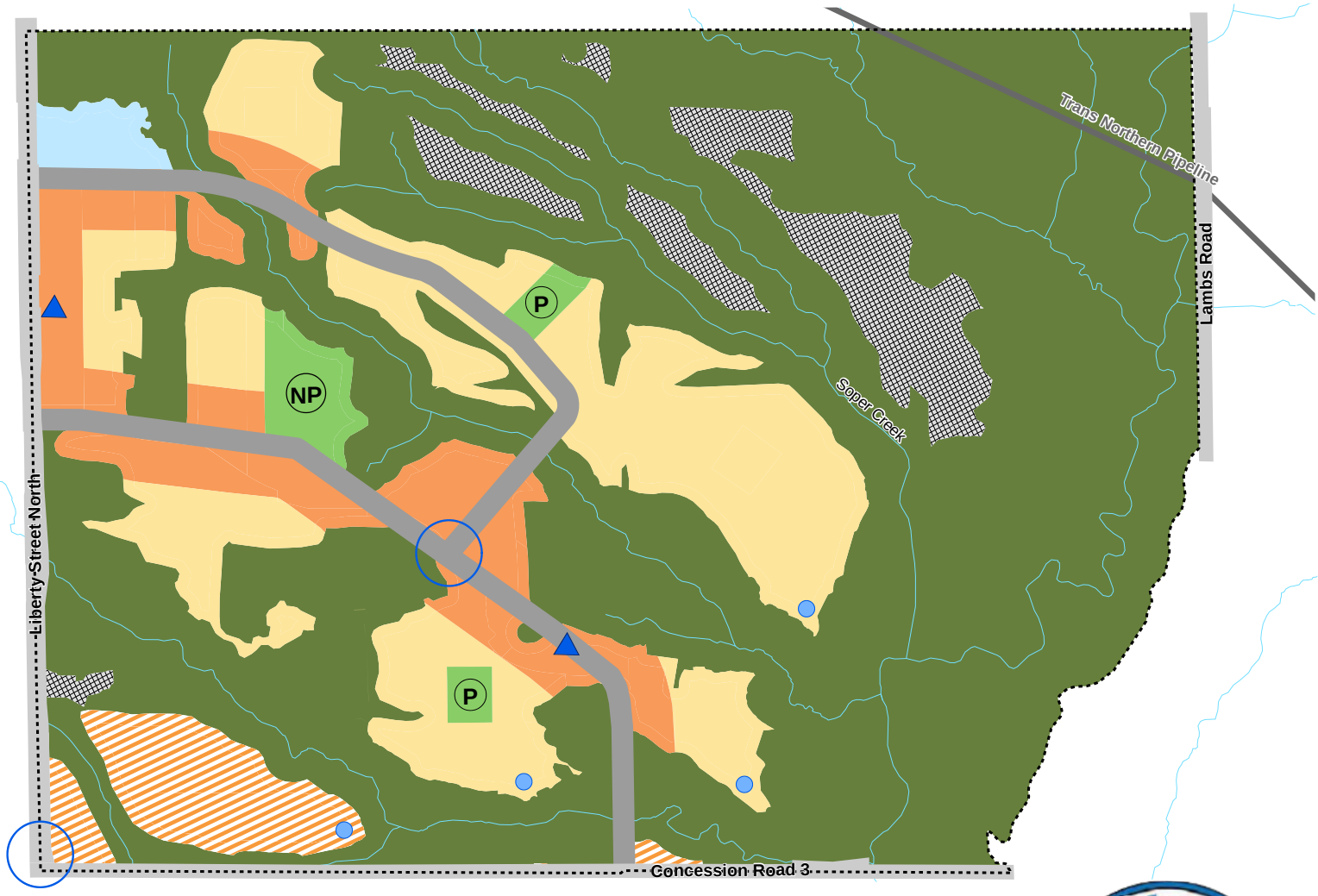


Clarington

Municipality of Clarington | Soper Springs Secondary Plan

Urban Design and Sustainability Guidelines

April 2026



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GUIDELINE STRUCTURE

The document is organized as a series of guidelines along with detailed guidance to assist designers in achieving the community's vision. It is intended that creativity and sensitivity to context should be encouraged to achieve the intent of each guideline with consideration of alternative approaches on a case-by-case basis where it can be demonstrated that the overall vision is being met.

SECTION 1 – Introduction	
SECTION 2 – Community Structure	
SECTION 3 – Streets and Blocks	
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SECTION 5 – Mobility	
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SECTION 7 – Green Infrastructure and Buildings	

1 INTRODUCTION

The Soper Springs Secondary Plan Area is 184 hectares in size, located in the Municipality of Clarington (MOC), at the north end of Bowmanville. The area is generally bound by Liberty Street North to the west, Concession Road 3 to the south, and Lambs Road to the east. The Secondary Plan's northern boundary runs 1 kilometre north and parallel to Concession Road 3 and aligns with the Bowmanville urban boundary. A mixture of agricultural uses, natural areas, and private residential properties exist around the area.



Figure 1: Soper Springs Secondary Plan Area

A large portion of lands within the Soper Springs Secondary Plan boundary are designated as Environmental Protection Area (EPA) as noted on Map "A3" of the Clarington Official Plan.

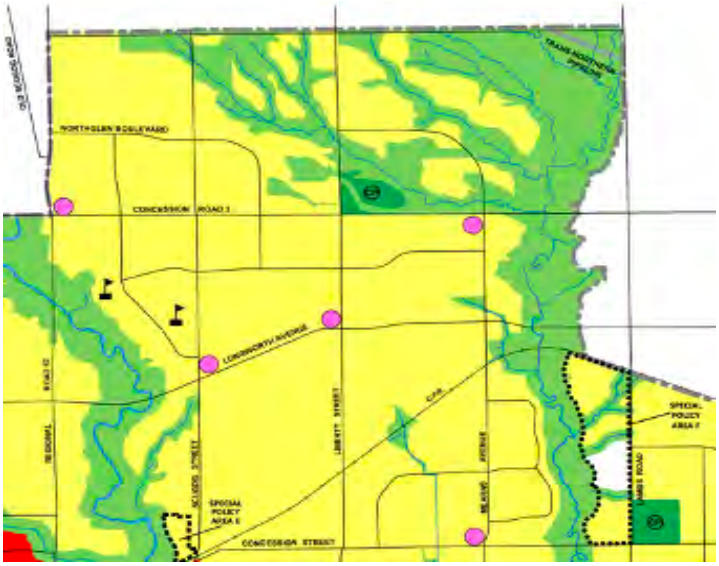


Figure 2: Map A3 Clarington Official Plan

1.1 PURPOSE OF THE GUIDELINES

The Urban Design & Sustainably Guidelines (Guidelines) build on the Sustainability + Green Principles Report prepared by SGL Planning and Design Inc. which were informed by the Municipality of Clarington's sustainability journey. These Guidelines also build on the Council endorsed Priority Green Clarington (2015), which provided a plan to promote and encourage greener, more sustainable neighbourhoods in the Municipality.

The Guidelines provide guidance for the design of streets and blocks, built form, streetscape design, community focal points, Environmental Protection Area (EPA) interface, parks and open space as well as sustainability. They will provide a level of expectation for the design and assist with the review and evaluation of future development applications.

The Guidelines are to be used by:



Council and Committee to confirm whether an application meets the vision for Soper Springs.



Municipal Staff and Agencies as a reference for review and approval.



Developers and consultants to understand how to make their proposals align with the vision.



The public to understand how their community is to be designed.

1.2 OBJECTIVES OF THE GUIDELINES

The Guidelines have been prepared to accomplish the following objectives:

- Achieve high quality urban design throughout the community in both the public and private realm;
- Encourage the design and building of an attractive and sustainable environment consistent with the vision for the Soper Springs Secondary Plan area;
- Ensure new development is unique;
- Incorporate an active transportation network;
- Maintain compatibility with the surrounding natural heritage; and
- Provide consistent direction of the design of the community for the public, development community and Municipal Staff.

1.3 INTERPRETATION AND IMPLEMENTATION

The Guidelines are intended to implement the Secondary Plan direction for the Soper Springs Community and provide direction on urban design, streetscapes, built form, and sustainability initiatives.

The Guidelines are to be read in conjunction with, and complement the policies of the Soper Springs Secondary Plan, objectives and policies of the Municipality of Clarington Official Plan (COP), the provisions of the Municipality of Clarington Zoning By-law, the Priority Green Development Framework and Implementation Plan, and other guidelines.

In the event of a conflict between the Guidelines and the Secondary Plan, the provisions of the Secondary Plan shall prevail over the provisions of these Guidelines.

1.4 PLACEMAKING AND DESIGN EXCELLENCE

Placemaking is both a philosophy and a multi-faceted approach to planning and urban design. While not a new concept, placemaking has recently come to the forefront of planning for successful, sustainable and complete communities. Through a collaborative process, the intent of placemaking is to capitalize on a community's vision, assets and potential and define the physical, cultural and social identities that will help support its ongoing evolution. Placemaking through

the cohesive design of the public and private realm helps provide residents, workers and visitors with a strong sense of place.

Appropriate, place-specific urban design principles and practices are a key element that shape how we experience and interact with the public realm, which includes destinations such as places to shop, eat, gather, interact, learn, enjoy and work. Great places can be defined by a combination of their natural landscapes and access to the environment, walkability and mix of uses, safe and attractive streetscapes, high quality architecture and human-scaled built form, parks and urban squares, public art and neighbourhood composition. Placemaking through good urban design will play a key role for the Soper Springs Secondary Plan to promote physical and mental health, community well-being and sustainability.

Good urban design will promote excellence in the design of the Soper Springs community. While the specifics of each development proposal may vary, the overall objectives for the highest quality designs will remain the same throughout the Secondary Plan area.



1.5 VISION AND GUIDING PRINCIPLES

The Soper Springs Secondary Plan will promote a positive image and foster a strong sense of place. The goal for creating vibrant and sustainable urban places as stated in Section 5 of the Clarington Official Plan is:

> "To create a built environment that celebrates and enhances the history and character of Clarington, fosters a sense of place for neighbourhoods and communities, promotes a positive image of the Municipality, demonstrates a high quality of sustainable architectural design, and enhances the well-being of residents, both present and future."

The urban design and sustainability principles reflect the vision and framework set out by the Clarington Official Plan and the Municipality's Priority Green Plan, and more specifically the Priority Green checklist for secondary plans. These principles were used to inform the preparation of the Secondary Plan policies and will be used to inform the Guidelines. In Phase 1 of the Secondary Plan Study, SGL prepared the Sustainability and Green Principles Report. The Report identified four main themes and principles for each of the themes that will also inform the Guidelines. **Figure 3** summarizes four key themes: built environment, mobility, natural environment and open space, and infrastructure and buildings. The themes are further broken down into key principles for each theme.



Figure 3: Key themes for design principles in Soper Springs

1.6 THE LAND USE SCHEDULE

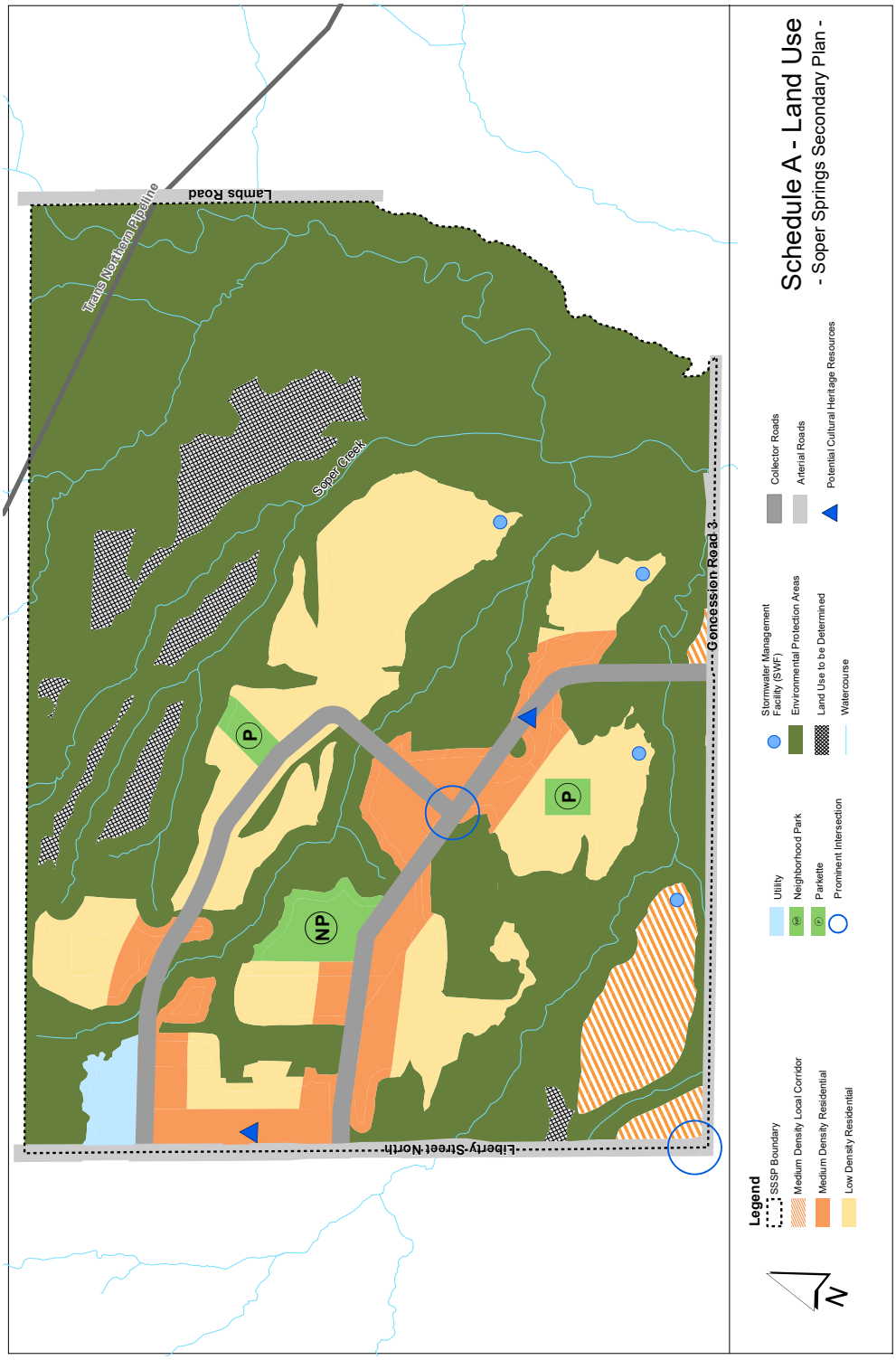
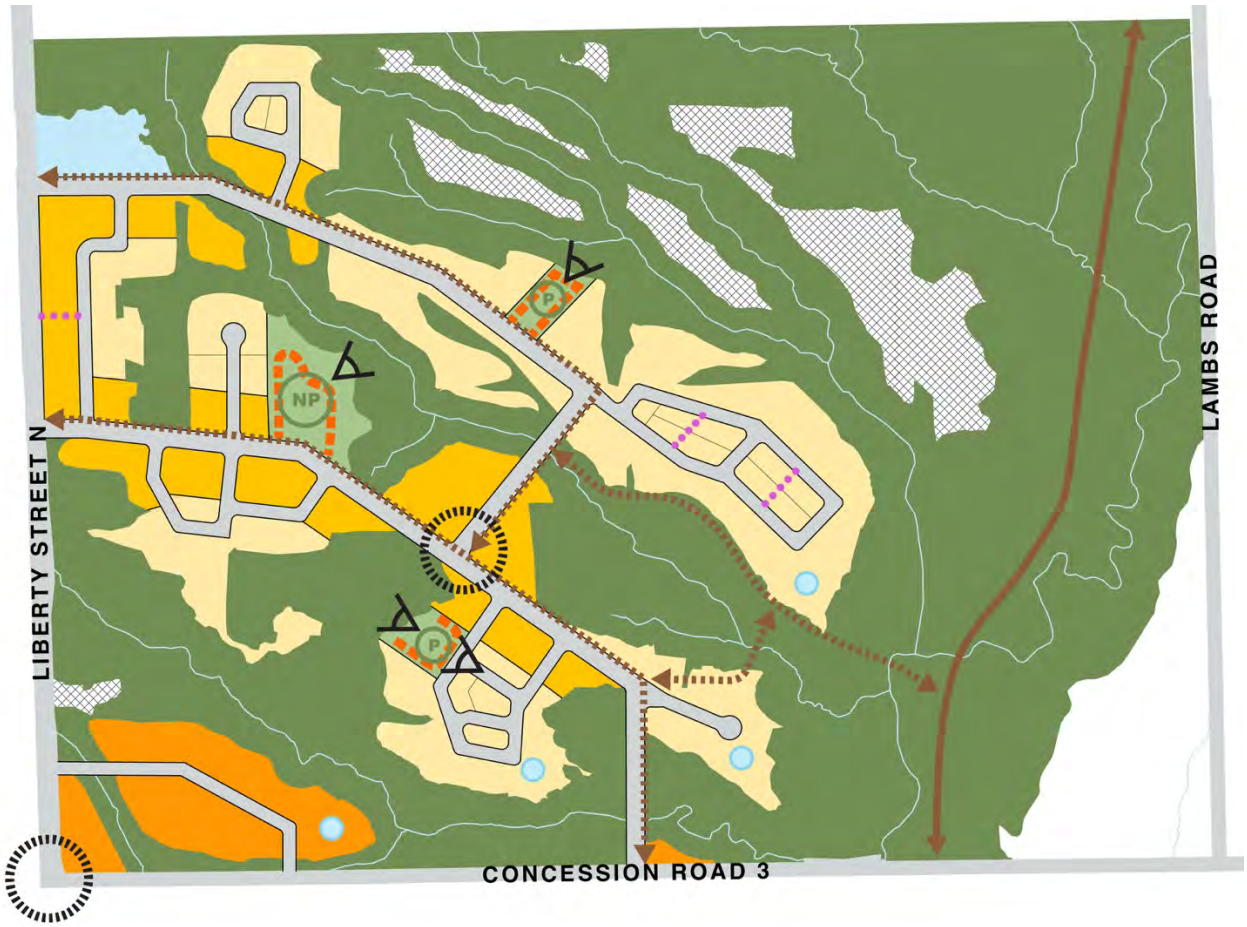


Figure 4: Schedule A - Land Use

1.7 THE DEMONSTRATION PLAN



MUNICIPALITY OF CLARINGTON

SOPER SPRINGS SECONDARY PLAN
DEMONSTRATION PLAN

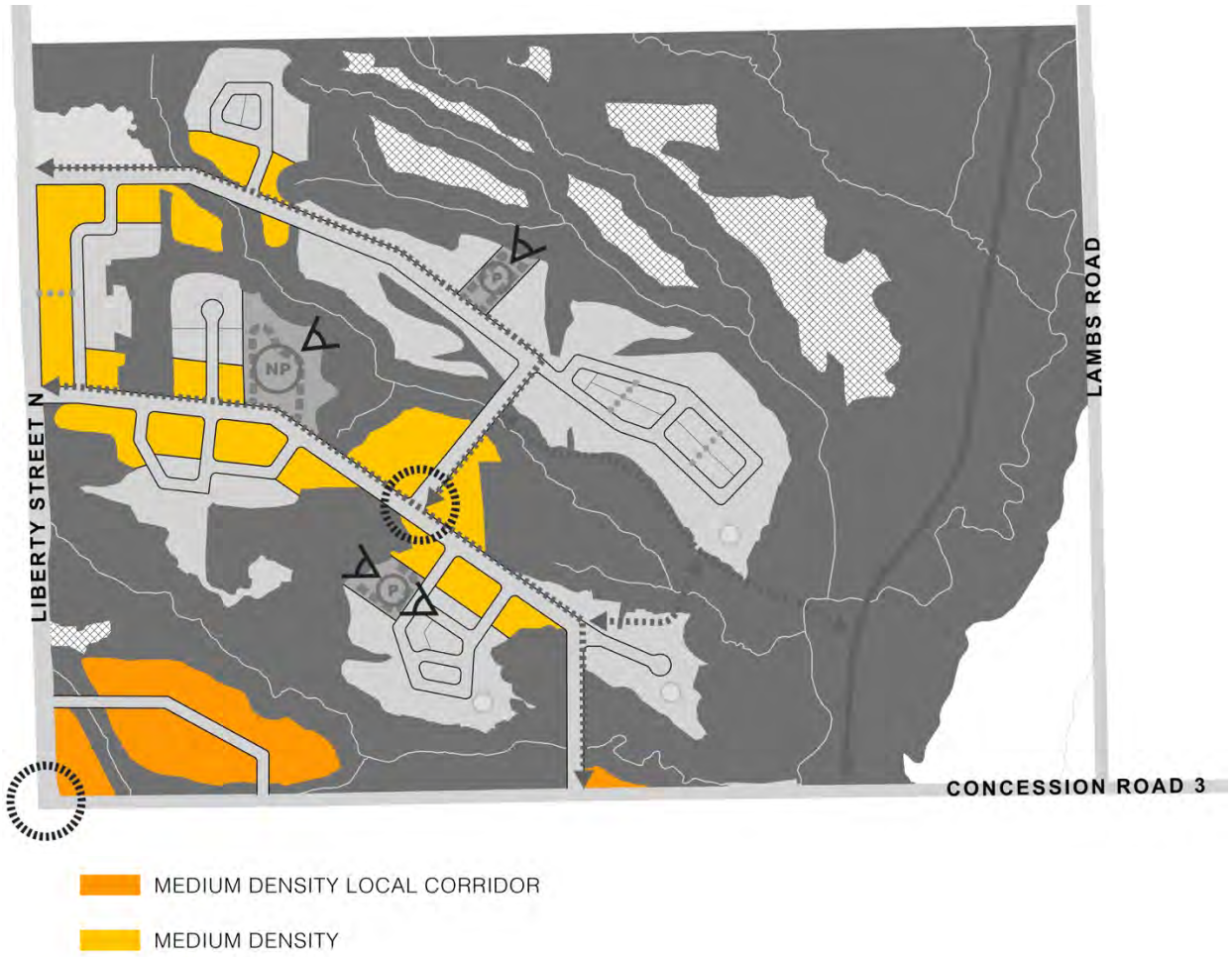
- MEDIUM DENSITY LOCAL CORRIDOR
- MEDIUM DENSITY
- LOW DENSITY
- ENVIRONMENTAL CONSTRAINT: LAND USE TO BE DETERMINED
- UTILITY
- NEIGHBORHOOD PARK
- PARKETTE
- ENVIRONMENTAL PROTECTION AREAS (EPA)
- PARK TRAILS
- MULTI-USE PATH
- MULTI-USE PATH - MUNICIPAL TRAIL
- MIDBLOCK CONNECTION
- PROMINENT INTERSECTION
- VIEW CORRIDOR
- STORMWATER MANAGEMENT POND

Schedule A of the Secondary Plan is further refined into a Demonstration Plan. This plan illustrates conceptually how a local road layout, streets and blocks, a mix of land uses, parks and open spaces and trails could be laid out. Each land use and community element is described in Section 2 of these Guidelines.

2 COMMUNITY STRUCTURE

The Soper Springs Secondary Plan provides a framework for the development of a compact, walkable, and accessible community. This Section is meant to provide a description of what the Secondary Plan envisions for the different structure components. The Guidelines provide design guidance for the different components of the community.

2.1 LOCAL CORRIDOR / MEDIUM DENSITY RESIDENTIAL

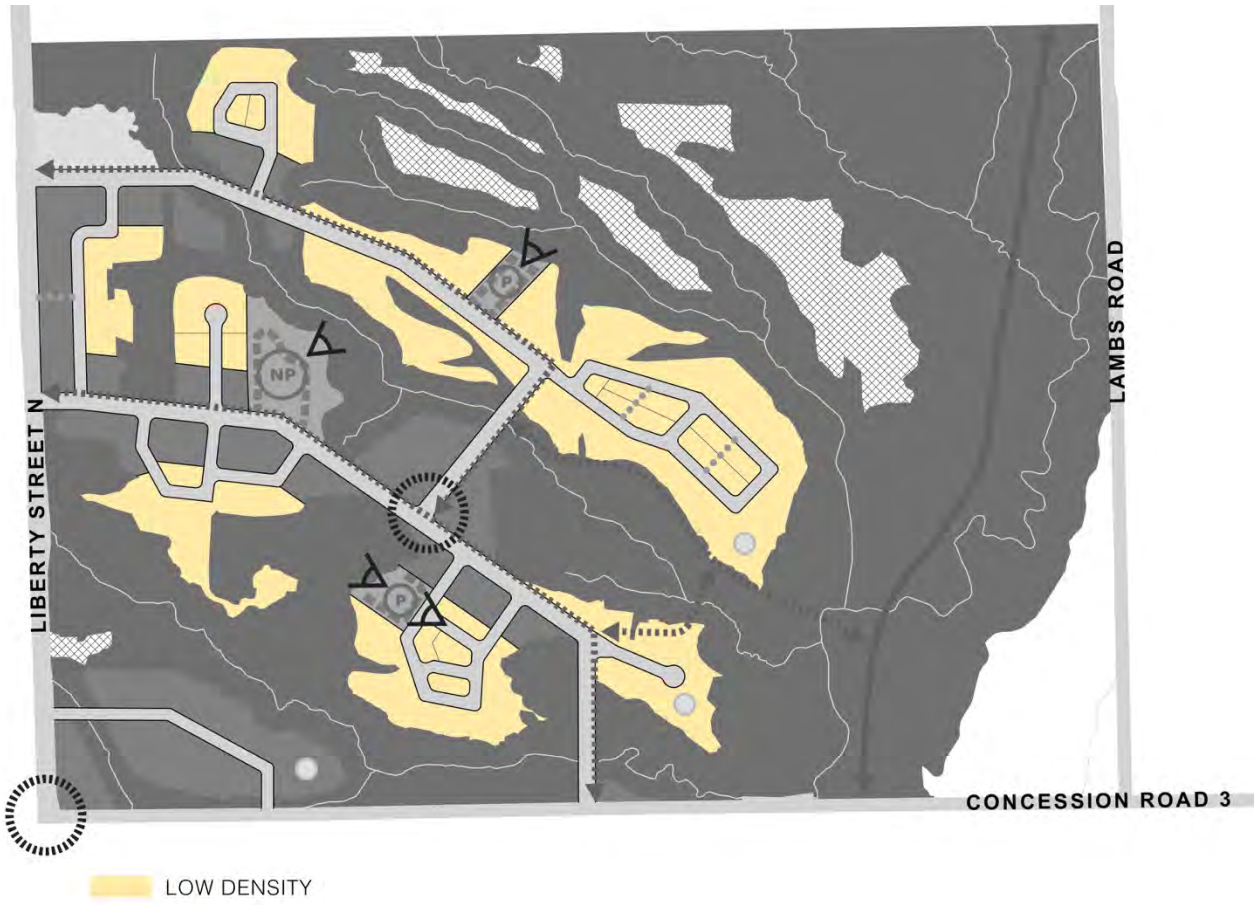


The Local Corridor located along Concession Road 3 is intended to provide for transit supportive pedestrian friendly intensification, that includes a mix of higher density residential uses and may accommodate retail and commercial uses to support future transit along the Local Corridor. Medium Density Residential land uses, located along the Mearns Avenue extension and a portion of Liberty Street

North of the Mearns Avenue extension is intended to provide residential development that also achieves higher densities and transit-oriented development. The intersection of Liberty Street North and the Mearns Avenue extension may also incorporate retail or commercial uses.

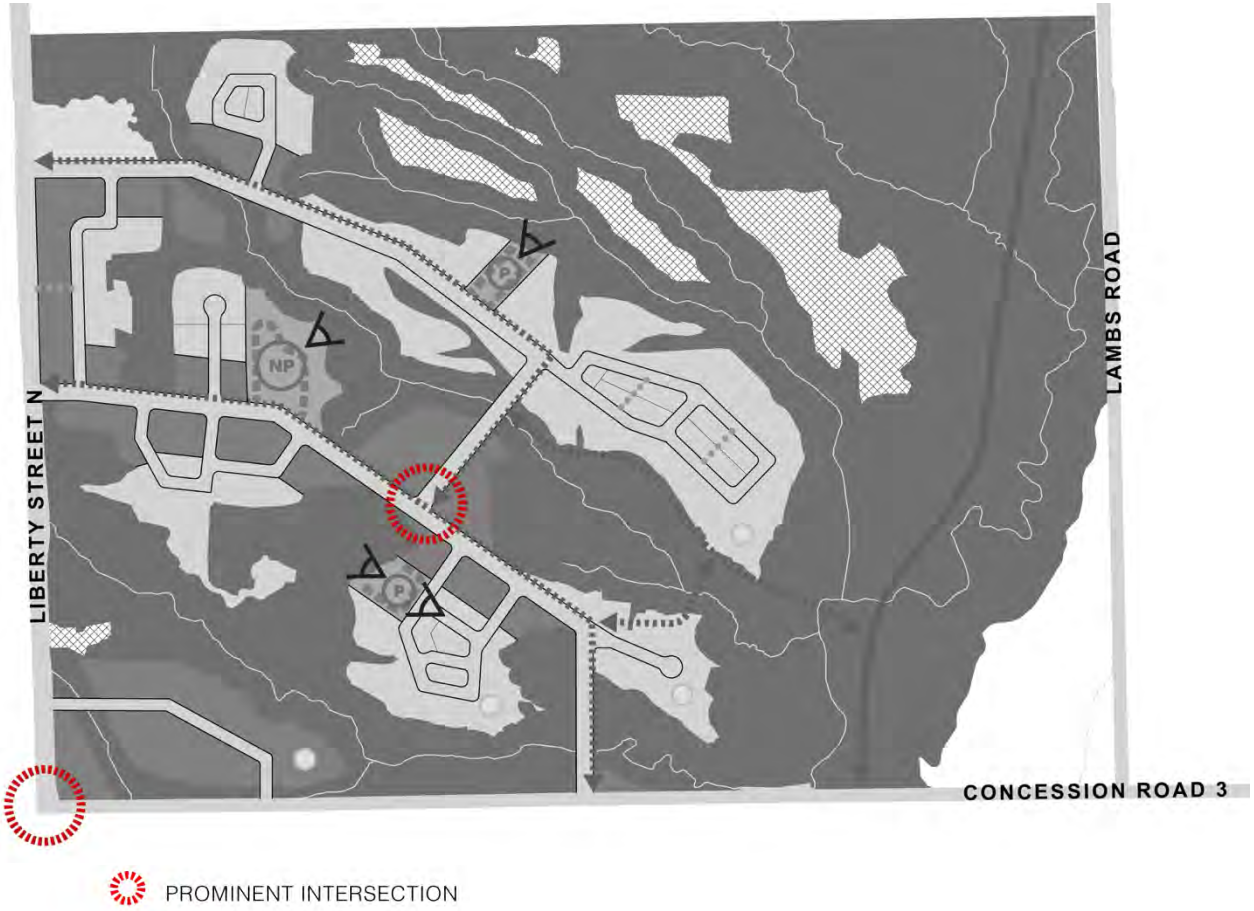
Permitted housing types include mixed use buildings, apartments and townhouses.

2.2 URBAN RESIDENTIAL AREAS



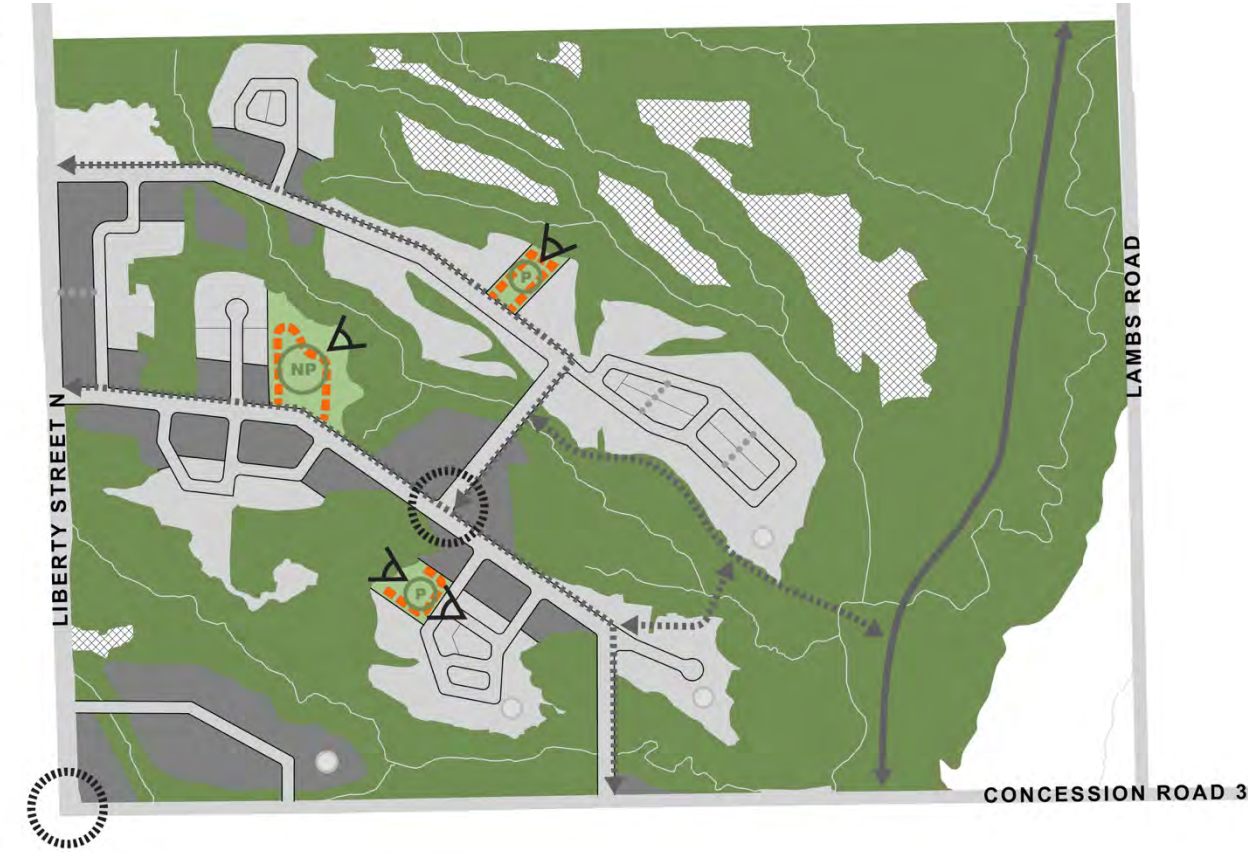
Most lands in Soper Springs are planned for Low Density Residential uses. Low Density Residential designation will include semi-detached and detached houses. All forms of townhouses and low-rise apartments are also permitted but can only make up 20% of the total number of units in the Low Density Residential designation.

2.3 PROMINENT INTERSECTIONS



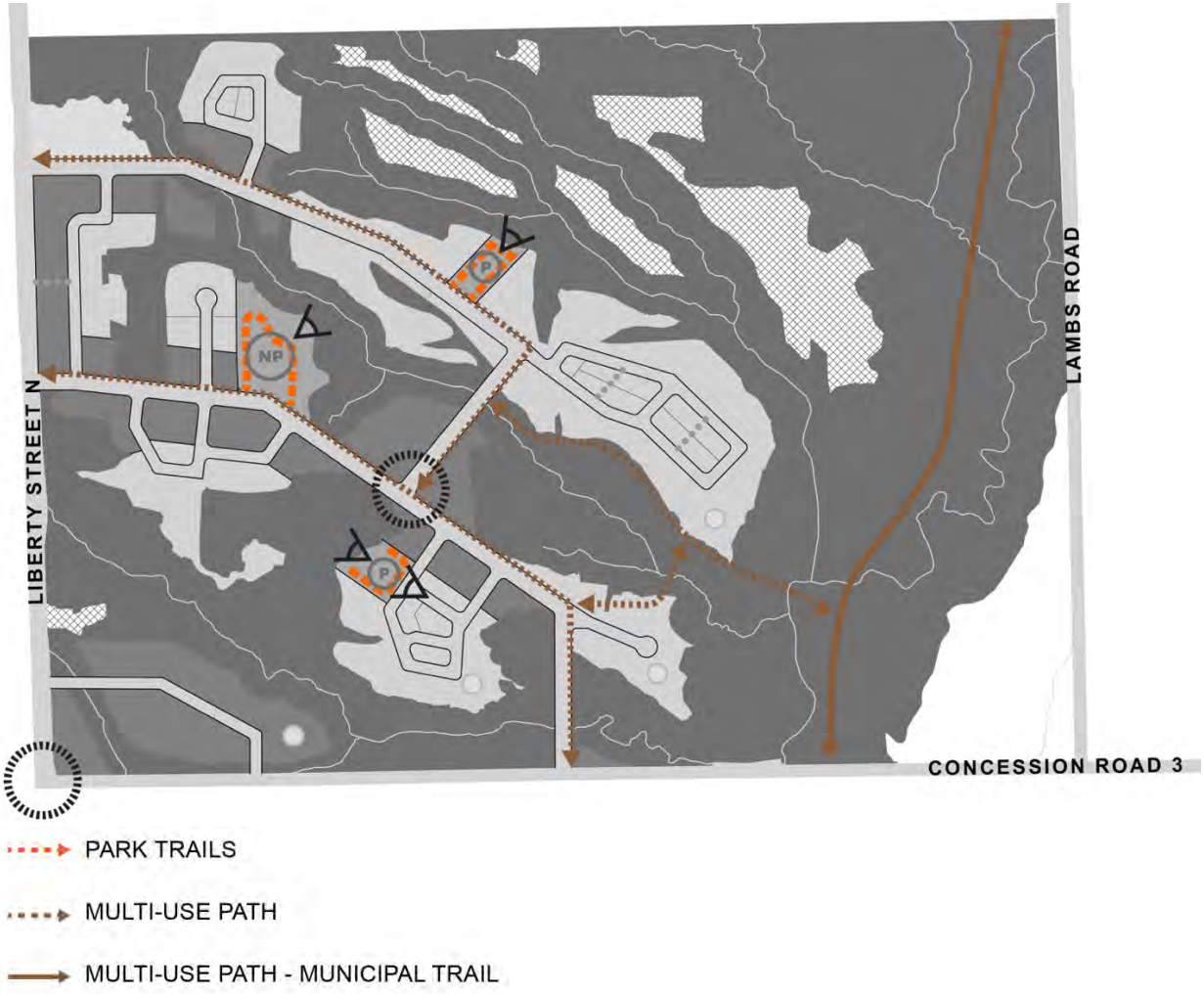
A Prominent Intersection is located at Liberty Street North and Concession Road 3, and at the central intersection of the Mearns Avenue extension and the new northern collector road. Prominent Intersections apply to all four corners of the intersection and will form the primary gateway into the community. These areas shall also have the greatest concentration of intensification.

2.4 PARKS AND EPA



Neighbourhood Parks are to serve the basic active and low intensity recreational needs of the surrounding residents. Neighbourhood parks are a minimum of 1.5 hectares in size depending on the area served and the activities to be provided. Parkettes are intended to augment the recreation, leisure and amenity needs of a neighbourhood. They will not contain sports fields. They are to be between 0.5 ha and 1 ha in size. They are required wherever the Municipality deems it necessary to augment or adjust the park requirements of any neighbourhood according to the Municipality's Parks, Recreation and Cultural Plan and COP policy 18.3.7.

2.5 TRAILS



Multi-use paths (MUPs), park **trails, and a Municipal MUP are proposed for Soper Springs.** MUPs are pathways separated from vehicular traffic that accommodate pedestrian and cycling routes. They are wider than typical sidewalks and usually indicate separate lanes for walking and cycling. Park trails are specific connections from parks to the MUP or public sidewalk, and are typically paved trails. **The Municipal MUP** is **either paved or unpaved** and **provides access to environmental areas such as the EPA. They are intended to keep users on a designated path to minimize disruption to the surrounding landscape. These trails are narrower than MUPs and usually have a surface of crushed aggregate or woodchip.** A MUP is proposed within the EPA connecting to the Municipal MUP Trail that runs along Soper Creek. The municipal MUPs generally follow the trails identified in Schedule K of the Official Plan connecting the community to the larger natural heritage system.

3 STREETS AND BLOCKS

Human scale streets and small blocks are important elements of a walkable neighbourhood. Creating a tight network of pedestrian- friendly streets and blocks helps people choose to walk rather than take their car, especially for short trips.

1. Streets and blocks should be designed to have a rectilinear or modified grid.
2. Irregular shaped blocks are appropriate when responding to topographic or unique conditions or to achieve distinct neighbourhood character.
3. Block lengths should not exceed 250m for collector or local roads to support active transportation where appropriate.
4. Block depths should be designed to maximize density, allow for appropriate built form typologies, and accommodate adequate setbacks, outdoor amenity spaces, service, parking and vehicle access arrangements, and transitions in scale.
5. Where possible, streets and blocks should be designed to protect existing mature trees and vegetation outside the EPA lands.
6. Streets and blocks should retain, protect and enhance significant cultural heritage resources.



Figure 5: An example of a modified grid layout of streets

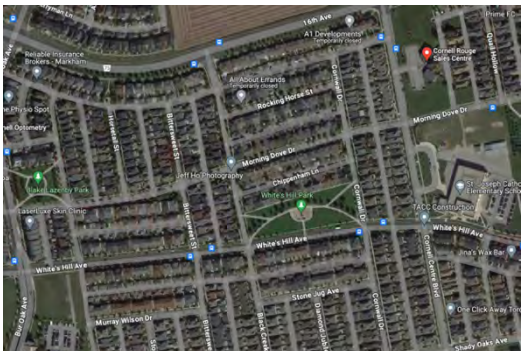


Figure 6: Example of a grid layout of streets

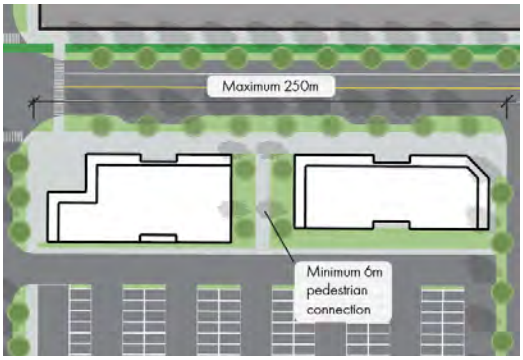


Figure 7: Blocks should be generally 250m wide



Figure 8: Parks and road terminus are arranged to offer views to the surrounding EPA

7. Design of streets should create views to landmarks or natural features through careful placement of intersections and terminus wherever possible.
8. Where feasible streets and blocks should run parallel to contours and minimize grade alteration and maximize views.
9. Cul-de-sac and dead-end streets are discouraged. If necessary, pedestrian connection from cul-de-sacs and dead-end streets to other parts of the community should be a priority.
10. Back-lotting or reverse lot frontages shall be avoided where feasible and not considered unless demonstrated to be the only option.
11. For blocks with grade-related residential units, encourage street and block alignments within 25-degrees of geographic east-west to maximize passive solar orientation of buildings.
12. Streets should terminate at public facilities such as parks, NHS or landmark buildings.

4 BUILT ENVIRONMENT

4.1 LOW RISE RESIDENTIAL

As identified in Section 2.3, Low Rise Residential accounts for most of the Urban Residential Areas of Soper Springs. Low-rise built form includes singles, semi-detached, all forms of townhouses, and low-rise apartments up to 3 storeys in height. Some higher density low-rise uses, identified in Section 2.3, permit mixed use buildings, apartments, and all forms of townhouse dwellings up to 3 storeys in height.

4.1.1 GENERAL

1. Demonstrate design excellence with architectural detailing of the highest quality possible for all buildings.
2. Variations in elevations and a mix of unit types are encouraged within a block and throughout a draft plan of subdivision.
3. The difference between adjacent building heights should generally not vary more than 1 storey, however greater variation may be permitted if compatibility between adjacent building forms can be demonstrated.
4. Generally, lots should be rectilinear in shape, where there are variations in topography and other limiting factors variations in shape are permitted.
5. Diversity in housing size and design should be facilitated by a variety of lot sizes.



Figure 9: Example of townhouses with high-quality architectural detail



Figure 10: Difference between adjacent buildings should generally not vary more than 1 storey

6. Orient buildings to the street, park or open space to establish a streetwall that contributes to an active public realm encouraging walking and cycling.
7. The siting and massing of dwellings should be compatible and harmonious with adjacent dwellings.
8. Site buildings close to the street edge to help define the street edge.
9. Due to their prominence at intersections, corner lots should have a high level of design detail.
10. Provide equal and prominent design consideration for both building elevations on corner lots.
11. Prominent architectural elements such as balconies, wraparound porches are encouraged.
12. Exposed elevations should include well-articulated fenestration.

4.1.2 SINGLE AND SEMI-DETACHED DWELLINGS

1. Create a consistent street wall by designing dwellings to frame the street edge with a consistent setback, with front doors, windows, and entry features facing the road.
2. Reduce the visual dominance of the garage and front driveway through the design of the front entrance and architectural elements.
3. Porches, stairs, canopies, and other entrance features are encouraged to give prominence to the front entrance.



Figure 11: Porches are encouraged to give prominence to the front entrance

4. Garages should not protrude beyond the main front wall of the dwelling unit or front porch. Garages should generally be set behind or flush with the main front wall or accessed from a rear lane. Where a garage protrudes beyond the main front wall it should be flush with the porch.

5. Both halves of a semi-detached dwelling should be compatible in terms of design expression. Symmetrical building elevations are encouraged. Asymmetrical elevations may be permitted provided it is complementary and harmonious to the overall dwelling.
6. Both semi-detached units should be fully attached above grade.
7. Maximize continuous green planting areas along the street by pairing driveways and garages to maximize the extent of continuous green planting area.



Figure 12: Example of a dwelling with a portico and recessed garage

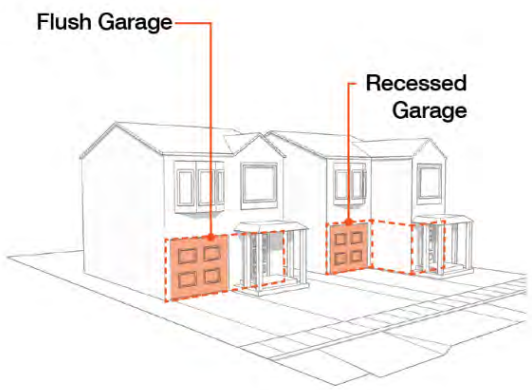


Figure 13: Set garages flush or behind the main front wall to reduce visual dominance of garages

4.1.3 TOWNHOUSES

1. Coordinate the siting, massing, and façade design of townhouse on a block-by-block basis.
2. Visually unite and articulate each townhouse block to provide variation between units.
3. Provide a variety in roof designs to break up the massing of the units.
4. Use traditional gables and dormers, or more contemporary designs that include cantilevers and parapet details to break up the roof massing.
5. Where possible, the main roof should appear as one roof and reflect the architectural style of the block units.
6. Blocks of attached townhouse units shall be oriented to the street with integrated front garages accessed from the street. For rear lane townhouses an attached or detached garage will be located at the rear of the block and accessed from a lane.
7. Orient the main front entry to the front lot line for interior units, while the entry of the corner unit is encouraged to be oriented to the exterior lot line.



Figure 14: Example of a rear-lane townhouse



Figure 15: Example of a back-to-back townhouse



Figure 16: Example of a rear-lane townhouse

8. The massing and built form of townhouse units adjacent to single and semi-detached dwellings shall be broken down with architectural elements to promote visual integration.

9. Garages should not protrude beyond the main front wall of the dwelling unit and front garages should not exceed 50% of the width of the unit and should be paired to allow for more substantial front yard green space.
10. Rows of street townhouses should generally be limited to a maximum of 6 units.
11. Utility meters shall be screened from public view and integrated into the design of the units using wall recesses, enclosures, or insetting within the building walls. Rear lane units should locate utility meters at the rear lot line where allowed by the utility provider.

4.1.4 GARAGES AND DRIVEWAYS

1. Design driveways to be as far away from parks, schools and open space features, where possible.
2. The width of the driveway should be no larger than the interior width of the garage.
3. Garages should not dominate the streetscape.



Figure 17: Reduce visual prominence of garages

4.2 RESIDENTIAL MID-RISE

For the purposes of these guidelines a mid-rise building is defined as a building between 4 and 6 storeys in height.

1. The Local Corridor should include the greatest heights and massing, typically with the greatest heights at the corner of the Prominent Intersection.

2. A sun/shadow and/or wind study may be required to demonstrate there is no adverse impacts on public parks, sidewalks, private amenity spaces and adjacent development.
3. Transition may be required such as a local road to separate different built form, lower heights adjacent low rise.
4. Minimize the design of a slab building and reduce the overall massing with a maximum building length of generally 60m.
5. To help mitigate overlook and maximize sunlight to the lower levels of the buildings, a minimum separation distance of generally 15m is required. This space should be void of any building projections.





Figure 18: Examples of mid-rise built form

6. Break up the building mass with changes in material, balconies, stepbacks and building articulation.
7. Mid-rise apartment buildings should include a minimum 1.5m building stepback above the 6th storey to aid with transition and prevent slab buildings. Where a mid-rise apartment building abuts a low-rise designation provide additional transition through increased building setbacks and stepbacks to prevent overlook to low-rise dwellings.
8. Pair corner buildings at either side of a Prominent Intersection to create a gateway to the community.
9. Orient visual and accessible primary building entrances to the public roads.
10. Provide a 2m to 5m private setback at grade for residential units for pedestrian access, privacy and private amenity areas, by using screening, hard and soft landscape treatments and grade changes within the setbacks

4.3 MID-RISE MIXED USE



Figure 19: Example of built form transition for a mixed use building

1. Distinguish residential entrances from commercial entrances, through building design and location.
2. At-grade retail shall be broken down in scale and designed with a finer grain frontage.
3. Permitted retail uses may be developed as stand-alone commercial development or in a mixed use format with residential uses above the ground floor of commercial uses.



Figure 20: Example of a live-work townhouse

4. Active at-grade uses such as cafes, patios, should be provided to animate the street and encourage pedestrian activity where appropriate.

5. The 1st floor of a mixed use building should have a minimum height of 4.5m.
6. Balconies above the 1st floor are encouraged.
7. Temporary parking and bicycle storage should be incorporated into all buildings wherever possible.
8. Parking within the Local Corridor is encouraged to be underground. Where underground is not feasible structured parking could be acceptable. Surface parking is the least preferred.
9. Where surface parking is required, it shall be located at the rear or side of the building.
10. Utility meters, air conditioning units, and similar infrastructure should be incorporated as part of the building design, and be screened and not visible from the public realm.
11. Screen all rooftop mechanicals and telecom infrastructure from view with the design of the building or parapet walls.
12. Servicing, loading and parking access shall be accessed from the rear or side of the building.





Figure 21: Examples of mid-rise buildings with built from transition to the rear of the building



Figure 22: Screen rooftop equipment and utilities from the public view

4.4 PROMINENT INTERSECTIONS

1. Design Prominent Intersections as a community focal points.
2. Prominent Intersections will be emphasized through building massing, architectural treatment and materials, street furniture, landscaping, and public art.



Figure 23: Prominent Intersections should include street furniture such as bike racks, landscaping, and high-quality streetscape materials

3. The intersection will be the primary gateway to the Soper Springs Community. Any commercial use buildings surrounding the Prominent Intersections shall provide special architectural elements such as corner design, massing and height, awnings, and entrance door features.
4. Privately-owned publicly-accessible open spaces, where provided, should be located at the Prominent Intersection to contribute to its visual prominence, improve the relationship of built form to the public right-of-way, and contribute to the area's identity.



Figure 24: Example of corner design for a Prominent Intersection

5 MOBILITY

5.1 ACTIVE TRANSPORTATION

The active transportation network consists of pedestrian, cycling and trail networks. The Soper Springs active transportation network provides opportunities for the community to access different mobility options. Sidewalks, Trails and MUPs provide facilities for walking, cycling and other human powered forms of transportation. The network will be designed to be accessible for all ages and abilities.



5.1.1 GENERAL GUIDELINES

1. Complimenting the road network, the active transportation facilities will be well connected and facilitate permeability and connectivity both internally and externally.
2. Ensure the network is safe and comfortable for all users.
3. Implement wayfinding that directs users to intersections, landmarks and both on and off-street facilities.



Figure 25: Design multi-use paths in accordance with Municipal standards

4. Year-round use is encouraged through well maintained connections for sidewalks and trails to destinations such as parks, transit stops and commercial uses.
5. Ensure off-road trails or MUPs provide a continuous and connected network that lead to destinations such as a transit stops or Local Corridor.
6. Mid-block pedestrian connections are encouraged for blocks longer than 250 metres.



5.1.2 TRAILS

1. Trails are an important part of the active transportation network and should be connected to sidewalks and MUPs.
2. Trails should be designed to serve all ages and abilities by minimizing grading and sloping between development areas.
3. Trail design shall comply with AODA and Municipality of Clarington standards.
4. Clear signage should identify shared or dedicated use and network layout for pedestrians and/or cyclists.
5. Generally permitted adjacent to the EPA, trails should connect to parks and the trail system to provide opportunity for passive recreation.

5.1.3 CYCLING INFRASTRUCTURE

1. Offer dedicated or shared cycling infrastructure off-road throughout the community.
2. Cycling infrastructure shall be designed to meet MOC design standards.
3. Grading and sloping should be minimized to meet accessibility requirements and serve all users.
4. Provide clear signage shall be provided for all cycling routes where applicable.



Figure 26: Example of a multi-use path which includes separated lanes for pedestrians and cyclists

5.2 TRANSIT

1. Street design should consider locations of transit stops and shelters.
2. Incorporate appropriate amenities for all transit stops, including but not limited to transit shelters, seating, tactile paving, bicycle racks, and appropriate lighting.
3. Locate transit stops near active transportation nodes and other focal points of the community, including but not limited to parks and open spaces, and building entrances of mixed use, retail and commercial developments.
4. Transit signage shall be legible and prominent. Streetscape elements such as lighting and bike racks, should be placed near transit stops.
5. Plant shade trees near transit stops to provide relief from the sun.
6. Wayfinding and appropriate signage throughout the community will indicate transit stops and facilities.



Figure 27: Example of a transit shelter

5.3 ROAD TYPOLOGIES AND CROSS SECTIONS

The design of roads within the Soper Springs community shall facilitate the movement of all users in a safe, comfortable and accessible environment. The network of roads consists of Collector Roads and Local Roads and is bound by Arterial Roads.

Detailed road designs are to be finalized as part of the review process in accordance with MOC's engineering standards. Soper Springs is surrounded by 3 Type B Arterial Roads. Cross Sections for Liberty Street and Concession Road 3, as well as typical sections for collector and local roads are provided below.

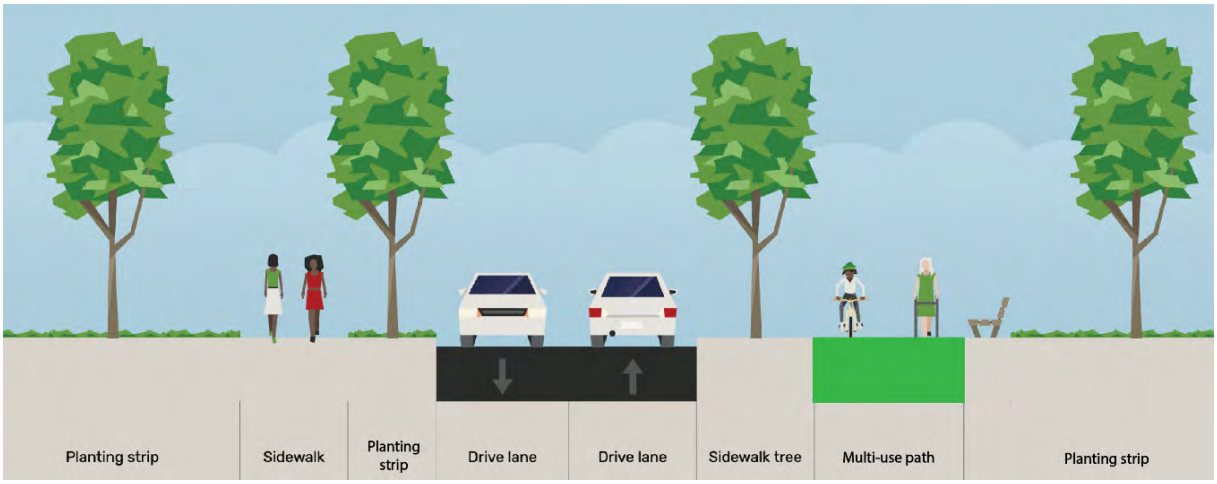


Figure 28: Recommended 30m wide cross-section for Liberty Street North and Concession Road 3 (Cross section conceptual and NTS)

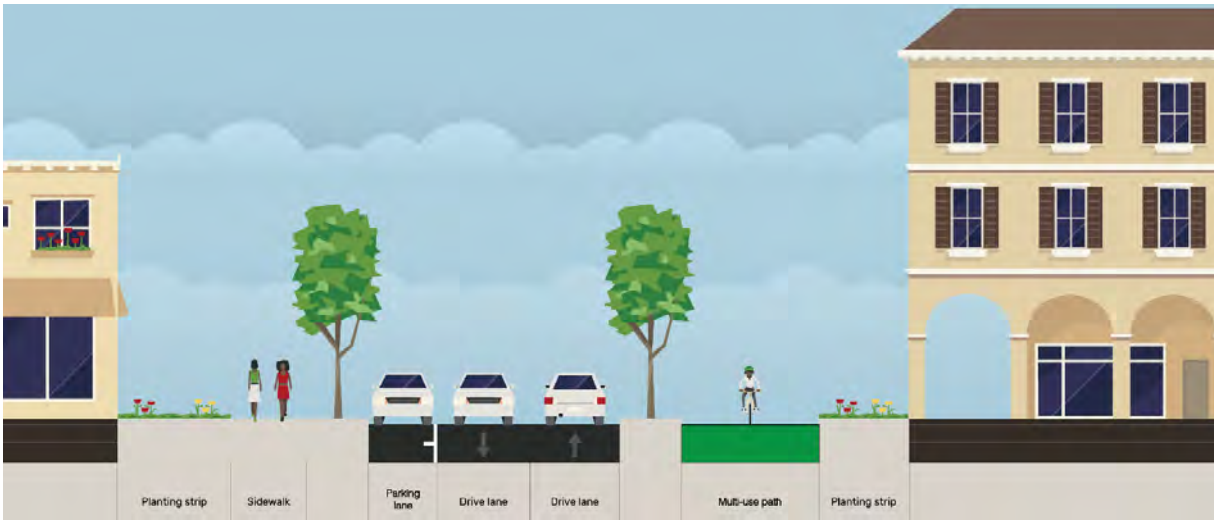


Figure 29: Recommended 23m wide collector road cross-section, prepared by TYLin (Cross section conceptual and NTS)

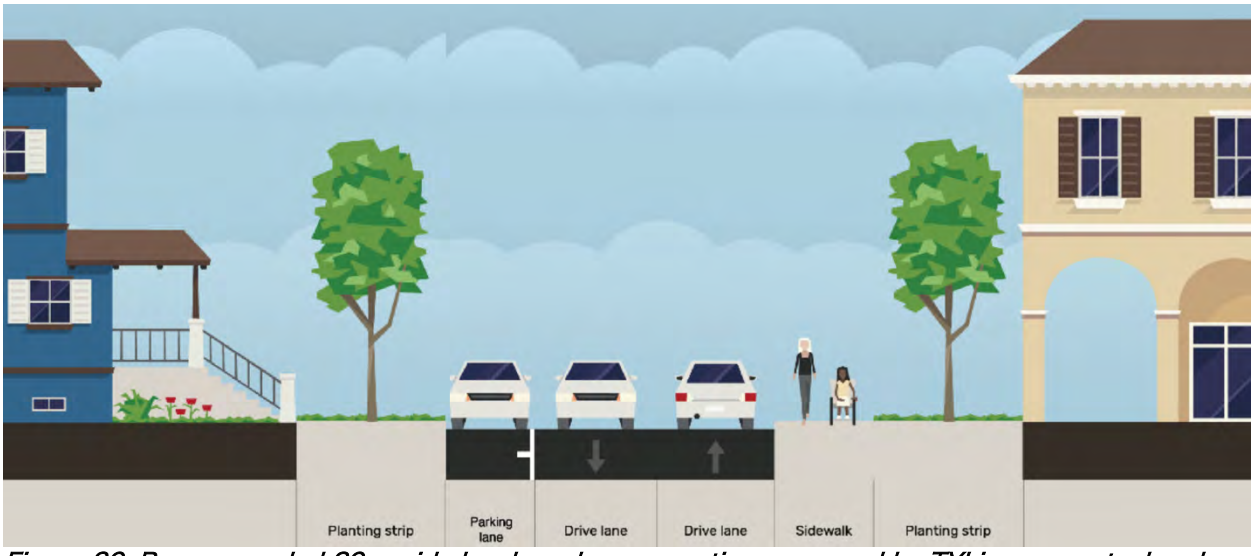


Figure 30: Recommended 20m wide local road cross-section, prepared by TYLin, conceptual and NTS

5.3.1 STREETSCAPE ELEMENTS

Primarily located on the boulevard, streetscape elements form an important part of the open space system and refers to components of the public realm such as street trees, landscaping, furniture, lighting, public art, and utilities. Where possible, green infrastructure should be considered in the boulevard. Streetscape elements help to create an attractive, cohesive and safe streetscape within Soper Springs.

5.3.2 SIDEWALKS

1. Sidewalks must be direct and continuous and be provided on at least one side of the street.
2. Sidewalks shall be constructed to municipal standards, with their width responding to the land use context and accessibility requirements.
3. The sidewalk network should be designed to connect to adjoining trails and MUPs and transit stops.
4. Connect sidewalks with other public realm components such as parks and open spaces and tie directly with trails.



Figure 31: Example of an urbanized streetscape

5.3.3 STREET TREES AND PLANTING

1. Plant street trees with sufficient soil volumes between the curb and the sidewalk.
2. A variety of native species should be planted to enhance biodiversity.
3. Generally, shade tree varieties shall be selected over smaller ornamental varieties.
4. Tree species should be selected to support the character of distinct neighbourhoods.



Figure 32: Example of boulevard planting

5. For mixed use developments, enhanced landscaping should be considered.



Figure 33: Example of enhanced landscaping with seating areas, planters, distinctive paving patterns, and street trees

5.3.4 STREET LIGHTING

1. Light fixture design should support and enhance the identity of corridors and neighbourhoods and address functional requirements.
2. Pedestrian lighting should be provided in areas with greater pedestrian activity.
3. Pedestrian lighting may be integrated with street lighting poles or located as stand-alone fixtures within the boulevard.

5.3.5 UTILITY PLACEMENT

1. Utilities such as gas, hydro, cable and telecommunications should be located underground wherever feasible. If utilities are located above ground, they should be consolidated and screened from view.



Figure 34: Utilities should be consolidated and screened from view

2. The location of street trees, landscaping and furniture should be coordinated with underground and above-ground utilities and planned concurrently.
3. The placement of above-ground utilities shall not obstruct pedestrian movement in the sidewalk, at intersections, view corridors, intersections, or daylighting triangles. Where this is unavoidable, utilities should be consolidated and screened, and public art opportunities should be considered in discussions with appropriate utility agencies.
4. Site above-ground utilities, such as Bell DMS Units, Micro Hubs, transformers and pedestals, to minimize their negative visual impact on the public realm. Avoid locating them at the end of “T” intersections, view corridors or day light triangles.

6 NATURAL ENVIRONMENT

6.1 NATURAL HERITAGE FEATURES

The Environmental Protection Area (EPA) is a key structural element of the Soper Springs Community. The EPA will contribute to Soper Springs character. Protection and integration are important components of the design of the community.

6.1.1 GENERAL GUIDELINES

1. Provide views, vistas and connections to the EPA by orienting streets and utilizing terminal views at the end of prominent streets.
2. Ensure connectivity between natural heritage features, maintaining, and where possible improving or restoring corridor function.
3. Consider connections, provided through such elements as parks and/or trails, to provide linkages to the EPA and municipal trail.
4. The preservation of existing vegetation, particularly mature trees, is strongly encouraged.





Figure 35: Place parks in proximity or adjacent to EPAs

6.1.2 WOODLANDS

1. To help mitigate heat island impacts preserve and expand existing tree cover.
2. Help to establish local ecological features through opportunities for naturalized plantings and landscape restoration.
3. Where back-lotting is required onto woodlands, discourage direct access from private properties.
4. Encourage access through trails to minimize long term impact.
5. Discourage lighting near woodlands to protect ecological features and functions.



Figure 36: Consider the inclusion of boardwalks in EPAs



Figure 37: Encourage access to trails

6.1.3 URBAN FOREST

1. Contribute to the success of the urban forest by planting native shade trees to help heat island effect, sequestering greenhouse gases, providing shade in the summer, separating pedestrians from vehicular traffic, and contributing to more appealing sidewalks and streets.
2. For singles, semis and townhouses, provide a minimum of 1 tree per lot; for multi-unit sites or commercial sites, provide as many trees as feasible, ensuring a minimum soil volume.



Figure 38: Contribute to the success of the urban forest by planting large native shade tree to help heat island effect

3. Provide street trees on both sides of the road in the public right-of-way wherever possible.
4. Encourage a variety of tree species along each road that are non-invasive, drought and salt tolerant, and low maintenance.
5. A double row of trees may be used in key areas, such as adjacent to parks and where a wider boulevard exists.
6. For more urban and mixed use areas, provide a minimum 30m^3 of soil volume using soil cells such as Silva-cells, continuous planting trenches, structural soil.



Figure 39: Soil cells can provide the required soil volume for street trees in urbanized areas



Figure 40: A double row of trees may be used in key areas, such as adjacent to parks and where a wider boulevard exists

6.2 PARKS AND OPEN SPACE

A vibrant community includes parks and open spaces that facilitate gathering and recreation and support ecological function. The parks and open space system includes parks, trails, stormwater management ponds and EPAs. Soper Springs parks and open space system will be functional and safe.

6.2.1 NEIGHBOURHOOD PARKS

1. Neighbourhood Parks should be located on collector roads and where possible adjacent to the NHS.
2. Locate Neighbourhood Parks within a short (400m to 800m) walking distance of all residents creating the opportunity for physical activity and gathering.
3. Neighbourhood Parks between 1.5 to 3 hectares in size and configured to accommodate both passive and active programming.
4. Connect parks to the trail system.
5. Provide on-street parking adjacent to the park.
6. Minimize back lotting and maximize exposure to a public street(s) through single loaded roads. Neighbourhood Parks should be designed with a minimum 50% public road frontage.
7. Signage and tree planting should clearly define access to the park.
8. Accessible and visible bicycle parking should be located on hard surfaces adjacent to play areas and entrances.



Figure 41: Neighbourhood Parks should accommodate both passive and active programming



Figure 42: Include wayfinding signage in parks

6.2.2 PARKETTES

1. Parkettes vary in size from 0.5 to 1 ha and can be accessed by walking within a short walking distance (400 m).
2. Parkettes should be designed with a minimum 30% public road frontage. The remainder is encouraged to front a natural heritage feature.
3. Encourage safe and efficient pedestrian circulation with pathways within the Parkette.
4. Provide areas of seating and shade as part of the design of the Parkette.





Figure 43: Examples of Parkettes

6.2.3 PRIVATELY OWNED PUBLICLY ACCESSIBLE OPEN SPACES

1. Privately Owned Publicly Accessible Open Spaces (POPS) can include highly visible urban squares and plazas.
2. Reinforce their role in the community open space network by locating adjacent to key destinations and pedestrian connections.
3. POPS should contribute to the public realm through high quality design and integration with the adjacent built form.
4. They should be highly visible and located within Local Corridors at Prominent Intersections.



Figure 44: Example of unique design features that may be accommodated in parks and POPS

7 GREEN INFRASTRUCTURE AND BUILDINGS

7.1 ENERGY CONSERVATION

1. Consider renewable energy sources that could be employed for the use of solar thermal and photovoltaic equipment, and/or wind power.
2. Enhance the use of passive buildings systems through consideration of building orientation to maximize the potential for sunlight and natural ventilation.
3. Encourage new low and medium density residential buildings to be Solar Ready, which includes all the necessary piping and equipment needed to install a rooftop solar power system.
4. Consider designing mid-rise buildings to reflect sunlight and absorb less heat using cool roofs that can be made of a highly reflective type of paint, a sheet covering, or highly reflective tiles or shingles. Consider cool roofing material with a minimum initial solar reflectance of 0.65 and minimum thermal emittance of 0.90.
5. Mitigate heat island impacts with consideration of paving material with high solar reflectance, strategic use of deciduous trees or preserve existing trees as part of a free cooling strategy to help with evapotranspiration and shading of sidewalks and hard surface areas in summer and solar access in winter.



Figure 45: Solar panels



Figure 47: Charging stations

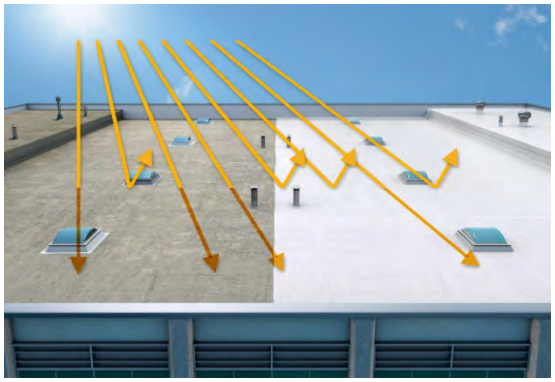


Figure 46: White roofs help reduce the urban heat island effect by reflecting sunlight

6. Consider the provision of charging stations in parking areas of mixed uses, institutional uses, or within underground garages for multi-storey residential buildings.
7. Grade related residential unit driveways are encouraged to be paved with light-coloured material to reduce the heat island effect.

7.2 WATER USE AND MANAGEMENT

1. Where possible implement green infrastructure, such as bioswales, within public parks and the public right-of-way to enhance ground water infiltration and improve water quality as part of a comprehensive water management plan.
2. Encourage the inclusion of LID features such as bio-swales, innovative stormwater practices, constructed wetlands, at-source infiltration, greywater re-use system, and alternative filtration systems such as treatment trains.
3. Consider the use of porous or permeable pavement in key locations such as on street parking and private parking lots as part of a stormwater run-off management strategy for promoting groundwater infiltration and water quality treatment.
4. Where possible, implement a rainwater harvesting program to provide the passive irrigation of public and/ or private greenspace, including absorbent landscaping, cisterns, rain barrels, underground storage tanks, infiltration trenches, etc.
5. Plant native, drought-tolerant plants to conserve water and other resources





Figure 48: Bioswales help to collect runoff after storm events



Figure 49: Example of a porous pavement that contributes to runoff management

on a residential and community-wide level.

7.3 STORMWATER MANAGEMENT

1. Consider implementing a comprehensive rainwater and water recharge strategy in conjunction with required stormwater management ponds.
2. Use rainwater harvesting, on-site infiltration, and evapotranspiration to retain stormwater on-site where possible.



Figure 50: Example of a Bioswale

3. Consider the use of a greywater systems and rainwater harvesting for watering lawns, gardening, to reduce demand on potable water use.
4. Encourage minimizing the use of hard surfaces by directing flow to landscaped areas and to reduce the volume of run-off into the storm drainage system.



with tree and shrub planting in Barrie

5. Consider the use of infiltration trenches, dry swales and naturalized bioswales adjacent to parking areas to improve on-site infiltration.
6. Encourage minimizing the risk of flooding by incorporating the natural drainage pattern.

7.4 MATERIAL RESOURCES AND SOLID WASTE

1. Incorporate strategies that emphasize targets for a higher diversion rate in recycling for the plan area.
2. Consider the use of recycled/reclaimed materials for new infrastructure including roadways, parking lots, sidewalks, unit paving, curbs, water retention tanks and



Figure 52: Reclaimed materials can be used for new infrastructure such as gabion walls

vaults, stormwater management ponds, sanitary sewers, and/or water pipes.

7.5 AIR QUALITY

1. Consider developer sponsored transit passes to promote transit ridership.
2. Ensure the active transportation network provides for increased mobility choices to promote walking, cycling and transit to aid in the reduction of short trips by cars.
3. Consider providing Electric Vehicle (EV) charging station rough-ins for 20% of parking spaces in multi-unit residential buildings.
4. Consider providing EV charging station rough-ins for 15% of parking spaces in non-residential buildings.
5. Consider providing EV charging stations for 5% of parking spaces in non-residential buildings.
6. Consider providing priority parking for carpool, ride share, low emissions and EVs at 5% for the total parking.



Figure 53: Accommodate electric vehicle charging spots in parking lots



Figure 54: Consider including carpool parking spots in parking lots

7. Minimize the number of parking spaces provided, particularly in areas served by efficient transit.
8. Consider buying local building materials and minimize the distance travelled to reach a construction site.

7.6 LIGHTING

1. Work to eliminate light pollution on natural areas with the installation of Dark Sky/Nighttime Friendly compliant light fixtures.



Figure 55: Choose light fixture that are Dark Sky Compliant that direct light down to minimize light spillage onto other properties

2. Choose light fixture that direct light down to minimize light spillage onto other properties.
3. Reduce energy use by installing high efficiency street lighting.
4. Consider opportunities for renewable energy use to reduce electric energy supply in the public realm, such as solar powered lighting for natural trails and park pathways.

7.7 GREEN BUILDINGS

The construction of buildings is a large contributor to greenhouse gas emissions. Any changes or improvements to where materials are sourced, the type of materials, and construction practices will help reduce the number of emissions.

1. Encourage the construction of energy efficient buildings through third-party accreditation such as LEED.
2. Orient buildings for opportunities for south facing windows to maximize the potential for passive and active solar energy.
3. Minimize surface runoff and reduce urban heat island effect through the installation of green roofs or white roofs, where possible.

7.8 STEWARDSHIP

1. Consider displaying in the sales centre, promotional information on the sustainable features of both the community and builders house designs.
2. Consider including education packages to residents regarding waste reduction, energy and water efficiency, and access to transit.
3. Design subdivision and site plans to promote current suitability aspects of development.



Figure 56: signage in restoration areas to facilitate education opportunities