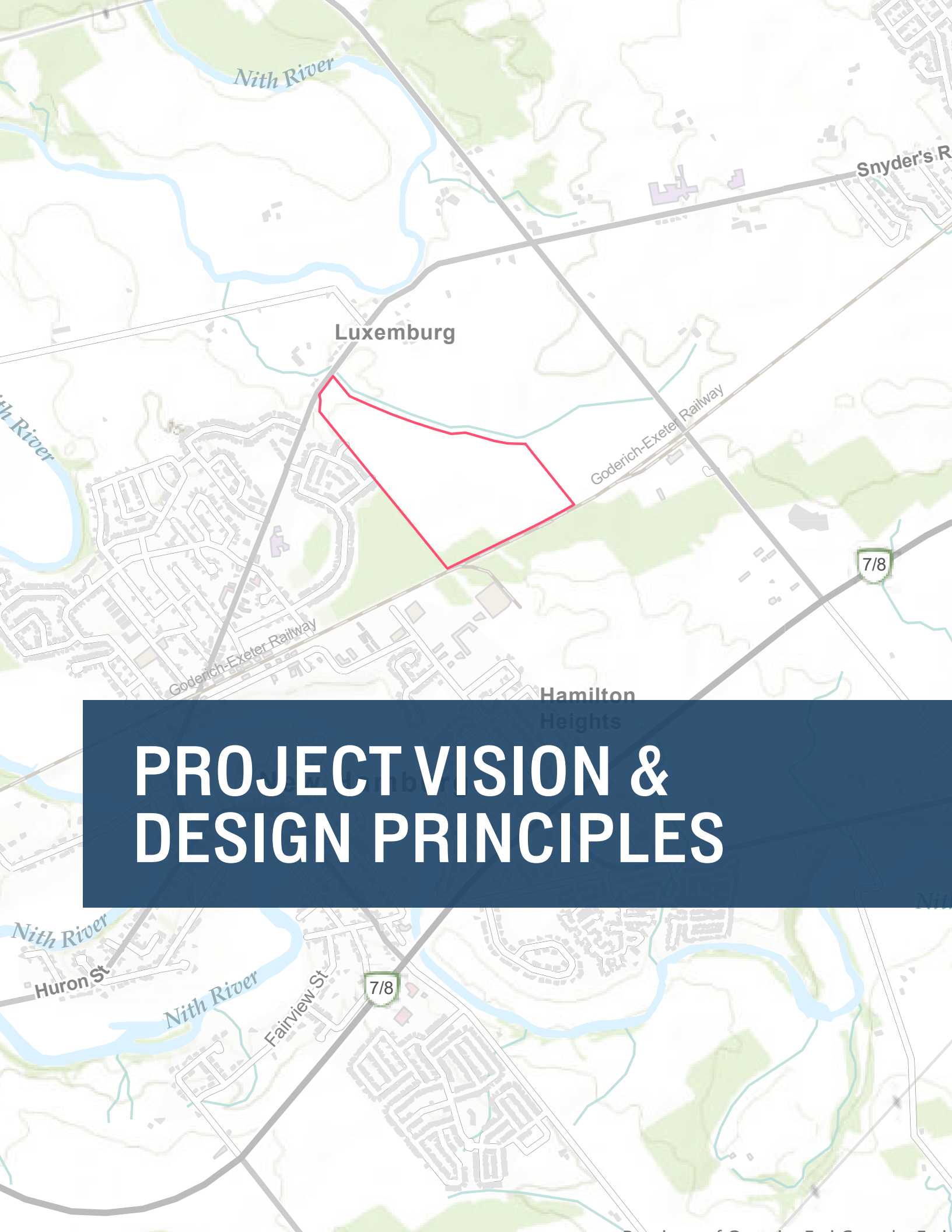
Figure 3.1.1 - View looking east across the Subject Lands.



Figure 3.1.2 - View looking west across the Subject Lands.



Figure 3.2.1 - Context map showing the Site in relation to its surroundings.



PROJECT VISION & DESIGN PRINCIPLES

4.0 | PROJECT VISION, DESIGN PRINCIPLES & DIRECTION

The following vision has been developed for the Subject Lands:

The proposed community is to be planned as the logical extension of the existing pattern of streets, services and development in a manner that is compatible with existing built form. The design of the proposed community will consider sustainability and urban design principles, emphasize walkability/active transportation and is to be based on a community structure that includes a grid pattern of streets, a perimeter trail, a mix and range of unit types including higher densities organized around a centrally located neighborhood park. The park is to be connected to open space and the broader community by a perimeter trail, sidewalk and active transportation system and is to be located within walking distance of future residents.

The vision for the Wilmot Woods Community related design principles and objectives are a result of a comprehensive, multi-disciplinary and iterative planning process. Comments received at the pre-consultation meeting provided valuable input to these design guidelines. The following design objectives, considerations and direction have been established to achieve the vision for the community:

- Integrate with and be designed as the natural extension of the existing community to the west.
- Provide for a range of housing types and in a manner that is compatible with the adjacent community.
- Achieve a high-quality community design and built form that contributes to place-making.
- Achieve a safe, pedestrian friendly environment that is well-connected and encourages active transportation.
- Provide a positive pedestrian experience along street frontages through architectural design/articulation, enhanced landscaping, active streetscapes and a walkable community.
- Contribute to a complete Community that is walkable and can accommodate various modes of transportation.
- Plan an active transportation network that connects residents to the existing community, and planned parks and open space system.
- Provide an efficient road design including a modified grid pattern of streets and sidewalks that connects to the adjacent community to the west and the broader Township Urban Area.
- Coordinate traffic calming and pedestrian protection measures around the neighbourhood park, open space and trail networks.
- Emphasize the public realm particularly at major entrances into the community, terminating views and other highly visible locations.
- Provide a positive pedestrian experience along street frontages through architectural design/articulation, enhanced landscaping, active streetscapes and a walkable community.
- Include landscape and wayfinding features that are cohesive throughout the community.
- Promote high standards of urban design for buildings within the community to foster a sense of identity.
- Ensure compatibility of scale and built form between new, proposed and existing development in the vicinity.
- Locate higher density residential uses in proximity to parks and open space.
- Promote sustainable design and low-impact design features throughout the community including the efficient use of energy, land, and infrastructure.

- Design the built form in a manner which is sensitive to the adjacent natural heritage system and mitigates impacts on natural features, functions and linkages through buffers, development setbacks, and stormwater management best practices (consideration is to be given to the elimination of the stormwater management facility approved within the Township).
- Contribute to achieving the density targets of the approved Regional Official Plan.
- Protect important natural heritage features including the woodlot and associated wetland located to the south through the implementation of appropriate buffers and setbacks.
- Promote universal and age-friendly design considerations.
- Design spaces that provide safe living and working environments through the consideration of Crime Prevention Through Environmental Design (CPTED) principles.

In addition to the general design directives, more specific design direction is considered appropriate and summarized as follows:

- The limits of core natural heritage features and related buffers are to be reviewed/reaffirmed, reflected in the community design and shown on the draft plans of subdivision;
- Protect and enhance the ecological functions of core natural heritage features;
- Confirm and implement buffer enhancements associated with core natural heritage features;
- Implement ground water infiltration on a distributed area basis.
- Consider opportunities to implement low impact development and green infrastructure.
- The design of streets, lots and buildings to consider passive solar opportunities/orientation.
- Locate a park central to the proposed community and within walking distance of future residents;
- Size and design the park in a manner that considers the Township's programming objectives;
- Design the community to ensure "eyes on the park".
- Provide a system of sidewalks and walkways that connect with the central park and planned active transportation network.
- Provide wayfinding features and coordinate with walkways.
- Design parks and pedestrian linkages to be AODA compliant;
- Plan and design a modified grid pattern of streets.
- Design the street network to evenly distribute traffic both internal and external to the community;
- Design the street network in a manner that provides for efficient maintenance, including snow removal.
- Design the community to provide for the logical staging of development including the provision of two means of access where appropriate.

These design principles and objectives for the community have been grouped according to the following themes:

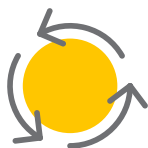
1. Natural & Cultural Heritage
2. Parks & Open Space System
3. Walkability, Active Transportation & Road Network
4. Place-Making, Project Features and Amenities
5. Sustainability



Pedestrian-oriented



Wayfinding



Circulation



Built Form



Public Realm



Sustainability

4.1

NATURAL & CULTURAL HERITAGE

The Natural Open Space System is to be based upon and implement the Greenlands Network and related policies of the Regional Official Plan (ROP), the Township Official Plan, and the more detailed recommendations of the Scoped Environmental Impact Study (EIS) prepared by R.J. Burnside & Associates Limited in support of these design guidelines and associated planning applications.

The overriding environmental goal is to maintain, restore and where appropriate, enhance natural heritage features and their associated ecological functions over the long-term. The overall community design and more detailed subdivision design should be based upon thorough understanding of how the features are sustained and can be maintained as part of the adjacent wetlands and related Core Environmental Features.

A Scoped Environmental Impact Study (EIS) was prepared and includes the surveyed limits of the adjacent woodlot and wetland. Natural heritage resources are conserved, protected and integrated within the overall plan illustrated to the left. The limits of proposed development respect the surveyed limits of adjacent natural heritage features and associated setbacks. The setbacks are to be designed as buffers to natural heritage features as part of an overall strategy that ensures the long-term protection of the natural environment.

POLICY & DESIGN DIRECTION:

- The limits of the plans of subdivision are to be coincident with recommended setbacks from adjacent natural heritage features.
- The setbacks from natural heritage features are to be enhanced through a combination of native herbaceous seeding and native species plantings as part of an overall strategy to protect the natural environment.
- Access to adjacent natural heritage features is to be restricted through permanent fencing, property delineation markers and/or barrier plantings.
- Incorporate "Natural Area Signage" at interfaces with natural heritage features.
- Direct trails and pedestrian movements outside the limits of adjacent natural heritage features and within the outside limits of associated setbacks.
- Design the built form in a manner which is sensitive to the adjacent natural heritage system and mitigates impacts on wildlife, natural features, functions and linkages through buffers, development setbacks and other established practices including implementation of bird-friendly guidelines.
- Assess and implement appropriate Low Impact Development (LID) measures which may include:
 - » Clean roof water lot level infiltration galleries
 - » Roof area drainage to be directed pervious areas to achieve volume retention targets
 - » Surplus clean roof water directed to wetlands, creeks requiring surface water inputs to maintain surface water balance
 - » Green Roofs for commercial, office and multiple residential buildings
 - » Clean water discharge from commercial, office and multiple residential buildings to be directed to infiltration galleries or controlled on roofs and directed to surface water features requiring surfaces water inputs.
 - » Rain Gardens
 - » Bio-swales
 - » Permeable pavement on hard surfaces that don't require chloride applications
 - » Water Conservation Systems that retain and reuse water, such as grey water recycling, rainwater harvesting, cisterns and rain barrels.

**Sustainability****Compatibility****Character**

4.2

PARKS & OPEN SPACE SYSTEM

A park block is proposed central to the community, adjacent to proposed townhouse and stacked townhouse residential uses. A central location will ensure the park is connected to trails, the active transportation system and within walking distance of the proposed community.

Careful consideration is to be given to the location of trails relative to the existing and planned trail system. Walkway blocks should be coordinated with the active transportation network and in a manner that connects the overall park system.

A perimeter community trail network is proposed around the limits of the property. Direct pedestrian access from the community trail along the property line adjacent to the existing subdivision lands, stormwater management facility, park blocks and the sidewalk system should be provided with the objective of connecting the subject lands to the existing active transportation network.

POLICY & DESIGN DIRECTION:

- Locate an active neighbourhood park central to the community and connect residents to the park through the sidewalk, walkway and active transportation system.
- The central park should also consider passive recreation opportunities and provide pedestrian connectivity between the community.
- Plantings and design elements of the central park should be coordinated with gateway, wayfinding and other features as may be approved by the Township.
- The central park should be designed to be AODA compliant.
- The design of the central park should implement Crime Prevention Through Environmental Design (CPTED) principles including natural surveillance, access control and maintenance.
- Locate the neighbourhood park adjacent to open space and provide seating areas for passive enjoyment.
- Develop a planting plan that complements adjacent land uses, provides shade opportunities and reduces the heat island effect associated with urban development.
- Park awareness/entrance features should be considered and be coordinated with other design features including wayfinding elements.
- A preliminary park design has been prepared for the neighbourhood park. The design incorporates active and passive amenities and makes provision for a pedestrian connection that links the community trail through the park to the sidewalk system. The design includes place-making/wayfinding features.

**Focal Point****Wayfinding****Public Realm****Pedestrian-oriented**

4.3

WALKABILITY, ACTIVE TRANSPORTATION & ROAD NETWORK

The community should be designed to create a positive pedestrian experience and a safe pedestrian friendly environment. The walkway, sidewalk and active transportation system should provide easy access to the neighbourhood park and the broader Community. The street pattern, related sidewalks and walkway system should be designed as a modified grid to assist with wayfinding and to provide a series of 'loops' within the community enhancing overall walkability and accessibility.

To encourage cycling, adequate provision should be made for bicycle parking and storage within multiple residential blocks and the neighbourhood park. A coordinated approach to wayfinding features, signage and low level lighting are to be considered to enhance the overall pedestrian experience.

POLICY & DESIGN DIRECTION:

- Design at the pedestrian scale to promote social interaction, active streetscapes and a walkable community.
- The street and sidewalk system should be planned as a modified grid and as an extension of the existing street pattern of the adjacent community.
- Open space, trails and sidewalks should be planned as a connected system, enhancing walkability and connectivity through the subdivision and to surrounding communities.
- Trails through the proposed storm water management blocks can further enhance connectivity and walkability and open space opportunities within the community.
- Ensure the design of streets, sidewalks, walkways and the trail system provide for a series of 'loops' to encourage active transportation and walkability.
- Proactively plan traffic calming measure to enhance pedestrian safety and encourage walking.
- Ensure the design of on-street parking provides for pedestrian movements at key crossings within the community.
- Ensure driveways are located furthest from adjacent walkways.
- Ensure adequate setbacks to minimize conflicts between car parking and sidewalks.
- Ensure a coordinated approach to the design of on-street parking, driveways and pedestrian crossings.

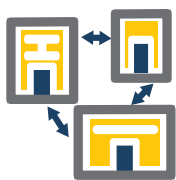
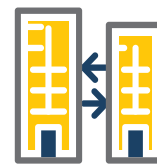
**Connectivity****Circulation****Pedestrian-oriented****Wayfinding****Compatibility**



Figure 4.3.1 - Active Transportation Plan

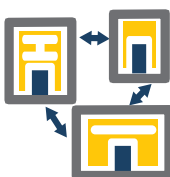
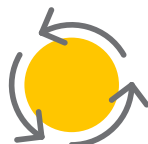
4.4

PLACE-MAKING, PROJECT FEATURES & AMENITIES

The public realm includes streets, parks, open space and associated views and vistas. The process of placemaking relies heavily on the creation of a public realm that is functional, attractive and coordinated. Place-making for the community and the design of the public realm should ensure connectivity with the adjacent community. Strong street edges are to be created along all streets through the careful design and placement of buildings, consideration of driveway widths relative to building mass and a coordinated approach to designing streetscapes.

POLICY & DESIGN DIRECTION:

- Provide connections to the public realm through building entrances and walkways.
- Use open space such as parks, streetscapes and public amenity spaces to provide residents the opportunity for passive and/or active recreation, social interaction and gathering.
- Attention should be given to the design of the public realm with design elements such as landscaping, entrance features, lighting and signage.
- Attention should be given to enhanced architectural details where facades interface with the public realm and at major entrances to the community.
- Landscape and other design elements should be coordinated with the adjacent streetscape and related features such as trees, signage, street lights and boulevard landscaping.
- The street pattern should be designed to provide terminating views and vistas which could include enhanced architectural design/articulation, parks, and open space.
- Design features and enhanced landscaping should be planned at the main entrances into the community as well as the neighbourhood park.
- Landscaping and entrance features relating to multiple blocks should be visually coordinated with and complementary to community design features.
- Planned multiple blocks will be designed with landscaped features at proposed access locations.

**Public Realm****View Terminus****Connectivity****Circulation**

STREETSCAPES:

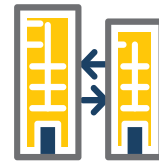
Attractive streetscapes will be achieved using a coordinated design approach to streetscape elements such as trees, signage, street lights and boulevard treatment. Streets should be designed in a manner that provide terminating view opportunities relative to built form and open space. Lots/blocks within highly visible locations should be identified as Priority Lots to ensure high quality built form, terminating vista opportunities and an attractive public realm. Specific guidelines relating to Priority Lots are included within Part 4 of these guidelines. The streetscape should include street trees comprised of native/indigenous, non-invasive species.

POLICY & DESIGN DIRECTION:

- An overall streetscape plan should be required to ensure a well-coordinated and visually attractive streetscape. The streetscape plan will address boulevard planting, the location of driveways, on-street parking, and pedestrian crossings.
- Garage projections are to be minimized through the use of setbacks, zoning which regulates garage width relative to the width of the front facade, front porches and landscaping.
- A range of lot widths are encouraged throughout the community to add variety and visual interest to the overall streetscape.
- Consideration to be given to larger caliper trees at major entrances, decorative street lighting and signage.
- Driveways should be paired for lots that are less than 12 metres in width.
- Attention to be given to the design of the utilities with the overall objective of ensuring attractive streetscapes. To this end, and subject to the design requirements of the utility provider, overhead hydro lines should be minimized particularly at major entrances to the community.



Animation



Compatibility



Character



PLANTINGS:

Street plantings are to be coordinated throughout the entire community. Plantings will be native/indigenous, non-invasive species where appropriate. Seasonal variety will be considered in the selection of trees. Buffers associated with environmental features will include native/indigenous and where appropriate Carolinian species. High-branching, large canopy trees should be provided within the park block, and in particular along the edges of the park. Landscaping of individual lots is required to achieve an attractive streetscape and encourages native, drought-tolerant plant species. Landscaping should be coordinated with the public realm and streetscape plan. Enhanced landscaping is encouraged at the entrance to multiple blocks.

EXAMPLES OF ACCEPTABLE TREE SPECIES:



Red/Freeman Maple



Hackberry



Serviceberry



Red Oak



Redmond Linden



Honeylocust



Bur Oak



Gingko (Male)





Figure 4.4.1 - Design Features

4.5

SUSTAINABILITY STRATEGY

The Wilmot Woods Community embraces the principles of sustainable development. There are a number of policies that promote sustainable design, development, built form and energy efficiency. The proposed Sustainability Strategy includes current best practices from both a development and building perspective.

The development of this community will become a significant landmark for the Township of Wilmot and New Hamburg community. Wilmot Woods Developments vision is to showcase an efficient, healthy and resilient community that reflects the advanced “tech” sector of the Region. Implementation of the strategy will involve a collaborative design approach with key stakeholders such as utilities, academia, and future residents.

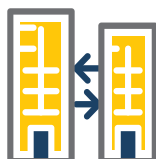
At a minimum, the community will provide a national example of affordable, Net Zero Ready Energy housing as well as a healthy living environment for future residents.

WILMOT WOODS DEVELOPMENTS SUSTAINABILITY STRATEGY

- Identifies the key environmental and climate change targets for the proposed community.
- Provides energy, carbon, and occupant health & wellness performance metrics for the design development of residences and buildings within the proposed community.
- Proposes a collaborative approach to assessing community scale energy systems for the proposed community.
- Proposes adoption of key technologies which support the physical well-being of residents, increase the affordability of home ownership, and significantly reduce the carbon & energy impact of the community.
- Provides product design solutions and technologies, which readily fulfill proposed local community energy plan goals for new community developments.

A number of documents were referenced in developing Wilmot Woods Developments Sustainability Strategy:

- 2018 report “Community Energy Investment Strategy for Waterloo Region”
- 2020 National Building Code – Proposed Tiered Energy Code for Houses and Small Buildings (Tier 5 Net Zero Ready)
- Net Zero Ready Home™ Performance Labeling Program Technical Guidelines vs 1.1. 2020 – CHBA (Canadian Home Builders Association)
- LEED™ V4 2019 : Canadian Green Building Council
- 2019 report developed by S2E consultants for the Federation of Canadian Municipalities FCM entitled
- “Municipal Tools for Catalyzing Green Development © 2019, The Corporation of the City of London”

**Sustainability****Compatibility****Built Form****Articulation****Landscape**

SUSTAINABLE DEVELOPMENT STRATEGY:

This section outlines Wilmot Woods Developments proposed Sustainable Development Strategy.

DESIGN DIRECTION:

- Encourage land uses and intensification that promote transit and alternative transit choices.
- Plan and design sites to reduce salt impact (ice control products) to natural environment and water systems.
- Plant native and non-invasive plant species on private sites and within the public realm.
- Encourage low maintenance, salt tolerant and drought tolerant plant species.
- Encourage innovative drainage systems that improve storm water quality and quantity.
- Where possible provide south facing windows to maximize passive solar orientation benefits. On larger, multi-building sites orient buildings to be south facing where possible.
- Increase the shading of surfaces by planting trees or other vegetation.
- When landscaping development sites, maintain a minimum of 15 cm/6" of quality topsoil for areas to be sodded. Appropriate topsoil levels absorb runoff and help to ensure plants survive and thrive.
- Design multiple blocks and the neighbourhood park to include bicycle parking.
- For sites with surface parking, identify a designated snow storage area in an area that will reduce salt and contaminant impacts to vegetation, groundwater and surface water. Appropriate snow storage areas can help manage and mitigate the risks associated with road salt.
- The completion of a chloride management plan is to be required through the site plan process associated with multiple blocks.
- Proper storage of topsoil will retain soil health and quality. Reusing soil promotes responsible use of a natural resource and minimizes the need to truck soil to and from the site. Retain and reuse uncontaminated on-site topsoil in areas not covered by the building and parking/hard surface areas.
- A sustainability statement is to be included as part of a complete site plan and/or condominium application for those multiple blocks requiring such approvals. The sustainability statement should address matters such as: water conservation, energy conservation, waste reduction, waste management, groundwater infiltration and chloride management.

Sustainable Development Strategy - Section 1: GENERAL SUBDIVISION AND SITE CONSIDERATIONS				
#	Required or Voluntary	Directive	Rationale	Implementation
1.1	Required	Amend Topsoil: Maintain a minimum 30 cm/12" quality topsoil, protect areas from disturbance and/or decompact subsoil in landscaped areas/non hardscape areas.	Rationale: Enhanced topsoil levels absorbs runoff and helps to ensure plants survive and thrive. Protecting areas from disturbance and decompacting soil in disturbed areas further ensures the health of planted material. Resource: Preserving and Restoring Healthy Soil: Best Practices for Urban Construction. TRCA June 2012	Subdivision
1.2	Required	Snow Management, Enhanced: Achieve the Smart About Salt Site Certification. Prepare and implement a salt management plan for all multiple residential, commercial and mixed-use developments with the objective of reducing the application of salts/chlorides.	Rationale: The Smart About Salt Site Certification ensures that design and management best practices are in place to mitigate the impacts of road salt. Resource: www.smartaboutsalt.com	Site Plan
1.3	Required	Reuse Topsoil: Retain and reuse uncontaminated on-site topsoil in areas not covered by the building and parking/hard surface areas. Proper storage of topsoil to retain soil health and quality.	Rationale: Reusing soil promotes responsible use of a natural resource and minimizes the need to truck soil to and from the site. Resource: Preserving and Restoring Healthy Soil: Best Practices for Urban Construction. TRCA June 2012	Site Plan
1.4	Required	Site Disturbance: To the extent practical, limit site disturbance including earthwork and clearing of vegetation to reduce erosion and dust. Require revegetation of disturbed portions of the site if construction, site servicing does not commence within six months of area grading/grading.	Rationale: Maintains the local landscape and helps to ensure soils and vegetation remain undisturbed. Resource: LEED ND	Subdivision and Site Plan
1.5	Voluntary (see exception)	Accessible Units: In ground oriented residential developments such as townhomes, 15% of units are constructed as visitable housing. Features include: one zero-step entrance, wider doorways and clear passage on the main floor, a main floor bathroom or powder room. NOTE: Currently required for multi-unit apartment and condo buildings under the Ontario Building Code.	Rationale: Visitable housing is the concept of designing and building homes with basic accessibility. Visitable homes provide a welcoming environment for visitors of all ages and mobility. It also helps a person of any age who develops a temporary or permanent mobility disability stay in their home without having to undergo extensive renovations. Resources: Visitable Housing Canada: www.visitablehousingcanada.com CMHC Accessible Housing by Design: www.cmhc-schl.gc.ca/en/co/ach/ach0_002.cfm	Site Plan/Building Permit

Sustainable Development Strategy - Section 2: TRANSPORTATION				
#	Required or Voluntary	Directive	Rationale	Implementation
2.1	Required	Community Connections: Provide pedestrian and cycling connections from on-site buildings to off-site public sidewalks, pedestrian paths, trails, open space, active transportation pathways, transit stops and adjacent buildings and sites. Provide strong pedestrian connections between the Phase 1 and Phase 2 Communities. Provide connections to the parks that are proposed. Connect the proposed community with Phase 1 and surrounding neighbourhoods.	Rationale: Encourages active transportation and transit use to reduce the dependence on the automobile.	Subdivision and Site Plan
2.2	Required	Accessibility: Design on-site sidewalks, crosswalks and walkways to be continuous, universally accessible, barrier-free and clearly delineated in accordance with these design guidelines and the Accessibility for Ontarians with Disabilities Act.	Rationale: Promotes walking by all age groups and abilities and provides access for those with limited mobility. Resources: The Illustrated Technical Guide to the Accessibility Standard for the Design of Public Spaces: www.gaates.org/documents/DOPS_Illustrated_Guide_140527_FINAL.pdf	Subdivision and Site Plan
2.3	Required	Bicycle Storage: Provide bicycle parking spaces consistent with the Zoning By-law approved for the Phase 1 Community.	Rationale: Cycling reduces greenhouse gas emissions, reduces traffic congestion and improves health. Convenient bicycle parking encourages the use of active transportation. Resource: Zoning By-law approved for the Phase 1 Community.	Site Plan
2.4	Required	Bicycle Storage (Visitor): Provision of bicycle parking spaces at grade near the main entrances or easy to identify areas.	Rationale: Applicants are encouraged improve upon the required bicycle parking requirements in the Zoning By-law to further encourage cycling as a viable transportation option.	OPA/ZBA and Site Plan
2.5	Required	Transportation Demand Management: Provision and implementation of a Transportation Demand Management Plan. Required for parking reductions associated with multiple residential, commercial and mixed-use development.	Rationale: Transportation Demand Management Plans are plans that encourage sustainable modes of transportation. TDM plans evaluate building transportation needs comprehensively and may consider measures such as the provision of transit passes, flexible work hours, unbundled parking, on site transit facilities, priority parking for carpooling and carshare programs, etc.	ZBA, Minor Variance Applications and Site Plan
2.6	Required	Electric Vehicles: Implement Building Code requirements for EV charging stations and provide "rough-ins" in new residential buildings where parking is provided within the building.	Rationale: The demand for electric vehicles and related infrastructure is growing in Canada, and encouraging electric vehicles reduces greenhouse gas emissions and air pollution.	Site Plan
2.7	Voluntary	Transit Pass: For multiple residential, commercial and mixed-use developments, encourage tenants and employees to use transit with possible incentives being provision of transit passes.	Rationale: Transit is intended to provide support for the Minor Node and higher densities in association with and in proximity to the Minor Node. Growth is directed towards intensification areas, all serviced by local transit. Transit-supportive development and measures to encourage transit ridership is encouraged	Site Plan

Sustainable Development Strategy - Section 3: NATURAL ENVIRONMENT				
#	Required or Voluntary	Directive	Rationale	Implementation
3.1	Required	Native Species (NHS): Use native, non-invasive species within the Natural Heritage System and related buffers, and use non-invasive species in all other areas.	Rationale: Planting native and non-invasive species protects and enhances the Natural Heritage System and biodiversity, and are resilient to the local climate.	Subdivision and Site Plan
3.2	Voluntary	Native Species (Enhanced, outside NHS and buffers): Use native, non-invasive species that are suitable to site conditions for a minimum of 75% of all landscaped areas.	Rationale: Additional native plantings outside of natural areas are encouraged to promote biodiversity and resiliency.	Site Plan
3.3	Required	Bird Friendly Design: Incorporate bird friendly design measures. Required for townhouse development adjacent to the Natural Heritage System.	Rationale: Bird Collisions with windows is a leading cause of bird death across North America. Resource: For assistance identifying bird friendly design measures please consult with FLAP Canada (www.flap.org) or the following Bird Friendly	Site Plan
3.4	Voluntary	Low Maintenance Landscaping: All landscaping is low maintenance and drought resistant (i.e. Xeriscaping) that does not require a permanent potable water based irrigation system (except for initial watering to establish plants).	Rationale: The use of low maintenance and drought-resistant planting reduces the amount of watering needed and produces a resilient landscape.	Site Plan
3.5	Required	Topsoil for Sodded Areas: When landscaping development sites, maintain a minimum of 15 cm/6" of quality topsoil for areas to be sodded.	Rationale: Appropriate topsoil levels absorb runoff and help to ensure sodded areas survive and thrive.	Site Plan
3.5	Required	Tree Planting (soil): Provide a soil volume of 30 m3 per tree and a minimum depth of 1 metre of high quality soil OR in hard surface situations install a soil cell product with high quality soil and provide the required soil volume.	Rationale: The use of high quality soil at an appropriate quantity helps ensure trees survive and thrive. A soil cell type product helps ensure trees survive in urban hardscape environments. High quality soil is well drained, un-compacted soil comprised of 5 to 15% organic material with a pH level of 6.0 to 8.0.	Subdivision and Site Plan
3.7	Required	Restoration and Enhancement: Complete and implement a restoration and/or enhancement plan that demonstrates net gain for adjacent Natural Heritage System areas, including a management and monitoring plan as may be required as a result of Environmental Impact Study recommendations.	Rationale: The restoration and enhancement of Natural Heritage System areas can aid in the improvement of degraded areas, and can enhance ecosystem function. Long term management and monitoring ensures the success of the restoration project over the long term.	Subdivision and Site Plan
3.8	Voluntary	Community Gardens: Consider incorporating a community garden(s) for cluster townhouse development. Include a rain barrel collection system.	Rationale: Community gardens encourage sustainable local food production, increase access to healthy food, provide opportunities for community building and create local green space.	Subdivision and Site Plan

Sustainable Development Strategy - Section 4: WATER CONSERVATION AND QUALITY

#	Required or Voluntary	Directive	Rationale	Implementation
4.1	Required	Stormwater Quality: Implement the enhanced SWM Strategy recommended by MTE Consultants Inc. in the stormwater management report dated December 14th 2020.	Rationale: Stormwater quality treatment reduces the total suspended solids and chlorides in receiving's streams.	Subdivision and Site Plan
4.2	Voluntary	Water Conservation Systems: Encourage systems to reuse water, such as grey water recycling, rainwater harvesting systems, cisterns and rain barrels where appropriate.	Rationale: Cisterns, rain barrels and rainwater harvesting systems allow rainwater to be captured and reused on site. Grey water systems allow the reuse of water internal to the building, for example allowing the reuse of water from bathing and/or laundry to be used for flushing toilets or irrigation.	Subdivision and Site Plan
4.3	Required	Pervious Surfaces: Minimize stormwater runoff through the use of Low Impact Development (LID) measures as appropriate and implementation of groundwater infiltration on a distributed area basis.	Rationale: Low Impact Development strategies mitigate the impacts of increased urban runoff and stormwater pollution by managing it as close to its source as possible. It comprises a set of site design approaches and small scale stormwater management practices that promote infiltration, evapotranspiration (where feasible) and rainwater harvesting.	Subdivision and Site Plan
4.4	Required	Water Efficient Fixtures: All newly installed toilets, urinals, private lavatory faucets, and showerheads that are eligible for labeling must be WaterSense labeled.	Rationale: Efficient water fixtures reduce the use of potable water. Resources: EPA Watersense - www.epa.gov/watersense/watersense-label	Site Plan/Building Permit

Sustainable Development Strategy - Section 5: ENERGY AND EMISSIONS

#	Required or Voluntary	Directive	Rationale	Implementation
5.1	Required	Urban Heat Island: Provide vegetated landscape areas in hard surface areas associated with townhouse blocks that are subject to site plan approval.	Rationale: Vegetation can reduce the urban heat island effect to improve human comfort and energy efficiency in the surrounding areas.	Site Plan
5.3	Voluntary	Increase the area of windows and glazing to take advantage of natural daylight for all residential units generally and for townhouse units subject to site plan approval in particular.	Rationale: The use of natural daylight will reduce the use of energy.	Subdivision, Site Plan and Building Permit
5.4	Required	Use energy efficient lighting and promote the use of energy efficient appliances	Rationale: The use of energy efficient lighting and appliances will reduce the use of energy.	Subdivision and Site Plan
5.5	Required	Sustainability Statement: Prepare a Sustainability Statement that summarizes how each townhouse development that is subject to site plan approval implements the sustainable development and building guidelines.	Rationale: The sustainability statement will provide a tool to evaluate how site plan applications comply with the Sustainable Development and Building Guidelines.	Site Plan

Sustainable Development Strategy - Section 6: WASTE AND BUILDING MATERIALS

#	Required or Voluntary	Directive	Rationale	Implementation
6.1	Required	Waste Management Plan: Provide and implement a waste management plan.	Rationale: Recycling and composting treats waste as a resource and reduces the need for landfill expansion.	Site Plan
6.2	Required	Waste Management Facilities: Provision of recycling, garbage and composting facilities which are easily accessible for all occupants (in an attached building);	Rationale: Recycling and composting treats waste as a resource and reduces the need for landfill expansion.	Site Plan
6.3	Required	On-Site Aggregate: To the extent possible, utilize suitable on-site aggregate material for construction purposes.	Rationale: Reduces the demand for new aggregate, reduces off-site transportation and related emissions and utilizes a non-renewable resource.	Subdivision and Site Plan
6.4	Voluntary	Locally Manufactured: Encourage that at least 15% of a project's construction materials are comprised of materials that are sourced within the Region of Waterloo and surrounding area.	Rationale: Local materials support the local economy and reduce the environmental impacts associated with transportation. Products should be sourced within 150km of the subject lands.	Subdivision and Building Permit
6.5	Voluntary	Sustainable Wood: Where wood based materials are used, utilize a minimum of 25% that are certified in accordance with the Forest Stewardship Council's principles and criteria for wood building components.	Rationale: The Forest Stewardship Council (FSC) is an international certification and labeling system dedicated to promoting responsible forest management, which includes sustainable harvesting and replanting practices. Resources: Forestry Stewardship Council - ca.fsc.org/en-ca	Building Permit
6.6	Required	Construction Waste Management: Develop and implement a waste management plan to reduce, recycle and/or salvage construction and land clearing waste.	Rationale: Reduces construction and waste disposed of in landfills, and to treat recycled and salvaged materials as a resource.	Subdivision and Site Plan

Sustainable Development Strategy - Section 7: MAINTENANCE, MONITORING AND COMMUNICATION

#	Required or Voluntary	Directive	Rationale	Implementation
7.1	Voluntary	Maintenance Plan: provision of a maintenance plan for townhouse development subject to site plan approval. The maintenance plan is to provide instructions, training requirements and schedules for maintaining sustainability features of the site/ building/landscaping.	Rationale: A maintenance plan will ensure sustainability features remain implemented on the site and continue to function at optimal levels.	Site Plan
7.2	Required	Education: Prepare a homeowners/tenant brochure that explains the intent, benefits, use, and maintenance of sustainable development design and building features as part of the lease/sale agreement and/or condo declaration.	Rationale: Communicating sustainable design features and educating occupants and visitors regarding the rationale for these features will help to ensure their proper use and maintenance.	Subdivision and Site Plan

Sustainable Development Strategy - Section 8: INNOVATION

#	Required or Voluntary	Directive	Rationale	Implementation
8.1	Voluntary	Innovative design or performance features not listed that receive approval from the Township.	Rationale: The intent of this category is to encourage and recognize additional innovative approaches in design or performance that are not specifically addressed above.	Creative discussions between applicant and Township Staff during the Subdivision and Site Plan approval process.

SUSTAINABLE BUILDING STRATEGY:

This section outlines Wilmot Woods Developments proposed Sustainable Building Strategy.

NET ZERO READY HOMES™ AND BUILDINGS - A PASSIVE DESIGN FOCUS

Efficiency of residences and small buildings will meet or exceed the highest performance tier currently identified in the proposed 2020 National Building Code –Proposed Tiered Energy Code for Houses and Small Buildings (Tier 5 Net Zero Ready). Wilmot Woods Developments has an extensive history with developing and constructing communities wherein residences meet both Energy Star for New Homes™ and Net Zero Ready Home™ or equivalent.

Targets and technologies applied to the design and construction of residences and buildings will focus first on the efficient passive design (insulation, air tightness, fenestration and more). Small and incredibly efficient

The residences and buildings will include the following elements and practices:

- Net Zero Ready - Passive Envelope Performance Aggressive Air tightness targets and on-site testing & verification.
 - » Continuous exterior insulation with limited thermal bridging.
 - » High performance windows and glazing products that reduce both space cooling and space heating loads.
- Net Zero Ready Mechanical Performance
 - » ERV - Energy Recovery Ventilation - systems enable healthy IAQ while reducing both heating and cooling loads.
 - » Enhanced drain water heat recovery application for domestic hot water systems.
 - » Enhanced drain water heat recovery application for domestic hot water systems.
- » Application of efficient, distributed hot water systems through use of re-circulation systems, air source hybrid electric hot water equipment, or .96UEF condensing systems.
- » Smart home thermostat controls - Controls optimize energy use around occupant behavior, predictive weather capabilities, and more.
- Net Zero Operation (The occupants)
 - » Energy monitoring platform that facilitates occupant interaction and reinforces awareness and energy literacy.
 - » Enables all occupants to affect/reduce the largest energy load in a building or residence (40% to 70% Occupant loads or Baseloads).

OCCUPANT HEALTH AND WELLNESS

Occupant health and wellness will be achieved through the development / design of the interior built environment to enhance the health and wellbeing of residents, visitors and community members.

Building and Residence:

- Focus on passive enclosure technologies that are designed and constructed to provide comfort to the occupant through surface temperature control, limited thermal bridging, and tight connections - reducing sound, odor and uncontrolled air leakage.
- Attached, multi-family dwellings will be designed and tested to ensure "compartmentalization", thus limiting cross-suite contamination of odor, sound, and air.
- Integrate ERV (Energy Recovery Ventilation) systems, enabling efficient delivery of fresh air throughout homes and buildings. This facilitates better relative humidity control in both summer and winter, thus supporting healthy interior environments.
- Glazing / Window selection and design that:
 - » Increases access to natural daylight
 - » Increases interior surface temperature during the winter, thus increasing occupant sense of comfort (minimizes radiant heat loss)
 - » Limits over-heating / air conditioning loads in the summer
 - » Enables occupants to maintain healthier ranges of relative humidity through the winter time without the issue of window condensation (leading to poor IAQ and material degradation)
 - » HVAC systems designed around the efficient, healthy, continuous delivery of fresh, conditioned air to every corner of the residence.

BUILDING & COMMUNITY PERFORMANCE STANDARDS & 3RD PARTY VERIFICATION

Performance and design verification through inspections, modeling and testing – To validate compliance with appropriate voluntary building performance programs.

Building and Residence:

- OBC Part 9 Residences: Net Zero Ready Home™ Performance Labelling Program Technical Guidelines vs 1.1. 2020 –CHBA (Canadian Home Builders Association).
- OBC Part 10 Buildings and Residences LEED™ V4 – and Mid-rise 2019 : Canadian Green Building Council.

ENERGY & CARBON LITERACY

"Smart & Sustainable" community resident and building owner engagement & training program. Enables all occupants to affect/reduce the largest energy load in a building or residence (40% to 70% Occupant loads or Baseloads).

Building & Homes that Interact with Occupants:

- Integration of technologies that encourage and support energy and carbon reduction literacy and transparency amongst residents, business owners and building occupants/operators. These technologies enable transparent and interactive energy and carbon monitoring of residences and places of business.
- Energy monitoring platform that facilitates occupant interaction and reinforces awareness and energy literacy.

4.6

THE PROPOSED COMMUNITY CONCEPT DESIGN

The community design is based on the following structural elements:

- A modified grid pattern of streets and sidewalks;
- A neighbourhood park that has been located central to the community and adjacent to the perimeter trail and open space;
- A central servicing spine that connects to an off-site servicing corridor to the south and Waterloo Street to the north;
- Two storm water management facilities that have been located in association with the servicing spine and in consideration of post development grading and drainage patterns.
- The identification and protection of adjacent natural heritage features;
- An integrated sidewalk and active transportation system;

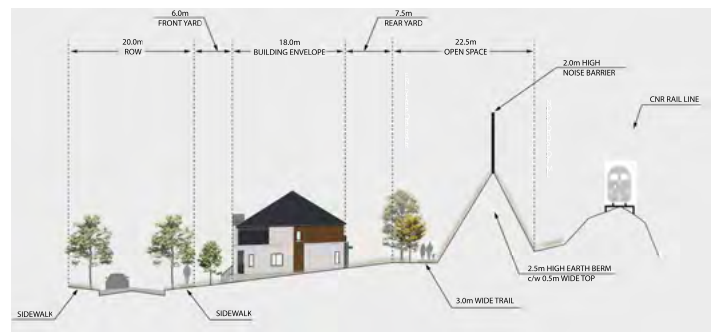
The design of the community emphasizes walkability, a mix of residential unit types/lot widths, a modified grid pattern of streets with short block lengths. The proposed community has been designed with a well-connected network of streets, sidewalks and trails to enhance connectivity and safely accommodate various modes of active transportation. The neighbourhood park has been located within walking distance of future residents within the community.

The community has been designed to achieve higher densities at a human scale. The active transportation network and well designed streetscapes will promote social interaction and walkability. The open space associated with the access from Waterloo Street will provide views and vistas to what could become a naturalized landscape. Proposed sidewalks and the perimeter trail will provide connections to the park and open space system. The grid pattern of streets/sidewalks will create a series of walking “loops” through the community. Sidewalks are proposed on both sides of all streets.

A perimeter trail is proposed along the western, southern, and eastern limits of the community and will connect the neighbourhoods within the community, the adjacent residential neighbourhood, parks, environmental features as well as Forest Glen Public School.

The proposed community has been designed to be compatible with surrounding land uses and the CNR rail line located to the south. The design provides for an appropriate transition between existing residential uses to the west and multiple residential built forms located in proximity to the neighbourhood park. The design also considers passive noise attenuation and mitigation relative to the CNR rail line. Specific design features include:

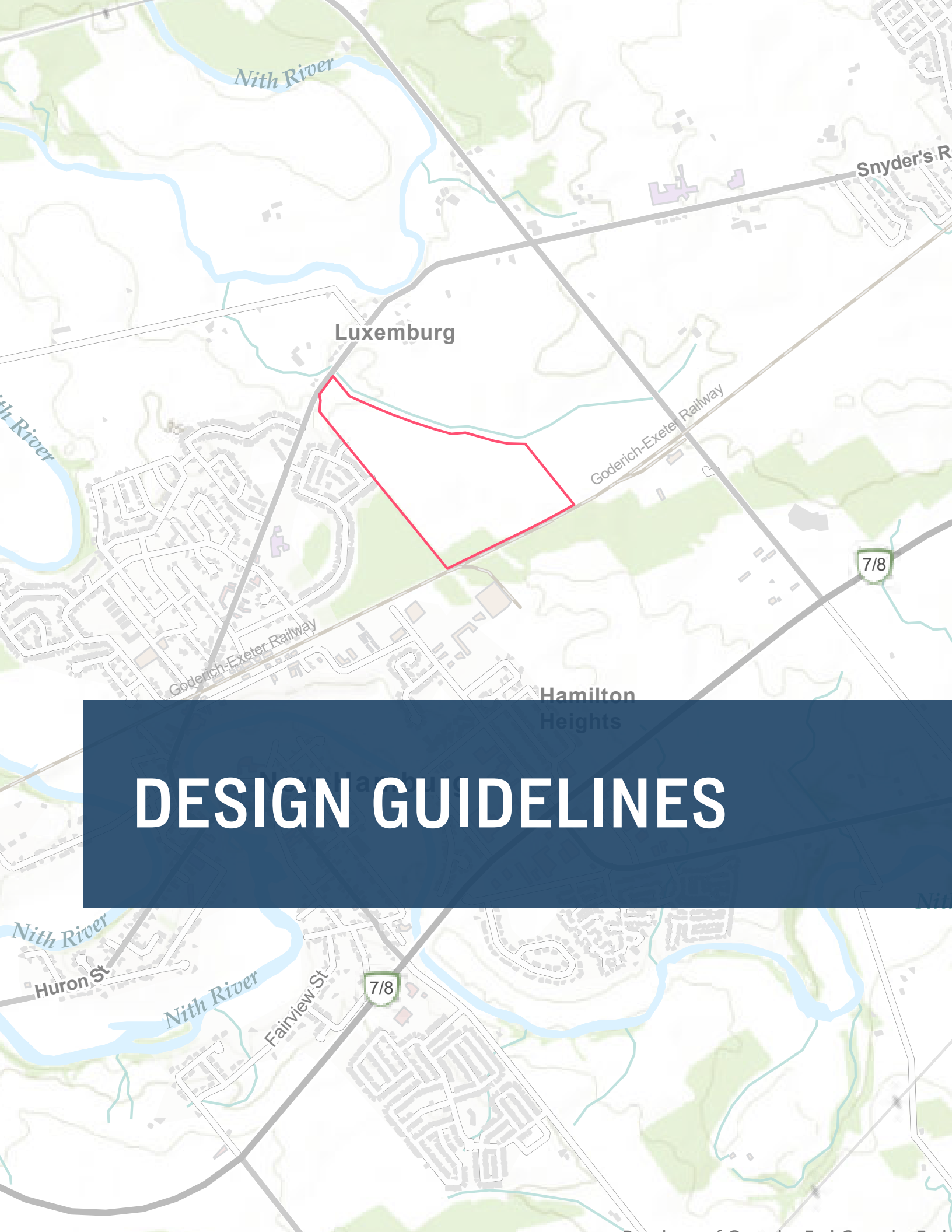
- A minimum 30m setback which has been enhanced by the street network that is proposed including a window street that runs parallel to the rail line.
- Amenity space that is oriented away from the rail line with shielding provided by the front face of dwelling units.
- A safety berm parallel to the rail line.
- Setbacks which minimize the need for vibration mitigation.



The compatibility features noted above are a result of an iterative design process that was informed by recommendations from R.J. Burnside & Associates Limited and guidelines prepared for new development in proximity to railway operations.



Note: All building placements and lot lines are for conceptual purposes only and will be finalized through subsequent processes.



Luxembourg

Snyder's R

Goderich-Exeter Railway

7/8

Hamilton
Heights

DESIGN GUIDELINES

7/8

Huron St

Fairview St

Nith River

5.0 | GENERAL DESIGN GUIDELINES

5.1

UNIVERSAL & AGE-FRIENDLY DESIGN

Planning proactively for a future in which a greater proportion of the population lives with reduced mobility and other disabilities is responsible, necessary and timely. Age-friendly planning is sensitive to the needs of all age groups and all ability levels. Whether providing room for parents with baby strollers, the mobility requirements of the elderly or other persons with disabilities (e.g., the use of walkers, wheelchairs and motorized personal mobility devices), or the needs of the general populace to navigate municipal buildings, streets, paths and sidewalks safely and easily, age-friendly planning creates a civic environment that is welcoming to all.

The philosophy of good barrier-free design is to incorporate universal design principals. Universal Design means designing the built environment so that it can be understood, accessed, and used to the greatest extent possible by all people regardless of their age or ability. Whenever possible, consider a design that allows a wide range of users, now and in the future, to live in and access the building and residence.

RECOMMENDATIONS FOR UNIVERSAL & AGE-FRIENDLY DESIGN:

- Ensure that all public spaces are barrier-free for persons of all ages and abilities. This includes sidewalks, parks, etc. as well as semi-private open spaces.
- Street trees, landscaping, seating, public art and signage should not obstruct the path of travel.
- Integrate access structures such as curb ramps, entry ramps and handrails as seamless components of buildings where practical.
- Use curb ramps to provide barrier-free connections between the street, pedestrian walkways and parking areas.
- Integrate tactile and visual design elements (such as differential paving) to assist in orientation and the recognition of potential hazards to persons with disabilities.
- Design in accordance with the Accessibility for Ontarians with Disabilities Act and other applicable provincial legislation.
- Introduce a range of unit types within the community to allow residents to age in place.
- In ground oriented residential developments such as row housing, VistAble housing units are strongly encouraged for a portion of the units. Features should include: one zero-step entrance, wider doorways and clear passage on the main floor.
- If an Exterior Walk is unwanted or impractical and stairs are provided, the final grading is to be considered in the design, and where possible, established so that future construction of an exterior walk or ramp could be constructed to the entrance(s) of the home.



5.2

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Crime Prevention Through Environmental Design (CPTED) is a multi-disciplinary approach of crime prevention that uses urban and architectural design and the management of built and natural environments. CPTED strategies aim to reduce victimization, deter offender decisions that precede criminal acts, and build a sense of community among inhabitants so they can gain territorial control of areas, reduce crime, and minimize fear of crime.

RECOMMENDATIONS FOR CPTED DESIGN:

- Use appropriate features that express ownership and boundaries such as defined entrances, parking areas, and pathways.
- Landscaping, fences, pavement treatments, and art can be used to delineate different areas. The arrangement, dimensions and scale of spaces and elements should be designed to encourage comfortable interactions among people.
- When designing sites avoid creating spaces that appear confined, dark, isolated or unconnected with neighbouring uses, or without a clear purpose or function.
- Integrate informal surveillance by considering visibility, light and openness. Orient and design physical features and activities to maximize the ability to see throughout the site. This includes attention to the placement of windows to provide visual access to areas of the site, and locating walkways, entrances, landscape materials, and other site features to avoid areas for persons to hide.
- Encourage the concepts of 'eyes on the street' and 'eyes on the park/trail' when placing windows, front porches and balconies.
- Incorporate appropriate lighting that does not produce glare. Avoid excessively bright lighting.
- Provide clear signage and other wayfinding cues that make a site easily understood and navigable.



Building designs that provide 'eyes on the park' are encouraged.



Examples of highly visible entrance, walkways and landscaping.

6.0 | GUIDELINES FOR LOW-RISE RESIDENTIAL

The proposed development should be designed with low density residential uses to ensure a seamless transition in building heights and density to the adjacent residential community. The following general design guidelines have been prepared for low rise residential buildings to ensure a high quality, well designed community.

UNIT MIX

- A variety of housing types and built form have been accommodated with higher density encouraged adjacent to the open space.
- The subject lands should be developed with a range of unit types and built form to avoid repetition on streetscapes and complement the residential land uses.



COLOUR PALETTE/MATERIALS

- Variations in building facades and materials that incorporate current design trends are encouraged.
- A sufficient variety of exterior colour packages should be offered to avoid monotony within the streetscape.
- Individual exterior colour packages should combine to create a visually harmonious streetscape appearance. In this respect, jarring colour contrasts should be discouraged.
- High quality building materials in complementing colour palettes are to be provided for all street facing facades.
- Natural or cultured stone or brick is encouraged as the exterior cladding material on most of the street facing facade.
- Siding or alternative materials may be used on all facades, however it is encouraged to combine the use as a secondary material, mixed with primary materials including brick and or stone on street facing facades.



FACADE VARIATION

- Variations in building facades and materials are encouraged.
- Within each townhouse block a cohesive design and colour palette should be applied. Facade variety should be applied between townhouse blocks to achieve variety along the streetscape.
- Street fronting townhouse blocks should be designed with a maximum of 6-8 freehold townhouse units within each block to avoid long stretches of units with the same colour palette.
- Within residential blocks intended for single-detached development the following guidelines apply:
 - Identical building elevations should be generally separated by at least two units;
 - Builders are encouraged to provide more than one elevation style per model.
 - Variety in colour packages should be provided and identical colour packages should be separated by at least one unit.
 - Identical units and/or building elevations should not be sited across from each other on the same street unless it is demonstrated that the colour and material packages for each unit provides sufficient variety.



Diagram demonstrating facade variation.

ROOF LINES

- Roof Lines (roof pitches) are encouraged to achieve a good transition between roof heights. Complementary roof lines are to be provided.
- Roof embellishments such as gables and dormers are encouraged especially on corner lots.
- Roof vents, stacks and flutes are encouraged to be located on the rear slope of the roof where feasible.

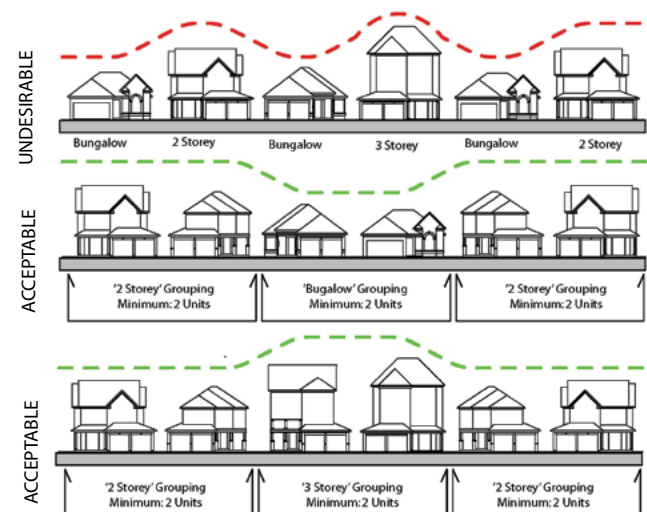


Diagram of acceptable vs. undesirable roof lines

WINDOWS

- All windows should be low maintenance, thermally sealed, and double (or more) glazed.
- On front and flankage elevations windows for portions of the building that are located above grade should be consistently employed to suit the house style.
- Window proportions should reflect the architectural style of the building.
- Large ground floor windows are encouraged wherever feasible to promote “eyes on the street”.
- Windows surrounding doors, or within doors are also encouraged. This includes sidelights and transom windows around front doors.
- Primary upper and lower story windows on street-facing elevations should be aligned in an organized manner to enhance the facade.
- Projecting bay windows are encouraged to give 3-dimensional interest to primary house faces.



GARAGES

- The placement and design of garages is important to the overall streetscape. As such, garages should be setback behind, or flush with, the habitable space of the dwelling unit as required by the zoning standards established for the subdivision.
- Zoning regulations should permit a reduced front yard setback for the habitable portion of a dwelling than the setback required for the garage.
- Garage widths should be in accordance with site specific zoning regulations and should be limited to a percentage of the front building facade length.
- Design treatment of garage doors is encouraged including sectional and paneled garage doors.
- A variety of lintel treatments above the garage are encouraged.
- For double garages, consider two single doors are preferred over one large door.



DRIVEWAYS & PLACEMENT

The following guidelines apply to driveways:

- Driveways for dwellings adjacent to intersections, public walkways, open space and parks should be located as far from the adjacent use as possible.
- Driveway slopes between garage and street should be minimized.
- Paired driveway locations are encouraged where feasible for smaller lots to maximize on-street parking opportunities.
- For larger lots, combined front yards (as illustrated) maximize on-street parking and landscaping opportunities.
- Driveways should be setback 6 metres from the intersection of two street lines.
- A maximum of one driveway with one access point connecting to a public street shall be permitted on a lot.
- Driveways for single-detached, semi-detached and street townhouse dwellings will be in accordance with an approved streetscape plan(s).
- An on-street parking plan is to be approved for each stage of development.

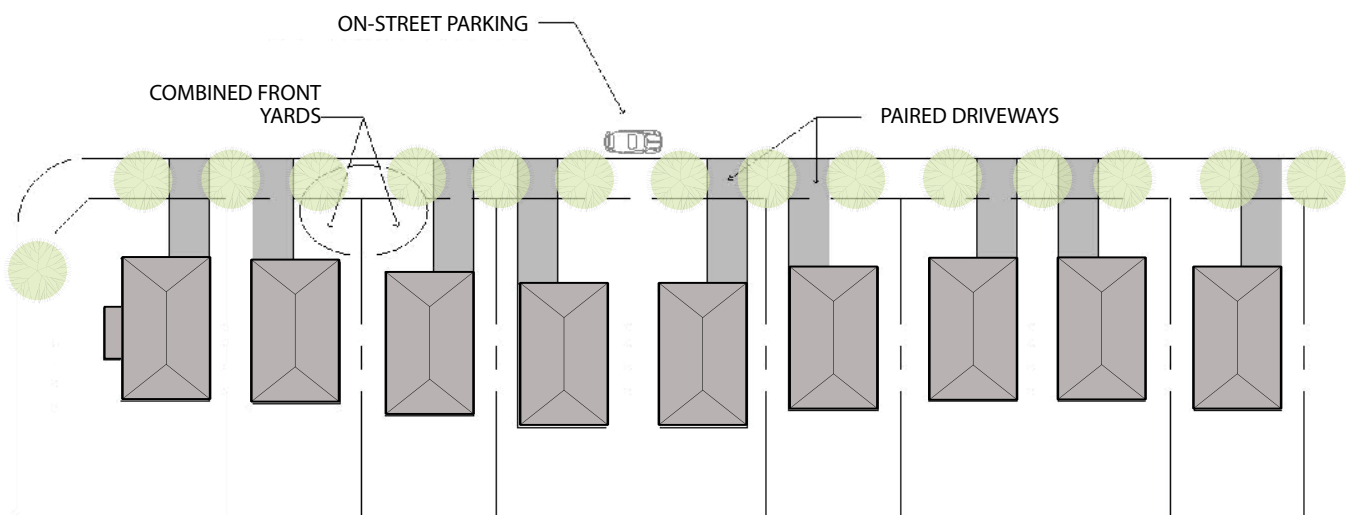
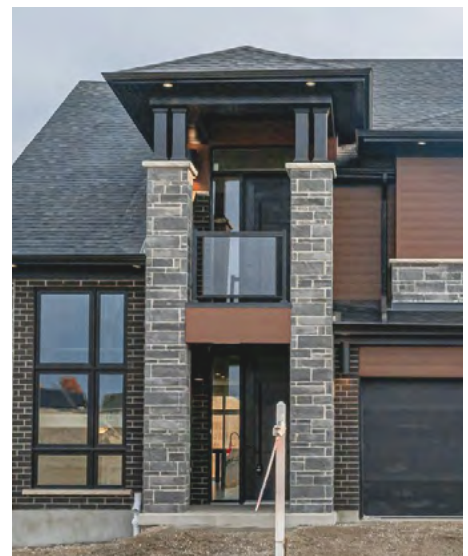


Diagram of driveway pairing.

PORCHES

- The generous use of front porches, veranda's or porticoes is encouraged to provide opportunities for 'eyes on the street' as well as social interaction among neighbours.
- Porch columns and hand railings should be consistent with the character of the house.
- Maintenance-free, pre-finished aluminum wrought iron railings or high quality composite railings are preferred.
- Where appropriate, porch depths should be sufficient enough to provide useful seating space. On corner/ priority lots, wrap-around porches are encouraged.
- Porch projections into required front and side yards should be in accordance with site specific zoning regulations.



MAIN ENTRANCES

- The main entrance to the dwelling should convey its importance as both a focal point of the facade and the interface between the private realm of the dwelling and the public realm of the street.
- Weather protection at entries should be provided where possible through the use of covered porches, porticoes, overhangs or recesses.
- The front entry design and detail should be consistent with the architectural style of the dwelling.
- Enhancements to emphasize the entry are encouraged and may include pilasters, masonry surrounds, a variety of door styles, a variety of transom lights above the door, sidelights, etc.

ARCHITECTURAL STYLE

- A harmonious mix of architectural styles which incorporate both traditional and modern influences is encouraged over one specific style.
- The various building types and architectural styles throughout the subdivision should be linked through the use of distinctive, well-designed buildings and the use of quality building materials.
- Townhouse, and cluster townhouse dwellings within the proposed development are to be designed with a high degree of architectural quality with emphasis given to building facades which face the public realm.

7.0 | GUIDELINES FOR TOWNHOUSE & MULTIPLE RESIDENTIAL

7.1

GUIDELINES FOR STREET FRONTING TOWNHOUSES

Townhouses are to be designed to integrate with other street fronting products (i.e. single detached and semi-detached lots). The following design guidelines should apply to the design of street fronting townhouses.

- Street fronting townhouses are to be a maximum height of 10 metres. An increase in the maximum building height should be considered to accommodate superior design elevations and architectural features.
- The overall design merits of the entire building are to be considered rather than the individual units.
- Ideally townhouse blocks should include four to six units. A maximum of eight attached dwelling units will be permitted.
- Townhouse buildings which are side-by-side or within the same block are to be coordinated with each other in terms of colours, materials, and architectural styling, however variety in colours is encouraged.
- The main facade should be located parallel to the street.
- To maximize on-street parking opportunities, shared driveways are encouraged for interior townhouse units.
- End unit townhouses should have an enhanced side facade where adjacent to a public street.
- The architectural design guidelines set out in the previous sections, including colour palette and materials, roof lines, main entrances, windows, and garages also apply to the design of townhouses.





7.2 GUIDELINES MULTIPLE RESIDENTIAL

When considering future site plans for multiple development blocks within the subject lands the following guidelines are to be considered:

- Built form and/or landscaping within the multiple blocks should address the street in a manner that supports an active streetscape for pedestrians. Consideration should be given to orienting primary building entrances towards the public realm.
- Canopies, awnings and wind screens as well as pedestrian-scaled lighting should be encouraged to provide pedestrian comfort.
- Built form should frame streets and intersections where appropriate.
- Site layout is to incorporate pedestrian walkways and connections to encourage and enhance walkability and access. Pedestrian connections on-site should connect directly with public sidewalks.
- Placement of outdoor lighting should complement the building design and prevent or minimize impacts on the night sky and adjacent properties. The impact of lighting will be reviewed through the site plan approval process.
- Pedestrian scale lighting is to be provided to accent walkways, steps, ramps, and building entrances.
- When setting buildings back from the street is unavoidable due to grades or other constraints, landscaping is to be used to define street edges.
- Landscaping is to be coordinated with building and site design to enhance the streetscape, define street edges and provide thermal comfort for pedestrians.
- Where possible, barrier free sidewalks leading directly from the public street and parking areas to the principal building entrances are to be provided.
- Garbage facilities, parking, loading and service areas should be designed and oriented such that they are separated and/or screened from the public realm.
- Site plan design should coordinate movements and minimize conflicts between pedestrians and vehicles.

PARKING

- Landscaping should be used to break up surface parking lots associated with multiple blocks.
- Where feasible, provide vehicle parking at the side and rear of buildings. Surface parking lots between buildings and internal roads is discouraged particularly at the interface with existing low-rise residential development.
- Locate parking areas (particularly barrier free parking spaces) in close proximity to building entrances.
- Parking areas are to be screened to avoid illumination of adjacent residential properties by automobile headlights.
- Pedestrian scale lighting is encouraged to accent walkways, steps, ramps, and building entrances.



SIGNAGE

- A unified and coordinated approach should be taken for signage within multiple blocks with emphasis on architecturally integrated building signage.
- Signs should be designed not to obstruct pedestrian, other non-vehicular travel and barrier free movements.
- Signage and community branding associated with proposed residential development is to be coordinated with the design of wayfinding measures and other features within the community.
- All permitted signage will require Sign Permits from the Township of Wilmot.

LIGHTING

Effective outdoor lighting improves visibility, increases safety, provides security and enhances the communities night-time environment. Improperly installed lighting can be extraordinarily powerful and create problems of excessive glare, light trespass, high energy use and skyward light pollution.

The following guidelines relate to lighting within proposed multiple blocks and street lighting in areas directly adjacent to natural features where applicable.

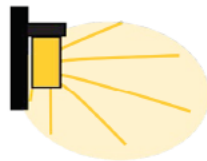
Outdoor lighting should be aimed, located, designed, fitted and maintained so as not to present a hazard to drivers, pedestrians or adjacent users by impairing their visibility or create a nuisance by projecting or reflecting objectionable light onto neighbouring properties.

- All outdoor lighting equipment and fixtures should be properly shielded and directed downward to mitigate potential impacts to wildlife in nearby natural areas. Fixtures that meet the IESNA Full Cutoff Classification, have an Uplight rating of 0, or are Dark Sky approved are encouraged.
- Lighting sources are not to be visible from adjacent properties or on-site residential units.
- Glare control should be achieved through the use of cut-off fixtures, shields and the appropriate application of the fixture mounting height, wattage, aiming angle and fixture placement.
- Effective lighting systems should be designed to minimize lighting from being directed up to the sky. Full cut-off luminaries that direct no light above the horizontal plane are required. Examples of effective and ineffective lighting are shown below.

Ineffective Lighting

Fixtures that produce Glare and Light Trespass could disturb your neighbours, as well as waste energy.

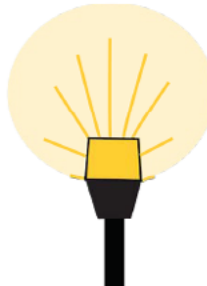
Typical wall light



Area floodlight



Typical yard light



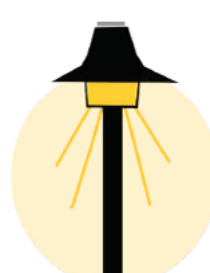
Darksky-friendly wall light



Area floodlight with hood



Yard light with reflector



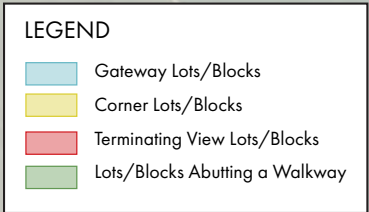
Effective Lighting

Fixtures that shield the light source minimize Glare and Light Trespass. It saves money and energy.

- Vertical surface illumination and accent lighting can provide a sense of security and mitigate shadows and provide important aesthetic benefits. All building facades, landscaping and sign lighting should be designed to eliminate direct up lighting from reaching the sky and prevent glare onto neighbouring properties and roadways.
- Where security lighting is required, motion sensor activated lighting saves energy, reduces light pollution and is encouraged.
- The following is also encouraged for all exterior fixtures in areas directly adjacent to natural features: minimize the amount of blue light by using fixtures with Correlated Colour Temperature (CCT) of 3000K or less (International Dark Sky Association recommendations).
- The following Crime Prevention Through Environmental Design (CPTED) principles should be considered when designing lighting:
 - When creating lighting design, avoid poorly placed lights that create blind-spots for potential observers and miss critical areas.
 - Avoid overly bright security lighting.
 - Use shielded or cut-off luminaires to control glare.
 - Place lighting along pathways and other pedestrian-use areas at proper heights.
 - Only light areas where needed.
- LED light fixtures and bulbs are encouraged. LEDs have a significantly higher efficiency to HID lamps in converting electricity to light. They have a long lifetime and their small size allows innovative design that can provide better control over stray light, potentially reducing sky glow and light trespass. LEDs can be dimmed, thereby forming the basis of a system of intelligent lighting. Then energy savings can be achieved by dimming them when they are not needed.
- Parking Lot lighting helps people navigate from their cars to and from their home. Parking lot lighting also aids with a feeling of security. Unless properly designed the lighting of parking lots may be a source of sky glow. Lighting plans are required for those blocks that are subject to site plan approval. The lighting plans are to minimize sky glow through a variety of measures including consideration of pole height, fixture type, shielding, fixture orientation and reducing the use of lights after business hours.
- Lighting plans are to be prepared by the local utility provider and form part of streetscape plan(s) required for each subdivision stage. The streetscape plan(s) are to coordinate street lighting, boulevard planting, on-street parking and driveway locations.



Examples of effective street lighting.



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8.0 | GUIDELINES FOR PRIORITY LOTS/BLOCKS

Priority lots/blocks are those lots and blocks that have the highest visibility within the public realm and the most visual prominence within the community. As such, special design consideration is required for the publicly exposed elevations of buildings. Priority lots contribute largely to the character of a community so a higher level of architectural design is expected for buildings on those lots. Development on priority lots/blocks should be designed and oriented to contribute to the public realm and pedestrian environment, provide for definition at key locations and contribute to a distinctive community image and public realm.

GATEWAY LOTS/BLOCKS:

Gateway lots/blocks are generally located at the entrance gateways and establish a first impression of the community. Their design should recognize the high level of exposure and establish the character and design quality of the community.

For Gateway lots/blocks, the following guidelines shall be considered:

- Distinctive design forms including prominent building form and landscaping should be required within gateway blocks.
- Building faces with public exposure from internal public streets at community entrances should be designed with enhanced facade design including high quality building materials and landscaping.
- Entry elements are encouraged to produce interest in the facade as well as to help define the entrances to the community.
- Building materials and/or colours should be complementary to community entry features.
- Flankage elevations visible from the street should have high levels of building design and detail with attention given to massing, height, roof lines, materials, and details.
- Building detailing should include, well-proportioned windows, masonry detailing, and a mix of coordinated building materials.
- Large, blank facades along the face of a road should be avoided.
- Similar setbacks should be employed where possible for each block to create a strong edge condition within gateways.



Examples of an enhanced flankage elevation.



Example of an entrance feature.

CORNER LOTS:

Corner lots play a significant role in setting the character and quality of the street. Corner lots are located at the intersection of two streets and have two facades fully exposed to the public realm. They act as informal landmarks within a community and therefore should be carefully designed.

Units in corner lots should be designed with the following guidelines in mind:

- Consideration should be given to providing special model designs specifically for corner lot conditions.
- Flankage elevations visible from the street should have consistent materials and details as the front elevation.
- Where possible, the main entry to the dwelling should be located on the long elevation facing the flanking street.
- Main entries facing the front lot line or shorter side of the lot may be permitted provided the design of the flanking face to include a secondary entry, projecting bay or other appropriate architectural feature.
- Unit designs are encouraged to provide an architectural feature at the corner. This could include, but is not limited to, wrap around porches.
- Both street frontages for corner lot dwellings should have high levels of architectural design and detail with attention given to massing, height, roof lines, materials, and details.
- Where possible, utility meters shall be located on the interior side elevation of detached units.
- Identical elevations on abutting or directly opposite corner lots are discouraged. However, building designs which have compatible architectural style, massing, elements and details are encouraged on abutting or directly opposite corner lots to provide both harmony and variety to the streetscape.
- The following architectural elements are encouraged for corner lots:
 - » A prominent wrap-around porch.
 - » Sufficient fenestration on front and flanking elevations displaying balanced proportions.
 - » Well-articulated flanking elevations to avoid flat, blank, uninteresting facades.



Examples of corner lot design elements

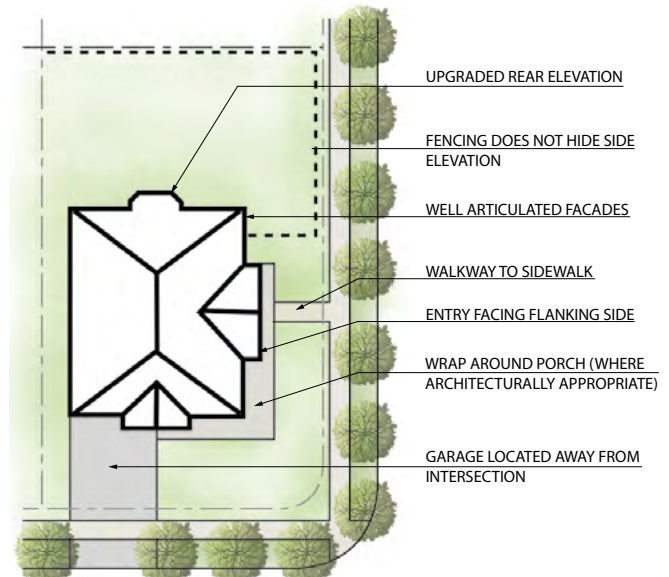


Diagram of corner lot design with the main entry located on the long elevation facing the flanking street.

TERMINATING VIEW LOTS/BLOCKS (T-INTERSECTION & ELBOW STREETS:

T-Intersection lots/blocks occur at the top of an intersection, where one road terminates at a right angle (or close to a right angle) to the other. Elbow Streets occur at a bend on the road, with more than one unit at the end of the street view.

The following design consideration should be given to homes at the end of the T intersection street view and homes at a bend on the road:

- Buildings should be designed to provide a visually attractive terminus from the intersecting street.
- Front elevations of buildings that terminate the street should include a number of enhanced architectural features and landscaping.
- Building design for lots at the end of T-intersections should have facade designs that utilize elements such as coordinated fenestration, masonry detailing, and entry elements.
- Driveways are encouraged to be located to the periphery of the view corridor to increase landscaping opportunities and reduce the prominence of the garage where possible.
- On elbow streets, driveway locations are to be carefully considered to avoid (as much as possible) driveways on adjoining lots merging at the street line.
- Where side elevations on elbow streets are partially visible from the street, materials should be coordinated with those of the front elevation.
- Where residential driveways and garages are located at the visual terminus of a street, design enhancements such as decorative garage door openings should be incorporated to contribute to an attractive streetscape.

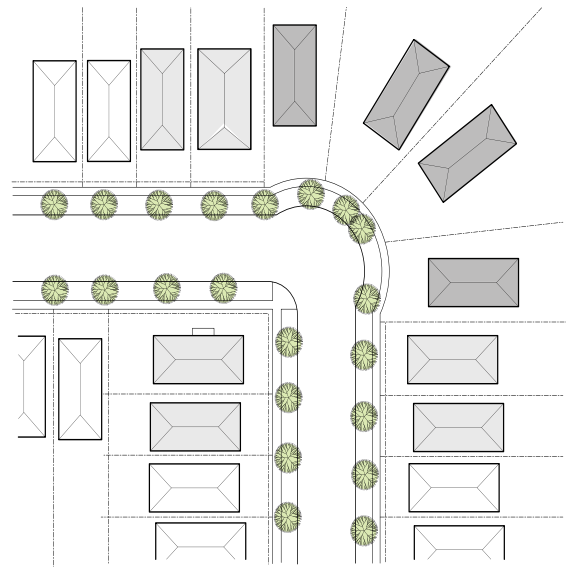


Diagram of lots along elbow streets.

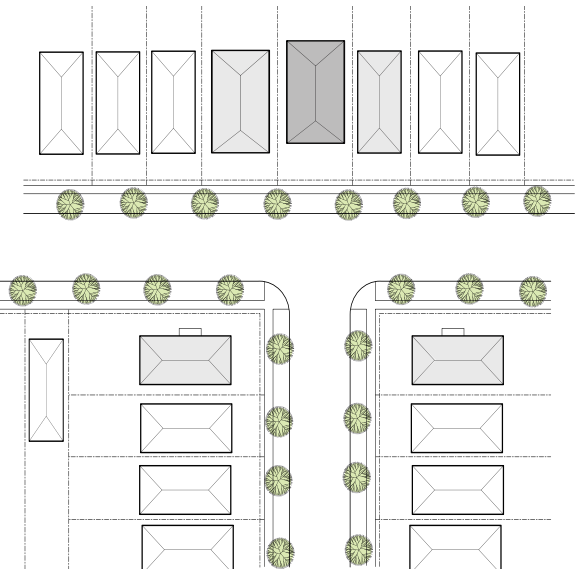
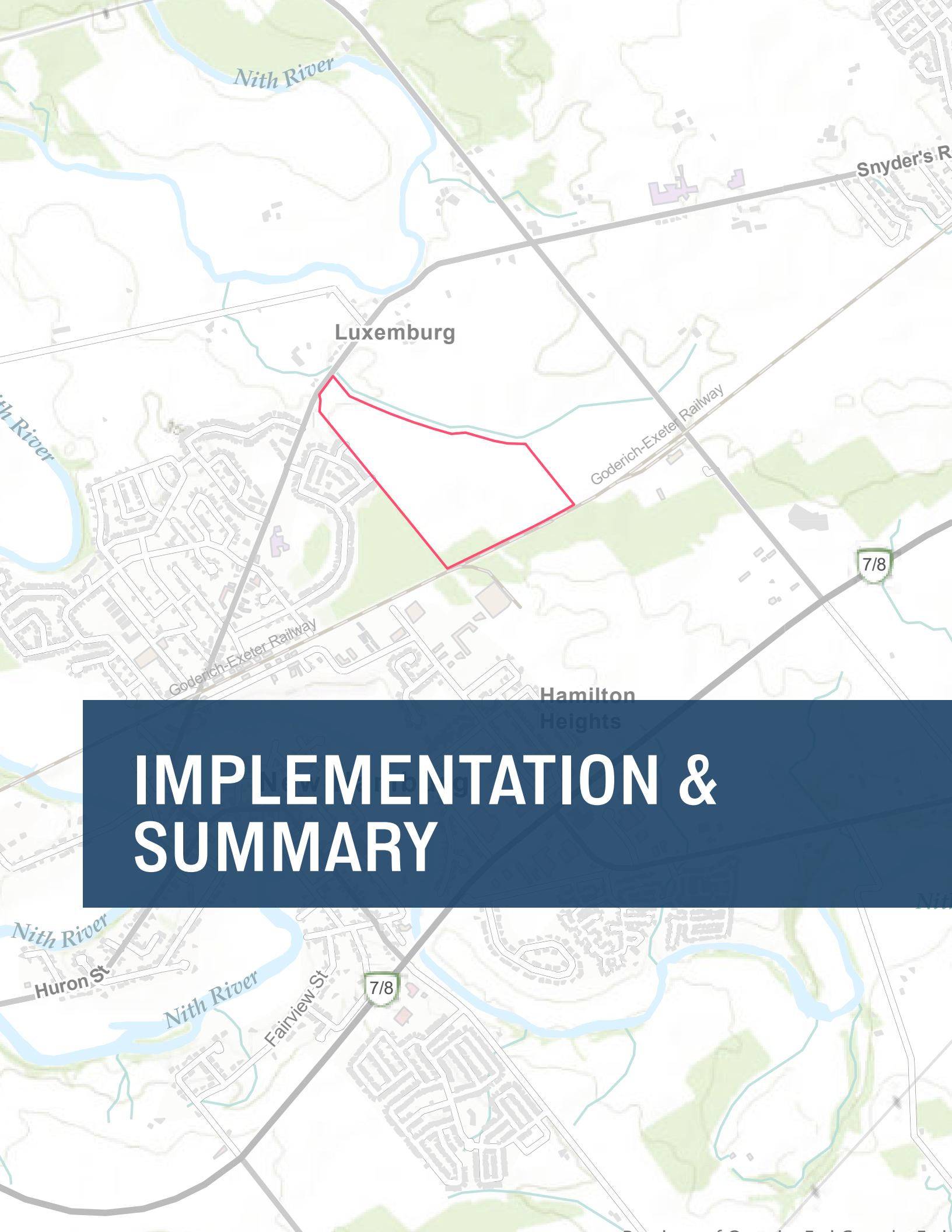


Diagram of a lot at the terminus of a T-Intersection.



Examples of terminating view lot.



IMPLEMENTATION & SUMMARY

9.0 | IMPLEMENTATION

GENERAL IMPLEMENTATION RECOMMENDATIONS:

1. That the recommended Community Concept Plan be considered in preparing the draft plan of subdivision for the subject lands with necessary adjustments having regard to the scale and general nature of the Community Concept Plan.
2. That the policy and design direction of these guidelines be considered in preparing draft plan approval conditions and the amending zoning by-law.
3. That the policy and design direction of these guidelines be considered in the design and review of site plans and building elevations.

DRAFT PLAN APPROVAL CONDITIONS:

- a. Implement buffers as recommended in the Scoped Environmental Impact Study prepared by R. J. Burnside & Associates Limited (February, 2022).
- b. Require the preparation and implementation of required buffer enhancements.
- c. Require the preparation and approval of streetscape plan(s) to ensure a well-coordinated and visually attractive streetscape.
- d. Require on-street parking, driveways and on-street utilities to be coordinated and integrated as part of streetscape plan(s);
- e. Require the developer to implement traffic calming measures with the details to be incorporated on final engineering plans to be approved by the Township of Wilmot;
- f. Implement the Priority Lot Plan included on page 36 in accordance with the Priority Lot Guidelines contained within this document.
- g. The subdivider is to retain a qualified design professional who shall certify compliance with the Priority Lot, townhouse and stacked townhouse guidelines in support of building permit applications;

- h. Require the subdivider to prepare and implement design features for identified gateway and enhanced entrance locations;
- i. Require the subdivider to prepare a conceptual park plan for the neighbourhood park located within the community. The conceptual park plan is to be considered by the Township of Wilmot prior to final subdivision approval (registration);
- j. Require the subdivider to prepare an active transportation plan that identifies and integrates the various components of the active transportation network including sidewalks, walkways and planned community pathways;
- k. Ensure the subdivider's engineer is responsible for the design and inspection of any lot level infiltration facilities for all single detached and townhomes within the community;

ZONING BY-LAW PROVISIONS:

The amending zoning by-law should:

- a. Implement these design guidelines and recommended Community Concept Plan.
- b. Provide for housing types and a range of lot widths consistent with these design guidelines;
- c. Restrict multiple residential building heights to a maximum of four (4) storeys measured at the front face of buildings.
- d. Include zoning provisions that regulate garage projections, the maximum width of driveways and garages, require a minimum landscaped area between driveways and adjacent lots/blocks.
- e. Direct higher density forms of housing in proximity to the neighbourhood park and to locations where grades and/or block configuration is best suited for higher density.
- f. Restrict street fronting townhouses to a maximum of 6-8 units per building block.
- g. Direct driveways to the opposite side of adjacent parks and walkways.

