VOL1

URBAN DESIGN MANUAL

VOLUME 1
INTRODUCTION

Edmonton

LAND ACKNOWLEDGEMENT

The City of Edmonton acknowledges the traditional land on which we reside, is in Treaty Six Territory. We would like to thank the diverse Indigenous Peoples whose ancestors' footsteps have marked this territory for centuries, such as nêhiyaw (Cree), Dené, Anishinaabe (Saulteaux), Nakota Isga (Nakota Sioux), and Niitsitapi (Blackfoot) peoples. We also acknowledge this as the Métis' homeland and the home of one of the largest communities of Inuit south of the 60th parallel. It is a welcoming place for all peoples who come from around the world to share Edmonton as a home. Together we call upon all of our collective, honoured traditions, and spirits to work in building a great city for today and future generations.

VOL1

WHY AN URBAN DESIGN MANUAL?

An urban design manual is being developed to elevate the practice of urban design, architecture and landscape architecture in Edmonton.

To this end, the manual consists primarily of a series of design guidelines which set out the City's expectations regarding the physical design of the city, and in particular, its urban structure, built form and public realm.

The design guidelines are not intended to be prescriptive, but instead articulate the City's expectations of urban design, architecture and landscape architecture that align with City policy (e.g. The City Plan), Council priorities (e.g. energy transition and climate adaptation) and recognize best practice.

The design guidelines were developed in conjunction with, and therefore should be applied in conjunction with, The City Plan, District Plans and the Zoning Bylaw. While the design guidelines provide additional – and often more specific design guidance than these documents – this is not their primary purpose. The design guidelines are instead intended for, and guide, specific planning and design processes including neighbourhood design, rezoning and development permit applications, and City infrastructure projects. To this end, the guidelines also reference other City standards and guidelines, including the Complete Streets Design and Construction Standards, and the Winter Design Guidelines.

While the design guidelines are primarily intended to guide new development, they can also guide renovation, redevelopment and revitalization projects throughout the city – in both developed and developing locations.

From increased tourism to the health and wellness of its citizens, a well designed city provides the building blocks for a community to be successful. Edmonton is undergoing an urban shift – growing from a big small city to a small big city – and requires new tools to help grow and continue to be a great place to live.

VOL1

URBAN DESIGN DEFINED

Urban design addresses the public realm of streets and civic spaces, along with the buildings that define them.

1   Rice Howard Way

2   Alberta Legislative Grounds (City of Edmonton)

3   East Campus Village, University of Alberta (City of Edmonton)

Unless noted, all photos in the Urban Design Manual are from Edmonton, and provided by the Urban Design Unit.

Urban design is generally described as the design of the built environment – the public realm of streets and civic spaces, along with the buildings that define them – with a primary focus on placemaking and the human experience.
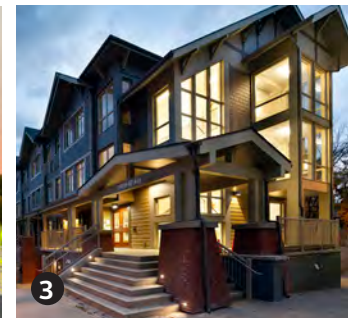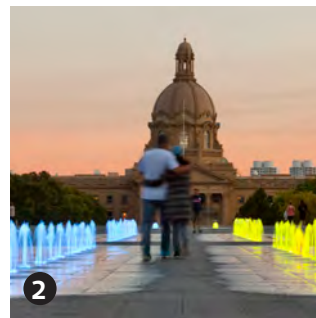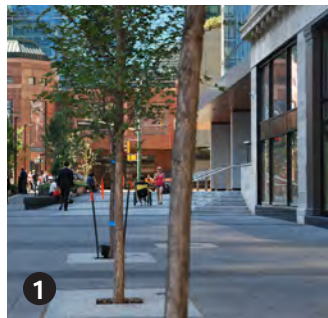
Urban design is an interdisciplnary endeavor practiced by architects, landscape architects, planners and other allied professionals. While urban design requires a strong technical and creative focus, placemaking must integrate users and the broader community into the planning and design process.

Placemaking is rooted in the concept of human-centered design. Originating in the field of industrial design, human-centered design is now an important aspect of urban design and city-building, where a focus on understanding and responding to user needs influences the planning, design and management of the built environment. Current applications of human-centered design include 'smart cities' (where data collection is used to improve the delivery of services and residents' quality of life) and environmental psychology (e.g. understanding how humans are 'pre-wired' to perceive and interact with the built environment).

To fully realize the potential for placemaking and human-centered design, urban designers frequently employ integrated design techniques such as charrettes – short, intensive and collaborative workshops in which designers and stakeholders identify and test potential design solutions.

VOL1

GUIDING
PRINCIPLES

OVERVIEW

The manual embraces six guiding principles that not only reflect the City of Edmonton's approach to urban design[1], but also align with the six guiding values of The City Plan – Belong, Live, Thrive, Access, Preserve and Create.

Creating opportunities to accommodate everyday tasks with less dependence on automobile use.

Enabling diverse activities, amenities, and uses that contribute to lively, people-focused places.

Celebrating people, cultures, and natural and built heritage while promoting the evolution of culture for generations to come.

Embracing openness and welcoming people of all cultures, incomes, ages, abilities and genders.

Reducing our ecological and urban footprint while contributing to human health and wellness.

Integrating the movement of people within the public realm across a multitude of modes, systems and scales.

While it is understood that these principles are highly interrelated, for clarity only the key considerations associated with each principle are described on the following pages. In practice, urban design interventions should strive to achieve multiple city-building objectives wherever possible.

1   The Guiding Principles have been adapted from a project previously undertaken by B&A Planning Group for the Urban Design Unit.

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GUIDING PRINCIPLES

AUTHENTIC

This principle aligns with the following outcomes in *The City Plan*:

BELONG Edmonton fosters wellness and mental health by providing opportunities for all people to engage in community life and supporting those who are isolated or marginalized.

THRIVE Edmontonians acknowledge and celebrate Indigenous heritage while honouring the diverse cultures, perspectives and experiences residents bring from around the world.

PRESERVE Edmonton protects and enhances its image and identity through heritage.

1 Gibson Block

2 Winter market, Churchill Square

3 *Amiskwaciw Wakayhkan Ihtawin* by Metis Artist Destiny Swiderski

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An authentic city celebrates people, cultures, and natural and built heritage while promoting the evolution of culture for generations to come. Of special consideration is our river valley and prairie setting, the local history of indigenous peoples, and the variety of cultural traditions that are uniquely associated with Edmonton.

GOAL

Buildings and open spaces are designed in a manner that celebrates Edmonton's unique culture, history, geography and northern climate.

WHAT THIS COULD LOOK LIKE

– Streets and blocks that respond to topography, natural features and landmarks, contributing to our overall city image.

– Unique and memorable buildings and civic spaces that embrace winter city design and reflect Edmonton's natural and cultural context.

– Historic buildings and cultural landscapes that have been preserved, adapted to or integrated with new uses (including heritage interpretation, celebrations, and other cultural events).

– Public art and architecture designed by indigenous artists and architects.

City Image is a concept proposed by urbanist Kevin Lynch in his 1960 book Image of the City. Lynch proposed that five physical elements found in cities – paths, edges, districts, nodes and landmarks – taken together form a 'mental map' which not only assists in wayfinding but contributes to a sense of identity.

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GUIDING PRINCIPLES

INCLUSIVE

This principle aligns with the following outcomes in *The City Plan:*

BELONG Edmonton fosters wellness and mental health by providing opportunities for all people to engage in community life and supporting those who are isolated or marginalized.

THRIVE Edmontonians feel safe and secure in their communities and benefit from public spaces and infrastructure that support health and wellbeing.

1   www.justice.govt.nz/ assets/Documents/ Publications/cpted– part–1.pdf

An inclusive city is a city for everyone – fostering pride, ownership and self–expression. An inclusive public realm focuses on the human experience and ensures equitable access to infrastructure and spaces. It is one that embraces openness and welcomes people of all cultures, incomes, ages, abilities, and genders.

GOAL

The public realm is welcoming and safe for people of all cultures, incomes, ages, abilities and genders.

WHAT THIS COULD LOOK LIKE

–   Streets and civic spaces are used by people of all backgrounds and abilities, year–round. No one is excluded, particularly under–represented and vulnerable populations.

–   Children's play equipment and other amenities serve a range of users.

–   Seating and other amenities are provided that support socialization.

–   Spaces are well cared for and there is evidence of community pride.

Safety

Crime Prevention Through Environmental Design (CPTED) focuses on the design and management of the built environment to reduce crime and the fear of crime. In particular, CPTED emphasizes:

·   *Access: Safe movement and connections*

·   *Surveillance and sightlines: See and be seen*

·   *Layout: Clear and logical orientation*

·   *Activity mix: Eyes on the street*

·   *Sense of ownership: Showing a space is cared for*

·   *Quality environments: Well designed, managed and maintained*

·   *Physical protection: Using active security measures*

(New Zealand Ministry of Justice[1])

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GUIDING
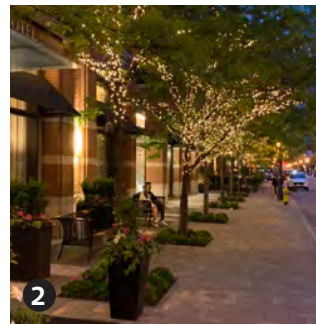## PRINCIPLES

INCLUSIVE

Accessibility

Urban design is concerned with accessibility for persons of all ages and abilities within the public realm including streets, civic spaces, parking areas, and at building entrances. Considerations often include:

- *Minimizing obstructions and identifying hazards within barrier-free paths of travel;*

- *Creating clear and legible signage;*

- *Ensuring sufficient space and ergonomics for persons in wheelchairs and other mobility aids;*

- *The design of curb cuts, pedestrian crossings, parking spaces; and*

- *Ensuring building entrances, ramps, etc, allow easy access to facilities.*

Similar to community safety, there is an opportunity to combine technical expertise and design best practice with direct engagement with users and community members. In these instances, a post-occupancy evaluation undertaken on completed building and civic space projects can provide valuable information that can inform projects currently under development.

1 Mid-block connection incorporating lighting and natural surveillance, Terwillegar Towne

2 Building and landscape lighting used to create a safe and attractive streetscape, Toronto

3 Tactile Walking Surface Indicator (TWSI) and curb cut, Jasper Avenue

4 Accessible washroom, Montreal

5 Accessible playground, Clareview

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GUIDING PRINCIPLES

WALKABLE

This principle aligns with the following outcomes in *The City Plan:*

LIVE Edmontonians have the ability to live locally, with access to diverse and affordable housing options in communities that support their daily needs.

ACCESS Edmontonians live closer to what they need and are supported by walkable communities, active transportation networks and greater connectivity across all travel modes.

1   Building heights, architectural detail, signage and tree canopy contribute to human scale, Whyte Avenue

2   High quality, human scaled public amenity, West Block

A walkable city allows people to conduct everyday tasks by walking and wheeling – regardless of age or ability – through compact, mixed use development combined with a comfortable, attractive and human–scaled public realm connected to various destinations including transit stops.

GOAL

A more attractive, comfortable, human–scaled city containing high quality, compact, mixed–use environments with increased densities to help reduce the need to travel long distances by personal automobile for everyday tasks.

WHAT THIS COULD LOOK LIKE

–   Patterns of streets, blocks, alleys and shared spaces that are fine grained and improve connectivity.

–   Well designed mixed–use and higher density developments, with amenity areas and civic spaces that fulfill the everyday needs of residents.

–   Architecture and landscape design that creates comfortable spaces suitable for year–round use.

–   Buildings and streetscapes that are human scaled and attractive.

Human scale is informed by the psychological, sensory and cognitive needs of human beings. Human scale can be seen in streets and civic spaces with a sense of enclosure (e.g. street walls, canopy trees), groupings of benches that promote social interaction, building facades rich in detail, and signage that is easy to understand at walking speed.

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CONNECTED

This principle aligns with the following outcomes in *The City Plan:*

ACCESS Edmonton advances equity through access to barrier–free spaces, services, facilities and transportation networks.

ACCESS Edmontonians live closer to what they need and are supported by walkable communities, active transportation networks and greater connectivity across all travel modes.

A connected city is one that integrates the movement of people within the public realm across a multitude of modes, systems and scales. The design of the public realm plays a vital role in humanizing our networks to ensure they are well integrated, designed for people of all ages and abilities, legible with good planning and wayfinding, and people–focused to ensure walkability, comfort, safety, and convenience.

GOAL

The public realm seamlessly integrates a choice of transport options that are comfortable, convenient, efficient, affordable and safe, and which make moving around and through our city easy and enjoyable for people all ages and abilities.

WHAT THIS COULD LOOK LIKE

– Networks of streets, blocks, shared spaces and other connections that are easily navigable and accommodate efficient connections for all users with particular emphasis on active transportation modes (walking and wheeling).

– Streets and civic spaces with well integrated facilities, and an adequate provision of bicycle racks, storage and similar amenities.

1 Downtown bike network

2 Bike parking, Century Park LRT Station

3 Multi–use facility, Vancouver

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GUIDING PRINCIPLES

HEALTHY

This principle aligns with the following outcomes in *The City Plan*[1]:

LIVE Edmonton is a leader in efficient, sustainable and resilient community design, development and living

PRESERVE Edmonton protects, expands and improves access to its natural systems and open spaces in support of biodiversity and the health and enjoyment of all Edmontonians.

A healthy city reduces its ecological and urban footprint while contributing to human health and wellness in support of the City's climate resilience goals. The public realm contributes to a functional, efficient, and compact urban fabric while supporting the preservation and protection of ecological services.

GOAL

Neighbourhoods, buildings, sites, streetscapes and civic spaces integrate nature and nature–based solutions, and embrace sustainable site and green building technologies, as Edmonton transitions to a low–carbon economy and adapts to the changing climate.

WHAT THIS COULD LOOK LIKE

– Compact, mixed use development that supports transit.

– Neighbourhood design that integrate wetlands and natural areas to promote ecological function and protect against flooding.

– Networks of streets and blocks that are easily navigable and accommodate active transportation (e.g. walking and wheeling).

– Sites, streetscapes and civic spaces that maximize tree cover, incorporate Low Impact Development (LID), and employ drought tolerant landscaping and water conservation practices.

– Buildings located, oriented and designed to maximize daylight, solar access and natural ventilation.

– Green roofs that address urban heat island effect and minimize stormwater impacts.

– Buildings, streetscapes and civic spaces that include biophilic design to better connect people to the benefits of nature.

– Community gardens that are focal points of neighbourhood open space.

– Materials, finishes and fixtures that are selected on the basis of embodied energy and carbon, maintenance and life cycle costs, and similar sustainable considerations.

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HEALTHY

Climate Resilience

*Climate resilience is one of the four goals of ConnectEdmonton, Edmonton's Strategic Plan 2019-2028 (Updated 2022)[1]. Climate resilience is about Edmonton's capacity to respond to the impacts of climate change and protect people, businesses and infrastructure from those impacts. Climate resilience involves both **mitigation** and **adaptation** – and urban design plays a significant role in achieving this goal.*

__Climate mitigation__ focuses on actions to reduce the emissions that cause climate change, facilitating the transition to a low–carbon community. Edmonton's Community Energy Transition Strategy and Action Plan (2021)[2] identifies a number of mitigation strategies, including:

- *Encouraging emission neutral buildings, and low embodied carbon buildings and infrastructure;*
- *Developing zero emission active transportation networks; and*
- *Conserving and restoring ecosystems for carbon capture and storage.*

*Climate change **adaptation** focuses on actions to manage the risks of climate change impacts– to human health welfare, the economy, urban infrastructure, and the environment. The Climate Resilient Edmonton Adaptation Strategy and Action Plan (2018)[3] identifies four major climate change impacts – changing temperatures, changing precipitation, changing weather extremes, and changing ecosystems. Key adaptation strategies include:*

- *Reducing the impacts of urban heat island effect;*
- *Proactive drought management and water conservation;*
- *Flood mitigation (e.g. protecting wetlands);*
- *Preserving and protecting natural ecosystems; and*
- *Ensuring resilient, reliable and secure food systems.*

1   www.edmonton.ca/city_government/city_vision_and_strategic_plan/connectedmonton

2   www.edmonton.ca/city_government/city_vision_and_strategic_plan/energy–transition

3   www.edmonton.ca/city_government/city_vision_and_strategic_plan/climate–change–adaptation–strategy

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HEALTHY

1   Naturalized area, The Orchards

2   Constructed wetland, Big Lake

3   Urban tree canopy, Centennial Plaza

4   Low Impact Development, Paul Kane Park

5   Low Impact Development, Jasper Avenue

6   Biophilic design on the High Line, New York City

7   Community garden, Chappelle

1   Cushing, Debra Flanders and Miller, Evonne. Creating Great Places: Evidence–Based Urban Design for Health and Wellbeing, Routledge, 2020.

Low Impact Development *(LID) uses stormwater management techniques to mimic the predevelopment regime of infiltration and runoff, minimizing infrastructure needs while improving water quality.*

Biophilic design *incorporates nature into the built environment. This nature–based solution recognizes that humans have a natural affinity for nature (biophilia), and that contact with nature is critical to human health and well–being (Cushing and Miller)[1].*

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PRINCIPLES

VIBRANT

This principle aligns with the following outcomes in *The City Plan:*

BELONG Edmontonians can connect, be active in their community and celebrate Edmonton's heritage, diversity and unique identity.

PRESERVE Edmonton fosters citizen leadership, capacity building and co–creation. Edmonton is where creative spaces emerge and arts, design and culture flourishof all Edmontonians.

1   tacticalurbanismguide.com

2   Maria Rosario Jackson, Creative Placemaking and Expansion of Opportunity: Observations and Reflections, The Kresge Foundation, 2018

A vibrant city enables diverse activities, events and uses that contribute to lively, people–focused places. The public realm should create a unique sense of place, enhance livability, accelerate and catalyze investment, and draw higher intensities and mix of use, economic development and arts and culture 24/7.

GOAL

Streets and civic spaces are lively, support the economy, promote community animation and contribute to a unique sense of place, year–round.

WHAT THIS COULD LOOK LIKE

–   Streets and civic spaces that can accommodate various scales and intensities of community gatherings, animation and celebration.

–   A public realm that supports both emerging and established commercial activities.

–   Temporary and permanent public realm improvements employing tactical urbanism, creative placemaking and similar strategies.

Tactical Urbanism

"A city, organizational, and/or citizen–led approach to neighborhood building using short–term, low–cost, and scalable interventions to catalyze long–term change"[1]. Examples of tactical urbanism include temporary bike lanes and 'pop–up' patios and parkets.

Creative Placemaking

"The integration of arts, culture and community engaged–design into comprehensive community development and urban planning" that "builds on a community's cultural assets and leads to healthier places where all people, particularly those from historically marginalized communities, can thrive."[2]

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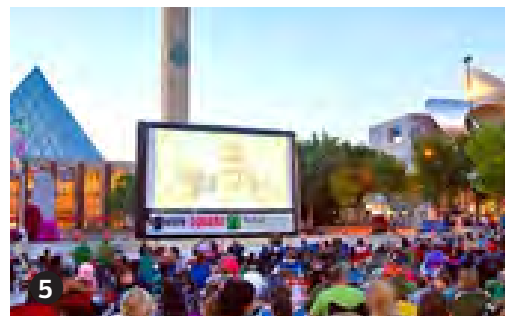## GUIDING PRINCIPLES

VIBRANT

1 The Umbrella Sky Project, Águeda, Portugal (www. pps.org)

2 The Intersection Repair Project, Portland, Oregon (www.pps.org)

3 Temporary activation, Jasper Avenue

4 Farmer's Market, 102 Avenue
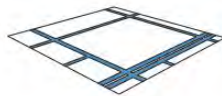
5 Evening programming, Churchill Square

VOL1

USING THE MANUAL

STRUCTURE

The Urban Design Manual is composed of three volumes described below. Each of the volumes and their constituent guidelines or requirements can be found at www.edmonton.ca/UDM.
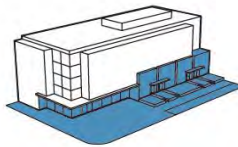
### VOLUME 1 INTRODUCTION

VOLUME 2 URBAN DESIGN GUIDELINES

URBAN STRUCTURE GUIDELINES are primarily concerned with the planning and design of new neighbourhoods, as well as individual development sites.
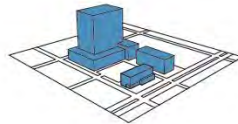
BUILT FORM GUIDELINES are primarily concerned with the form and massing of buildings.

PUBLIC REALM GUIDELINES are primarily concerned with the planning and design of streetscapes, civic spaces and amenity areas, as well as the public realm interface.
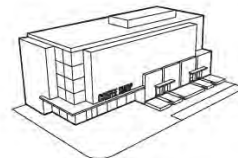
SIGNAGE GUIDELINES provide direction to signage within the public realm, encouraging design excellence through clear, legible, respectful and well integrated signage which contributes positively to a human scaled, walkable and vibrant public realm.
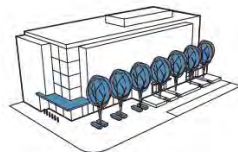
DESIGN DETAIL GUIDELINES provide direction to the finest scale of architecture and landscape architecture, and promote design excellence through materials, furnishings and architectural elements that contribute positively to buildings and civic spaces.

VOLUME 3 TECHNICAL STUDIES

Requirements for Urban Design Briefs, Wind Studies and other submissions that may be required as part of rezoning and development permit application processes.

VOL1

USING THE MANUAL

HOW TO USE THE GUIDELINES

1 Each guideline addresses a singular urban design typology or topic. Note that some guidelines (e.g. site design) apply to development in a more general way.

2 Notes describe how each guideline is to be applied and how it relates to the *Zoning Bylaw* (if applicable).

3 Each guideline articulates an overarching objective which aligns with the guiding principles.

4 Urban design considerations reflect generally accepted practices with a focus on performance expectations.

B2

1 ## TOWERS

The guideline addresses built form considerations related to the design of towers and tower tops.

This guideline identifies design considerations in addition to *Zoning Bylaw* regulations related to floor plate area, tower separation and setbacks.

2 Note that considerations of tower size and location must be taken holistically. While it may be possible to reduce or trade off minimum requirements, a site that cannot meet the minimum design expectations may not be suitable for a tower (or towers).

This guideline is intended to inform the concept or schematic design process and does not provide detailed guidance related to materiality (its articulation, transparency, etc.)

For additional considerations related to the siting, orientation and configuration of a tower (or towers) on a site please see *Site design*.

3 The careful siting, orientation and configuration of towers can contribute to a comfortable, human scaled public realm, minimize microclimatic impacts, prioritize the health and wellbeing of building occupants, while making a positive contribution to the city's skyline.

4 **Towers**

- The floor plates of residential towers should be no greater than 850m^2 to maximize views and sun exposure within adjacent buildings, streetscapes and civic spaces (Figure 1). Smaller tower floor plates (e.g. 750m^2) are recommended in certain situations, e.g.:
  - On sites adjacent to development of a smaller scale, to ensure the proposed tower addresses the existing street context.
  - On sites sites of a size and/or configuration that dictate a smaller tower footprint.
  - Where buildings lower height are proposed.
- For office towers, the maximum floor plate area should be limited to 2500m^2 (Figure 2).
  - A maximum facade length of 60 meters should be considered for these larger buildings to contribute to a more human scaled streetscape.
- A minimum separation distance of 25m should be provided between two towers on the same site. It may be appropriate to increase this separation in certain situations; e.g.:
  - To reduce wind and shadow impacts on surrounding streets, civic spaces and outdoor amenity areas.
  - To accommodate necessary building separations at the ground level; e.g. townhouse podiums on either side of a mid-block connection.
- Towers should be setback a minimum of 12.5m from side yard property lines and/or the centrelines of adjacent streets and lanes, allowing for tower development and appropriate separation for towers on adjacent sites.
- A podium/tower configuration is a desirable way to create a human-scaled streetwall and potentially mitigate the impact of wind downdrafts on adjacent streets and civic spaces.

Last Updated February 28 2023

Page 1   DRAFT – For review only   Built Form

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HOW TO APPLY THE GUIDELINES

The following table summarizes the application of the Urban Design Guidelines (and related policies, bylaws, standards, and other City guidelines) to the most common types of private and public development in Edmonton.

Project Type	Policy/Bylaw/ Standard	Urban Design Guidelines	Other City Guidelines
Private Development			
New neighbourhoods	District Plans *(in development)*	· **New Neighbourhood Design Guidelines**	
Rezoning applications	District Plans *(in development)*	· **Site Design** · **Built Form – General** · Other Built Form, Public Realm, Signage and Design Detail Guidelines as appropriate	· Winter Design Guidelines · Design For a Safer City · Access Design Guide · LID Guide
Development permit applications	· Zoning Bylaw · City Design + Construction Standards		
City Projects			
Streetscapes	· Complete Streets Design + Construction Standards	· **Civic Spaces** · Other Public Realm and Design Detail guidelines as appropriate	· Winter Design Guidelines · Design For a Safer City · Access Design Guide · LID Guide
Civic spaces	· Breathe · Complete Streets Design + Construction Standards		
Other infrastructure projects (e.g. LRT)	· As appropriate		

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GLOSSARY

References to other City policies, plans and standards are in parentheses (Note *District Policy* is currently in development). Where needed, notes describe how definitions may have been adapted from these policies, plans and standards.

Active edges refer to pedestrian accessible areas that feature public and privately owned design components favourable to pedestrians such as continuous pedestrian– oriented storefronts, building facades, pedestrian signage, lighting, trees, street furniture, landscaping, outdoor patios and art *(from District Policy).*

Accessible or **accessibility** is a concept integral to human rights that refers to the absence of barriers that prevent individuals and/or groups from fully participating in all social, economic, cultural, spiritual and political aspects of society. The term is often linked to people with disabilities and their rights to access, and also refers to universal design characteristics of products, devices, information, programs, services, infrastructure that enable independent use, or support when required, and access by people with a variety of disabilities (from the *Access Design Guide).*

Active transportation refers to any mode of transportation by which people use their own energy to power their motion, including walking, rolling, running, cycling, cross–country skiing, skateboarding, snowshoeing, roller blading and use of a wheelchair (from *District Policy).*

All ages and abilities refers to a design approach that considers both the safety and comfort of a broad range of potential users including, but not limited to, people with disabilities, children, seniors, women, racialized people and people with a low income (from *The Bike Plan).*

Alleys are low speed, low volume residential or commercial streets whose primary function is to facilitate vehicular access to a residence or business. Alleys function like a shared space between all users and functions as part of the public realm (from the *Complete Streets Design and Construction Standards).*

Animation refers to public and activity within streetscapes and civic spaces, generated by commercial activities, public amenities, festivals and other events (programmed and otherwise).

Built heritage includes structures of historical, cultural and/or architectural significance to the history of Edmonton that contributes to our unique sense of time and place (from *District Policy).*

City image is a concept proposed by urbanist Kevin Lynch in his 1960 book Image of the City. Lynch proposed that five physical elements found in cities – paths, edges, districts, nodes and landmarks – taken together form a 'mental map' which not only assists in wayfinding but contributes to a sense of identity.

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1   Civic spaces as defined in *Breathe* also include Main Streets and Pedestrian Priority Streets, but these have been removed from this definition.

2   This definition is similar to 'commercial frontages' as defined in *District Policy*; however, commercial frontages are intended to apply to nodes and corridors and this definition reflects the idea that these interfaces can exist on a site anywhere in Edmonton (e.g. a suburban shopping centre).

3   www.justice.govt.nz/ assets/Documents/ Publications/cpted– part–1.pdf.

4   de Groot et al 2002. A typology for the classification, description and valuation of ecosystem functions, goods and services.

Civic spaces include squares, plazas, and promenades – primarily hardscaped areas developed as gathering spaces for people. Some may contain markets, event venues, or small shops and food vendors. *(Adapted from Breathe[1])*

Climate adaptation involves owering the risks and negative impacts and embracing potential opportunities associated with climate change so that communities and ecosystems are prepared to cope with new climate conditions (from *The City Plan)*. For more information refer to the *Climate Resilient Edmonton: Adaptation Strategy and Action Plan.*

Commercial / Mixed–use Interfaces are existing or new commercial retail, office or mixed–use developments of various scales that have commercial ground floors oriented towards the street (adapted from 'Commercial Frontages', *District Policy[2]*).

Concept design refers to the translation of a project concept into physical drawings of the project which offer a general overview of the basic features, typically communicated in plans, sections and 3–dimensional renderings.

Corridors are a place for movement, living and commerce that is anchored by the mobility system and well connected to surrounding communities (from *District Policy*).

Crime Prevention Through Environmental Design (CPTED) focuses on the design and management of the built environment to reduce crime and the fear of crime. In particular, CPTED emphasizes:

- **Access:** Safe movement and connections
- **Surveillance and sightlines:** See and be seen
- **Layout:** Clear and logical orientation
- **Activity mix:** Eyes on the street
- **Sense of ownership:** Showing a space is cared for
- **Quality environments:** Well designed, managed and maintained
- **Physical protection:** Using active security measures

(New Zealand Ministry of Justice[3])

Ecological function refers to the capacity of natural processes and components to provide goods and services that satisfy human needs, either directly or indirectly (from *de Groot et al 2002[4]).*

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Energy transition refers to the broad shift in city-building transforming how energy is generated, how people move around the city, how buildings are constructed, all through the lens to ensure a just and equitable transition *(City of Edmonton)*. For more information refer to the *Community Energy Transition Strategy*.

Environmental health focuses on the relationships between people and their environment; promotes human health and well-being; and fosters healthy and safe communities (from *American Public Health Association*[1]).

Figure-ground is spatial pattern of a site, neighbourhood or city, expressed two-dimensionally as built form (figure) and open space (ground).

Fine grained can refer to a pattern of development characterized by small blocks (and a high intersection density[2]), as well as smaller scale, highly detailed and ground oriented development. Fine grained development is typically associated with better connectivity and walkability.

Frontage zone is the area adjacent to the building, used as a support and/or extension of the land uses along street. Uses can include ground floor retail displays, café seating, temporary signage, queuing areas, and other activities to support active use of the street by people and businesses (adapted from *Complete Streets Design and Construction Standards*[3]).

Ground oriented uses have direct access from the street to individual units or bays at the ground floor. These guidelines are primarily concerned with ground oriented uses of a residential and commercial / mixed-use nature.

Human scale is informed by the psychological, sensory and cognitive needs of human beings. Human scale can be seen in streets and civic spaces with a sense of enclosure (e.g. street walls, canopy trees), groupings of benches that promote social interaction, fine-grained buildings and signage that is easy to understand at walking speed.

Low Impact Development (LID) refers to a land development and stormwater management approach that works with nature to manage stormwater as close to the source as possible. LID focuses on maintaining and restoring the natural hydrological processes of a site. LID examples include rain gardens, green roofs and rainwater harvesting for reuse (from *District Policy*).

Landscape over structure refers to trees, shrubs, perennials (and associated growing media, including soil cells) located over a building (eg. roof garden) or other structure (eg. underground parking, vaults or utilities).

1   www.apha.org.

2   The number of intersections in a given area (www.pedshed.net).

3   The *Complete Streets Design and Construction Standards* differentiates between urban and suburban frontage zones; however, this definition reflects the idea that a frontage zone as a general concept can exist on a site anywhere in Edmonton.

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1   The *Breathe* definition for open space includes civic spaces. The UDM definition recognizes that civic spaces are more urban in nature and therefore defines them separately.

2   The UDM definition for public realm includes the example of a parking lot, to reflect their importance from an urban design perspective.

3   The Complete Streets Design and Construction Standards only focus on shared streets. The more inclusive UDM definition also identifies civic spaces as possible areas of consideration.

4   The *Zoning Bylaw* defines a tower relative to a podium; however, from an urban design perspective, not all towers will, or should, have a podium.

Mews are a type of mid–block pedestrian and active transportation connection with a strong public realm interface with adjacent residential, commercial and / or mixed use land uses.

Natural areas refer to areas of land or water that are dominated by native vegetation in naturally occurring patterns. Such areas could include grasslands, forests,wetlands, peatlands or riparian areas. Tableland natural areas are natural areas that exist outside of the river valley. Areas such as groomed parks, sports fields and schoolyards are not natural areas (from *District Policy*).

Open spaces include municipal parks, corridors, other jurisdictional parkland, and other types of public open spaces, such as school sites, municipal cemeteries and municipal golf courses (Adapted from *Breathe*[1]).

Pedestrian priority areas prioritize the safety and comfort of pedestrians over maximizing the movement of other modes. These enhanced pedestrian spaces include urban design and mobility infrastructure upgrades such as crosswalks, street furniture, wayfinding, pedestrian–scaled design of the roadway and lighting (from *District Policy)*.

Public realm refers to indoor and outdoor spaces on public or private property that are open to the public such as sidewalks, plazas, parking areas, amenity and other open spaces (adapted from *District Policy*[2]).

Public realm interfaces include ground–oriented uses and adjacent site areas that abut and are directly accessible from the public realm. The public realm interface is typically delineated by the streetwall, and marks the transition between private and public, and outdoor and indoor, spaces.

Shared spaces are low speed, low volume streets, as well as civic spaces, intended to be shared by all users, but specifically designed to protect those walking and wheeling. Shared spaces can meet the needs of adjacent residents and businesses, and function foremost as a public, shared space for recreation, socializing, shopping, and leisure (adapted from *Complete Streets Design and Construction Standards*[3]). Shared spaces are sometimes referred to as woonerfs (Netherlands) or home zones (UK).

Streetwall refers to a series of continuous building facades that are typically parallel to the road right–of–way (from the *Zoning Bylaw)*. Street walls typically provide definition to, and therefore contribute to, human scaled streets and civic spaces.

Tower refers a building greater than 28.0 m in height. (Adapted from the *Zoning Bylaw*[4]).

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Townhouse podium refers to the base of a tall tower form, with a shared sidewall between units. Each unit has individual direct access to the street or lane.

Walkability is the extent to which the built environment allows people to walk or wheel to get to everyday destinations for work, shopping, education and recreation, and which can be affected by street connectivity, mix of land uses, destinations and pedestrian infrastructure (Adapted from *The City Plan*[1]).

Walkable places have a mix of uses and are safe, comfortable and interesting–streets and open spaces are human scaled, with generous landscaping and urban tree canopy, active edges and lively, animated storefronts (from *Speck*[2]).

1   This more inclusive definition of walkability includes all forms of mobility devices including wheelchairs, scooters, walkers, canes and other mobility devices.

2   Speck, Jeff. Walkable City: How Downtown Can Save America One Step at a Time, North Point Press, 2013.