CITY OF THUNDER BAY
URBAN DESIGN & LANDSCAPE GUIDELINES

CITY OF Thunder Bay
Superior by Nature

EFFECTIVE JUNE 25, 2024

LAND ACKNOWLEDGEMENT

As we come together in this beautiful place, where the Thunder Bird hugs the land in its wings, where Anemki Wajiw – Thunder Mountain, welcomes all, where Nanabijou – the Sleeping Giant, rests, may you be prompted to pay respect and to acknowledge the land and with it, certain truths.

This land is the traditional land of the Anishnawbe people and is where they and many other peoples have gathered for time immemorial.

This sacred place, originally known as Anemki Wequedong, is now also the Treaty Territory of the Fort William First Nation , signatories to the Robinson-Superior Treaty in 1850.

This place is where, with the contribution of the Métis people in this area, a small thriving community formed into what has now become Thunder Bay.

Yet it is more than what these places are called, that we must learn to acknowledge and respect. We must acknowledge and respect the relationships.

The relationship to the Land – where we are the custodians and caretakers for the next generations.

The relationship to the Water – water is life.

The relationship to the Water Carriers – the women, who hold the sacred teachings about the water.

The relationship with the Plants – that help us live and sustain us with food and medicines.

The relationship with all our Relations – the four legged, the hooved, the winged. All the ones that walk, swim and crawl and the teaching that we are not above creation, we are a sacred part of creation.

The relationship with Mother Earth – who nurtures and sustains us all. Without her, we could not be here.

The relationship with our Ancestors – who pass along teachings of the First Peoples to help us live and walk in a good way.

We invite you to take a moment to acknowledge all these things and show respect. And by doing so, we humbly strive to live our lives – Mino Bimaadiziwin (Good Life) and to walk in a good way.

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SECTION 1
INTRODUCTION

SECTION 1: INTRODUCTION

1.1 Role of the Guidelines

Initially adopted by the City of Thunder Bay in December 2012, these Urban Design and Landscaping Guidelines have been updated to align with the City's 2022 Zoning By-law (By-law 1/2022). The overarching vision and guiding principles that underpinned the original Guidelines remain relevant and continue to serve as the foundation for this update. Aside from some minor updates to the public realm and general building and site design performance standards, the most substantive updates are reflected in the land use specific performance standards which follow and augment the current zoning provisions.

The City of Thunder Bay Official Plan recommends City-wide Urban Design and Landscaping Guidelines to provide detailed direction for the implementation of the policies and objectives of the Official Plan, and as a complement to zoning regulations.

Urban design guidelines are an essential tool to ensure high-quality development as Thunder Bay evolves from a primarily resource and industrial-based economy to an active, diverse, and healthy city. The guidelines articulate the aspirations of the Official Plan and the community, and will assist Council, City Staff, land owners, developers, and the public with clear directions to guide development throughout the City.

The urban design guidelines build on the vision and guiding principles of the Clean, Green, and Beautiful Committee's purpose to enhance the function, look and feel of Thunder Bay through public art, beautification, heritage, and environmental greening initiatives. As such, a set of City-wide guiding principles have been established and will be supported by the detailed Performance Standards contained within this document. To reflect the variation in land-uses throughout the City, the Performance Standards are organized to distinguish between Main Streets, streets within the North and South Cores, and development outside of these areas (i.e., residential, commercial, institutional, and employment areas).

The Performance Standards should be applied during the design, review and approvals process for new development and redevelopment across the City, including private development, as well as public works undertaken by City departments. They outline best urban design practices in city building through innovation in sustainable development and design excellence.

The guidelines should be used as a key reference in the pre-design phase of project implementation and as criteria in evaluating project proposals through the development application process.

Guidelines cannot, in themselves, result in high-quality city building. The City must lead by example and embody best practices in future capital projects as a way of setting a high standard for the private sector. A civic culture that embraces and values high quality urban form must be nurtured over time through public education and awareness activities. Partnerships between government, educational institutions, professions, the business and development community, and the public are key to a successful implementation process. It is therefore recommended that the City review other parallel mechanisms to assist in implementation including an urban design awards program; Peer Reviews; a Design Review Panel to assist in project review, and other outreach programs

1.2 Document Structure

The City of Thunder Bay Urban Design Guidelines are comprised of six sections:

Section 1.0 - Introduction

Section 1.0 introduces the guidelines, providing an overview of the study and process and describing the application of the guidelines. A brief summary of the existing planning framework is provided.

Section 2.0 - Urban Design Vision & Guiding Principles

Section 2.0 outlines the City's Urban Design Vision, which emerged from the City's Clean, Green and Beautiful initiative. To achieve this Vision, and inform the preparation of the guidelines, a set of 10 Guiding Principles is provided.

Section 3.0 - Performance Standards: Public Realm

Section 3.0 focuses on the development of the City at the broadest level, providing directions to ensure that future development is in support of a sustainable urban framework. Performance Standards focus on the elements that define the City, including the natural foundation; the North and South Cores; the City's Main Streets including the three 'Image Routes' designated to date; and the supporting street networks.

Section 4.0 - Performance Standards: General Building & Site Design

Section 4.0 augments the guidelines provided in the previous section, providing detailed Performance Standards for built form and site design by land-use. The section begins by providing Performance Standards that are applicable to all buildings within the City, before providing specific standards related to residential, mixed-use, commercial, office, and industrial buildings.

Section 5.0 - Performance Standards: Land Use Specific

Aligned with the 2022 Zoning By-law, Section 5.0 augments the guidelines provided in the previous sections, detailing Performance Standards related to building types for specific land uses including Residential, Employment, Commercial and Institutional Uses.

Section 6.0 - Implementation Recommendations

Section 6.0 provides an overview of the implementation measures and tools at the City's disposal to ensure the successful use and application of these Performance Standards. The Implementation Section also provides a performance standard checklist to be used by designers to evaluate and articulate their application of the standards.

1.3 Existing Planning Framework

1.3.1 Provincial Policy Statement

Updated in 2020, the Provincial Policy Statement (PPS) provides direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system under the Planning Act, the PPS sets the policy foundation for regulating the efficient development and use of land. While municipalities are the primary decision-makers for local communities, all municipal Official Plans and other planning related documents and decisions must be consistent with the PPS.

The PPS encourages intensification by directing growth within settlement areas and away from significant or sensitive natural resources. It recognizes that the wise management of development involves directing, promoting or sustaining growth. Land use must be carefully managed to accommodate appropriate development to meet the full range of current and future needs, while achieving efficient development patterns.

Efficient development patterns optimize the use of land, resources, and public investment in infrastructure and public service facilities. These land use patterns promote a mix of housing, employment, parks and open spaces, and transportation choices that facilitate pedestrian mobility, transit, and other modes of travel. They also support the financial well-being of the Province and municipalities over the long term, and minimize undesirable effects of development, including impacts on air, water and other natural resources.

The PPS is a progressive policy tool that supports Ontario's goal to build more sustainable communities that enable a high quality of life. For instance, mixed-use and higher densities within existing urban boundaries can result in more efficient city building, public transit, and active transportation. It is providing improved conditions to assist in the revitalization of downtown areas that have suffered from patterns of low-density suburban sprawl. In turn, as cities evolve toward a more compact, mixed-use form, municipal services and investments in infrastructure are becoming more efficient and cost-effective.

Growth Plan for Northern Ontario

Released in March 2011, the Growth Plan for Northern Ontario guides Provincial decision-making and investment for the next 25 years. The Growth Plan aims to strengthen the economy of the North by diversifying the region's traditional resource-based industries, stimulating new investment and entrepreneurship, and nurturing new and emerging sectors with high growth potential. Key recommendations include:

- Attract employment uses, including office and retail;
- Accommodate higher densities within existing urban boundaries;
- Achieve a vibrant, welcoming and inclusive community identity that builds on unique local features; and,
- Provide a range of amenities to residents and visitors, including shopping, entertainment, transportation and lodging, and educational, health, social and cultural services.

The Growth Plan also encourages the development of a revitalization strategy that will set minimum target areas for intensification and that will prioritize sites for redevelopment. The Growth Plan states explicitly that the preferred location for major capital investments, such as post-secondary education and training, research and innovation centres, and major cultural institutions, will be in municipalities with a sustainable revitalization strategy in place and in synchrony with their Official Plan.

1.3.3 Strategic Plan

The City of Thunder Bay Strategic Plan guides the decisions and actions of City Council and Administration. Periodically updated to reflect the current Council's vision for the future and the City's emerging priorities, its goals are longer term and influence – directly and indirectly – the City's land use planning directions and physical development.

1.3.4 Official Plan

Updated in 2019, the City of Thunder Bay Official Plan guides development and redevelopment to preserve and enhance the City's natural environment and cultural heritage, and to maximize new employment opportunities. The Official Plan states that, with sound goals, objectives, and policies, municipal planning can be an effective, efficient and consistent decision making process that will promote smart development. To achieve the vision for Thunder Bay as a city that is healthy, safe, successful, and adaptable, the Official Plan includes general goals, objectives, and policies, which are informed by the following four broad approaches:

- Environmental Sustainability Approach;
- Climate Adaptation Approach;
- Economic Approach; and
- Healthy and Safe Community Approach.

All decisions and actions taken by Council and Administration shall be guided by these approaches. In particular, the Official Plan forms the basis for decisions regarding the City's Zoning By-law, other land use controls, and future planning initiatives.

1.3.4.1 Urban Forestry

The Official Plan acknowledges the significance of street trees and forested areas. In order to improve the aesthetic quality of the urban environment, the Official Plan advocates increasing the stock of trees through planting programmes, adhering to high standards regarding maintenance and replacement, and encouraging developers to retain existing trees wherever practical. In addition, the City places a high priority on the protection and wise management of natural heritage features.

1.3.4.2 Site Plan Control

The Planning Act enables the City to designate lands for Site Plan Control on a case-by-case basis. Due to their value as a resident and tourism draw in the City, Regional Commercial, Community Commercial, Service Commercial, and Mixed-Use Waterfront Commercial areas are prioritized for Site Plan Control. Generally located along the Image Routes, these land use

designations deserve special attention as they usually involve complex site planning issues and concerns. In order to minimize negative externalities, the Official Plan elaborates the need to exert greater control over site design, including the location of proposed buildings, massing, landscaping treatment, exterior lighting, signage, and the design and layout of parking. Through this process, the City aims to ensure development that is safe, accessible, and sustainable while being compatible with adjacent areas, and enforceable in the long-term.

1.3.5 Zoning By-law

Council approved its new Zoning By-law in 2022 to bring it into conformity with the Official Plan and improve the quality of the built environment. The Zoning By-law is a regulatory tool that divides the City into land use zones, each with different land use permissions and regulations. These guidelines have been updated to align with, and complement, the use-specific standards articulated in the Zoning By-law, particularly in regards to built form, site planning, and landscaping.

1.3.6 Community Improvement Plans

Community Improvement Plans (CIP) are a tool that allows the City to offer grants for covering all or part of the cost of improvement projects in specific areas in need of development and / or redevelopment. There are two active CIPs, the Airport CIP (updated in 2019) and the Strategic Core Areas CIP (updated in 2021), which includes three central designated project areas: the North Core, South Core, and Westfort.

The purpose of CIPs is to assist property owners and tenants with financial incentives to rehabilitate or preserve buildings within the CIP areas. In addition to promoting revitalization and regeneration of the building stock, CIPs have the ability to attract tourism and business development, and to increase economic opportunities. Focused primarily on urban regeneration, the active CIPs offer a variety of grants that help cover eligible project costs, including but not limited to programs for planning and building fees, façade improvements, and interior renovations / conversions.

1.3.7 Transportation Master Plan and Active Transportation Plan

The Transportation Master Plan (TMP) is a strategic planning document that will guide the City's transportation infrastructure investments for the next 20 years and beyond.

Active transportation refers to any form of travel that is human-powered or by assistive devices, such as walking, cycling, and using wheelchairs, scooters, or skateboards. Prepared as part of the Thunder Bay Transportation Master Plan (TMP), the Active Transportation Plan was approved by Council in 2019 as an update to the original 2008 document.

The Active Transportation Plan is built on the following vision: "Through leadership, planning and community partnerships, Thunder Bay is a healthy, accessible, environmentally sustainable community, where active transportation is a key component of a safe, innovative, integrated transportation system that links where we all live, work, and play." This vision sets principles and goals for the development of a well- connected active transportation system in Thunder Bay.

Principles:

- Safety;
- Promotion and Education;
- Inclusive/Diversity;
- Connectivity/Access;
- Aesthetics;
- Supportive Amenities/Facilities; and,
- Sustainability.

Goals:

- Improved safety for people doing active transportation;
- Increase the number of people walking, biking or travelling by active transportation;
- Develop Infrastructure that supports active transportation;
- Develop policies that support active transportation; and,
- Develop community partnerships to help implement a dynamic and sustainable Active Transportation Plan.

1.3.8 Climate-Forward City: Net-Zero Strategy

Climate-Forward City: Thunder Bay Net-Zero Strategy is a proactive and dynamic guide for collaborative action on energy use and greenhouse gas emissions in Thunder Bay. This Strategy provides a vision for the community and highlights the scale of changes needed to respond to the climate emergency. The Urban Design Guidelines influence the built environment which will have a significant impact on how we live and how our City functions. How we design our environment will impact our energy use and greenhouse gas emissions by influencing how easy it is to walk, bike, or use transit, how we construct buildings using passive design, and how we increase our tree canopy and low-impact developments.

1.3.9 Climate-Ready City: Climate Adaptation Strategy

Climate-Ready City: Thunder Bay Climate Adaptation Strategy is a guide to coordinate decision-making and planning efforts across the City to reduce vulnerabilities and build resilience in City departments and operations, and in the community. The Strategy aims to reduce the risks inherent in climate change and take advantage of opportunities while building upon existing adaptive actions to help the City prepare for, respond to, and recover from the impacts of climate change with an emphasis on increasing the resilience of infrastructure and the natural environment. How we design our built environment will have a direct impact on well we deal will the effects of climate change from how we manage stormwater to how we protect ecosystems.

1.3.10 Urban Forestry Management Plan

Thunder Bay's urban forest provides significant benefits to the community, at a benefit-cost ratio of 2:1, including stormwater runoff reductions, energy consumption savings, air quality improvement, carbon dioxide reduction, and aesthetic value increases for properties. The Urban Forestry Management Plan is a comprehensive, efficient, and effective urban forestry program prepared by City forestry staff and community members to protect and enhance the City's tree canopy. The goals and objectives of the plan include:

- Establish a vision for Thunder Bay's urban forest, developed with community input and support;
- Provide recommendations and costs for strategies to deal with urban forest management issues;
- Undertake a comprehensive review of the current urban forest program including resources, priorities, successes, service gaps, and capital programs:
- Establish short, medium and long-term strategies to manage the urban forest; and,
- Implement the Municipal Forest Action Plan - a seven-year urban forest management work program.

The continued improvement of Thunder Bay's urban tree canopy, particularly in urban areas, and along Image Routes, is an essential component of the Official Plan, Clean, Green, & Beautiful Thunder Bay, Net-Zero Strategy, and numerous other City initiatives.

1.3.11 Inspire Thunder Bay Culture Plan

The Inspire Thunder Bay Culture Plan, initiated in January 2010, identifies municipal and community priorities for strengthening the arts, culture and heritage sector and elevating its role in sustainable city-building.

The Vision of the plan promotes, "a welcoming, diverse and lively city that provides a hub for cultural experiences and wealth generating opportunities that extend throughout the region and beyond..." This will be accomplished through a Cultural Plan that is:

- Inclusive and Responsive;
- Participatory and Accessible;
- Collaborative;
- Innovative; and,
- Sustainable.

Key to the Culture Plan is the development of six Strategic Directions, supported by recommended actions and partnerships, and including:

1) Foster Capacity in the Cultural Sector;
2) Develop Tourism Potential in the Creative Community;
3) Activate Culture in Urban Places and Spaces;
4) Enable Cultural Participation in Neighbourhoods;
5) Nurture Cultural Interaction and Exchange in Public Space; and,
6) Foster the Potential for Creative Entrepreneurship in Youth

These directions promote culture within the community; identify existing and needed resources to foster cultural development; and integrate cultural considerations into various aspects of the City's municipal processes.

1.3.12 Engineering & Development Standards

The City of Thunder Bay Engineering and Development Standards outline the requirements of the Engineering Department for the review and processing of land development applications, including:

- Sanitary sewers;
- Stormwater management;
- Roadways;
- Curbs;
- Gutters;
- Sidewalks;
- Parking Lots; and,
- Water systems.

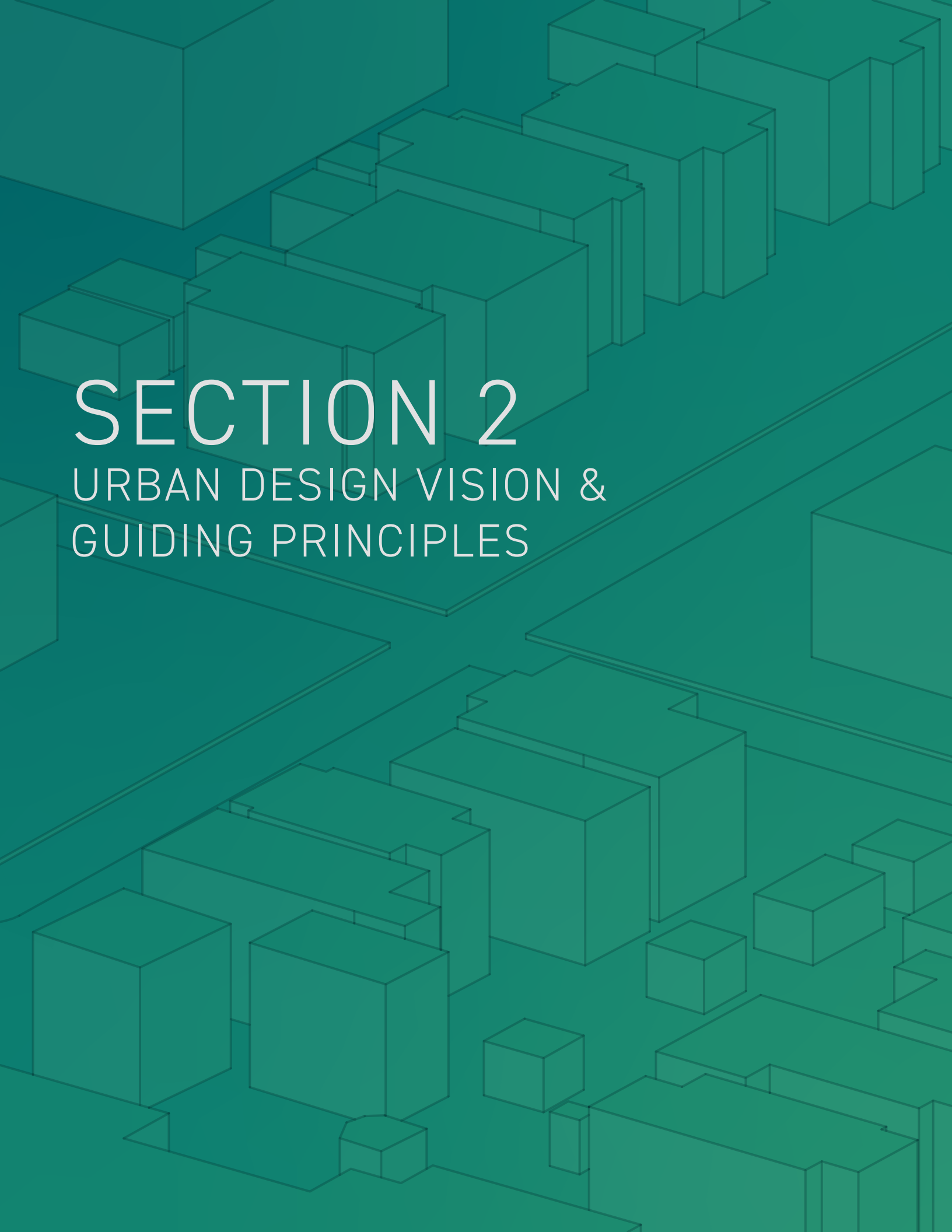
These requirements are outlined through a series of supporting plan and section diagrams that aim to provide the development community with a clear understanding of the required land development standards. In addition to improving development outcomes, the standards are intended to ensure that the interests of both residents of the new development and the City as a whole are fully protected. Unless otherwise stated, the Performance Standards in these Guidelines are meant to augment the directions of the Engineering and Development Standards, which shall continue to be adhered to throughout the development process, and the Transportation Master Plan.

1.3.13 Stormwater Management Plan

Completed in 2016, the City of Thunder Bay Stormwater Management Plan (SMP) provides a comprehensive assessment of the stormwater system and a corresponding framework for improving it over the next 20 years. With the overall goal to protect natural areas and promote environmental sustainability, the SMP identifies future capital works that incorporate Low Impact Development (LID) strategies and green infrastructure. It also recommends revisions to the City's Engineering and Development Standards in order to help keep the raindrop where it falls. This new approach to managing stormwater mimics natural hydrology by reducing runoff and feeding the groundwater system while preventing pollution of surface water resources. Finally, the SMP acknowledges that broader changes to the City's organizational structure may be required to successfully implement the Plan's long-term goals and objectives.

1.3.14 Parks & Open Spaces Standards and Specifications

The Parks and Open Spaces Standards and Specifications provides the standards for planting trees and shrubs in City parks and new developments. The document provides developers and contractors with the required standards for various vegetation types, as well as the procedures for obtaining the necessary City approvals. These updated standards should inform all design guidelines related to landscaping, parks, and open spaces.



SECTION 2
URBAN DESIGN VISION & GUIDING PRINCIPLES

SECTION 2: URBAN DESIGN VISION & GUIDING PRINCIPLES

2.1 Urban Design Vision

2.1.1 City-Wide Vision

It is the City's vision to foster and promote a high quality of life, which is directly linked to establishing and nurturing an environmentally sustainable and healthy community that embodies excellence in urban development and design. The vision for improving the quality of life is centred on the creation of a city that:

- Protects and enhances its natural systems;
- Provides a clean and healthy urban environment for its citizens; and,
- Supports economic growth and a strong cultural identity through high-quality urban form.

These objectives are captured in the City's Clean, Green, and Beautiful initiative.

A Clean City minimizes its impact on the environment by reducing, reusing and recycling its waste products and by maintaining a healthy built and natural environment for present and future generations.

A Green City preserves important natural features (woodlands, watercourses, wetlands, etc.) and restores and enhances ecological functions with the intention of creating a continuous natural system of sufficient size to remain healthy and vital for future generations.

A Beautiful City is one that celebrates its cultural diversity and history through the design of its built form (streets, bridges, buildings and neighbourhoods) as well as through the arts (visual, performance, and civic spaces).

A clean, green and beautiful City is a place where people want to live and work and where people want to visit. It is marketable in terms of economic growth and vitality, it provides a high quality of life for its citizens, and it is a source of pride for all who live there.

(Clean, Green & Beautiful Policy No. 02-05-01)

2.1.2 Downtown and Image Route Vision

To protect the surrounding wilderness from further outward expansion, the majority of intensification in Thunder Bay will occur along the City's Image Routes, and within the North and South Cores. Higher density built form that continues to support the integrity of stable neighbourhoods is encouraged. New development will be of the highest quality, and will promote a mix of uses to support safe, walkable, and accessible streets characterized by wide boulevards, public art, and active at-grade frontages. Abundant landscaping and large, mature street trees will be provided in all new developments to enhance the urban forest, and bring nature back into the City.

2.1.3 Maamawe, Growing Together

The City's 2023 - 2027 Strategic Plan is premised on fostering an inclusive city that embraces and celebrates its cultural diversity and advances reconciliation. The Plan's goals speak to strengthening the City's relationship with Indigenous communities and integrated Indigenous perspectives in all aspects of the City, including placemaking.

All together (Maamawe), Thunder Bay will foster an inclusive city focused on service excellence and collaboration, and provide opportunities for a high quality of life. We embrace and celebrate our diversity, which makes our community a vibrant and dynamic place to live and prosper.

Guided by this renewed vision for the future and corresponding strategic directions and goals, the City's approach to urban design and city building should reflect and embed Indigenous teachings and knowledge.

2.2 Guiding Principles

The following 10 principles embody the key high-level city planning and urban design objectives that have influenced the specific recommendations contained in the guidelines.

1. Protect the City's natural surroundings from unnecessary expansion through **intensification and compact built form**.

2. Expand the City's **tree canopy and natural systems** on public streets, parks and municipal lands, as well as private lands.

3. Ensure the design of the built environment is **resilient and adaptive** to the impacts of **climate change**.

4. Revitalize the two Downtowns, and the City's main streets through intensification, infill and a **mix of uses**.

5. Prioritize **design excellence and sustainability** in the construction and operation of buildings, streetscapes and open spaces.

6. Support **long-term economic development** through investment in high-quality urban environments.

7 Encourage **population growth and resident retention** through a high quality of urban life.

8 Protect and enhance Thunder Bay's **cultural, built, and natural heritage**.

9 Enhance the place-specific **character of the city** through architectural, streetscape, and landscape design that reflects unique regional attributes.

10 Improve public health through urban development that **supports active transportation** including walking, cycling and transit.

11 **Lead by example** through excellence and innovation in City-led infrastructure and capital projects that inspire private developers to meet or exceed these standards.

SECTION 3
PERFORMANCE STANDARDS: PUBLIC REALM

SECTION 3: PERFORMANCE STANDARDS - PUBLIC REALM

3.1 Celebrating the Natural Foundation

The City of Thunder Bay is known internationally for its breathtaking natural heritage landmarks, including the Sleeping Giant, Mount McKay, Lake Superior, and the Neebing, McIntyre and Kaministiquia Rivers. These features are complemented by a system of large community parks (e.g., Centennial Park, Chippewa Park), medium neighbourhood parks (e.g., Waverley Park, Vickers Park), and smaller parkettes.

All of the above features reinforce Thunder Bay's great Canadian wilderness context, and accommodate passive/active recreation. Their preservation and enhancement should be of the highest priority. The protection of the tree canopy and reforestation of the City should influence the layout of all new development, and be linked by a well-connected network of parks, open spaces and trails to encourage walking, cycling, and other forms of active transportation.

PERFORMANCE STANDARD 01

Natural Heritage Features

The preservation and enhancement of natural heritage features should be a symbol of Thunder Bay's commitment to sustainable development and the 'reforestation' of the City.

a) Natural heritage features should be preserved and enhanced except where trees are removed to prevent the spread of wildfires.
b) A City-wide system of natural heritage features, parks, and open spaces should coincide with a linked network of trails to support active transportation.
c) Development adjacent to natural heritage areas should provide a positive interface overlooking these amenity areas.
d) Development adjacent to significant natural areas and open spaces should promote LID that focuses on the use of on-site natural features that may be enhanced to protect water quality.
e) Site development should provide for significant visual and pedestrian connections from adjacent public streets to natural areas.
f) Development should not interfere with natural drainage patterns and should provide adequate buffers to sensitive natural features.
g) Opportunities for outdoor education should be integrated into new site development (e.g., signage, interactive features, etc.).

Refer to Other Applicable Performance Standards:

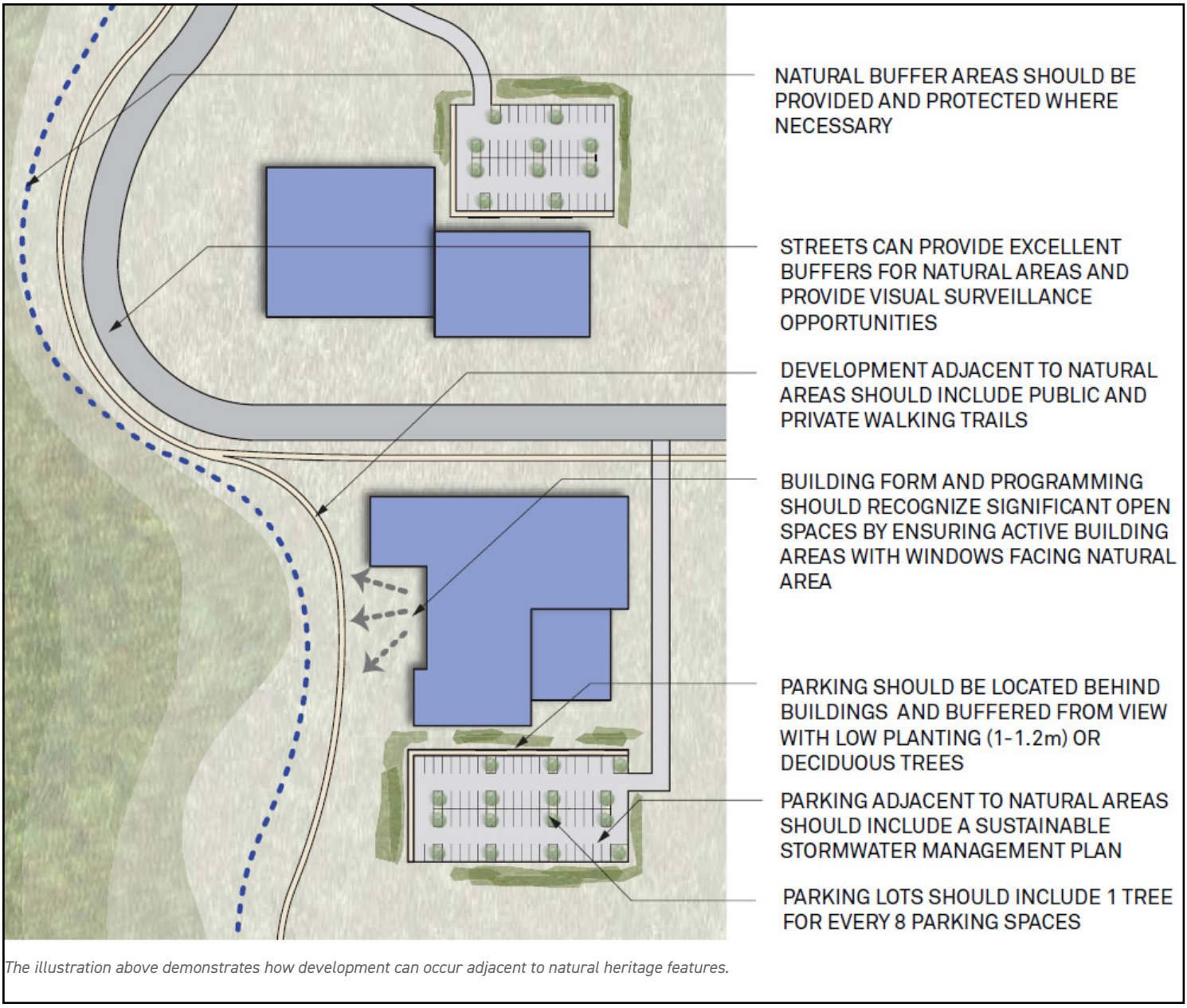
02 Parks and Open Spaces
03 Stormwater Management Facilities
04 Multi-Use Trails
29 Sustainability: Site Design

New neighbourhoods, and redevelopment within existing neighbourhoods, should preserve and enhance existing natural heritage features to protect vegetation, ecological functions and the cultural landscape, and to reinforce the City's wilderness surroundings. Natural drainage networks should be maintained to retain functional surface drainage and watercourses, and to support stormwater management infrastructure such as stormwater management ponds and LID strategies. This can be accomplished by creating links between existing natural heritage features, and by providing an additional landscaped buffer adjacent to sensitive natural features.

Preservation of natural heritage features should also be encouraged through active use, education, and awareness. Natural heritage features should be integrated as part of a larger system of connected parks, open spaces and natural heritage features through cycling infrastructure and multi- use trails. Opportunities for outdoor education are encouraged.

Development adjacent to natural heritage features should capitalize on this unique relationship by providing strong visual and physical links to natural heritage features both from buildings and adjacent public streets. Where appropriate buildings adjacent to natural heritage features should maximize views and awareness of the feature.

Where natural heritage features are part of a site or adjacent to it, a significant amount of the perimeter should be bounded by streets and/or public open space to enhance safe use through casual surveillance. The siting of private yards backing onto natural areas should be limited.



The illustration above demonstrates how development can occur adjacent to natural heritage features.

PERFORMANCE STANDARD 02

Parks & Open Spaces

Parks and open spaces are focal points within the City and neighbourhoods. New development should be located, or new open spaces should be created within the development, to ensure open space is within walking distance of residential and employment uses.

In addition to the City of Thunder Bay's Parks Master Plan, the following guidelines apply to both new and existing parks:

Location and Interface

a) The majority of residents within urban areas should be located within 800 metres (10-minute walking distance) of a community park, and if possible, 400 metres of a neighbourhood park or parkette.
b) Open spaces should be located along, and at the terminus of, the Image Routes and other key corridors.
c) Where viable, neighbourhood retail uses and cafes should face directly onto parks and open spaces.
d) The perimeter of parks should be lined with buildings that face onto the park. Housing with the rear property line against parks, should be avoided.
e) Where housing does back onto a park or open space, high-quality rear fencing must be provided. Access gates for individual adjacent properties may be allowed at owner's cost.

Design

f) Opportunities for naturalization with native species and "no mow zones" should be maximized wherever feasible.
g) All areas not used for active recreation or sports fields should be considered for naturalization and tree-planting to provide shade, expand the urban forest, and increase biodiversity.
h) Signage should be coordinated near entrances to reduce clutter.
i) Recycled materials should be used where possible.
j) New or revitalized parks and open spaces should be the subject of both community design workshops and design competitions and should be designed by registered landscape architects with a reputation for excellence and innovation.
k) The design of new and revitalized parks should explore opportunities for Indigenous cultural events, learning, and teaching.

Uses and Amenities

l) Community and neighbourhood parks should accommodate both active and passive recreation.
m) Playground equipment should be imaginative, easily maintained and should be located in areas shaded by trees and close to other park amenities.
n) While inclusive and universally accessible design standards should be optimized, it is recognized that all playground equipment may not be accessible.
o) Structures supporting adult exercise (i.e., weights, cardio equipment) should be incorporated into parks.
p) Areas should be designated within parks to support community gardening and urban agriculture.
q) Designated and fenced leash-free dog areas should be provided in some parks and open spaces as appropriate.
r) Public washrooms, drinking fountains, and emergency call stations should be provided in community parks.
s) Opportunities for year-round washrooms should be considered wherever feasible.

Access & Connectivity

t) A majority of the perimeter of open spaces should be clearly visible and accessible from surrounding public streets. Where possible, existing parks (e.g., Kaministiquia River Heritage Park, George Burke Park) should be enhanced to meet this guideline.
u) Parking should be provided on-street (not directly adjacent to the park) and in small parking lots at the perimeter of parks and open spaces.
v) Parking lots should incorporate tree-planting at one tree per eight spaces.

w) Parks, open spaces, and natural heritage features should be linked by a network of multi-use trails. Where the continuity of open spaces is disrupted, they should be linked through urban areas with special tree-lined, off-road multi-use trails, either within street right-of-ways or designated corridors.

x) Vehicle connections through open spaces should be limited to emergency and maintenance vehicles.

Refer to Other Applicable Performance Standards:

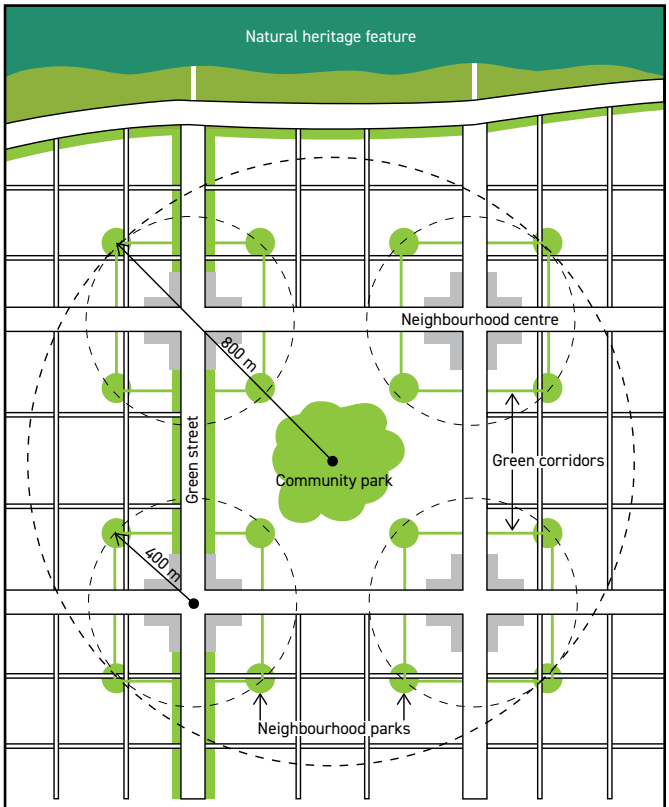
01 Natural Heritage Features
03 Stormwater Management Facilities
04 Multi-Use Trails
08 Neighbourhood Landmarks
10 Accessibility: Public Realm
30 Surface Parking
43 Buffer Planting

Parks and open spaces in the City of Thunder Bay include:

- Community Parks
- Neighbourhood Parks
- Parkettes

These parks are focal points within the City, and should be accessible within an 800 metre (10-minute) walking distance of all residents. Where this is not achieved, the location of new parks and open spaces should be determined prior to all other design considerations. Open spaces should reflect their role and should serve the diverse needs of the City, including facilities for passive (e.g., walking trails, gardens, seating areas, park pavilions, interpretive displays) and active (e.g., sports fields, skating rinks) recreation.

To ensure active use, open spaces should be integrated as part of a larger system of natural heritage features and open spaces connected through walkways and multi-use trails. They should be framed by public streets and buildings which face directly onto them, to enhance safety through casual surveillance. Where sports fields are adjacent to residential uses, they should have appropriate buffer planting and setback treatments to mitigate the impact of lighting, noise, traffic and parking areas.



The illustration above demonstrates the preferred organization of a neighbourhood, with most development being located within 800 metres of an open space and connected through green streets and corridors.

PERFORMANCE STANDARD 03

Stormwater Management Facilities

Stormwater management facilities are essential to minimize the amount of run-off that enters the natural drainage system. Stormwater managment planning is increasingly important in the face of more frequent and extreme weather events caused by climate change.

In addition to the City of Thunder Bay's Stormwater Management Plan, the following guidelines apply to both new systems and retrofits of existing systems.

a) Stormwater facilities should be designed to be attractive amenities and to double as passive open space areas, where feasible.
b) The edges of stormwater management facilities should be naturalized and should provide a barrier to make them safe and to reduce goose habitats. Regular access points should be provided for maintenance purposes.
c) Landscaping should not interfere with the function of the facility.
d) A majority of the perimeter of stormwater management areas should be bounded by streets, parks or buildings which overlook them.
e) Where there are public open space areas in close proximity to stormwater management facilities, public access should be provided where appropriate.
f) Signage should be provided to promote education and safety awareness at stormwater management facilities.
g) Impervious surfaces should be minimized adjacent to stormwater management facilities.

Refer to Other Applicable Performance Standards:

01 Natural Heritage Features
02 Parks and Open Spaces
04 Multi-Use Trails
29 Sustainability: Site Design

Impervious surfaces are the greatest contributor to stormwater pollution, and stormwater management facilities are essential to minimize the amount of run-off that enters the natural drainage system. Breaks in impervious surfaces, by means of landscaping or other permeable surfaces and the utilization of LID practices, should be provided to allow absorption into the soil and avoidance or minimization of discharge into the storm drain system.

Depending on location and surrounding land uses, stormwater management facilities should be publicly accessible, and should form a significant component of the natural heritage and open space system. Public education displays are encouraged to increase awareness and appreciation of the natural environment.

Where encouraged, public access should be considered on a site-by-site basis through a combination of facility edge treatments. Shallow slopes should be provided for direct access areas and overlooks with railings or densely planted areas should be applied to discourage direct access.

Facilities should be framed by public streets, open spaces and buildings, and fencing and screening measures should be minimized, to enhance safety through casual surveillance.

PERFORMANCE STANDARD 04

Multi-Use Trails

Thunder Bay's multi-use trails run through a rich and beautiful natural heritage and open space system, providing links to key destinations within the City.

a) New multi-use trails should connect existing trails, streets, parks and open spaces.
b) Where the continuity of open spaces is disrupted, they should be linked through urban areas with special tree-lined, off-road multi-use trails either within street right-of-ways or designated corridors.
c) Multi-use trails should be provided through large surface parking lots where they interrupt the continuity of the trail network.
d) Trails should minimize impacts on adjacent natural heritage areas.
e) Two way trails should be 3.0 to 4.5 metres wide.
f) Frequent access points should be provided along multi-use trails.
g) Multi-use trails should be barrier-free to accommodate people of all ages and abilities.
h) Trails should include adequate amenities including seating, lighting, waste receptacles, signage, and interpretive information.

Refer to Other Applicable Performance Standards:

01 Natural Heritage Features
02 Parks and Open Spaces
03 Stormwater Management Facilities
05 Transit-Oriented Development & Design
07 Urban Area Gateways
10 Accessibility: Public Realm
12 Dedicated Cycling Lanes
24 Arterial Roads
25 Collector Roads
26 Local Roads
33 Bicycle Parking

Thunder Bay's network of multi-use trails runs through a rich and beautiful natural heritage and open space system. New multi-use trails should fill in gaps in the existing network, according to the Active Transportation Plan, by providing links to key destinations, including the North and South Cores, the Image Routes, Confederation College, Lakehead University, and the waterfront.

The design of multi-use trails should reflect the function and nature of the spaces they occupy. For example, trails located within sensitive natural environments should be constructed of low impact materials that are porous and stable, such as crushed rock or board walks.

3.2 Transforming the Downtowns & City Main Streets

Thunder Bay's North and South Cores and the Main Streets are ideal areas for infill and intensification with mixed-use buildings, allowing the City to grow within its present boundaries in areas already served by transit and other city services. This section focuses on recommendations to ensure appropriate and high quality redevelopment in those areas.

Thunder Bay's Main Streets include the Image Routes and other key corridors. These streets are gateways to the City and Downtowns, a spine between the North and South Cores, and key organizational elements in the City. They should evolve as whole streets that reflect their role as mobility corridors, neighborhood centers, commercial hubs and social spaces.

A key recommendation of the City's Urban Forest Management Plan is for City-wide tree canopy coverage of 50 percent and to introduce additional trees in under-treed neighbourhoods. Much of this will be accommodated within boulevards, on medians, and within private property on the City's Main Streets. These improvements to the City's Urban Forest are perhaps the single most important initiative in the evolution of the City into a clean, green, and beautiful community.

PERFORMANCE STANDARD 05

Transit-Oriented Development & Design

Development should support and promote transit-supportive design in the form of complete, compact, and walkable neighbourhoods to increase public transit ridership and service in a manner that is convenient, accessible, and low carbon.

a) A mix of land uses and higher densities are encouraged along major transit routes at key transit nodes.
b) Compact, higher-density development should be located adjacent to main streets providing a high level of transit service.
c) Within urban areas, 90% of the population and employment should be within 400m to a bus stop, recognizing that the provision of transit service in some areas is conditional on density, land use and street network design to support viable transit operations.
d) Transit facilities should be placed at areas of high pedestrian activity, passenger generators and transfer points based on potential ridership and safety considerations.
e) Multi-use trails and bicycle routes should connect to transit facilities.
f) Bicycle parking and storage should be provided close to major transit facilities.
g) The design and placement of transit stops should be in accordance with the Transit Accessibility Design Guidelines for the City of Thunder Bay.
h) Transit shelters should be placed at high boarding locations and other unique priority areas such as in front of hospitals and major medical facilities, homes for persons with disabilities, senior citizen residences, and other community facilities.
i) Areas adjacent to transit stops should be well-lit, and should incorporate tree planting for shade.

Refer to Other Applicable Performance Standards:

04 Multi-Use Trails
12 Dedicated Cycling Lanes
15 Street Furniture
16 Transit Shelters and Stops
23 Street Network and Block Layout
24 Arterial Roads
25 Collector Roads
26 Local Roads
33 Bicycle Parking
48 Mixed Use Buildings

As outlined in the Climate-Forward City: Thunder Bay Net-Zero Strategy, a strong transit system is a key component of a healthy and vibrant city. Transit should provide a high level of service that is convenient, safe, comfortable and affordable to all areas of the City as an alternative to private automobile use. Urban development patterns have a dramatic influence on the viability of transit service. Transit supportive design provides a mix of land uses and higher densities along main streets and downtown areas.

PERFORMANCE STANDARD 06

City Gateways

a) City-wide wayfinding signage should be located at City gateways and should provide directions to key City destinations (i.e., Downtown Cores, waterfront, Image Routes).
b) Wayfinding signage should be designed as significant public art.
c) Gateway features should be located on municipal property.

Refer to Other Applicable Performance Standards:

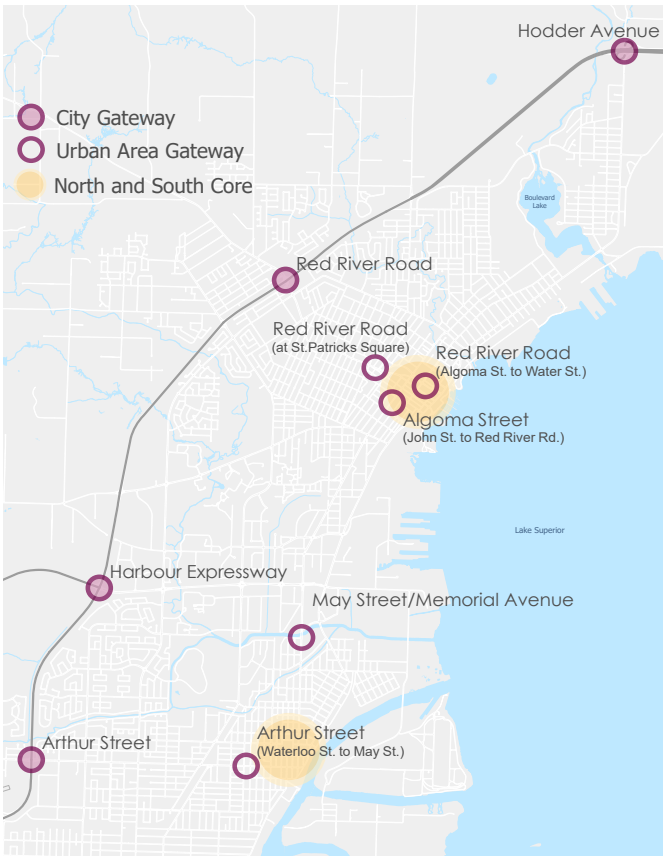
19 Public Art
24 Arterial Roads
41 Signage

As per the City's Image Route Guidelines, City gateways identify key arrival points to the City, and include:

- Arthur Street at Thunder Bay Expressway;
- Harbour Expressway at Thunder Bay Expressway;
- Red River Road at Thunder Bay Expressway; and,
- Hodder Avenue at Thunder Bay Expressway.

These key intersections are primary gateways into the City from the Thunder Bay International Airport (Arthur Street) and highway network. These gateways should reinforce a sense of entrance and arrival to the City through enhanced signage, public art and landscaping.

Gateways located along the Thunder Bay Expressway will need to be coordinated with the provincial regulations bodies. This should be a first step in planning city-wide gateways.



This map highlights Thunder Bay's City and Urban Area Gateways.

PERFORMANCE STANDARD 07

Urban Area Gateways

a) Gateways should be identified through enhanced streetscape design elements, including trees, feature planting and paving, seating, public art and lighting.
b) Gateway areas require a higher order of streetscaping including double rows of trees on either side of the roadway, decorative planting in medians and wide sidewalks complemented with pedestrian scale lighting.
c) Gateway features should be located on municipal property.
d) Where possible, gateway areas should be centres for information and wayfinding but should not be overwhelmed by signage.
e) High quality designed buildings and appropriate land uses should support gateway areas.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
13 Green Streets
14 Green Medians
19 Public Art
37 Main Street Buildings
41 Signage
48 Mixed Use Buildings

Urban area gateways identify key arrival points to the North and South Cores, the Intercity area, and the waterfront. These include:

- Arthur Street, between Waterloo Street and May Street: This segment of Arthur Street leads to the civic core of the City at its southern end and has an opportunity to celebrate the legacy of community-builders who have shaped the city.
- May Street at the Neebing/McIntyre Floodway: This segment of May Street is a gateway into the Intercity area.
- Algoma Street, between John Street and Red River Road: This segment of Algoma Street is the gateway into the North Core, and a cultural hub that should be celebrated.
- Red River Road, between Algoma Street and Water Street: This segment of Red River Road is the gateway to the Waterfront. It should provide a grand entrance to Prince Arthur's Landing.
- Red River Road at St. Patrick Square is the gateway to the North Core.

Urban area gateways should inspire, and be catalysts for improvements throughout the North and South Cores and along the Image Routes and key corridors. Where possible, new development and enhancements to existing development (e.g., façade improvements, intensification) should be focused within urban area gateways.

Urban area gateways should incorporate buildings that prominently address adjacent streets, signifying the entrances to, and exits from, the downtowns through enhanced building and site design treatments, such as taller corner elements, double height entrance areas, and large expanses of glazing. They should have significant public art displays and urban plazas, and, where appropriate, wide, pedestrian-supportive boulevards with active at-grade uses.

Urban area gateways should be centres of information, promoting key locations throughout the City, including the Downtowns, the Image Routes, the waterfront, and key parks and open spaces.

Where possible, urban area gateways should be connected to key destinations in the City to encourage active transportation. This can be accomplished through existing and new trails, open spaces, and natural heritage features.

PERFORMANCE STANDARD 08

Neighbourhood Landmarks

Thunder Bay has a number of individual neighbourhoods that each have unique distinguishing characteristics. In these neighbourhoods, gateway features should not identify individual neighbourhoods (i.e., ornamental walls, name signs). Instead, residential neighbourhoods should be defined by their architectural and landscape character, including landmark features (e.g., parks) that reflect the identity of the neighbourhood.

Refer to Other Applicable Performance Standards:

02 Parks and Open Spaces
19 Public Art
37 Main Street Buildings
42 Private Trees

PERFORMANCE STANDARD 09

Boulevard Design

A City's streets are its most important public space. The design of the boulevard (i.e., building face to curb face) must recognize both automotive use and a range of other needs including pedestrian and cycling, transit infrastructure, seating, bike parking, signage, lighting, trees, landscaping, and adequate sidewalk space for commercial and social activity. Well-designed, tree-lined and adequately sized boulevards are required to accommodate active transportation and intensification along main streets.

a) Boulevard widths should be optimized to support their multi-purpose function and provide adequate space to promote healthy tree growth.
b) Boulevards should be continuous along the streetscape (i.e., minimal driveway curb-cuts).
c) Boulevards should be a minimum of 4.8 metres in width wherever possible.
d) Where a right-of-way is not wide enough to achieve the minimum boulevard width, a combination of measures should be explored including right-of-way widening and reduced lane widths.
e) All boulevards should be designed to accommodate snow storage.
f) Sidewalks should be barrier-free.
g) Feature paving should be used to delineate pedestrian priority.
h) Boulevards should be planted with street trees. Linear tree trenches, continuous raised planters, soil cell technology, or structural soils are recommended to ensure mature growth.
i) Pedestrian-scaled boulevard lighting should be provided in areas of high use, particularly where the future tree canopy may impact light levels.
j) Where feasible, the incorporation of LID stormwater practices, including native or adaptive species, should be encouraged to provide a break in impervious surfaces.
k) Native, adaptive, and/or non-invasive groundcovers are preferred as alternatives to non-native turfgrass.
l) Use of artificial turfgrass in boulevards is discouraged except in locations where its use

its more beneficial than viable alternatives. Turf material must be high quality and approved by the City.

Boulevards should be designed to reflect adjacent land uses (e.g., wide sidewalks in mixed-use or commercial areas, multi-use trails in sub-urban areas) and should accommodate the following components:

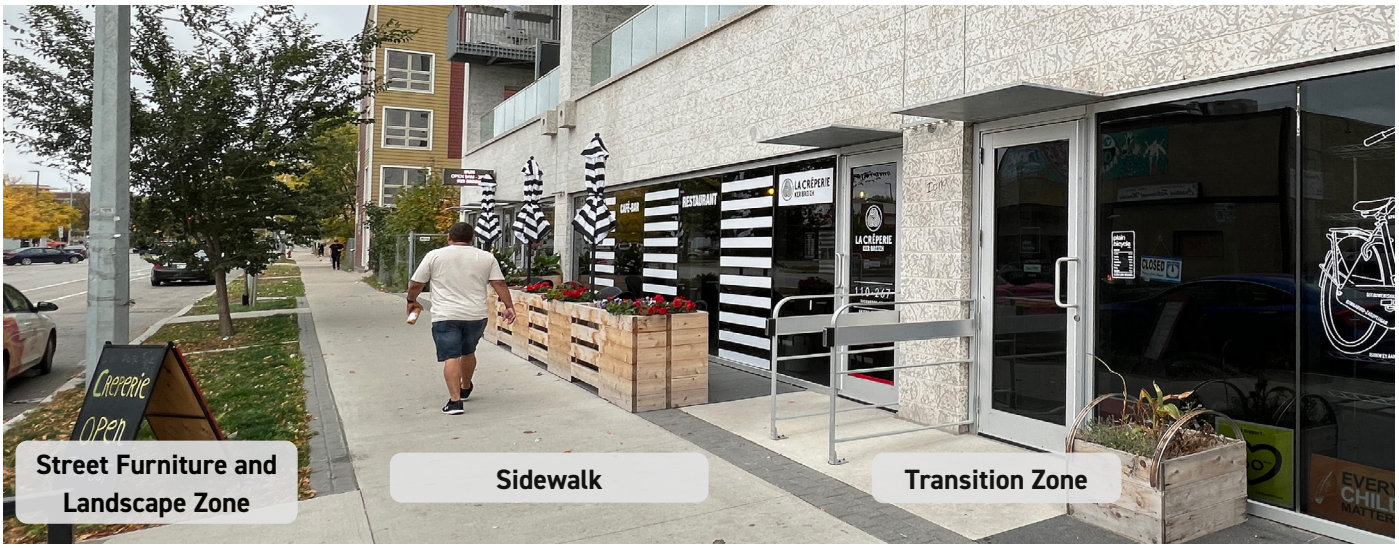
Street Furniture and Landscape Zone: The Street Furniture and Landscape Zone should be located between the sidewalk and vehicle traffic. The zone contains landscaped areas with site furnishings, and infrastructure facilities such as benches, bicycle racks, transit shelters, and utilities. Along the Image Routes and key corridors, these areas should be planted with consistent street trees to provide shade, reduce the urban heat island effect, create a buffer between pedestrian and vehicle traffic, and minimize stormwater run-off. Where relevant, the guidelines that follow should be used in conjunction with the City's Urban Forest Management Plan.

Sidewalk: The sidewalk should be located adjacent to buildings or the property line. The sidewalk is dedicated to the movement of pedestrians and should remain clear of any and all obstructions, horizontally and vertically, at all times. In limited scenarios where sidewalks are temporarily obstructed, adequately delineated cane-detectable pathways should be provided to ensure the safe passage of pedestrians. Sidewalks should be constructed of brushed concrete to facilitate accessible pedestrian movement, with some use of feature paving bands (e.g., pavers, impressed concrete or concrete) to indicate pedestrian priority.

Transition Zone: Located in urban areas, between the sidewalk and the building or property line, on public and/or private property, the transition zone should be between 0.75-1.0 metres to provide a dedicated area for window shopping, spill-out retail, building entrance, street furniture and signage.

Refer to Other Applicable Performance Standards:

10 Accessibility: Public Realm
11 All Season Design: Public Realm
13 Green Streets
14 Green Medians
15 Street Furniture
16 Transit Shelters and Stops
19 Public Art
20 Street Lighting
21 Waste Receptacles
22 Utilities
37 Main Street Buildings
41 Signage



Boulevards should be designed to reflect adjacent land uses and accommodate a Transition Zone, Sidewalk, and Street Furniture and Landscape Zone.

PERFORMANCE STANDARD 10

Accessibility: Public Realm

All sidewalks and public pedestrian routes should be safe and easy to use by people of all ages and abilities. These routes should be easily identifiable, separated from vehicular travel, and free of obstacles throughout all seasons.

a) Wherever possible, sidewalks should be a maximum gradient of 1:20 (5%).
b) Unit paving materials used in sidewalks, paths and walkways should be firm and level, with joints no wider than 6 millimetres.
c) A Street Furniture and Landscape Zone should be provided between the sidewalk and the curb face to accommodate utility posts, seating, planters, etc. without interfering with pedestrian circulation.
d) All pedestrian routes are required to accommodate persons using mobility aids, walkers or guide dogs. These routes should be a minimum of 1.5 metres (in urban areas with high pedestrian traffic levels the preferred width is 1.85 metres), and should be clear of obstructions at all times. Where temporary obstructions are necessary a protected, delineated and cane-detectable pathway must be provided to ensure safe passage of pedestrians.
e) To minimize risk to persons with visual limitations, all routes should be free of protruding obstacles, overhanging signs, branches etc., within the first 2.1 metres of the building height. Where potential obstructions are mounted on the sides of buildings or structures, they should not penetrate into the sidewalk area by more than 10 millimetres.
f) Where traffic islands are required, they should be built of materials and finishes that are easily distinguishable from the surrounding paving, as an aid to persons who are blind or who have visual limitations.
g) Crosswalks that cross a traffic island should be level with the main crossing or have curb ramps for persons using mobility aids.

Refer to Other Applicable Performance Standards:

02 Parks and Open Spaces
04 Multi-Use Trails
09 Boulevard Design
11 All Season Design: Public Realm
15 Street Furniture
17 Crosswalks and Crossrides
19 Public Art
30 Surface Parking
38 Accessibility: Private Realm

Outlined in this section are several key public realm accessibility objectives for the City of Thunder Bay. Additional objectives are provided in the **Accessibility for Ontarians with Disabilities Act (AODA)** and the **Ontario Building Code (OBC)**. These standards should be reviewed and considered with all design and construction projects. The primary goal of these recommendations is to ensure that the design of areas within the public realm consider users of all abilities.

PERFORMANCE STANDARD 11

All Season Design: Public Realm

Thunder Bay is a cold climate city, and the design of its public spaces (i.e., streets and open spaces) needs to consider all season requirements including sun shading, wind and snow protection, snow storage and all weather accessibility.

a) A minimum 1.5 metre sidewalk should remain clear of snow and debris year-round on all pedestrian travel routes.
b) Where snow storage cannot be accommodated in the travel lanes (due to a boulevard widening or limited right-of-way), a designated winter snow storage area should be identified within the boulevard that does not interfere with the use of the sidewalk. Tree planting and street furniture will need to be selected and located based on the snow storage areas.
c) Key cycling routes should be identified and cleared in the winter months to support year round cycling.
d) All public parks should consider the incorporation of public washrooms and both summer and winter activities to support year round park use. Where winter park uses are incorporated, cleared pedestrian access paths to those amenities should be provided.
e) Paving surfaces should be selected for their winter durability and slip resistance.
f) The location of public walkways and parking lots should be coordinated with winter sun angles to ensure walking and driving surfaces remain dry and free of ice.
g) All roof designs and awnings should consider mitigating falling ice and snow.

Refer to Other Applicable Performance Standards:

02 Parks and Open Spaces
04 Multi-Use Trails
09 Boulevard Design
12 Dedicated Cycling Lanes
13 Green Streets
38 All Season Design: Private Realm
42 Private Trees
43 Buffer Planting

Year round use of city infrastructure including streets and parks is critical in cold weather climate. The City of Thunder Bay should look to alleviate the discomfort of cold weather through wind and snow protection for short outdoor trips and through providing outdoor amenities that highlight the City's winter climate and provides residents with engaging and interesting outdoor events and activities. These can include hosting winter festivals, ensuring clear pedestrian clearways and bus waiting areas, and providing for snow storage areas within the design of streets and open spaces.

PERFORMANCE STANDARD 12

Dedicated Cycling Facilities

Dedicated cycling infrastructure minimize conflicts between cyclists and vehicles, and instill confidence in less experienced riders.

a) Dedicated cycling infrastructure should be integrated into the greater active transportation network and should adhere to the Active Transportation Plan.
b) Primary links in the City's cycling network should be maintained year-round. This will require snow storage within the boulevard.
c) On-street dedicated cycling lanes should comply with the current **Ontario Traffic Manual (OTM)**, and should be provided on new streets and retrofitted streets, and on existing streets (where the right-of-way allows).
d) New off-road dedicated cycling lanes should be provided wherever possible, either as one-way lanes on either side of the street or as two-way trails on one side of the street.
e) New off-road dedicated cycling lanes should be placed in a wide boulevard and, where possible, separated from vehicular traffic by a 2.0 metre landscaped strip with street trees. Similarly, where possible, there should be a 1.8 metre planting strip between the cycling lanes and the adjacent sidewalk.
f) All existing and future cycling routes should have frequent information signs.
g) Symbols and pavement marking are encouraged to distinguish all cycling routes.

Refer to Other Applicable Performance Standards:

04 Multi-Use Trails
05 Transit-Supportive Design
11 All Season Design: Public Realm
24 Arterial Roads
25 Collector Roads
26 Local Roads
30 Surface Parking
33 Bicycle Parking

There is a recognized need for a variety of cycling facilities within the City in order to accommodate both advanced and basic cyclists. This will be accomplished through the provision of wide curb lanes, off-street trails, and dedicated cycling lanes where appropriate.

Dedicated cycling facilities are recommended as part of the overall cycling strategy as they explicitly distinguish between vehicle and cyclist traffic. Separation minimizes conflicts between cyclists and vehicles. It also instills confidence in less experienced riders, allowing them to commute on higher traffic streets and to access key destinations in the most efficient way, and with minimal delays.

Where dedicated cycling facilities are provided, they should be clearly distinguished. Signage and symbols should be selected from the **Ontario Traffic Manual (OTM)**.

For technical specifications, please refer to the most current edition of the **Ontario Traffic Manual Book 18 - Cycling Facilities**.

PERFORMANCE STANDARD 13

Green Streets

Street trees are perhaps the most important singular contribution to city beautification. Mature street trees provide shade for pedestrians, reduce the urban heat island effect, enhance the visual and environmental qualities of the street, minimize run-off, and provide a buffer between traffic and the pedestrian. They also act as a passive form of traffic calming.

a) A City-wide campaign of expanding the street tree canopy should be a priority in the design of all road works projects.
b) As the City's tree canopy is expanded, an increased maintenance program is required for leaf collection and pro-active pruning.
c) Wherever possible, existing healthy street trees should be preserved.
d) 15 cubic metres of good quality soil should be provided per tree (can be shared).
e) To support sustainable tree growth, street trees should be planted in the boulevard – between the sidewalk and inside vehicular lane, and where possible use a continuous linear trench.
f) Utilize continuous tree pits to maximize soil volume. A soil cell system, suspended slab system, or structural soil infill are alternate options.
g) When planting trees within hard surfaces in boulevards, tree grates, tree guards, and underground utility boxes are recommended. Tree grates and other related infrastructure should not impede future tree growth.
h) Street trees should be planted within a minimum boulevard width of 2.5 metres.
i) Where sufficient boulevard width is available, a double row of trees should be planted on either side of the Sidewalk Zone.
j) For optimal tree health, street trees in the boulevard should be set back 1.5-2 metres (minimum) from the curb.
k) Large deciduous trees should be planted at 8-10 metre intervals (on centre) or clustered in groups of 2-4 trees on bump-outs where intersection sightlines allow.
l) Medium and small trees should be planted at 8-10 metre intervals (on centre).
m) Where applicable use drought tolerant seed mixes, including native species, for grass within a boulevard to minimize irrigation and maintenance requirements, large mulched planting beds around tree planting can also be considered instead of grass.
n) If irrigation is not in place, two-year maintenance watering is necessary for all plant material to ensure longevity.
o) Bio-swales or infiltration swales should be used within boulevards to allow natural watering of plant material and reduce stormwater run-off.
p) Where feasible, permeable surfaces are encouraged to minimize the amount of surface run-off into the stormwater system.
q) Street trees should not interfere with vehicle sight lines.
r) Utilities design and location should be coordinated so that it does not interfere with sustainable tree growth.
s) Where feasible, the incorporation of LID stormwater practices should be encouraged to provide a break in impervious surfaces.

Refer to Other Applicable Performance Standards:

02 Parks and Open Spaces
04 Multi-Use Trails
09 Boulevard Design
11 All Season Design: Public Realm
14 Green Medians
42 Private Trees
43 Buffer Planting

The existing residential communities within the City of Thunder Bay, such as Hyde Park and Mariday Park, have a significant number of well established street trees and the City's residential areas, main streets, and Image Routes should strive for a similar canopy.

Mature street trees provide shade for pedestrians, reduce the urban heat island effect, minimize run-off into the stormwater system, enhance the visual and environmental qualities of the street, and provide a buffer between the pavement, sidewalk and buildings. In winter, mature street trees lining a street provide character and enhance the sense of place. Therefore, existing street trees should be preserved wherever possible and supplemental street trees should be considered in an existing community where the existing tree canopy is reaching the end of its life-cycle.

Where relevant, these guidelines should be used in conjunction with the City's Urban Forest Management Plan.

PERFORMANCE STANDARD 14

Green Medians

A green median is an enhanced median with trees, shrubs, landscaping and installations.

a) Medians planted with street trees should have a minimum width of 3.0 metres.
b) Where medians approach intersections or mid-block connections, accessible areas should be provided to allow refuge for pedestrians crossing the street.
c) Preferred species for trees and shrubs in medians are non-invasive species suitable for Canadian Plant Hardiness Zone 3 climatic conditions.
d) Use drought tolerant seed mixes for grass within a median to minimize irrigation and maintenance requirements.
e) Bio-swales or infiltration swales should be used within medians to allow natural watering of plant material and reduce stormwater run-off.

Refer to Other Applicable Performance Standards:

13 Green Streets

To ensure the proper installation of new trees, and maintenance of existing trees, these guidelines should read in conjunction with other relevant City documents, including the Parks and Open Spaces Standards and Specifications.

PERFORMANCE STANDARD 15

Street Furniture

Street furniture contributes to the creation of unique streets, and is an essential component of a pedestrian-supportive streetscape.

a) Street furniture should be concentrated in areas with high pedestrian activity.
b) Street furniture should not obstruct pedestrian or vehicle circulation.
c) Street furniture should not hinder sidewalk maintenance and snow removal.
d) Raised planters should be designed to double as seating areas.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
10 Accessibility: Public Realm
11 All Season Design: Public Realm
16 Transit Shelters and Stops
19 Public Art
20 Street Lighting
21 Waste Receptacles
22 Utilities
41 Signage

Street furniture contributes to the creation of a unique streetscape, and should be concentrated in areas with the highest pedestrian traffic, such as the Image Routes, the North and South Cores, along the Waterfront, and on other significant corridors. In addition, street furniture is an essential component of a pedestrian-supportive streetscape offering opportunities for rest, social interaction, and casual surveillance.

City-wide street furnishings should be developed within an overall concept and should provide a consistent and unified streetscape appearance that is appropriate for the area context. Within the core areas, BIAs should continue to manage street furniture programs using selections that are consistent with the City-wide approach.

Street furnishings should be placed in a coordinated manner that does not obstruct pedestrian or vehicular circulation or impact sidewalk maintenance, particularly snow removal.

PERFORMANCE STANDARD 16

Transit Shelters and Stops

Transit shelters should be safe, attractive and comfortable.

a) Transit shelters should be barrier-free year round.
b) Transit shelters should provide weather protection, and basic amenities (i.e., seating and lighting). Where adjacent to street lighting, lighting in shelters is not required.
c) Tree planting should be provided adjacent to the shelter to provide shade, a wind break, and an attractive environment.
d) Sidewalks should connect directly to transit shelters. A concrete loading/unloading area should be provided (width varies by context).
e) Transit shelters should not interfere with pedestrian circulation.
f) Transit shelters should be highly transparent to promote safety.
g) Opportunities to integrate area-specific public art or community information in transit shelters should be explored. Any panels or art installations must follow Crime Prevention through Environmental Design (CPTED) Principles.

Refer to Other Applicable Performance Standards:

05 Transit-Oriented Development & Design
09 Boulevard Design
10 Accessibility: Public Realm
11 All Season Design: Public Realm
15 Street Furniture
19 Public Art

In areas with high pedestrian traffic, such as the North and South Cores, the Image Routes, and along key corridors, transit stops should include a shelter for weather protection and basic amenities, including seating, waste receptacles, lighting, and route information. Where appropriate (e.g., along the Image Routes, at the waterfront), transit shelters should accommodate interpretive installations that commemorate specific events, places, and personalities of significance.

To promote active use, transit shelters should be located close to building entrances, and should connect directly to adjacent sidewalks to ensure safety and convenience. They should have barrier-free access and be located in a way that does not interfere with pedestrian movement.

Transit shelters should be designed and located to allow sufficient space for snow clearing.

PERFORMANCE STANDARD 17

Crosswalks and Crossrides

Crosswalks and cross rides should be designed to ensure the safety of pedestrians riders.

a) Crosswalks and crossrides should be continuous and connected to adjacent active transportation infrastructure.
b) Crosswalks should conform to the **Ontarians with Disabilities Act**.
c) Crosswalks should be clearly designated with lighting and pavement surface marking.
d) In high-traffic pedestrian areas public art should be integrated into crosswalk design.
e) In Downtown areas, mid-block crosswalks should be provided on blocks greater than 250 metres.

Refer to Other Applicable Performance Standards:

10 Accessibility: Public Realm
14 Green Medians
19 Public Art

There is a significant amount of pedestrian and vehicular traffic in the City of Thunder Bay, particularly along the main streets and within the North and South Cores. As the City evolves, streets that are currently primarily vehicle-oriented will begin to see an increase in pedestrian and cycling traffic. In order to improve the safety of all users, it is essential that the City of Thunder Bay design a continuous system of crosswalks to ensure the safe coexistence of vehicular and pedestrian traffic. Where appropriate, raised crossings and other traffic calming measures should be considered to slow traffic, providing opportunities for safe, seamless, and accessible crossing to all ages and abilities.

The location of crosswalks and design of curb cuts should conform to the policies of the **Ontarians with Disabilities Act** and the City's Engineering and Development Standards. Crosswalks should be clearly delineated, with appropriate surface markings or variation in surface treatment, and signage. They should be continuous and connected to adjacent sidewalks. Traffic signals should be timed such that pedestrians have adequate time to clear the crossing. Pedestrian countdown devices should be considered on a case-by-case basis. Where blocks are longer, mid-block signals and courtesy crossings with specialized markings and signage should be considered.

PERFORMANCE STANDARD 18

On-Street Parking

On-street parking should be permitted, wherever possible, to animate the street, reduce vehicle speeds and serve as a buffer between pedestrians and vehicles particularly on streets with at-grade retail.

a) On-street parking should be provided wherever possible on the City's main streets and in the downtown areas.
b) Parallel on-street parking is preferred and angled parking should be avoided except where it allows for the elimination of parking on main streets.
c) On-street parking may be situated between bump-outs where appropriate.
d) Bump-outs should be well landscaped and designed to accommodate snow removal, and can also be used for the implementation of LID stormwater techniques. Where appropriate they should also be used to shorten pedestrian crossing distances.
e) Where feasible, on-street parking should be visually distinguished from travel lanes.
f) Parking meters should be located behind the sidewalk or the street furniture and landscape zone (if applicable) to accommodate snow removal and storage.

Refer to Other Applicable Performance Standards:

12 Dedicated Cycling Lanes
24 Arterial Roads
25 Collector Roads
26 Local Roads
37 Main Street Buildings

On-street parking on the Image Routes and throughout the City should be permitted, wherever possible, to animate the street, reduce vehicle speeds and serve as a buffer between pedestrians and vehicles, particularly on streets with at-grade retail. To encourage on-street parking, appropriate design standards for roadways, including bump-outs, should be developed.

Parallel on-street parking is preferred over perpendicular or angled parking to minimize the overall width of the roadway and to optimize sightlines.

On-street parking may be situated within bump-outs where appropriate. Bump-outs should be landscaped with street trees, where sightlines allow, or low-level ground cover planting, and should be designed to accommodate snow loading.

Where appropriate, permeable surfaces should be considered to promote drainage, provide passive irrigation to street trees, and to enhance the street edge.

PERFORMANCE STANDARD 19

Public Art

Public art will enhance the unique culture and history of the City.

a) Public art should be incorporated through new capital projects.
b) Significant public art pieces should be the subject of design competitions to support local artists (where desired) and to promote excellence and innovation.
c) Public art should be place-specific.
d) Public art should be located at key destinations within the City.
e) Public art is encouraged within private developments that have significant public spaces (e.g., courtyards).
f) Public art should be visibly and physically accessible.
g) Public art should be durable and low- maintenance.
h) Public art should be complemented by adjacent landscaping where appropriate.

The inclusion of public art will contribute to the culture and history of the City, and will enhance the unique character of key destinations along the Image Routes, within the North and South Cores, at key gateway areas, and within parks and open spaces. The guidelines should be used in conjunction with the City's Public Art Policy.

Refer to Other Applicable Performance Standards:

06 City Gateways
07 Urban Area Gateways
08 Neighbourhood Landmarks
09 Boulevard Design
16 Transit Shelters and Stops

Public art should be place-specific and explore opportunities to celebrate historic and cultural events of local, national and international significance (i.e., The Dawson Trail along Red River Road, a memorial theme along Memorial Avenue). Sites may be reserved for groupings of complementary pieces, including temporary installations.

Public art should be both physically and visually accessible and barrier free.

Public art should be place-specific and explore opportunities to celebrate historic and cultural events of local, national and international significance.

PERFORMANCE STANDARD 20

Street Lighting

a) The design and location of lighting should consider sustainability and the impacts of light pollution.
b) Downcast pedestrian-scale lighting should be provided in high traffic pedestrian areas ensuring adequate overlap of the cones of illumination to provide continuous visibility.
c) All lighting should be located within the Street Furniture and Landscape Zones, or within medians as required.
d) All pedestrian and street lighting should be "dark sky" friendly to minimize light pollution. Where current standards do not adhere to these guidelines, it should be taken into consideration when they are next upgraded.
e) Private property lighting should ensure safe and well lit pedestrian areas, including parking areas and building entrances.
f) Street lighting fixtures should be selected in accordance with existing city engineering standards and consider all maintenance ramifications.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
14 Green Medians
16 Transit Shelters and Stops
22 Utilities
29 Sustainability: Site Design

In key areas, lighting can be used to accent special features, such as buildings, heritage properties, landscaping, and signage. Downcast, pedestrian-scaled lighting enhances safety and visibility on streets. The design and location of lighting should consider sustainability and the impacts of light pollution including: energy efficiency, directional lighting that reduces wasted energy, induction lighting, solar power and street reflectors and sensors (to help regulate brightness and when lights turn on and off).

Consideration should be given to providing additional pedestrian-scale lighting in areas with a high volume of pedestrian activity, such as key intersections, transit stops, trail crossings, and mid-block connections.

PERFORMANCE STANDARD 21

Waste Receptacles

a) Waste receptacles should be located in highly active pedestrian areas and, where applicable, should be placed within the Street Furniture and Landscape Zone to minimize disruptions to pedestrian circulation.
b) Outdoor ashtrays should be located outside of buildings, and publicly accessible.
c) Receptacles should be located in close proximity to seating areas.
d) Waste receptacles should be provided on private sites that are frequently accessed by the public (i.e., schools, convenience stores, etc.).
e) Waste receptacles should include slots for recycling and litter.
f) Waste receptacles should be designed to be universally accessible.
g) Waste receptacles should be coordinated as part of an overall street furniture palette.
h) Sharps containers should be located securely at key locations as determined by City Staff working in collaboration with social service providers to determine need.
i) Side opening designs are recommended to facilitate easy maintenance.
j) Receptacles should be wildlife proof.
k) Advertising on waste receptacles is discouraged.
l) A City-wide design for waste receptacles should be developed to assist with maintenance. An opportunity for community individuality should be considered in the universal design.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
10 Accessibility: Public Realm
19 Public Art

Consideration should be given to developing centrally managed program for installation and maintenance of City-owned waste receptacles to ensure standards are being met and maintained.

PERFORMANCE STANDARD 22

Utilities

Utilities must be considered as an integral component of the streetscape and the design of the public and private realm.

a) Where feasible, utilities should be buried below grade. Where this is not feasible, they should be grouped in single locations.
b) Utilities, including utility cabinets, transformer vaults, hydro meters and gas meters, should be incorporated into building design, where feasible. Where this is not feasible, utilities should be placed in discrete locations and/or screened from public view, where they will not interfere with pedestrian movement or transit stops.
c) Utilities should be placed within the street Right-of-Way (or in a front yard easement) in a joint utility trench that can be accessed for repairs without disturbing street trees and the other amenities in the boulevards.
d) To minimize clutter near bus shelters, opportunities to coordinate street lighting and bus signage within the utility pole should be explored.
e) Utility and service connections to the street should be located to allow for street trees in the boulevard.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
10 Accessibility: Public Realm
20 Street Lighting

The coordinated design and integration of service infrastructure and utilities will contribute to the visual quality of Thunder Bay's streetscapes. Utilities must be considered as an integrated component in the design of the public realm.

Where feasible, utilities should be buried below grade, typically in the boulevard section of the right-of-way. The use of a joint utility trench is encouraged for access and maintenance benefits.

Where utilities cannot be located below-grade, opportunities should be identified for grouping above grade utilities in single locations (e.g., the flanking yard of the public right-of-way). Such locations should be guided by the location and hierarchy of streets, stormwater management facilities, parks and other components of the open space system, as well as utility access considerations.

New and innovative solutions for integrated utility services should be explored to minimize street clutter. Products that incorporate street lighting and telecommunication facilities within the same pole are encouraged.

3.3 Developing the Community Structure (City-wide)

Complementing the natural heritage features and Image Routes, the City of Thunder Bay's structural network is comprised of Arterial Roads, Collector Roads, Local Roads and lanes. These streets serve an important functional role in the movement of people and goods throughout the City, and they are equally important as a place for members of the community to meet and socialize. As the City pursues the Climate Forward City: Thunder Bay Net-Zero Strategy, a primary objective will be to encourage residents to drive less and walk or cycle more. Key routes should be enhanced to optimize the connectivity and movement of people in a safe and enjoyable way.

PERFORMANCE STANDARD 23

Street Network and Block Layout

Streets should reinforce a well-connected grid, modified to reflect natural features and open spaces.

a) Streets should be based on a modified grid pattern.
b) Cul-de-sacs are discouraged.
c) Where cul-de-sacs occur, pedestrian through-connections should be provided.
d) Opportunities to connect ending streets between developments are encouraged to maximize connectivity.
e) Provide a variation in block sizes and street layouts.
f) Block lengths should average 200 metres.
g) Mid-block pedestrian connections should be provided through blocks greater than 250 metres.
h) Mid-block pedestrian connections should have a minimum right-of-way of 6.0 metres and a walkway of at least 3.5 metres wide.
i) Rear lanes should be provided wherever possible for blocks fronting onto main streets, or where front yard parking and front yard garages are undesirable.
j) Reduce or eliminate chain link fences between developments and create continuous and connected community developments.
k) Where rear lanes exist, they should be preserved as a means of diverting parking and loading functions away from main streets.
l) Where a T-intersection is required, the adjacent site (at the terminus of the 'T') should be considered a feature property whose design appropriately terminates the street.

Refer to Other Applicable Performance Standards:

05 Transit-Oriented Development & Design
12 Dedicated Cycling Lanes
24 Arterial Roads
25 Collector Roads
26 Local Roads
27 Rear Lanes

The street network in Thunder Bay is anchored by a number of key corridors, including the Main Streets, the Thunder Bay Expressway, and other prominent streets. Where redevelopment opportunities result in new streets, they should reinforce a well-connected grid of Collector Roads, Local Roads and lanes (modified to reflect natural features and open spaces), and be characterized by shorter block lengths, similar to that which has helped make Thunder Bay's denser and older neighbourhoods so successful. This allows traffic to dissipate to local destinations, reduces congestion, promotes walkability and improves public transit and emergency vehicle access.

In existing communities, opportunities should be pursued to connect ending streets to adjacent or new development to maximize connectivity. Where this is not possible, and where streets end in cul-de-sacs, pedestrian connections should be provided to enhance the level of connectivity through the community.

New communities in Thunder Bay should provide a variation in block sizes and street layouts to encourage the development of a mix of housing forms and densities. Block lengths should average 200 metres. In special circumstances, where a block is longer than 250 metres, a 5 to 6 metre (minimum) through-block pedestrian walkway or a mid-block parkette should be provided, including downcast pedestrian-scaled lighting.

PERFORMANCE STANDARD 24

Arterial Roads

Arterial Roads, such as Arthur Street, Balmoral Street and Memorial Avenue, serve a variety of functions and should have an urban character.

a) Arterial road boulevards should aim to be a minimum 4.8 metres in width and should accommodate street trees offset 1.5-2.0 metres from the curb.
b) Within commercial areas, on-street parking should be provided on both sides of Minor Arterial Roads. Where snow storage is required, parking lanes should be wider. Otherwise, narrower parking requirements can be considered.
c) Joint driveways are encouraged to minimize curb cuts which undermine cycling and pedestrian travel.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
12 Dedicated Cycling Lanes
13 Green Streets
18 On-Street Parking

Arterial Roads are designed and constructed to serve a variety of functions, including carrying large volumes of pedestrian, vehicle and transit traffic, connecting urban areas and nodes within municipalities and distributing traffic to Collector Roads. Arterial Roads should have an urban character and should include a high level of design in the pedestrian realm. This includes buildings with densities that support alternative transportation, and the provision of well landscaped, pedestrian-supportive boulevards that include sidewalks, street trees, consistent paving, lighting and public art.

On-street parking should be permitted on both sides of Arterial Roads where adjacent to mixed-use areas, and cycling lanes should be provided on both sides of the road where possible. Arterial Roads should reflect their role as regional transportation corridors and community connectors.

PERFORMANCE STANDARD 25

Collector Roads

Collector Roads play a pivotal role in the City, and their design should be more substantial than Local Roads.

a) Collector road boulevards should aim to be a minimum 4.8 metres in width and accommodate street trees offset 1.5 metres from the curb.
b) 2.5-2.8 metre on-street parking should be provided on both sides of Collector Roads where snow storage is required. Otherwise, narrower parking requirements (2.0-2.4m) can be considered.
c) Joint access driveways are encouraged to minimize curb cuts which undermine cycling and pedestrian travel.

Refer to Other Applicable Performance Standards:

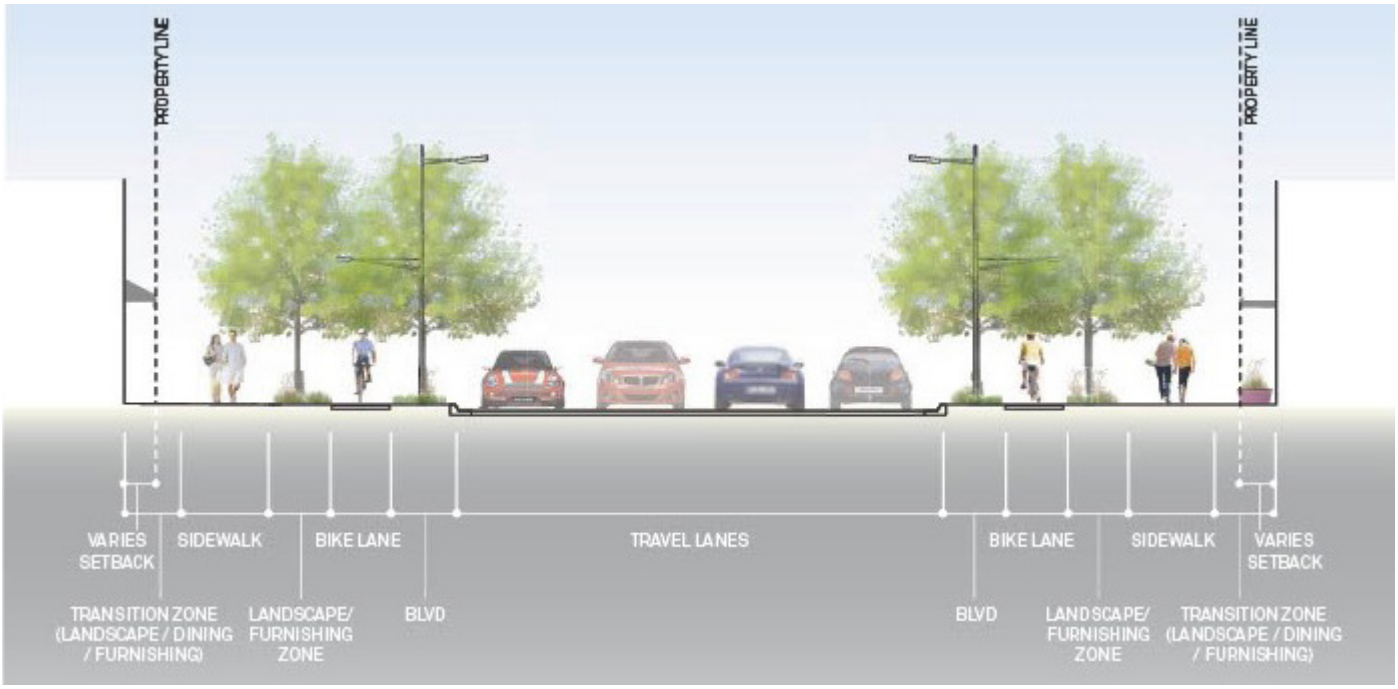
09 Boulevard Design
12 Dedicated Cycling Lanes
13 Green Streets
18 On-Street Parking

Collector Roads play a pivotal role in the City, connecting Local Roads to one another, to intersecting Collector Roads, and to Arterial Roads. As a result, the design requirements for Collector Roads should be more substantial than Local Roads.

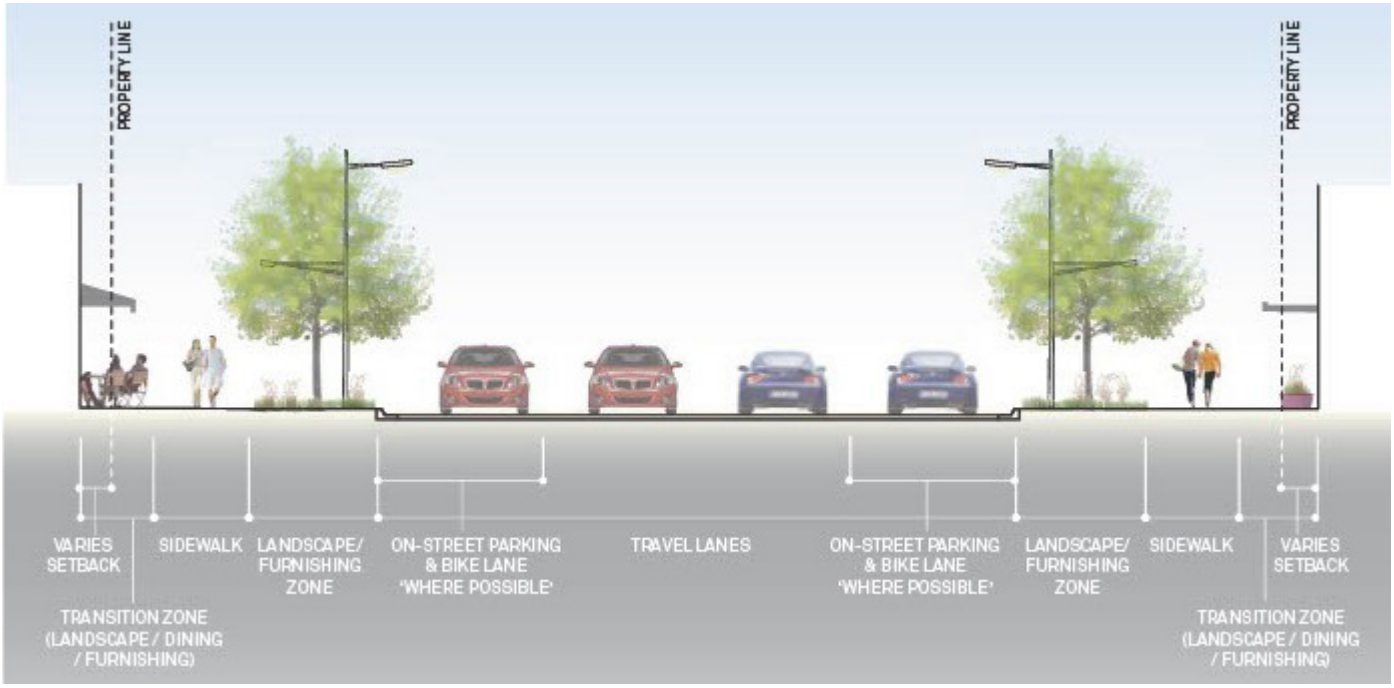
Collector Roads should be designed to serve a variety of functions, including transit, connections between communities, and connections to Local Roads. On-street parking should be permitted on both sides of Collector Roads where adjacent to mixed-use areas.

Cycling lanes should be provided on both sides of the street following the Active Transportation Plan. The placement of cycling lanes should adhere to the standards set by the City of Thunder Bay.

Examples of Collector Roads include Walsh Street, Franklin Street, Vickers Street, Montreal Street, Churchill Drive, Valley Street, and Clarkson Street.



Arterial Road Sample (with or without on-street parking, and with boulevard cycling lanes)



Arterial Road Sample (with on-street parking)

PERFORMANCE STANDARD 26

Local Roads

Local Roads should be 'intimate' pedestrian-scaled streetscapes that promote walking, cycling and residential activities, but discourage high speeds and through traffic.

a) Horizontal and vertical traffic calming treatments should be appropriately applied to reinforce slower speeds and reduce the likelihood of cut-throughs for safer neighbourhoods.
b) Curb to curb widths should accommodate two travel lanes and one on-street parking lane.
c) Wherever possible, sidewalks should be provided on at least one side of the street.
d) Barrier curbs are encouraged on new and retrofitted Local Roads within urban areas. In less urban areas, rolled/mountable curbs or a rural cross-section would also be appropriate.
e) Street trees should be planted in the boulevards on both sides of Local Roads.

Refer to Other Applicable Performance Standards:

13 Green Streets
18 On-Street Parking

Local Roads play a dual role, both as community socialization spaces and as transportation corridors. The design requirements, while less substantial than Collector Roads, should create 'intimate' pedestrian-scaled streetscapes that promote walking, cycling, and residential activities, but discourage speeding and through traffic. Local Roads should be designed with a narrow pavement width to reduce traffic speeds. The width of the asphalt should be wide enough for two minimal-width traffic lanes, and one on-street parking lane. This lane can act as a snow storage area in the winter.

Sidewalks should be placed on at least one side of the street. In cases where this is not feasible, the on-street parking lane should be provided on the side of the street that contains a sidewalk. Bicycle movement is considered to be a normal part of Local Road traffic movement and signage should be provided to indicate shared use with vehicular traffic.

PERFORMANCE STANDARD 27

Rear Lanes

Rear lanes are rear access roads that are either privately or publicly owned and are typically maintained by adjacent property owners. Rear lanes provide access to parking and loading functions away from the primary public street.

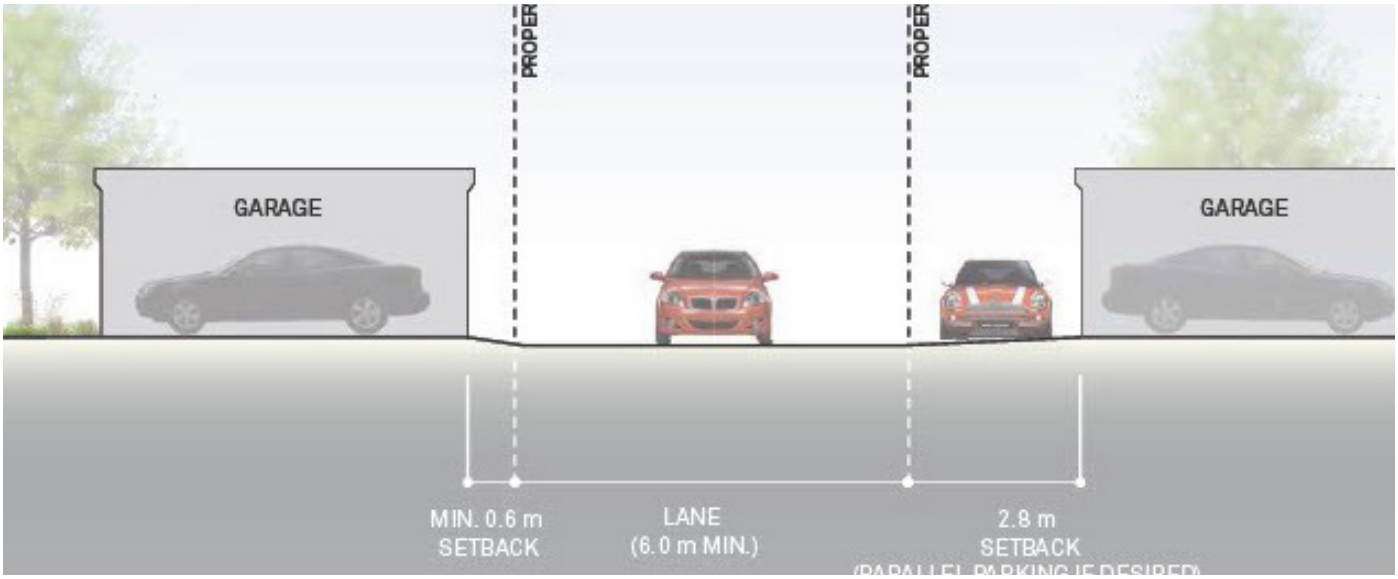
a) Rear Lanes can be used in mixed-use areas to service commercial uses, and in residential areas where front-yard garages/parking is undesirable.
b) Where rear lanes are considered in new developments, the provision of utilities within the lane should also be considered to reduce the potential for conflicts in the boulevard, and to help meet the performance standards for the boulevard space.
c) Rear Lanes should be a minimum of 6 metres in width.
d) Primary building façades should not face Rear Lanes.
e) Areas at the end, or beside, Rear Lanes should be reserved for snow storage.
f) Permeable materials are encouraged.
g) Rear Lane access should be provided at a central location where blocks exceed 250 metres.
h) A minimum setback of 0.6 metres is required between garages and Rear Lanes in residential areas.
i) An additional setback (2.8 metres) can be used to accommodate parking along the Rear Lane.
j) Rear Lanes should be considered to eliminate the need for driveways and street facing garages. Appropriate locations for Rear Lanes could include properties along Main Streets, Collector Roads, or facing open spaces.

The use of Rear Lanes is encouraged in mixed-use areas to service commercial buildings, where residential uses (e.g., townhouses) front onto Arterial and Collector Roads, and to provide access to parking, garbage pick-up and loading areas.

Where Rear Lanes provide access to residential parking facilities, the primary façade of the building should not face the lane, nor should primary at-grade access to the building be provided from the lane. To maintain adequate distance between the vehicular traffic on the Rear Lane and the rear of the garage, a minimum setback of 0.6 metres should be applied between the garage and the edge of the Rear Lane. Where parallel parking for property owners is desirable on the Rear Lane, a setback of 2.8 metres should be provided between the right-of-way and the garage.

The use of permeable materials is encouraged where sufficient drainage exists, as low traffic levels permit the use of less durable surfaces.

Areas at the end of Rear Lanes should be set aside for snow storage.



Residential Rear Lane Sample

SECTION 4

PERFORMANCE STANDARDS: GENERAL BUILDING & SITE DESIGN

SECTION 4: PERFORMANCE STANDARDS - GENERAL BUILDING & SITE DESIGN

4.1 Sustainability

Following the Climate-Ready City: Thunder Bay Climate Adaptation Strategy, sustainable design strategies should be at the forefront of all development, to minimize adverse impacts on the environment, promote energy efficiency, reduce the urban heat island effect, encourage the re-use and re-adaptation of materials, and minimize the amount of run-off into the stormwater system.

PERFORMANCE STANDARD 28

Sustainability: Buildings

Sustainable principles should be integral to building design, orientation, and material selection, and should adhere to the **Climate Forward City: Thunder Bay Net-Zero Strategy** as a key guiding document.

a) New building construction and renovation should adhere to a LEED or similar green standard.
b) Alternative energy sources should be optimized to reduce each building's carbon footprint.
c) Energy consumption should be reduced through innovative mechanical and construction technology (i.e., natural cooling, light recovery, passive solar design, cool roofs, and on demand water heating).
d) Buildings that are designed with flexible floor plans are encouraged to accommodate multiple uses.
e) Green roof technologies are encouraged where the life-cycle cost benefits outweigh the up-front costs.
f) Water use reduction technologies are encouraged.
g) Waste water technologies are encouraged to collect and filter rain water.
h) Waste receptacles should be conveniently located.
i) Construction materials should be recycled.
j) New materials should be locally sourced wherever possible.
k) Construction materials should consider life-cycle costing.
l) Operable windows should be installed in all building areas to allow natural ventilation.
m) Glazing systems should be designed to provide high levels of natural light into building areas.
n) Buildings should meet the **Canadian Standards Association Bird-friendly design standard** (CSA A460:19).

Refer to Other Applicable Performance Standards:

35 Outside Storage
54 Light Industrial Uses
55 Offices and Laboratories

Buildings should be built to Leadership in Energy and Environmental Design (LEED) standard, or an equivalent standard. Sustainable features should be integral to all building designs, allowing a seamless integration between passive and active systems. Environmental conditions should be factored into the buildings' orientation, material selection and design.

Buildings are encouraged to reduce the energy consumption of building and site systems (HVAC, hot water, lighting) through the use of appropriate mechanical and construction technology (i.e., natural cooling, light recovery, passive solar design, cool roofs, and on demand water heating).

Water use reduction technologies are encouraged, including water-efficient appliances, such as aerators, low-flow shower heads, dual-flush toilets, front-loading washers, waterless urinals and high-efficiency dishwashers. Waste water technologies, such as rain barrels or cisterns, are encouraged to collect and filter rain water to be recycled for non-potable domestic uses. Vegetated or "green" roofs are recommended to minimize water runoff, manage stormwater, and reduce solar gain, and provide additional outdoor amenity areas.

All buildings should have conveniently located waste receptacles to support the separation of waste into different streams according to reuse and recycling regulation (i.e., compost, paper, plastics).

Mixed-use, commercial and apartment buildings should provide flexibility in the building floor plate, envelope and façade to accommodate multiple uses over their lifespans.

Construction materials should be durable and consider life-cycle costing to avoid premature replacement. Where possible, materials should be recycled to reduce the environmental impacts of extracting and manufacturing new materials. If there are no salvageable materials available, efforts should be made to purchase materials from demolition sales, salvage contractors and used materials dealers. Where the life-cycle cost benefit outweighs the up-front costs, new construction materials (e.g., wood, granite, etc.) should have low embodied carbon and be locally sourced to reduce the impacts of transportation. Canadian products are generally designed to withstand our climate.

PERFORMANCE STANDARD 29

Sustainability: Site Design

Careful consideration should be taken when siting a building to accommodate the natural characteristics of the landscape, while also recognizing the larger context of the street.

a) Impervious surfaces should be minimized, while landscaped areas maximized.
b) Bio-swales should be used to capture stormwater run-off.
c) Native, adaptive, or non-invasive plant species are recommended. Plants that require a lot of water should be minimized.
d) Tree planting should be optimized for any site and within parking areas.
e) Where irrigation is required, such as for non-native and/or non-drought resistant decorative landscaping, high efficiency systems should be used.
f) Grey water should be captured and used as a source for irrigation.
g) All planting beds should be mulched.
h) Snow storage areas should be well-drained on site.
i) Where possible, site design should incorporate and enhance existing grades and natural drainage to limit the need for cut/fill.
j) Design and orient buildings to optimize solar exposure to promote passive solar design.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
30 Surface Parking
43 Buffer Planting
51 Drive-Throughs & Other Vehicle Queues

Landscaped areas should be maximized to ensure adequate growing conditions for trees (15 cubic metres of good quality soil). Impervious surfaces (i.e., parking areas and driveways) should be as small as possible within allowable standards. Permeable surfaces (i.e., unit pavers, porous concrete, or porous asphalt) should be used for areas that must be paved to minimize stormwater runoff and increase groundwater recharge.

Bio-swales or infiltration trenches should be utilized to capture, filter and infiltrate stormwater runoff from impervious surfaces.

Native or adaptive plant species should be planted to reduce or eliminate the need for landscape irrigation. Turf grasses and other landscaping materials that require large amounts of water are discouraged. Consider using adaptive seed mixes that have reduced watering requirements, such as"Eco-Lawn," or the OSC: Low Maintenance Mixture currently recommended in the City's Parks and Open Spaces Standards and Specifications. All planting beds should be mulched. Mulch retains moisture in the soil and prevents evaporation.

If an irrigation system is necessary, use a high-efficiency drip/bubbler system. Weather based controllers should be installed to dynamically control the irrigation system, along with a properly timed irrigation schedule to minimize evaporation and demand on municipal systems. Water sub-meters should be installed on landscape irrigation systems to monitor consumption and to quickly identify leaks. A maintenance program should be developed that establishes procedures for cutting, caring for and conducting routine maintenance of lawn and landscaping.

A non-potable water source should be used for landscape irrigation (captured rainwater from roofs, graywater or municipally claimed wastewater), while well-drained snow storage areas should be provided on site in locations that enable melting snow to recharge groundwater rather than entering the municipal stormwater system.

Where sites are near the wilderness boundary of the City, **FireSmart** recommendations and the National Resource Council Standards for Wildland-Urban Interface Fires should be considered in all landscaping design.

4.2 On-Site Parking

These standards pertain to multi-storey commercial, residential, institutional and mixed-use buildings. Additional standards for specific land uses can be found in Section 5.

As new communities develop and established communities redevelop, a variety of parking solutions will be appropriate to support increased densities, including surface parking, above- grade and below-grade structured parking and on-street parking. As a general rule, parking areas should be designed to minimize their visual impact and to allow for redevelopment as future building sites. Therefore, the layout of buildings should consider site access, landscape and site servicing that will permit the redevelopment of these sites. In mixed use or commercial areas, structured parking is the most efficient use of land.

PERFORMANCE STANDARD 30

Surface Parking

Large areas of uninterrupted surface parking should be avoided.

a) Surface parking areas should be located at the rear or side-yard of a building and should not be placed between the front face of a building and the sidewalk.
b) Hammerhead bump-outs should be provided at the end of linear parking lots to accommodate exiting vehicles.
c) Driveways to parking should be from rear lanes and side streets wherever possible.
d) Shared parking and shared driveways between adjacent properties are encouraged. Where multiple access points currently exist, they should be consolidated where possible.
e) Where existing development has parking located adjacent to the sidewalk it should be screened by a 3.0 metre landscaped buffer in accordance with the Sample Landscape Strips document.
f) Surface parking lots should be divided into smaller "parking courts" and encourage "park once and walk" usage.
g) 1 tree for every 8 parking spaces is recommended. These can be clustered to facilitate snow clearing.
h) Permeable surfaces or low impact development should be utilized to minimize stormwater run-off.
i) Clear, 1.5 metre (minimum) dedicated pedestrian routes should provide direct connections from parking areas to building entrances and throughout, further reinforcing "park once and walk" usage. Design should include horizontal and vertical traffic calming measures to ensure slow vehicle speeds and maximize pedestrian safety.
j) Pedestrian-scaled lighting should be provided along pathways.
k) Preferential parking (i.e., accessible parking stalls, bicycles, car-share, energy efficient vehicles) located close to building entrances is encouraged.
l) Where preferential parking is provided within bump-outs directly in front of the building, curb-cuts to the sidewalk should be consolidated (no more than one curb- cut for every two cars). No more than four spaces should be provided consecutively, to minimize the total number of curb cuts.
m) Drop-off areas should not interfere with pedestrian traffic.
n) Well-drained snow storage areas should be provided or removed off-site.

Refer to Other Applicable Performance Standards:

29 Sustainability: Site Design
30 Surface Parking
37 Main Street Buildings
38 Accessibility: Private Realm
42 Private Trees
43 Buffer Planting
50 Retail
54 Light Industrial Uses
55 Drive-Throughs and Other Vehicle Queues

To support retail uses along the main streets, within the Intercity area, and along other key commercial corridors, there is an abundance of surface parking lots. Ultimately, these surface lots will become prime opportunities for intensification and redevelopment. However, in the interim, they should be carefully designed to minimize their impacts on the public realm and maximize pedestrian safety through the use of horizontal and vertical traffic calming measures.

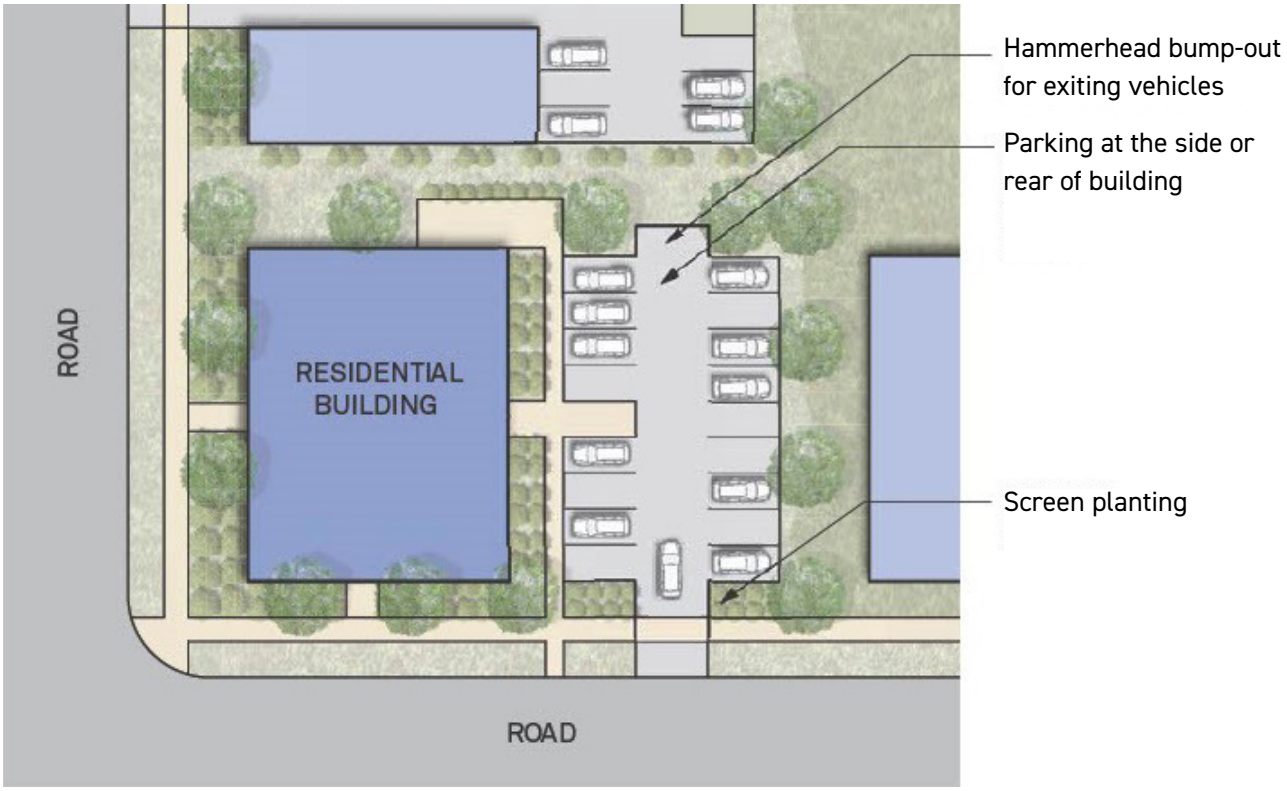
Large areas of uninterrupted parking should be avoided. The total amount of parking should be minimized through shared parking between adjacent properties, particularly in the evenings, weekends and other off-peak periods. Where surface parking is required for new development it should be located at the rear or side-yard of buildings. Where parking areas exist in the front yard adjacent to the sidewalk, a 3.0 metre (minimum) landscaped buffer should be located between parked vehicles and the sidewalk. This buffer should be located within the private realm to not reduce the total sidewalk width and to complement the public boulevard green space.

Planting strips, landscaped traffic islands and/or paving articulation should be used to define pedestrian and vehicle routes and define smaller parking 'courts' that provide safe pedestrian walkways, encourage "park once and walk" usage, improve edge conditions, and minimize the aesthetic impact of surface parking. The amount of landscaping should be proportionate to the overall parking lot size, but generally, 1 tree for every 8 parking spaces is recommended. Each tree planted in parking lot islands should have access to a minimum of 15 cubic metres of good quality soil (soil volume can be shared between trees).

Permeable surfaces (unit pavers, porous concrete or asphalt, etc.) should be utilized for areas that must be paved to minimize stormwater runoff and increase groundwater recharge. Bio-swales or infiltration trenches should be utilized to capture, filter and infiltrate stormwater runoff from impervious surfaces.

Preferential parking is encouraged for alternative modes of transportation. Please refer to the City's Bicycle Parking Guidelines. Service and drop-off area circulation should not interfere with pedestrian circulation.

Well-drained snow storage areas should be provided on site in locations that enable melting snow to recharge groundwater rather than entering the municipal stormwater system and avoid negatively impacting surface drainage systems during periods of melt.



Residential Surface Parking Area Sample

PERFORMANCE STANDARD 31

Above-Grade Parking Structures

Parking garages that face onto public sidewalks should be designed to integrate into the surrounding streetscape with commercial uses at grade.

a) Parking structures should have active, at-grade uses facing public sidewalks, and apply treatments to reinforce slow entry and exit to maximize pedestrian safety.
b) Vehicular access to parking structures should be provided from the rear or side wherever possible.
c) Pedestrian entrances should be provided from the main frontage.
d) Covered parking should also incorporate long-term bicycle parking.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
19 Bicycle Parking
29 Sustainability: Site Design
36 General Building Design
37 Main Street Buildings

Where above ground structured parking garages are built next to public streets they should be designed to contribute to the quality of the street. Parking structures fronting onto streets should be developed with active at-grade building uses lining the edge of the ground floor to provide attractive, animated façades which contribute to the streetscape and enhance pedestrian safety. The ground floor height should be a minimum of 4.5 metres floor to floor.

Vehicular access to parking structures should be located at the rear and/or side of buildings away from main building frontages and major streets. Pedestrian entrances for parking structures should be located adjacent to main building entrances, public streets or other highly visible locations.

PERFORMANCE STANDARD 32

Below-Grade Parking Structures

Below-grade garages can be used as a means of maximizing areas for building footprint and landscaping.

a) Vehicular access to parking structures should be provided from rear lanes or side lanes where possible.
b) Pedestrian entrances should be highly visible from the main face of the building fronting the public sidewalk.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
27 Rear Lanes
29 Sustainability: Site Design
33 Bicycle Parking
34 Servicing and Loading
37 Main Street Buildings

Vehicular access to parking structures should be located at the rear and/or side of buildings away from main building frontages and major streets where possible. Pedestrian entrances for parking structures should be located adjacent to main building entrances, public streets or other highly visible locations.

Where below-grade garages are built, resulting impacts to the stormwater management system should be considered to avoid undue stress on the system.

PERFORMANCE STANDARD 33

Bicycle Parking

The accommodation of convenient bicycle parking is essential to support active transportation and ensure that it remains a long-term transportation option.

a) Bicycle parking should be provided along City streets and close to building entrances - especially in commercial areas.
b) Bicycle parking should be sheltered from the elements whenever possible.
c) Bicycle parking should not impede pedestrian circulation.
d) Post-and-ring, or inverted 'u', bicycle parking is preferred.
e) Bicycle storage facilities should be provided in areas of high pedestrian activity and encouraged in both the public and private realm.
f) Sheltered and secure bicycle parking facilities should be provided at transit terminals and employment, business, office buildings, and apartments.

Creating a network of parks, open spaces, streets and trails that connect Main Streets and key destinations will establish cycling as a major mode of transportation. Convenient, abundant, and secure bicycle parking is essential to ensure that cycling remains a long-term transportation option. These guidelines should be used in conjunction with the City's Bicycle Parking Guidelines.

Bicycle parking should be provided at regular intervals on the Image Routes and other areas of high pedestrian activity, and should be located close to building entrances. Post-and-ring and inverted 'u' parking, constructed of stainless, galvanized, or powder coated steel, is preferred as larger units can impede pedestrian movement and snow clearing.

Bicycle parking and storage facilities should encourage active transportation, including parking at public parks and open spaces, and visitor bicycle storage at transit facilities and employment areas.

Refer to Other Applicable Performance Standards:

02 Parks and Open Spaces
05 Transit-Oriented Development & Design
09 Boulevard Design
28 Sustainability: Buildings
29 Sustainability: Site Design
30 Surface Parking
55 Offices and Laboratories

Post-and-ring bicycle parking

4.3 Storage, Servicing, and Loading

Storage, servicing and loading areas should not define the character of a building or the adjacent streets, open spaces, or properties. They should be located behind the building, or screened from public view, and should be paved with an impervious surface of asphalt or concrete to minimize the potential for infiltration of harmful materials. Storage, servicing, or loading areas must not encroach into the exterior side or front yard setback.

PERFORMANCE STANDARD 34

Servicing and Loading

Where servicing and loading areas apply, their visual impact should be minimized through location and screening.

a) Loading docks and service areas should be integrated within the building where possible.
b) Where this is not possible, they should be located at the side or rear of buildings and screened from public view.
c) Access to servicing and loading areas should always be provided from secondary streets.
d) Shared access is encouraged to minimize curb cuts.
e) Where possible, service and loading areas should be coordinated with outside storage areas.
f) Servicing enclosures should be constructed of materials that complement the main building.
g) Service and loading areas must not encroach into the exterior side or front yard setback.
h) Loading and service areas may occupy the full rear yard if a landscaped edge and/or buffer treatment is provided.

PERFORMANCE STANDARD 35

Outside Storage

a) Outside storage areas should be located at the side or rear of buildings and should be screened from public view.
b) Screening walls should have a minimum height that is equal to the storage facility.
c) Storage areas should be large enough to accommodate the needs of all users.
d) Access to outside storage areas should always be provided from secondary streets.
e) Shared access is encouraged to minimize curb cuts.
f) Where possible, outside storage areas should be coordinated with servicing and loading areas.
g) Outside storage areas must not encroach into the exterior side or front yard setback.
h) Refuse areas should be paved with an impervious surface.
i) Loading and service areas may occupy the full rear yard if a landscaped edge and/or buffer treatment is provided.
j) Storage areas should be constructed of materials that complement the main building. Chain link fencing is highly discouraged.

Refer to Other Applicable Performance Standards:

27 Rear Lanes
28 Sustainability: Buildings
34 Servicing and Loading
36 General Building Design
37 Main Street Buildings
43 Buffer Planting
50 Retail
54 Light Industrial Uses
55 Offices and Laboratories

4.4 Built Form Guidelines

New buildings should reflect design excellence while embodying regional influences that respond to climatic conditions and local materials. Over time a regional architectural character should develop which can give the City a unique identity.

Similarly, with a shift towards sustainability and a focus on new technologies, local building traditions and an inspired material palette the City's urban landscape can transform into a demonstration of green city-building.

As Thunder Bay evolves, a variety of new development is encouraged, including residential buildings (i.e., single and semi-detached dwellings, townhouses, and apartments) and mixed-use buildings (i.e., retail at grade with residential/office above).

A number of the recommendations in this document are consistent across all building types, and therefore, this section presents Performance Standards that are applicable to all buildings, buildings on main streets, and buildings within heritage areas. They should be used in conjunction with the guidelines provided in Section 5.

PERFORMANCE STANDARD 36

General Building Design

Building Orientation & Massing

Buildings should generally be positioned to frame adjacent streets, internal drive aisles, boulevards, parking areas and amenity areas.

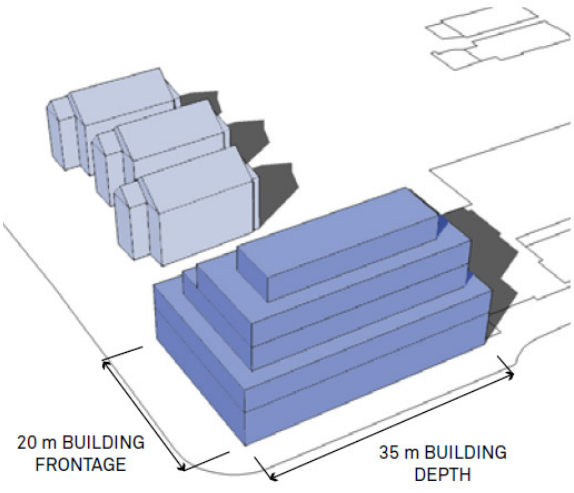
a) Buildings should frame adjacent streets with direct access from public sidewalks.
b) On corner sites, buildings should frame both streets.
c) Backlotted building and site design should be avoided.
d) The massing of taller buildings should ensure five hours of sunlight per day on adjacent buildings, streets and open spaces.
e) Taller building elements should be located at the south side of the building to reduce shadows cast on adjacent properties.

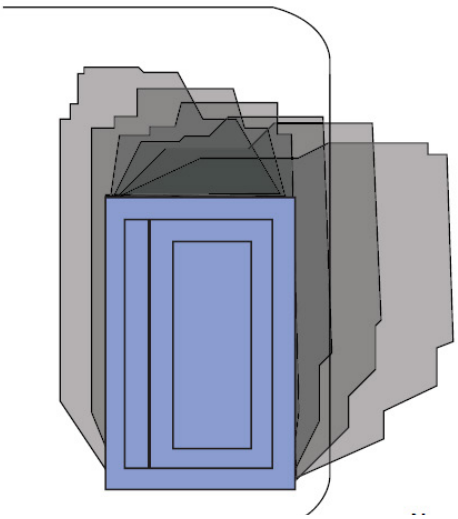
The building base, including architectural elements such as entrances, canopies, and large areas of glazing, reinforces the symbolic 'front door' of the building. Above the building base, vertical and horizontal design elements should be used to define the middle and top of the building, creating an aesthetically pleasing skyline through the use of stepbacks, balconies, terracing and/or architectural elements, including projecting roof lines, trellises or vertical elements.

Building Setback & Stepbacks

f) Surface parking lots should not be located within front-yard setbacks.
g) A range of setbacks are encouraged to create variety in the streetscape and accommodate public amenity space.
h) Large front-yard setbacks should be well-landscaped.
i) Taller buildings should have a 3 to 4-storey building base. Articulation above the base is encouraged.
j) Taller buildings should stepback 3.0 metres above the building base.
k) Stepbacks should be determined by a 45-degree angular plane applied at a height equivalent to the adjacent development or 13.5m.
l) Where stepbacks occur, useable outdoor terraces should be provided.
m) Shadow analysis is recommended for any proposed building that is more than 3-storeys taller than an adjacent building.

A setback refers to the grade level building location in relation to the front property line. With the exception of buildings on main streets, buildings in the City of Thunder Bay should include a variety of setbacks in order to create variation in the streetscape, and to accommodate public amenities, such as open space,





The illustrations above demonstrate how building articulation and stepbacks can be used to minimize shadows.

mid-block pedestrian walkways and/or main entrances. Surface parking should not be located within front-yard parking areas.

A stepback refers to the portion of the building that is "stepped back" above the building base at the building front, side or rear. Stepbacks reduce the mass of the building as it rises, allow for increased sun penetration at street level, enhance privacy, accommodate upper level terraces, and create transitions to surrounding low-rise residential areas, natural heritage features, and open spaces. Taller buildings (i.e., apartment, office and mixed-use buildings) should have stepbacks, where required, to ensure five hours of sunlight on adjacent properties per day. This also creates useable outdoor amenity space (i.e., terraces, green roofs). Shadow analysis is recommended on a building-by-building basis to identify impacts.

Building Access & Entrances

n) Main entrances should address public streets.
o) Individual at-grade unit entrances should be provided in larger buildings.
p) Main entrances should provide weather- protection.
q) Building entrances should adhere to Crime Prevention Through Environmental Design (CPTED) principles.

Main building entrances should face public streets and have direct access from a public sidewalk. These entrances should reflect the use of the building (e.g., large entry awnings, canopies or double-height glazing for public buildings), and should provide weather protection through awnings, recessed entries, front porches, porticoes and/or verandas. In larger buildings, individual entrances should be provided for ground floor units to help animate the street, and to break up large façades into individual units. Secondary entrances should not be dominant, but should be easily accessible and convenient to service, loading and parking areas.

The design and location of building entrances should adhere to the principles of Crime Prevention Through Environmental Design (CPTED). For example, building entrances should provide visibility between indoor and outdoor areas to enhance opportunities for natural surveillance. Likewise, in apartment dwellings, pedestrian access to parking and service areas within the principal building should be situated near exposed communal areas (e.g., exercise or meeting areas).

Façade Design

The use of various architectural styles is encouraged, but design should reinforce the continuity of the street and create a strong community character.

r) Where buildings are located on a corner lot, the street facing façade should be equal architectural expression and similar façade materials as those used on the front elevation.
s) Various architectural styles are encouraged, but should promote complementary details, elements, materials, and quality.
t) Large façades should be visually divided into smaller units.
u) Large, blank façades should be avoided.
v) Buildings should provide weather-protection at grade.
w) Where building frontages exceed 12 metres in width, they should be divided into functionally and visually smaller units through the use of façade articulation, internal courtyards, and networks of connected walkways and landscaping.

The use of various architectural styles is encouraged, but building façades should maintain a consistent standard of design and materials equal to that of the front façade. They should have consistent rhythms of similar details and architectural elements to reinforce continuity within neighbourhoods, and create a strong community character. Buildings facing streets and public spaces should address the street through vestibules, entrances, covered walkways or canopies and awnings to provide weather protection. On corner lots, dual façades should address both streets using wrap-around porches and balconies, large windows, and side entrances. Blank façades are discouraged. Flanking

façades should maintain a consistent standard of design and materials equal to that of the front façade.

Functional building elements, such as vents or rainwater leaders within the wall plane, should be integrated into the architectural design.

Window Treatments

x) In non-residential buildings, a significant amount of the building frontage on the ground floor and at building base levels should be glazed to allow views of the indoor uses and create visual interest for pedestrians.
y) Clear glass is preferred to promote the highest level of visibility and mirror glass should be avoided at the street level.
z) In residential buildings, habitable rooms (e.g., living room, kitchen) should face the public street, and have 30- 40% window surface area. Flanking walls should have 20% surface window area.
aa) Windows should provide natural ventilation and light.
ab) Skylights and clerestory windows are encouraged.
ac) Glazing should meet the **Canadian Standards Association Bird-friendly design standard** (CSA A460:19).

Buildings should encourage strong visual connections between the interior use and public areas to generate interest from the public realm, and enhance safety through opportunities for casual surveillance. Commercial and office buildings facing or flanking a street, lane or open space should provide a significant amount of clear glazing on the ground floor. Residential buildings should be designed with habitable rooms (i.e., living room, dining room, kitchen) facing the street, and should be comprised of a substantial percentage (30-40%) of surface window area. Flanking walls should include at least 20% surface window area. The window design should be primarily an expression of the interior dwelling use (e.g., larger windows in public rooms, such as living rooms and kitchens).

Windows should be arranged to enhance views, and provide natural ventilation and light, without sacrificing privacy to the primary or adjacent dwellings. Skylights and clerestory windows (a row of narrow windows at the top of a high wall, usually above adjacent roofs) are encouraged to enhance natural light. Skylights should be coordinated with other roof and building elements and located behind the roof ridge away from public view. Clerestory windows should be detailed to provide a structural and coordinated connection between the building wall and roof.

Building Projections

ad) Building projections (i.e., balconies, porches, canopies, stairs) are encouraged as transitional elements that provide access, amenity space and weather protection.
ae) Balconies should be provided above the ground floor of residential buildings.
af) Balconies should be designed as integral parts of the building.
ag) Slight design variations are encouraged to create

Buildings should provide a generous amount of window openings.

distinction, but continuity of scale and proportion is recommended between buildings.

Roofs

ah) Flat roofs and roof terraces are encouraged to be used as private and communal outdoor patios, decks and gardens.
ai) "Green" roof technologies are encouraged where the life-cycle cost benefits outweigh the up-front costs.
aj) Roof materials/colours should complement the building materials and the overall building design.
ak) Rooftop mechanical equipment should be integrated with the building design or screened using materials complementary to the building.
al) Parapets or other architectural screening devices should be used to screen rooftop mechanical units.

Building Materials

Building materials should enhance buildings, create an appropriate relationship with the existing urban fabric, and respond to Thunder Bay's climatic and local conditions, as per the Climate-Forward City: Thunder Bay Net-Zero Strategy.

am) Materials should be high quality and durable.
an) Design and material quality should be consistent and building materials and finishes should be complementary.
ao) Where building facades front onto Image Routes, or other key corridors, the finish materials should extend to all sides of the building.
ap) Preferred cladding materials include brick, stone, metal, glass, in-situ concrete and pre-cast concrete. Imitation materials are discouraged.
aq) Building materials should not be used to replicate other materials (i.e., shingles that resemble bricks, etc.).
ar) Clear, high-efficiency glazing should be encouraged wherever possible.
as) Mechanical penthouse materials should complement the architectural character.

Building materials should be chosen for their functional and aesthetic quality as well as their energy and maintenance efficiency. Despite the use of various architectural styles within the City, the design and material quality should be consistent and building materials and finishes should be complementary.

Building materials should be selected that enhance the design of each new building, while creating an appropriate relationship with the existing urban fabric. They should respond to Thunder Bay's climatic and local conditions, while contributing to a renewed aesthetic. Local materials allow new buildings to bring an enriched life to the street, while still being embedded in the characteristics of the region and offering a visible reference to the City's past.

Preferred cladding materials include brick, stone, metal, glass, in-situ concrete and pre-cast concrete. Facades that are primarily stucco, vinyl siding, plastic, plywood, concrete block, tinted and mirrored glass, or metal siding are discouraged, particularly on primary façades.

Mechanical penthouses should be considered integral to the architectural massing, composition and design of the building. They should be clad in materials that are attractive and complement the architecture of the building.

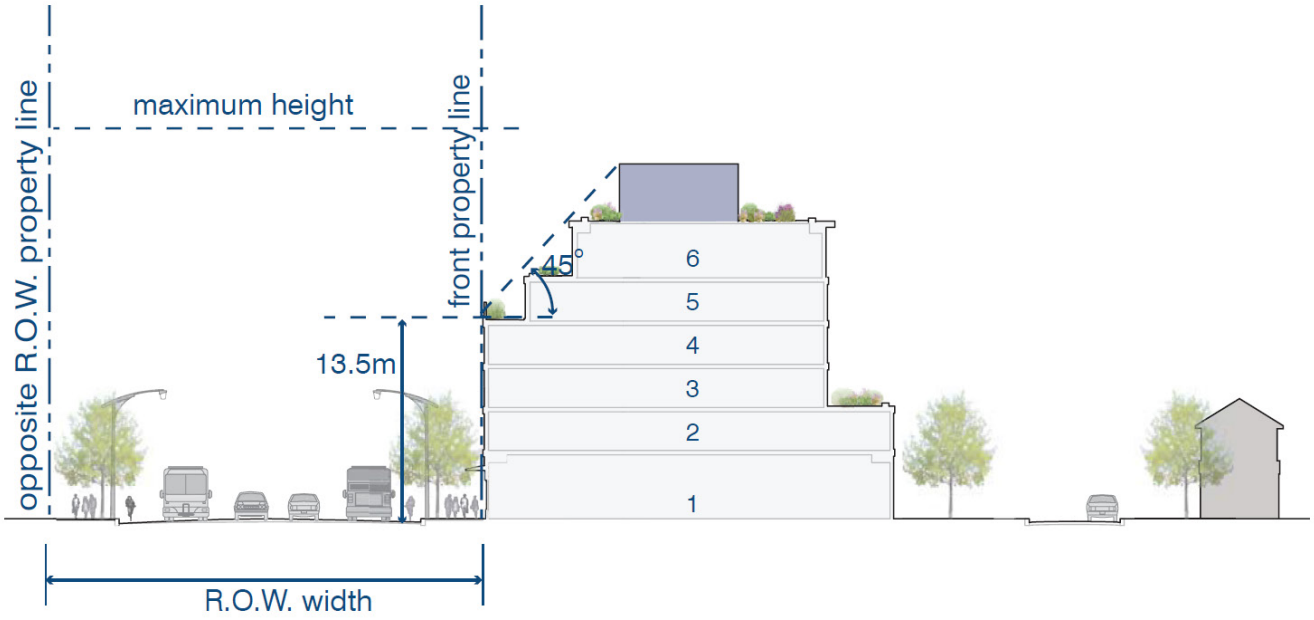
The use of clear, high-efficiency glazing should be encouraged wherever possible. Minimal tinting should be used in glazing to promote visual connection between buildings and outdoor areas and to provide a sense of the interior life and activity within the buildings.

PERFORMANCE STANDARD 37

Main Street Buildings

The design of main street buildings should promote an active public realm along the Image Routes and key corridors.

a) Buildings should generally be located at the front property line to create a continuous streetwall.
b) On corner sites, buildings should align with their respective frontages.
c) Where setbacks vary on both sides, the average should be used.
d) Minor variations in setbacks are encouraged to facilitate wider boulevards, accommodate public amenity space, and to create a more interesting streetscape.
e) Taller buildings should have a 3 to 4-storey building base. Articulation above the base is encouraged.
f) Taller buildings should stepback 3.0 metres above the building base.
g) Stepbacks should be determined by a 45-degree angular plane applied at a height equivalent to the adjacent development or 13.5m.
h) Main building entrances should be directly accessible from the public sidewalk.
i) The ground floor of all buildings should be 4.5 metres (floor-to-floor height) to accommodate internal servicing and loading, and future conversion to retail (where appropriate).
j) Maximum building height should be determined by a 1:1 ratio with the right-of- way width.
k) Maximum heights may only be achieved if all other Performance Standards are satisfied.
l) A minimum building height of 7.5 metres (2-storeys) is desirable.
m) Main entrances should be directly accessible from public sidewalks.
n) Above-grade units should be accessed from a single entrance.
o) A significant amount of the building frontage on the ground floor and at building base levels should be glazed to allow views of indoor uses and to create visual interest for pedestrians.
p) Clear glass is preferred over tinted glass to promote the highest level of visibility, and mirrored glass should be avoided at the street level.
q) Balconies should be provided above the 2nd or 3rd floor of taller, mixed-use buildings.

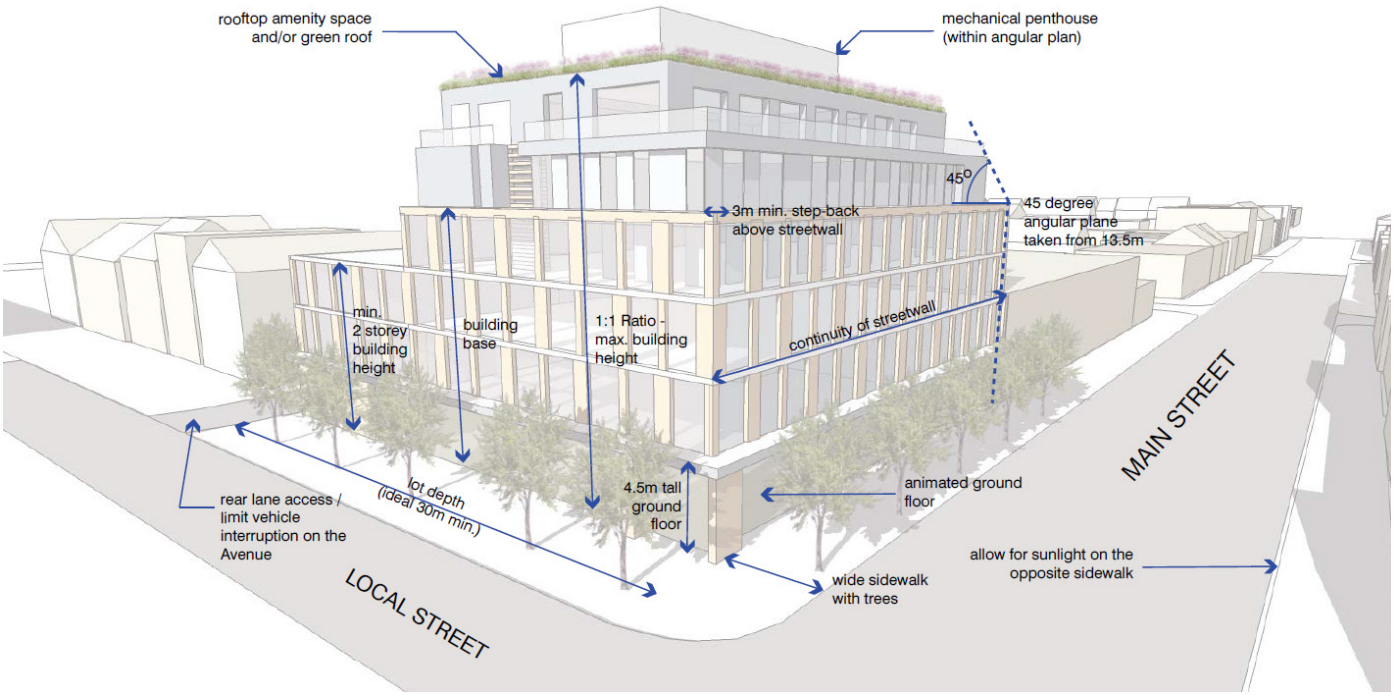


Main Street Building Design Sample

r) Balconies should be designed as integral parts of the building.

New development along the Image Routes and within key corridors will strengthen communities, and accommodate many new residents and jobs. To ensure successful new buildings, it is imperative that they fit into the existing context, and contribute positively to the character of the streetscape. Buildings should be positioned to frame abutting streets, internal drive aisles, boulevards, parking areas and amenity areas, and should be directly accessible from the public sidewalk. A significant amount of the building base façade should be glass to allow views of the indoor uses and create visual interest for pedestrians. Where buildings are prohibited from using windows (i.e., where future adjacent development is anticipated), the side façades should still incorporate a minimum level of articulation including detailed brick work, planting walls, or murals. Where residential or office uses are included above retail uses, separate entrances should be provided with access from a single, main entrance that defines the buildings symbolic entrance and civic address.

Buildings should generally have consistent setbacks to create a continuous streetwall. On corner sites, building setbacks should generally align with their respective street frontages and make necessary transitions to both edges. Where variations in setbacks occur on both sides of a proposed building, the average of the two setbacks should be used. Additionally, variations in setbacks may be used to incorporate public amenities, such as open space, mid-block pedestrian walkways and/or main entrances.



Main Street Building Design Sample

To promote intensification, ensure the most efficient use of existing infrastructure, and create a vibrant streetscape, the City should consider requiring that all new buildings achieve a minimum height of 7.5m (2-storeys). Generally, the maximum heights of buildings along the Image Routes and key corridors should be limited to a 1:1 ratio with the right-of-way width, provided the built form demonstrates compliance with all other Performance Standards (e.g. stepbacks, angular planes, etc.). Taller buildings can be considered, on a case-by-case basis, in key areas, including:

- Within the gateways identified in Performance Standard 06 and 07;
- At key intersections within the North and South Core; and,
- On large lots, on a case-by-case basis, where lot size, setbacks, stepbacks and building transitions can accommodate appropriate transitions to neighbouring properties.

The design of buildings should clearly distinguish between the building base, middle and top. A 3 to 4-storey building base, highlighted by architectural elements such as entrances, canopies, large areas of glazing and retail opportunities, will define the streetscape and create a human scale at grade. Above the base, architectural articulation defines the middle and top of the building, creating an aesthetically pleasing skyline through the use of balconies, terracing and/or architectural elements, including projecting roof lines, trellises or vertical elements.

Taller buildings along the Image Routes and key corridors, should be carefully designed, with building setbacks and stepbacks, to create transitions to surrounding low-rise residential areas, natural heritage features, and open spaces. They should have a minimum 3.0 metre stepback above the building base, with an additional 'pedestrian perception stepback' determined by a 45-degree angular plane, to reduce the overall building mass and provide a transition to adjacent residential communities. This also creates useable outdoor amenity space (i.e., terraces, green roofs). Shadow analysis is recommended on a building-by-building basis to identify impacts.

Where appropriate (i.e., at gateways, within the North and South Cores), taller buildings should be designed to reinforce their potential role as landmarks within the City through unique massing, as well as building projections, recesses at grade, lower storey design and open space treatments.

PERFORMANCE STANDARD 38

Accessibility: Private Realm

Incorporation of accessibility features in the design of private open spaces, parking lots, circulation areas and buildings is essential to create private development that is welcoming and accessible to all members of the community.

a) Private buildings that will be publicly accessed, such as retail shops, office buildings, theatres, etc., should minimize all changes in grade at the main entrances of the building.
b) Wherever possible, the principles of universal design should be incorporated into new and existing buildings.
c) Sidewalks and pedestrian paths on private property should be a minimum of 1.5 metres, with periodic widening, to accommodate persons using mobility aids.
d) Detectable warning surfaces should provide navigational cues for persons with visible impairments, especially in areas where there is an approach change in surface level such as at the tops of stairs or ramps.
e) Where possible, signage should incorporate a pronounced high contrast and glare-free colour contrast. A minimum contrast of 70% light reflectance is recommended.
f) Accessible parking spaces must be provided in proximately to building entrances as required by the **Ontario Building Code**.
g) Unobstructed and safe travel paths through private open spaces, parking areas and to building entrances should be clearly marked and provided.
h) All travel paths should be well lit and clear of obstacles.
i) Unit paving materials used in sidewalks, paths and walkways should be firm and level, with joints no greater than 6 millimetres wide.

Outlined in this section are several key private realm accessibility objectives for the City of Thunder Bay. Additional objectives are provided in the **Accessibility for Ontarians with Disabilities Act (AODA)** and the **Ontario Building Code (OBC)**; these standards should be reviewed and considered with all design and construction projects. The primary goals of these recommendations are to ensure that the design of areas within the public realm consider users of all activity level and abilities.

PERFORMANCE STANDARD 39

All Season Design: Private Realm

Thunder Bay is a cold climate city, the design of its buildings, parking lots and outdoor storage areas should consider all season requirements, including sun shading, wind and snow protection, snow storage and all weather accessibility.

a) A minimum 1.5 metre sidewalk should remain clear of snow and debris year-round on all pedestrian travel routes.
b) Where snow storage is to be accommodated in parking lots, a snow storage plan should be established to ensure that snow accumulation does not conflict with pedestrian travel and accessibility.
c) Weather protection should be incorporated in the site design of buildings to ensure pedestrians are sheltered from the predominate winds.
d) Where possible overhangs or awning should be provided along main street areas to shelter pedestrians and the sidewalk from rain and snow.
e) Front entrances to buildings should be located closest to key pedestrian travel areas to minimize outdoor travel in winter months.
f) Outdoor patios should be designed to be seasonal (to not infringe on the winter snow storage areas), yet where possible, should incorporate features that extend their usability, including shading devices and heaters.
g) Within parking lots, covered or sheltered walkways (with landscaping buffering users from the predominant wind direction) should be considered.
h) Where landscaping is used to visually shield storage or loading areas, a mix of coniferous and deciduous planting should be considered to ensure a strong year round visual character.
i) In residential settings, 50% of the front yard should be landscaped. Alternatives to turfgrass such as shrubs and perennials beds are encouraged to improve aesthetics, reduce long-term maintenance, decease stormwater run-off, and increase biodiversity.
j) The location of walkways and parking lots should be coordinated with winter sun angles to ensure walking and driving surfaces remain dry and free of ice.

As a City with four seasons, the year-round comfort of visitors and employees should always be considered in the design of a building or site. There should always be a focus on sheltering pedestrians in the coldest months and providing extended access to sunlight and open areas in the warmer seasons. This includes designing wind barriers, sunny seating areas, covered walkways and where possible, minimizing overly exposed pedestrian areas such between parking lots and adjacent streets to building entrances.

PERFORMANCE STANDARD 40

Heritage Design

The City of Thunder Bay has a strong foundation of designated and non-designated heritage buildings, including those within the North and South Cores, the Thunder Bay Waverly Park Heritage Conservation District, the Vickers Park area, and a number of residential properties.

Renovations to Heritage Buildings

Heritage buildings within the City should be retained and restored to respect the original stylistic intent of the building.

a) Heritage buildings should be regularly maintained, both structurally and aesthetically.
b) A heritage professional should be involved in all building restoration.
c) Wherever possible, existing building components should be restored rather than replaced.
d) Additions and restorations should match the original stylistic intent of the building.
e) Old images, period research, and the existing stock of buildings should be used as inspiration to determine appropriate built form.
f) Renovated buildings should match the setback established by existing buildings.
g) Additions or renovations to a heritage property should use materials that match or enhance the original structure (e.g. color, texture, scale, etc.). Accessibility upgrades should be undertaken in a manner that does not undermine the heritage character of the building.

Heritage properties within the City should be retained and restored, including regular structural and façade maintenance. Retaining the façade is not an acceptable substitute to the retention of the whole structure.

A heritage professional should be involved in all renovations and alterations to existing heritage properties to ensure the most appropriate renovation techniques and materials are employed. Wherever possible, building components (i.e., windows, doors, signs, etc.) should be restored and brought up to today's standards (e.g., energy efficiency).

Additions or renovations should respect the initial stylistic intent of the building, and should reintegrate key aspects of heritage design that have been lost through degradation or previous renovation. The original façade materials on heritage properties should not be changed or covered. Façade renovation should be in keeping with the original building articulation, using those elements that are intact and replacing those that are missing or damaged (e.g., columns, cornices, openings, windows, doors, etc.).

The replacement of any of these features should be seen as a last resort, and where necessary, they should be replaced with models that are as visually similar as possible. Where significant restoration is required, old images, period research, and the existing stock of heritage properties should be used as inspiration to determine the appropriate mass, scale, rhythm, and materials.

Renovated heritage properties should generally be limited to their existing height, not including the cornice or parapet, to encourage the retention of these key features. Buildings should match the pre-established setback of adjacent buildings to ensure a continuous street wall. This is especially beneficial on sites where buildings are currently set back from the street or are missing altogether.

Heritage Context Infill

New development in a heritage area should be sympathetic to existing buildings, while encouraging modern, creative architecture.

h) New infill buildings should not mimic existing buildings.
i) They should have sympathetic scale, massing, height, and building components.
j) New buildings should have a height-to-width ratio that is similar to existing buildings.
k) In retail areas, storefront design should maintain a consistent rhythm of façades.
l) Adaptive re-use is encouraged where feasible.

Where new development is proposed within the Heritage Conservation District, or adjacent to existing heritage properties, careful consideration is required to ensure built form is compatible with the character of the area. New heritage infill buildings should complement, yet be distinguishable from, existing heritage buildings, striking a balance between heritage authenticity and creative, context-sensitive architecture. They should not mimic adjacent heritage properties, but should have sympathetic scale, massing, height, and building components (i.e., window alignment, roof-lines, entrance location, ground floor treatment and materials).

On blocks with significant heritage frontages, new buildings should have a height-to-width ratio that is similar to existing buildings. In heritage retail areas, storefront design should maintain a consistent rhythm and character through recessed entries and large bay windows.

Where appropriate, heritage structures should be retained and incorporated into new developments, through adaptive re-use.

PERFORMANCE STANDARD 41

Signage

A hierarchy of signage should be implemented uniformly throughout the City, and should encompass street signs, directional signage, wayfinding, pedestrian and cyclist-scaled, and commercial signage.

a) A comprehensive wayfinding strategy for the City should be developed.
b) Commercial signage should not overwhelm the appearance of the streetscape nor restrict the placement of street trees.
c) In areas with high pedestrian traffic (i.e., the North and South Cores, the Image Routes, etc.), commercial signage should be pedestrian scaled.
d) Mobile signs should be prohibited.
e) Signage and kiosks should not impede pedestrian circulation.
f) Signs should not impede vehicle sight lines.
g) Information signage should be located in high traffic areas.
h) Street furniture should not include advertising.
i) LED signage should be regulated to ensure that their location, luminosity, and visual changes do not interfere with the safety or comfort of street users and businesses or create excessive light pollution which harms wildlife.

Refer to Other Applicable Performance Standards:

02 Parks and Open Spaces
03 Stormwater Management Facilities
04 Multi-Use Trails
06 City Gateways
38 Accessibility: Private Realm
40 Heritage Design
50 Retail

A hierarchy of signage should be implemented uniformly throughout the City, and should encompass street signs, directional signage and commercial signage. This will reduce the overall amount of street clutter, while ensuring that wayfinding signage is highly visible and easy to understand.

A comprehensive wayfinding strategy for the City is in place, outlining strategies for signage types, locations, and accessibility best practices. It also includes mapping at key locations for proposed wayfinding signage.

Signs and information kiosks should be located in areas of high pedestrian activity, such as the North and South Cores, along the Image Routes and key corridors, and along the waterfront. They should be limited in size to minimize visual impacts on the streetscape, and should be carefully located to ensure they do not impede pedestrian circulation or vehicle sight lines.

Advertising should not be included within street furniture with the exception of small, unobtrusive plaques to indicate the source of funding for the furniture.

4.5 Landscape Design

Private landscaping, including trees on private property as well as buffer planting, can augment landscaping features within the public realm and significantly enhance the aesthetic appeal of a streetscape. Landscaping is recommended to provide shade on the sidewalk, protect from wind, and create a buffer between pedestrian and vehicle traffic. In addition, landscaping should be used to screen undesirable uses such as parking and outdoor storage from view of the public realm.

PERFORMANCE STANDARD 42

Private Trees

Private trees are trees planted on private property.

a) Preferred species should be selected by property owner using species suitable for zone 3 climatic conditions.
b) Utility right of ways should be adhered to for all tree planting on private sites.
c) Wherever possible, plant trees on private property in a continuous row, parallel with public street trees.
d) Incorporate a diverse array of drought- tolerant, adaptive or native plant material.
e) City of Thunder Bay should distribute maintenance pamphlets for all new private trees.

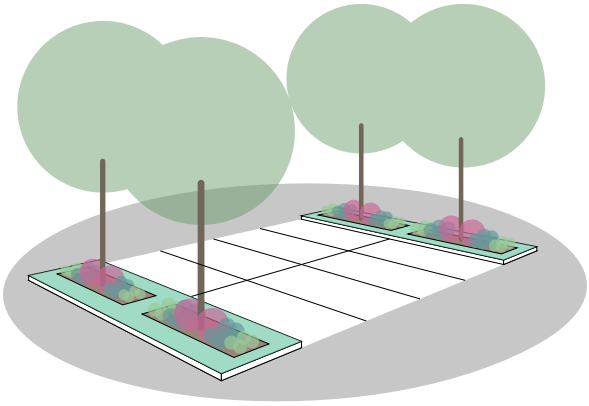
To ensure the proper installation of new trees, and maintenance of existing trees, these guidelines should read in conjunction with other relevant City documents, including the Parks and Open Spaces Standards and Specifications.

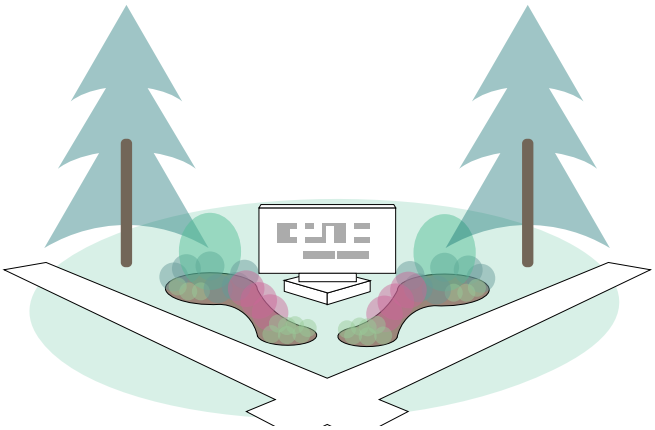
PERFORMANCE STANDARD 43

Buffer Planting

Buffer planting uses landscaping features (i.e., berms, trees, shrubs, and grasses) to provide a transition between varying uses and the public realm. Additional guidance is provided in the Sample Landscape Strips document.

a) A landscape setback of a minimum of 3.0 metres is encouraged for all parking lot areas. This should be landscaped with screen planting.
b) Coniferous trees would be acceptable in these situations to block views.
c) Plant material to be used to create hedging, frame views, create unique or special places, add color, and to enhance the overall quality of the street and parking area. The landscape design should not create safety or visibility issues for pedestrians, cyclists or drivers.
d) The enhanced landscaping requirement on City owned land will require a commitment by the City of Thunder Bay to support a landscape maintenance program which exceeds standards set by the typical municipality.
e) Plant species should be Canadian Hardiness Zone 3, drought and salt tolerant, and either native, adaptive, or non-invasive. Size and growth habit should be selected based on the space available.





SECTION 5
PERFORMANCE STANDARDS: LAND USE SPECIFIC

SECTION 5: PERFORMANCE STANDARDS: LAND USE SPECIFIC

The design guidelines in Section 5 provide land use specific performance standards applicable to the primary permitted land uses within Urban Neighbourhoods, Pedestrian Commercial Areas, Commuter Commercial Areas, and Business Areas as per the City of Thunder Bay Zoning By-law 1-2022.

Each of the performance standards in this Section are focused and structured around the achievement of the following three core urban design goals:

1. **Building Orientation and Site Design**
   Buildings and development sites should create high-quality, well-designed, and sustainable places that contribute positively to the context, character, and experience of the site and surrounding neighbourhood.
2. **Access and Circulation**
   People should be able to arrive, enter, navigate, and depart safely and intuitively by foot, mobility device, bicycle, or car.
3. **Landscaping**
   Beyond naturalizing and beautifying buildings and development sites, landscaping and vegetation should reflect the local ecology and contribute to the creation of sustainable places and communities.

The intent of the land use specific guidelines is to augment and complement the development regulations established through the **City of Thunder Bay Zoning By-law 1-2022**. In the event that there is a conflict between these guidelines and the Zoning By-law, the Zoning By-law will prevail.

The matrix below is intended as a simple Zoning By-law reference guide showing the primary permitted primary land uses by zone.

		Backyard Homes	Detached & Converted Homes	Townhouses	Low-Rise Apartments	Mid-Rise Apartments	High-Rise Apartments	Mixed-Use Buildings	Non-Residential Buildings	Retail	Drive-Throughs & Other Vehicle Queues	Motor Vehicle Dealerships & Service Shops	Light Industrial	Offices & Laboratories
Urban Neighbourhood Zones														
UL	Urban Low-Rise Zone	●	●	●	●									
UM	Urban Mid-Rise Zone			●	●	●								
UH	Urban High-Rise Zone						●	●	●	●				●
UX	Urban Mixed-Use Zone		●				●	●	●	●				●
NC	Neighbourhood Commercial Zone							●	●	●				●
Pedestrian Commercial Zones														
WC	Waterfront Commercial Zone							●	●	●				●
DN	Downtown Neighbourhood Zone			●	●	●	●	●	●	●				●
MS	Main Street Zone							●	●	●				●
Commuter Commercial Zones														
CC	Community Commercial Zone							●	●	●	●	●		●
SC	Service Commercial Zone							●	●	●	●	●		●
RC	Regional Commercial Zone							●	●	●	●	●		●
Business Area Zones														
BU	Business Zone							●	●		●		●	●
IL	Light Industrial Zone							●	●		●	●	●	●

5.1 Residential

The Residential design guidelines cover the full spectrum of residential development types, from detached homes to apartments, as well as residential mixed uses and neighbourhood-scale commercial uses. The intent is to support the development of well-designed, residential development that contributes to the creation of an attractive and animated public realm and the visual character of Thunder Bay's neighbourhoods. Development should also strive to meet the objectives of the Climate-Forward City: Thunder Bay Net-Zero Strategy such as creating compact and walkable neighbourhoods, accessible public transit stops, and net-zero new builds.

PERFORMANCE STANDARD 44

Backyard Homes

Building Orientation & Site Design

a) Backyard homes should be sited to align with buildings and yard configurations on adjacent lots. Generally, backyard homes should be located next to existing backyard buildings (i.e., backyard homes, garages, or other accessory buildings).
b) When located on a lot with a rear lane, the backyard home may front onto the lane.
c) Building design should articulate individual homes.
d) Where backyard homes are located on a corner lot, the street facing façade should be of equivalent architectural expression and similar façade materials as those used on the front façade.
e) One simple roof form is desired. Secondary roof forms, such as dormers, shall be integrated into the main roof form.
f) Total dormer width for each elevation shall not exceed 50% of the width of the upper storey.
g) Windows should be placed and sized to provide views to the street, lane, or into the yard space shared with the primary dwelling, avoiding direct views into neighbouring yards.
h) Balcony spaces should face onto the street, lane, or shared yard space and avoid direct views into neighbouring yards. Inset balconies and opaque side screening can help achieve privacy for occupants and neighbours.
i) All utilities, HVAC, and other mechanical elements (e.g., meters, stacks, conduits, vents), as well as loading/servicing areas are to be integrated into the design of the building to minimize their aural and visual impact, particularly to neighbouring properties and common areas.
j) Site design should minimize the visual impact of parking through the placement, orientation, and articulation of the building form, as well as through the design and placement of garages and surface parking areas.

Refer to Other Applicable Performance Standards:

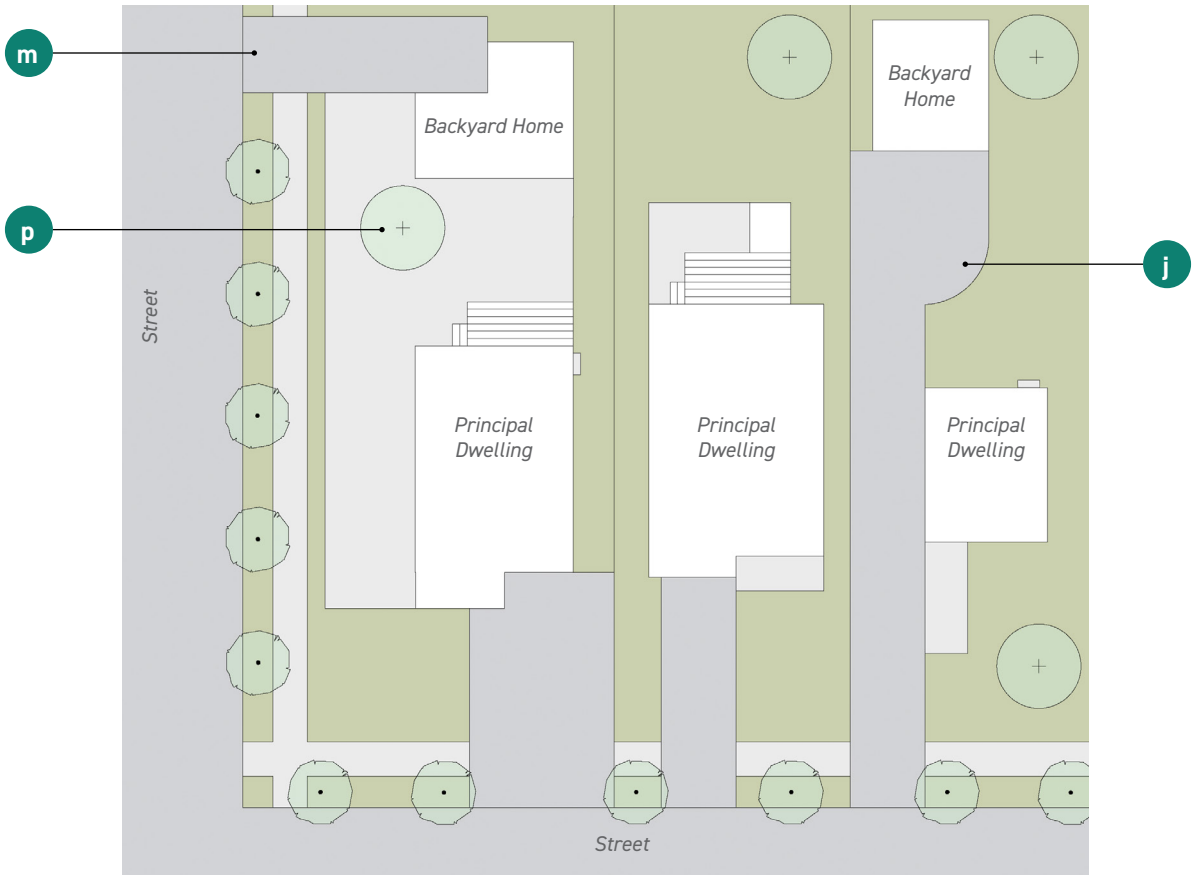
03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
27 Rear Lanes
29 Sustainability: Site Design
30 Surface Parking
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
42 Private Trees
43 Buffer Planting

Access & Circulation

k) Backyard home entrances should be clearly defined and consistent.
l) A hard surface walkway, at least 1.5 m in width, providing direct access and egress from the doorway of the backyard home to the street or lane is required.
m) Wherever possible, driveways should be located at the side or the rear of buildings. Otherwise, minimize their visual impact through site layout and landscape design.
n) Parking areas and their access points should be located away from street corners.
o) Bicycle parking is encouraged and should be convenient, accessible, and secure from theft and weather.

Landscaping

p) The placement and design of new backyard homes should maintain existing, healthy trees.
q) Rear yard trees are encouraged to provide privacy between the backyard home and the main house.
r) On lots with a frontage greater than 6.0 metres, at least 50% of the rear yard area, including the area covered by a backyard home, should be soft landscaping.
s) On lots with a frontage of 6.0 metres or less, at least 25% of the rear yard area, including the area covered by a backyard home, should be soft landscaping.
t) Privacy fencing, in accordance with the Fence By-law, should be located along rear yard and outdoor amenity areas only.
u) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.



PERFORMANCE STANDARD 45

Detached & Converted Houses

Building Orientation & Site Design

a) Residential buildings should be oriented to the street with front doors, porches, and municipal address numbers well-lit and clearly visible from the sidewalk.
b) Front entry doors should incorporate sidelights, transoms, and/or a vision panel.
c) Building elements projecting from the façade into the front and side yards, such as unenclosed porches, bay windows, landings, canopies and other features, are encouraged to add visual interest along the streetscape.
d) Where homes are located on a corner lot, the street facing façade should be of equivalent architectural expression and similar façade materials as those used on the front façade. There should be no blank walls facing any street.
e) All utilities, HVAC, and other mechanical elements (e.g., meters, stacks, conduits, vents), as well as loading/servicing areas are to be integrated into the design of the building to minimize their aural and visual impact, particularly to neighbouring properties and common areas.
f) Site design should minimize the visual impact of parking through the placement, orientation, and articulation of the building form, as well as through the design and placement of garage and surface parking areas.

Access & Circulation

g) Home entrances should be clearly defined.
h) An attached garage (front or side lot facing) should be less than 50% of the width of the house to increase opportunity for front facing porches, windows, and rooms and encourage more visually engaging facade aesthetics.
i) An attached garage should be offset from the livable building face and not protrude more than 1.0 m beyond the front or side façade to allow for casual surveillance of and from the public streetscape and encourage more visually engaging facade aesthetics.
j) Driveways should be no wider than the garage door.
k) Where driveways are located in the front or side of a house, they should be paired with the neighbouring property, if practical, to allow maximize usable green space, reduce pavement, and permit more efficient on-street parking.

Landscaping

l) 50% of the front yard should be landscaped. Alternatives to turfgrass such as shrubs and perennials beds are encouraged to improve aesthetics, reduce long-term maintenance, decease stormwater run-off, and increase biodiversity.
m) Front yards should incorporate a minimum of one (1) tree per home.
n) Rear yard trees are encouraged.
o) Front and side yard landscaping areas should be provided to enhance the overall streetscape quality and pedestrian experience.
p) Decorative fencing, in accordance with the **Fence By-law**, may be permitted along the front yard as a design feature of the lot to define private and public property.
q) Privacy fences, in accordance with the **Fence By-law**, should be located along rear yard and outdoor amenity areas only.
r) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Pedestrian Commercial Areas - Converted Houses

The following standards only apply to Converted Houses in the Pedestrian Commercial Areas:

s) Adjacent property lines should be bordered with a minimum 3.0 m landscaped strip with plantings providing screening and seasonal interest.

t) A 1.6m high visual screen is required where non-residential uses abut a zone permitting residential use on the first storey.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
42 Private Trees
43 Buffer Planting

Front entry doors should incorporate a vision panel, with building elements projecting from the facade in the front yard encouraged to add visual interest.

PERFORMANCE STANDARD 46

Townhouses

Building Orientation & Site Design

a) Buildings should be sited such that homes in opposing blocks are consistently facing front-to-front and/or back-to-back. Avoid back-to-front facing relationships.
b) Front doors, porches, and municipal address numbers well-lit and clearly visible from the sidewalk.
c) Front entry doors should incorporate sidelights, transoms, and/or a vision panel.
d) Building elements projecting from the façade into the front and exterior side yards, such as unenclosed porches, bay windows, landings, canopies and other features, are encouraged to add visual interest along the streetscape.
e) Building design should articulate individual homes.
f) Where homes are located on a corner lot, the street facing side façade should be of equal architectural expression and similar façade materials as those used on the front façade.
g) All utilities, HVAC, and other mechanical elements (e.g., meters, stacks, conduits, vents), as well as loading/servicing areas are to be integrated into the design of the building to minimize their aural and visual impact, particularly to neighbouring properties and common areas.
h) Site design should minimize the visual impact of parking through the placement, orientation, and articulation of the building form, as well as through the design and placement of garage, parking structure, and surface parking areas.
i) Consideration should be given to rear yard access for maintenance equipment (e.g., rear lanes, private easements, access corridor from garage, etc.)

Access & Circulation

j) Home entrances should be clearly defined and consistent, without adding unnecessary visual clutter to a building's façades.
k) Wherever possible, driveways should be located at the side or the rear of buildings. Otherwise, minimize their impact through site layout and landscape design.
l) Where garages are located at the front or rear of a building, they should be laterally offset to provide backyard access that avoids use of the living space or the need for private access easements across adjacent rear yards.
m) Utilities, water, and sewer connections to street must be located to allow for planting in front yard and in boulevard
n) Where driveways are located in the front of a building, they should be paired to allow for more substantial front yard green space and to permit more efficient on-street parking.
o) Parking areas and their access points should be located away from street corners.
p) Garages should not project beyond the front facade of the building.
q) Bicycle parking is encouraged and should be convenient, accessible, and secure from theft and weather.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
42 Private Trees
43 Buffer Planting

Landscaping

r) Front yards should incorporate a minimum of one (1) tree per at-grade home, using species recommended by **Parks and Open Spaces Standards and Specifications**.

s) Front and side yard landscaping areas should be provided to enhance the overall streetscape quality and pedestrian experience.

t) Decorative fencing, in accordance with the **Fence By-law**, may be permitted along the front yard as a design feature of the townhouse block to define private and public property.

u) Privacy fences, in accordance with the **Fence By-law**, should be located along rear yard and outdoor amenity areas only.

v) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

w) A 45 square metre landscaped amenity space should be maintained for townhouses in the rear yards.

x) 50% of the front yard should be landscaped. Alternatives to turfgrass such as shrubs and perennials beds are encouraged to improve aesthetics, reduce long-term maintenance, decease stormwater run-off, and increase biodiversity.

Pedestrian Commercial Areas

The following standards only apply in the Pedestrian Commercial Areas:

y) Parking and vehicular access should be located underground or to the rear of the building.

Building design should articulate individual homes.

PERFORMANCE STANDARD 47

Apartments

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly articulated and visible from the sidewalk.
b) Buildings should be sited to maximize usable green space and reduce pavement.
c) There should be no parking between the street and the primary façade. In the case that the site has streets on two sides, the secondary frontage should not have parking between the street and the building. (Except low density residential infill development using driveways).
d) Areas not required for access or servicing between buildings should be well landscaped to be used as communal open space.
e) Balconies should be provided above the ground floor where possible, and incorporated into the building design.
f) Balconies should be large enough to function as amenity spaces.
g) Where buildings are located on a corner lot, or where the side façade faces the public street, the street facing façade should be of equal architectural expression and similar façade materials as those used on the front façade.
h) Avoid blank façades along ground floors, ensuring buildings are compatible with surrounding development through materials, fenestration, canopies, and other design and massing details.
i) All utilities, HVAC, and other mechanical elements (e.g., meters, stacks, conduits, vents), as well as loading/servicing areas are to be integrated into the design of the building to minimize their aural and visual impact, particularly to neighbouring properties and common areas.
j) Parking should be located primarily to the rear of the property. Side yard parking should not comprise more than 25% of the primary frontage.
k) Short-term or visitor bicycle parking should be located at the primary entrance.
l) Long-term/resident bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
20 Street Lighting
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
34 Servicing and Loading
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

Building designs should avoid blank facades along ground floors through the use of fenestration, canopies, and other design and massing details.

Access & Circulation

m) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users.
n) Lighting along public walkways should be pedestrian scaled.
o) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian hard surface walkway (min. 1.5 m).
p) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
q) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate tactile plates to signal crossings or changes in grade.
r) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicle speeds and reduce conflict between users (e.g., reduce turn radii and use curb bump-outs where possible to reduce length of unprotected crosswalks).

Landscaping

s) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) deciduous or coniferous large stature tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.
t) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.
u) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.
v) Where space allows, adjacent property lines should be bordered with a minimum 1.0 m landscaped strip with plantings providing screening and seasonal interest.
w) A minimum of one (1) tree should be planted for every five (5) surface parking spaces.
x) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.
y) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.
z) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Pedestrian Commercial Areas

The following standards only apply in the Pedestrian Commercial Areas:

aa) Property lines abutting low-rise residential, which are required to be screened, should incorporate a minimum of one (1) deciduous or coniferous tree, plus 20 shrubs for each 10.0 m of property boundary to provide greenery, noise attenuation, and canopy.

PERFORMANCE STANDARD 48

Mixed Use Buildings

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) Buildings should be sited to maximize usable green space and reduce pavement.
c) A 4.5 metre minimum floor-to-floor height is recommended at street level to create a strong street presence and support retail uses.
d) There should be no parking between the street and the primary façade. In the case that the site has streets on two sides, the secondary frontage should not have parking between the street and the building.
e) Primary building entrances should be clearly articulated and signed, particularly where there are multiple uses in each building.
f) Building entrances should support retail uses and can be expressed and detailed in a variety of ways, including large entry awnings, canopies, or double-height glazing.
g) Where buildings are located on a corner lot, the street facing façade should be of equal architectural expression and similar façade materials as those used on the front façade.
h) Avoid blank façades along ground floors, ensuring buildings are compatible with surrounding development through materials, fenestration, canopies, and other design and massing details.
i) Where a building's ground floor contains non-residential uses, a minimum of 50% of the primary frontage ground floor should be glazed, and the secondary frontage's ground floor should be a minimum of 25% glazed.
j) Clear glass is preferred over tinted glass to promote a high level of visibility and mirrored glass should be avoided at street level.
k) Parking should be primarily to the rear of the property. Side yard parking should not comprise more than 25% of the primary frontage.
l) A raised and generously landscaped island, at least 1.0 m wide and the length of the parking stalls, per each 10 stalls is required to visually and physically break up large parking lots.
m) Residential parking areas should be distinct from commercial parking and identified with clear signage and controlled vehicular access.
n) Short-term or visitor bicycle parking should be located at the primary entrance.
o) Long-term/resident bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Access & Circulation

p) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users.
q) Lighting along public walkways should be pedestrian scaled.
r) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian hard surface walkway (min. 1.5 m).
s) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
t) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
u) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Landscaping

v) Street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.

w) A common outdoor area for building residents should be provided, including substantial soft landscaping and screened from any adjacent commercial or vehicular circulation areas by a continuous buffer with a minimum of one (1) deciduous or coniferous tree, plus 20 shrubs for each 10.0 m of linear frontage.

x) Where a building's ground floor contains non-residential uses, outdoor uses such as patios, seating, displays, raised planters and decorative lighting within the setback and/or the street allowance are encouraged.

y) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.

z) If the building is minimally set back from the street in a legal non-conforming situation, a minimum of one (1) deciduous or coniferous tree should be planned in the public right-of-way for each 10.0 m of linear street frontage. (City will facilitate tree planting according to plan).

aa) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.

ab) Where space allows, adjacent property lines should be bordered with a minimum 1.0 m landscaped strip with plantings providing screening and seasonal interest.

ac) Property lines abutting low-rise residential, which are required to be screened, should incorporate a minimum of one (1) deciduous or coniferous tree, plus 20 shrubs for each 10.0 m of property boundary to provide greenery, noise attenuation, and canopy.

ad) A 1.6m high visual screen is required where non-residential uses abut a zone permitting residential use on the first storey.

ae) A minimum of one (1) tree should be planted for every five (5) surface parking spaces.

af) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.

ag) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.

ah) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
20 Street Lighting
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
34 Servicing and Loading
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

PERFORMANCE STANDARD 49

Neighbourhood Scale Non-Residential Buildings

Building Orientation & Site Design

a) The building should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) Primary entrances should be directly accessible from public sidewalks. Where located on a corner lot, primary entrances should be located on the building face fronting the highest-order public street.
c) Buildings should be oriented to maximize the amount of street frontage occupied by the building facade, with 75% as a minimum target, where possible.
d) Areas not required for access or servicing between buildings should be well landscaped and programmed (e.g., outdoor seating and dining areas).
e) Primary building entrances should be clearly articulated and signed.
f) Integrate retail signage into the building design so as to not dominate or clash with the building's architecture.
g) Where buildings are located on a corner lot, the street facing façade should be of equal architectural expression and similar façade materials as those used on the front façade.
h) Avoid blank façades along ground floors, ensuring buildings are compatible with surrounding development through materials, fenestration, canopies, and other design and massing details.
i) Primary and secondary frontage, and side façade building walls should be a minimum of 50% glazed.
j) Where a building's ground floor contains non-residential uses, outdoor uses such as patios, seating, displays, raised planters, and decorative lighting within the setback and/or the street allowance are encouraged.
k) Parking should be primarily to the rear of the property. Side yard parking should not comprise more than 25% of the primary frontage.
l) A raised and generously landscaped island, at least 1.0 m wide and the length of the parking stalls, per each 10 stalls is required to visually and physically break up large parking lots.
m) Short-term or visitor bicycle parking should be located at the primary entrance.
n) Long-term/employee bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Access & Circulation

o) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users.
p) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
q) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate tactile plates to signal crossings or changes in grade.
r) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
s) A barrier-free path of travel from sidewalk to accessible parking spaces must be provided.
t) Where on-site parking is provided, consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Landscaping

u) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.

v) In infill circumstances where a landscape strip may not be possible, plantings should be designed to create tree-lined streets with a full, continuous canopy.

w) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.

x) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.

y) Where a commercial building or parking area abuts a residential use or public space, a minimum 1.0 m wide landscaped buffer with plantings to providing screening and canopy should be planted along the mutual property boundary.

z) A minimum of one (1) tree should be planted for every five (5) surface parking spaces. In addition, for every 10 parking spaces, a raised and generously landscaped island (1.0 m wide and the length of the parking stalls) is required to visually and physically break up large parking lots.

aa) Low impact development techniques should be used whenever possible, to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
34 Servicing and Loading
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
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42 Private Trees
43 Buffer Planting

Areas between buildings should be well landscaped and programmed

5.2 Commercial

The Commercial design guidelines cover retail, service, and other commercial uses in urban, neighbourhood, and commercial area contexts. The intent is to support high-quality commercial development that – regardless of context – creates a strong street edge and contributes to a pedestrian-focused public realm.

PERFORMANCE STANDARD 50

Retail

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) Adjacent buildings should be in parallel alignment with minimal setbacks to define a continuous urban street edge.
c) For multi-building sites, locate larger anchor buildings towards the rear of the site with smaller buildings located close to the street edge and drive-through lanes/facilities oriented to the rear or interior of the site.
d) Buildings should be oriented to maximize the amount of street frontage occupied by the building facade, with 50% as a minimum target.
e) Primary entrances to be clearly articulated and signed.
f) Where buildings are located on a corner lot, the street facing side façade should be of equal architectural expression and similar façade materials as those used on the front façade.
g) Avoid blank façades along ground floors, ensuring buildings are compatible with surrounding development through materials, fenestration, canopies, and other design and massing details.
h) Exterior lighting should incorporate energy efficiencies such as sensors and timers, direct light away from the night sky, and be designed to prevent light spillage onto adjacent properties.
i) Primary and secondary frontage, and side façade building walls should be a minimum of 50% glazed.
j) Surface parking areas should be located at the rear, or side yard of a building and should not be placed between the front façade of a building and the sidewalk. Side yard parking should not comprise more than 50% of the primary frontage.
k) Provide right angle parking spaces wherever possible. Avoid dead-end parking aisles; if required, asphalt bump-outs (i.e., hammerheads) must be provided to allow for forward travel.
l) A raised and generously landscaped island, at least 1.0 m wide and the length of the parking stalls, per each 10 stalls is required to visually and physically break up large parking lots.
m) Short-term bicycle parking should be located at the primary entrance.
n) Long-term/employee bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Access & Circulation

o) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users through the application of horizontal and vertical traffic calming treatments such as reduced corner radii, raised crossings, etc.
p) Lighting along public walkways should be pedestrian scaled.
q) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
r) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
s) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
t) A barrier-free path of travel from sidewalk to accessible parking spaces must be provided.
u) Pedestrian walkways should be raised 0.15 metres from the parking areas to provide definition and pedestrian safety and should be hard surfaced with material other than asphalt. Depressed curbs should be located adjacent to barrier-free parking spaces and within barrier-free circulation routes.
v) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Landscaping

w) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.

x) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.

y) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.

z) In addition to landscape strips, landscaping around building foundations should include a minimum of one (1) shrub per metre of linear building façade facing a public street or containing a primary entrance. Foundation plantings may be clustered to provide interest.

aa) Where a commercial building or parking area abuts a residential use or public space, a minimum 1.0 m wide landscaped buffer with plantings to provide screening and canopy should be planted along the mutual property boundary.

ab) A minimum of one (1) tree should be planted for every five (5) surface parking spaces.

ac) Outdoor storage, including garbage and recycling bins, should not be located between the building and the sidewalk and should be screened from view from the street and adjacent properties with fencing and/or plantings.

ad) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.

ae) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.

af) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
34 Servicing and Loading
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

PERFORMANCE STANDARD 51

Drive-Throughs & Other Vehicle Queues

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) There should be no parking between the street and the primary façade. In the case that the site has streets on two sides, the secondary frontage should not have parking between the street and the building.
c) Drive-through stacking lane entries should be located at the rear of the building (not between the building and the public street).
d) Locate stacking lanes away from adjacent sensitive uses, such as residential and public spaces, to reduce the impacts of noise and pollution. Use landscaping and fencing to help buffer potential impacts.
e) Separate stacking lanes from parking areas and driveways using landscaped islands, varied pavement treatments, curbs, and painted lines.
f) Primary entrances should be clearly articulated and signed.
g) Exterior lighting should be designed to prevent light spillage onto adjacent properties.
h) Any ground-oriented utility or mechanical elements (e.g., meters, stacks, conduits, vents), as well as loading, garbage, servicing areas should be located at the rear of the building and be integrated into the design of the building or contained in enclosed areas to minimize their visual impact, particularly from the public realm and common areas.
i) Parking and stacking spaces should be primarily to the rear of the property. Side yard parking should not comprise more than 50% of the primary frontage.
j) Short-term or visitor bicycle parking should be located at the primary entrance.
k) Long-term/employee bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.
l) Waste receptacles should be provided next to stacking lanes to allow users to conveniently discard of any litter from their vehicle.

Access & Circulation

m) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users through the application of horizontal and vertical traffic calming treatments such as reduced corner radii, raised crossings, etc.
n) Lighting along public walkways should be pedestrian scaled.
o) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
p) When pedestrian traffic crosses vehicle lanes provide safe circulation routes that clearly demarcate the pedestrian path of travel (i.e., raised pedestrian crossings, bollards, landscaping).
q) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
r) Aside from designated loading areas and queuing areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
s) Drive-through lanes should not impede pedestrian access to buildings.
t) Multiple service windows in a single stacking lane should be implemented to reduce idling and congestion.
u) Design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.
v) Where possible stacking lanes should be separated from parking areas through the use of landscaped islands.

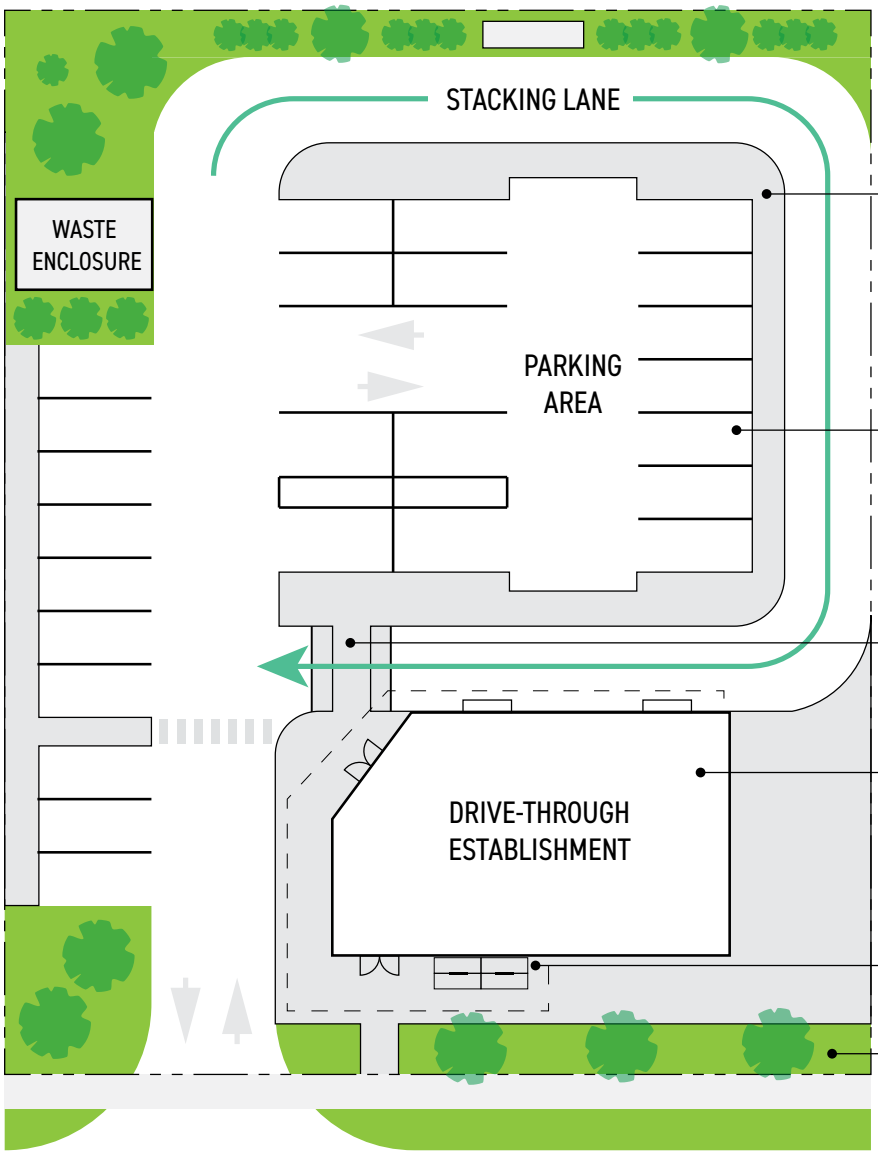
w) Stacking lanes should be located such that vehicle line-ups do not block traffic along public streets or impede the movement of vehicles on site.
x) Where site area is constrained, double stacking lanes may be provided to reduce the length of the queue. This should be evaluated on a site-by-site basis to ensure that all other guidelines in this section are achievable.
y) Where two drive-through businesses operate from the same building, separate stacking lanes should be provided to minimize vehicle conflicts. The alignment of these lanes should be evaluated on a site-by-site basis to ensure that all other guidelines in this section are achievable.

Landscaping

z) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.
aa) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.
ab) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.
ac) Where a commercial building, stacking space, or parking area abuts a commercial or residential use or public space, beyond required setbacks, a minimum 1.0 m wide landscaped buffer with plantings to provide screening and canopy should be planted along the mutual property boundary.
ad) A minimum of one (1) tree should be planted for every 10 surface parking spaces, in addition to the trees planted on the frontage.
ae) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.
af) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.
ag) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
34 Servicing and Loading
36 Outside Storage
36 General Building Design
38 Accessibility: Private Realm
49 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting



Drive-through queue lanes and parking areas should be located to the rear or side of the establishment.

PERFORMANCE STANDARD 52

Motor Vehicle Dealerships & Service Shops

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) Adjacent buildings should be in parallel alignment with minimal setbacks to define a continuous urban street edge.
c) Service facilities associated with a dealership should be set back at least 15.0 m from adjacent residential, institutional, and park uses to minimize odor and noise impacts.
d) Buildings should be oriented to maximize the amount of street frontage occupied by the building facade, with 50% as a minimum target.
e) Primary entrances should be clearly articulated and signed.
f) Where buildings are located on a corner lot, the street facing side façade should be of equal architectural expression and similar façade materials as those used on the front façades.
g) Avoid blank façades along ground floors, ensuring buildings are compatible with surrounding development through materials, fenestration, canopies, and other design and massing details.
h) Primary and secondary frontage, and side façade building walls should be a minimum of 50% glazed.
i) Exterior lighting should be designed to prevent light spillage onto adjacent properties.
j) Any ground-oriented utility or mechanical elements (e.g., meters, stacks, conduits, vents), as well as loading, garbage, servicing areas should be located at the rear of the building and be integrated into the design of the building or contained in enclosed areas to minimize their visual impact, particularly from the public realm and common areas.
k) Surface parking areas should be located at the rear, or side yard of a building and should not be placed between the front façade of a building and the sidewalk. Side yard parking should not comprise more than 50% of the primary frontage.
l) Area used for outdoor displays cannot be located on any required parking spaces, loading areas, walkways, or required landscaped area.
m) Provide right angle parking spaces wherever possible. Avoid dead-end parking aisles; if required, bump-outs must be provided to allow for forward travel.
n) A raised and generously landscaped island, at least 1.0 m wide and the length of the parking stalls, per each 10 stalls is required to visually and physically break up large parking lots.
o) Short-term or visitor bicycle parking should be located at the primary entrance.
p) Long-term/employee bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Refer to Other Applicable Performance Standards:

09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

Access & Circulation

q) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users.
r) Lighting along public walkways should be pedestrian scaled.
s) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
t) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
u) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
v) A barrier-free path of travel from sidewalk to accessible parking spaces must be provided.
w) Pedestrian walkways should be raised 0.15 m from the parking areas to provide definition and pedestrian safety and should be hard surfaced with material other than asphalt. Depressed curbs should be located adjacent to barrier-free parking spaces and within barrier-free circulation routes.
x) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Landscaping

y) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.
z) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.
aa) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.
ab) In addition to landscape strips, landscaping around building foundations should include a minimum of one (1) shrub per metre of linear building façade facing a public street or containing a primary entrance. Foundation plantings may be clustered to provide interest.
ac) Where a commercial building or parking area abuts a residential use or public space, a minimum 1.0 m wide landscaped buffer with plantings to provide screening and canopy should be planted along the mutual property boundary.
ad) A minimum of one (1) tree should be planted for every five (5) surface parking spaces.
ae) Outdoor storage, including garbage and recycling bins, should not be located between the building and the sidewalk and should be screened from view from the street and adjacent properties with fencing and/or plantings.
af) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.
ag) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.
ah) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

PERFORMANCE STANDARD 53

Commercial Mixed Use Buildings

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) Adjacent buildings should be in parallel alignment with minimal setbacks to define a continuous urban street edge.
c) For multi-building sites, locate larger anchor buildings towards the rear of the site with smaller buildings located close to the street edge and drive-through lanes/facilities oriented to the rear or interior of the site.
d) Buildings should be oriented to maximize the amount of street frontage occupied by the building facade, with 50% as a minimum target.
e) Primary entrances to be clearly articulated and signed.
f) Where buildings are located on a corner lot, the street facing side façade should be of equal architectural expression and similar façade materials as those used on the front façade.
g) Avoid blank façades along ground floors, ensuring buildings are compatible with surrounding development through materials, fenestration, canopies, and other design and massing details.
h) Primary and secondary frontage, and side façade building walls should be a minimum of 50% glazed.
i) Exterior lighting should be designed to prevent light spillage onto adjacent properties.
j) Surface parking areas should be located at the rear, or side yard of a building and should not be placed between the front façade of a building and the sidewalk. Side yard parking should not comprise more than 50% of the primary frontage.
k) Residential parking areas should be distinct from commercial parking and identified with clear signage and controlled vehicular access.
l) A raised and generously landscaped island, at least 1.0 m wide and the length of the parking stalls, per every 10 stalls is required to visually and physically break up large parking lots.
m) Short-term/visitor bicycle parking should be located at the primary entrance and may be located within the street allowance.
n) Long-term/resident bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Access & Circulation

o) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users.
p) Lighting along public walkways should be pedestrian scaled.
q) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
r) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
s) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
t) A barrier-free path of travel from sidewalk to accessible parking spaces must be provided.
u) Pedestrian walkways should be raised 0.15 m from the parking areas to provide definition and pedestrian safety and should be hard surfaced with material other than asphalt. Depressed curbs should be located adjacent to barrier-free parking spaces and within barrier-free circulation routes.
v) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Landscaping

w) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.

x) A common outdoor area for building residents should be provided, including substantial soft landscaping and screened from any adjacent commercial or vehicular circulation areas by a continuous buffer with a minimum of one (1) deciduous or coniferous tree, plus 20 shrubs for each 10.0 m of linear frontage.

y) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.

z) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.

aa) In addition to landscape strips, landscaping around building foundations should include a minimum of one (1) shrub per metre of linear building façade facing a public street or containing a primary entrance. Foundation plantings may be clustered to provide interest.

ab) Where a commercial building or parking area abuts a low-rise residential use or public space, a minimum 1.0 m wide landscaped buffer with plantings to provide screening and canopy should be planted along the mutual property boundary.

ac) A minimum of one (1) tree should be planted for every five (5) surface parking spaces.

ad) Outdoor storage, including garbage and recycling bins, should not be located between the building and the sidewalk and should be screened from view from the street and adjacent properties with fencing and/or plantings.

ae) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.

af) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.

ag) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
20 Street Lighting
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
34 Servicing and Loading
36 General Building Design
37 Main Street Buildings
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

5.3 Employment

The Employment design guidelines focus on office and light industrial uses, emphasizing consistent standards for site design and compatibility with adjacent uses.

PERFORMANCE STANDARD 54

Light Industrial Uses

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) There should be no parking between the street and the primary façade. In the case that the site has streets on two sides, the secondary frontage should not have parking between the street and the building.
c) Primary entrances should be clearly articulated and signed.
d) Exterior lighting should be designed to prevent light spillage onto adjacent properties.
e) Parking should be primarily to the rear of the property. Side yard parking should not comprise more than 50% of the primary frontage.
f) A raised and generously landscaped island, at least 1.0 m wide and the length of the parking stalls, per each 10 stalls is required to visually and physically break up large parking lots.
g) Outdoor storage should be screened from view from the street and adjacent properties with fencing or solid wall.
h) Short-term/visitor bicycle parking should be located at the primary entrance and may be located within the street allowance.
i) Long-term/employee bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Access & Circulation

j) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users.
k) Lighting along public walkways should be pedestrian scaled.
l) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
m) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
n) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
o) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
35 Outside Storage
36 General Building Design
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

Landscaping

p) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.

q) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.

r) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.

s) Where an industrial building or parking area abuts a commercial or residential use or public space, a minimum 1.0 m wide landscaped buffer with plantings to provide screening and canopy should be planted along the mutual property boundary.

t) A minimum of one (1) tree should be planted for every 10 surface parking spaces, in addition to the trees planted on the frontage.

u) Required visual screening (i.e., blank walls and fencing) should be softened with foundation plantings/trees.

v) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.

w) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.

x) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

Buildings should be oriented to the street

PERFORMANCE STANDARD 55

Offices and Laboratories

Building Orientation & Site Design

a) Buildings should be oriented to the street with primary entrances clearly visible from the sidewalk.
b) There should be no parking between the street and the primary façade. In the case that the site has streets on two sides, the secondary frontage should not have parking between the street and the building.
c) Primary entrances should be clearly articulated and signed.
d) Exterior lighting should be designed to prevent light spillage onto adjacent properties.
e) Parking should be primarily to the rear of the property. Side yard parking should not comprise more than 50% of the primary frontage.
f) Short-term/visitor bicycle parking should be located at the primary entrance and may be located within the street allowance.
g) Long-term/employee bicycle parking should be located indoors in a dedicated common area or in an outdoor area secure from theft and weather.

Refer to Other Applicable Performance Standards:

03 Stormwater Management Facilities
09 Boulevard Design
13 Green Streets
29 Sustainability: Site Design
30 Surface Parking
31 Above-Grade Parking Structures
32 Below-Grade Parking Structures
33 Bicycle Parking
36 General Building Design
38 Accessibility: Private Realm
39 All Season Design: Private Realm
41 Signage
42 Private Trees
43 Buffer Planting

Access & Circulation

h) Design sites to prioritize the safety and comfort of pedestrians, cyclists, and transit users through the application of horizontal and vertical traffic calming treatments such as reduced corner radii, raised crossings, etc.
i) Lighting along public walkways should be pedestrian scaled.
j) Clearly demarcate pedestrian routes through parking areas that minimize distance of unprotected walking and incorporate signage and tactile plates to signal crossings or changes in grade.
k) Ensure all primary building entrances are barrier-free and connect to the public sidewalk via an unobstructed and direct pedestrian pathway (min. 1.5 m).
l) Aside from designated loading areas, sidewalks (min. 1.5 m) should border buildings wherever parking or vehicular circulation is adjacent to the building.
m) Pedestrian walkways should be raised 0.15 m from the parking areas to provide definition and pedestrian safety and should be hard surfaced with material other than asphalt. Depressed curbs should be located adjacent to barrier-free parking spaces and within barrier-free circulation routes.
n) Consolidate driveways and design internal vehicular circulation to facilitate safe vehicular speeds and reduce conflict between users.

Landscaping

o) All street frontages should incorporate a minimum 3.0 m wide landscape strip with a minimum of one (1) large stature deciduous or coniferous tree, plus other small to medium plantings in accordance with the **Sample Landscape Strips** document.
p) Required trees and shrubs should be clustered to provide visual interest or define an entrance, property boundary, or other site feature.

q) Lot frontage areas occupied by curb cuts or driveways must be included when calculating linear frontage planting requirements, and any trees that would otherwise be required in such areas must be planted in remaining lot frontage areas.

r) Where an office, laboratory, or parking area abuts a commercial or residential use or public space, a minimum 1.0 m wide landscaped buffer with plantings to providing screening and canopy should be planted along the mutual property boundary.

s) A minimum of one (1) tree should be planted for every 10 surface parking spaces, in addition to the trees planted on the frontage.

t) Outdoor storage should be screened from view from the street and adjacent properties with fencing and/or plantings.

u) A common outdoor area for building employees should be provided, including substantial soft landscaping and screened from any adjacent commercial or vehicular circulation areas by a continuous buffer with a minimum of one (1) deciduous or coniferous tree, plus 20 shrubs for each 10.0 m of linear frontage.

v) Continuously poured concrete curbing (0.15 m) is required around traffic islands, adjacent to parking stalls, vehicular ingress and egress, and any other landscaped areas.

w) Snow storage areas should consider drainage patterns to prevent backups and ponding while also ensuring continuous pedestrian access.

x) Low impact development techniques should be used whenever possible to improve the quality of stormwater run-off and minimize the amount of run-off leaving the site.

There should be no parking between the street and the primary façade.

SECTION 6
IMPLEMENTATION

SECTION 6: IMPLEMENTATION

6.1 Introduction

The successful implementation of these guidelines is based on four key implementation recommendations:

- **Site Plan Control –** Consistent with the Official Plan, implementation of these guidelines can be strengthened through the establishment of a Site Plan Control By-law that, where applicable, would allow City Staff to comment on the design and character of all new development and redevelopment.
- **Action Items & Future Studies -** Based on the recommendations of these guidelines, amendments to some existing City standards, policies, and guidelines may be warranted. Action items will need to be addressed as necessary, and City Staff in all applicable departments should be circulated a copy of the final document and included in coordinating any follow-up review in resolving the action items.
- **Education Programs -** Education programs and workshops with the City's development industries, builders and home owners to make the recommendations of this document common practice and to determine what works best for the City and its residents.
- **Implementation, Monitoring and Updating Processes -** Monitoring and updating the use and application of the guidelines is necessary to be able to address site specific issues as they arise, including exceptions to the guidelines, required updates to the document and potential review and commenting processes.

These tools and techniques are outlined further in the sections that follow. The success of the guidelines in positively shaping new development and redevelopment will be directly related to the implementation process.

6.2 Site Plan Control

Establishing Site Plan Control Areas, in accordance with Section 41 of *The Planning Act*, is an important tool in shaping the character, materiality and design of new buildings and development. Where applicable, it allows the City to implement the guidelines through a mandatory review and commenting process. Using the guidelines, City Staff will be able to review the appropriateness of a building's design and determine what amendments, if any, are needed.

As per the City's Official Plan, the "*City shall, by By-law, establish a Site Plan Control Area for the entire City, certain locations, or land use designations, zones, or uses. In addition, the City may identify certain circumstances where site plan approval will not be required. The City may delegate approval authority to Administration in order to assist in timely approvals.*"

Consistent with the Official Plan, it is recommended that the City implement a City-wide Site Plan Control by-law to allow for the consistent application of these, and other, guidelines.

6.3 Action Items

It is recognized that the immediate implementation of all guidelines is not possible due to required changes in current standards and levels of service, and budget implications. Outlined in this section are the action items that require further study and consideration.

6.3.1 Street Furniture

Goal - Street furniture is an essential component of a pedestrian-supportive streetscape, and should be maintained to the highest degree.

Challenge - The City does not currently maintain street furniture on a year-round basis.

Future Action - It is recommended that the City's street furniture maintenance program be reconsidered to include year-round maintenance of street furniture in key areas. This is particularly important in the North and South Cores, along the Image Routes, and on key corridors where the guidelines recommend the inclusion of public art within street furniture (i.e., benches, bus shelter's, etc.).

6.3.2 Signage

Goal - Signage should provide clear, legible, and useful, communication while not overwhelming or cluttering the visual environment.

Challenge - The City's existing signage by-law does not account for mobile signs along Image Routes.

Future Action - It is recommended that the existing signage by-law be amended to prohibit mobile signs on the Image Routes, and other key corridors, including Waterloo Street/Balmoral Street, Junot Avenue/Golf Links Road, and Water Street/Cumberland Street/ Hodder Avenue.

6.3.3 Year Round Maintenance of Cycling Facilities

Goal - Cycling facilities should be maintained (including clearing and snow plowing) to facilitate year round cycling.

Challenge - The City does not currently maintain on-street cycling facilities in the winter months.

Future Action - It is recommended that the City budget for snow clearing and year round maintenance of cycling facilities.

6.3.4 Reduced Back-Lotting

Goal – A primary goal of these performance standards is to create vibrant, lively and active streetscapes. To achieve this, it is important that building address streets and create a strong street interaction between public and private uses. The back-lotting of development against streets generally undermines this goal.

Challenge – Current practices are to back lot some land-uses against streets. This reduces the traffic impacts of development by consolidating access points and minimizing conflicts with the roadway. Unfortunately, this also creates an environment that is not friendly for cyclists or pedestrians.

Future Action - It is recommended that the City look at a range of options to maintain existing traffic operations while minimizing future back-lotting. This could include reserving the land adjacent to busier street for more robust development types (i.e., apartment or office buildings) which would allow them to act as a buffer to lower density residential / employment areas.

6.3.5 Rear Lanes

Goal – Rear lanes can provide an additional access option for all development types. If implemented as recommended in this document they will reduce the number of curb cuts along a street which will improve the overall pedestrian, drivers, and cyclist environment, as well as provide more opportunity for LID stormwater techniques to be applied in the boulevard space.

Challenge – The City's approach to rear lanes needs to be considered on a case-by-case basis to determine an appropriate course of action relative to their construction, liability and maintenance.

Future Action – It is recommended that an internal City discussion group be establish to discuss and review the merits and challenges with rear lane systems. Current or upcoming development applications that include a rear lane will need to be reviewed and assessed on a case by case basis.

6.4 Education Programs

6.4.1 Developers Information Package

The recommendations of this update document are intended to assist with creation and enhancement of vital, complete communities that are pedestrian-supportive, easy to navigate and diverse in housing choice. Accordingly, the directions may result in changes to the way that development occurs within the City.

Given this new direction, it is recommended that the City work with local developers and home builders to facilitate the transition. A Developers Information Package, paired with City-led workshops, should be prepared to high-light key guideline updates, demonstrate how to use the guidelines, and outline the role that they will have in the development approvals process.

6.4.2 Regular Information Sessions

On-going communication with residents and the development community about the guidelines should be undertaken. A yearly update/discussion forum encourages public participation and education on the design of the city and is an opportunity to highlight examples of well executed developments that meet the City's vision.

6.4.3 Design Awards

To acknowledge developments that achieve the principles of the guidelines, and help to further excellent urban design within the City, Thunder Bay should host regular (every 1-3 years, as appropriate) Design Awards that acknowledge best practices and help to bring awareness to good urban design and its role in the community. These awards should be coordinated with regular information sessions. Recognizing successful design projects at any scale should be a priority as it creates awareness of the importance of good urban design.

6.5 Implementation, Monitoring, and Updating Processes

6.5.1 Design Review

City Staff will continue to implement the guidelines as part of their review of development applications and in consultation with the public and members of the development community.

A group of City Staff including a Planner, City Engineer, Landscape Architect (Parks and Open Spaces), and the Mobility Coordinator currently meet ad-hoc to review all Site Plan Approval applications.

Going forward, the City may consider transitioning to a more formalized Design Review Process and the establishment of an Urban Design Review Panel to guide, evaluate, and advise on the design of larger development and/or redevelopment projects. This could be done in conjunction with the establishment of a Site Plan Control By-law. Based on a formal application process, the Panel should be comprised of volunteers that are qualified professionals in the field of architecture, urban design, planning and landscape architecture and can review design applications at various stages of design, including concept, schematic design and design development.

The establishment of an Urban Design Review Panel allows for greater flexibility and rigour in the application of the guidelines to achieve design excellence, particularly on significant projects. In broad terms, the responsibilities of a Design Review Panel include:

- Review of development proposals in accordance with the urban design guidelines outlined in this document.
- Review of projects proposed in the public realm (parks, streetscape treatments, municipally controlled parking, etc.).
- Provide design advice as needed.

The Terms of Reference for the creation of a Design Review Panel should, at minimum, consider the following:

- Panel composition;
- Application/appointment process and term limits;
- Panel authority;
- Remuneration; and
- Conflict of interest.

6.5.2 Design Guideline Updates & Monitoring

Following the regular information sessions (outlined in section 6.4.2) a meeting of City Staff from all applicable departments should be held to discuss the outcomes and feedback received at that meeting. All recurring issues or challenges with implementing the guidelines should also be discussed. A general file can be kept on the Guideline Update and should contain a summary of guideline issues as they arise. Amendments to the guidelines should be identified as a part of that general meeting.

The guidelines will need to evolve as the City develops. For example, as infill becomes more prevalent additional guidelines might be required to address any emergent issues that are not evident at this time.

Technical revisions that do not impact the effect of the guidelines, including updates to links, names and titles, and example images, will be made from time to time as needed and will not require Council approval.

6.5.3 Exceptions to the Guidelines

When implementing design guidelines it is important to recognize that exceptions can sometime be warranted and that at times a project that strives for excellence in design can demonstrate that a specific guideline is not appropriate in that instance. It is the responsibility of the designer/developer/ builder to demonstrate to the City where this exception exists and it is at the discretion of the City to support or not support that justification. In cases where the City requires further review of applications, a Peer Review Process should be undertaken.

SECTION 7
GLOSSARY

SECTION 7: GLOSSARY

The definitions provided in this section are to be referenced for the purposes of this document only.

1:1 Ratio

The 1:1 ratio is used to determine the building height, where the width of the street right-of-way equates to the maximum height of the building.

Angular Plane

Angular planes provide build- to envelopes to maintain and define the character of the street; ensure adequate access to sun and sky views; and to govern transitions to adjacent built forms.

Articulation

Articulation refers to the layout or pattern of building elements, including walls, doors, roofs, windows and decorative elements, such as cornices and belt-courses.

Backlotted

Backlotting refers to buildings that are oriented towards internal streets, with the back of the building facing onto a public street.

Barrier-Free

Modifying buildings or facilities so that they can be used by people of all ages and abilities. An example of barrier-free design would be installing a ramp for wheelchairs alongside or in place of steps.

Boulevard

The boulevard is the area between the front property line or building face, and the edge of the curb.

Crime Prevention through Environmental Design (CPTED)

CPTED is a pro-active crime prevention that surmises that the proper design and effective use of the built environment can lead to a reduction in the incidence and fear of crime and improve the quality of life.

Façade

The exterior wall of a building.

Human Scale

The quality of the physical environment which reflects a sympathetic proportional relationship to human dimensions and which contributes to the citizen's perception and comprehension of buildings or other features of the built environment.

Low-Rise Building

Refers to buildings that are less than three or four storeys in height.

Mid-Rise Building

Generally refers to buildings that are five to eleven storeys or up to a height that is no taller than the right-of-way width of the street on which it is located.

Mixed-use Building

Refers to multiple types of uses within a building or set of buildings. This may include a combination of residential, employment, retail, institutional, or other land uses.

No Encroachment Zone

A No Encroachment Zone is an area within a prescribed setback where no elements of a building, including non- habitable elements (patios, balconies), can penetrate.

Pedestrian Perception Stepback

The upper floors of the front façade of a building that are pushed back from the building base to mitigate the perception of excessive building height.

Pedestrian-oriented

An environment designed to make pedestrian movement safe, attractive and comfortable for all ages and abilities; considerations include separation of pedestrian and auto circulation, street furniture, clear directional and informational signage, safety, visibility, shade, lighting, surface materials, trees, sidewalk width, intersection treatment, curb cuts, ramps and landscaping.

Private Realm
Refers to any space that is perceived as being private. Sometimes public and private realms blend to create a transition zone.

Projections
Refers to a component of external building design and articulation, where horizontal and/or vertical building elements extrude from the main structure of the building, creating an element of depth and visual complexity. Examples of projections include roof overhangs, awnings, and balconies.

Public Realm
Refers to spaces that are perceived as being publicly accessible, for example, sidewalks, parkettes, bike paths and building forecourts.

Rear Lane
A vehicular road located at the rear of lots, providing access to service areas and parking.

Rhythm
Refers to the pattern of building frontages along a streetscape, paying particular attention to lot widths, building entrance and glazing locations and proportions, etc.

Right-of-Way
The part of the street space that is publicly owned and lies between the property lines.

Setbacks
Refers to the distance between a property line and the front, side or rear of a building.

Siting/Building Orientation
The location, positioning and orientation of a building on its site, generally taking into account its relationship to adjoining properties, building and street boundaries.

Stepbacks
Refers to the setting back of the upper storeys of a building. Front and side stepbacks help to create a transition between built form of varying heights and provide appropriate separation between adjacent buildings and/or open spaces.

Storey
A habitable level within a building, excluding raised basements.

Streetscape
The distinguishing elements and character of a particular street as created by its width, degree of curvature, paving materials, design of street furniture, pedestrian amenities and the setback and form of surrounding buildings

Street wall
The condition of enclosure along a street created by the fronts of buildings, and enhanced by the continuity and height of the enclosing buildings. In this study, the "streetwall" portion of a building's front façade is defined as a minimum of 10.5 metres (3 storeys) and up to 80% of the height of the building.

Transition
Refers to the physical design elements of a building which contribute to a sense of transition between mid-rise buildings on the Avenues and adjacent buildings which are often low-rise residential buildings on flanking local streets. Transitions may be achieved through use of building setbacks, stepbacks, heights and massing.

Urban Fabric
This condition is generally found along main streets in established urban neighbourhoods. Buildings having narrow façades and organized in a compact manner, addressing the street are referred to as having a "fine grain fabric".

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