

Keystone Hills Area Structure Plan



Publishing Information

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Keystone Area Structure Plan

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OFFICE CONSOLIDATION

2022 September,

2023 July,

2023 November

Keystone Hills Area Structure Plan

BYLAW 15P2012

ADOPTED JULY 16, 2012

NOTE: This Office Consolidation includes the following amending Bylaw:

AMENDMENT	BYLAW	DATE	DESCRIPTION
1	31P2014	2014 December 15	(a) Delete and replace Map 4 entitled "Growth Management Overlay"
2	7P2015	2015 July 27	(a) Delete and replace Map 4 entitled "Growth Management Overlay"
3	50P2018	2018 July 23	(a) Delete and replace Map 4 entitled "Growth Management Overlay"
4	68P2018	2018 September 11 <i>Signed: 2018 September 18</i>	(a) Delete and replace Map 4 entitled "Growth Management Overlay"
6	93P2018	2018 December 10	(a) Delete and replace Map 4 entitled "Growth Management Overlay"
7	83P2019	2019 December 17	<p>(a) In the Table of Contents, delete section "6.8 Major Activity Centre" and replace with "6.8 Keystone Hills Core Area".</p> <p>(b) In the Table of Contents, delete section "6.9 Urban Corridor" and renumber the following sections accordingly.</p> <p>(c) In the Table of Contents, update and renumber the List of Maps to include the new maps provided within Schedule "A".</p> <p>(d) Throughout the document delete the word "Corridor" and replace with "Main Street" wherever it appears.</p> <p>(e) Throughout the document, delete the words "urban corridor" and replace with "Urban Main Street" wherever it appears.</p> <p>(f) In the Introduction, in the second paragraph of 2.1.1, delete and replace "Section 6.8, Major Activity Centre" with "Section 6.8, Keystone Hills Core Area".</p> <p>(g) In Section 2.3, subsection 1., in the second sentence, delete and replace "Urban Corridor (as defined in Section 6.9, Urban Corridor)" with "Urban Main Street (as defined in Section 6.8, Keystone Hills Core Area)".</p> <p>(h) Delete existing Section 6.8 and Section 6.9 and replace with revised Section 6.8 entitled "Keystone Hills Core Area" and renumber all the following sections and maps accordingly.</p> <p>(i) In Section 6.10.1(1), delete and replace bullet point c.</p> <p>(j) In Section 6.10.1(1) d., delete the "Major Activity Centre and Urban Corridor" and replace with "Keystone Hills Core Area".</p> <p>(k) In Section 8.2.3, delete "Major Activity Centre, the Urban Corridor" and replace with "Keystone Hills Core Area".</p> <p>(l) In Section 9.3, in the Purpose paragraph, delete the last sentence.</p> <p>(m) In Section 9.3.1(2) c., delete the final sentence.</p> <p>(n) In Section 9.3.1(3) b., delete and replace bullet point i.</p> <p>(o) In Section 9.3.1(3) f., delete "separate Centre Street Corridor and MAC Special Study and /or".</p> <p>(p) In Section 9.5.1(1) b., delete "the separate Centre Street Corridor and MAC Special Study and/or".</p> <p>(q) In Section 9.5.1(2) e., delete "the separate Centre Street Corridor and MAC Special Study and/or".</p> <p>(r) Delete Section 9.5.1(2) f. in its entirety.</p>
8	29P2022	2022 September 13	<p>(a) (a) In the Table of Contents, for section 6.4, add "6.4.2 Neighbourhood D Policies" after 6.4.1.</p> <p>(b) Delete the existing Map 3 entitled 'Constraints' and replace it with the revised Map 3.</p> <p>(c) Delete the existing Map 4 entitled 'Growth Management Overlay' and replace it with the revised Map 4.</p> <p>(d) In Section 6.1, in the second paragraph, delete the first sentence and replace with the new text.</p> <p>(e) In Section 6.2, in the first sentence, after the word "Industrial" add the word "Residential".</p> <p>(f) In Section 6.2, delete Table 1 and replace with the new table.</p> <p>(g) Delete the existing Map 5 entitled 'Land Use Concept' and replace it with the revised Map 5.</p> <p>(h) Delete the existing Map 6 entitled 'Community & Neighbourhood Concept' and replace it with the revised Map 6.</p>

AMENDMENT	BYLAW	DATE	DESCRIPTION
			<ul style="list-style-type: none"> (i) In Section 6.4.1, add the text at the end of the section. (j) In Section 6.4, delete Table 2 and replace with new table. (k) In Section 6.11.1(1), delete the words “, in the area south of 144th Avenue N, West of 15th Street N.E., to “the Canadian Pacific rail line”. (l) In Section 6.11.1(2), delete bullet point a. and replace with new text. (m) Delete the existing Map 12 entitled ‘Joint Use Sites’ and replace it with the revised Map 12. (n) Delete the existing Map 13 entitled ‘Transportation’ and replace it with the revised Map 13. (o) Delete the existing Map 14 entitled ‘Transit’ and replace it with the revised Map 14.
9	50P2022	2022 September 13	(a) Delete the existing Map 4 entitled ‘Growth Management Overlay’ and replace it with the revised Map 4
10	53P2023	2023 July 25	<ul style="list-style-type: none"> (a) Delete the entire Section 5.1 entitled “Urban Growth Policies”. (b) Delete the existing Map 4 entitled “Growth Management Overlay”. (c) Remove Section 5.1 entitled “Urban Growth Policies” from the Table of Contents. (d) Remove Map 4 entitled “Growth Management Overlay” from the Table of Contents under “List of Maps”. (e) In Section 11 “Utility Servicing Policies”, delete Policy 11.1.3 “Growth Management”.
11	80P2023	2023 November 14	<ul style="list-style-type: none"> (a) Delete the existing Map 5 entitled “Land Use Concept” and replace with the revised Map 5 entitled “Land Use Concept”, attached as Schedule “A”. (b) Delete the existing Map 6 entitled “Community and Neighbourhood Concept” and replace with the revised Map 6 entitled “Community and Neighbourhood Concept”, attached as Schedule “B”. (c) In Section 6.4.2 Neighbourhood D policies, in Policy 3 delete the words “35 and 40 hectares (86 and 99 acres)” and replace with the words “30 and 35 hectares (74 and 86 acres)”. (d) In Section 6.11.1 Industrial/Employment Area, in Policy 2, delete bullet point a. and replace with the following: <ul style="list-style-type: none"> “a. The Industrial/Employment Area should be comprised of approximately 25 hectares (62 acres) of land.”

Amended portions of the text are printed in italics and the specific amending Bylaw is noted.

Persons making use of this consolidation are reminded that it has no legislative sanction, and that amendments have been embodied for ease of reference only. The official Bylaw and all amendments thereto are available from the City Clerk and should be consulted when interpreting and applying this Bylaw.

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1 EXECUTIVE SUMMARY

The Keystone Hills Area Structure Plan (ASP) area, referred to in this ASP as the Plan Area, is located in the northwest and northeast quadrants of the City of Calgary on lands annexed from Rocky View County in 1989 and 2007. The Plan Area is bounded by Stoney Trail to the south, 160th Avenue N to the north, 14th Street N.W. to the west, and the Noise Exposure Forecast (NEF) contour to the east. Additionally, there is a panhandle of land included in the Plan Area east of the NEF contour, bounded on the north by 144th Ave N.E., on the east by a Canadian Pacific rail line, and on the south by Stoney Trail (see Map 1: Plan Area Location and Map 2: Air Photo). The Plan Area covers approximately 1,080 hectares (2,669 acres) of land.

The Plan Area will house approximately 60,000 residents and employ about 18,000 people in three Complete Communities and one Industrial/Employment Area, each with a distinct identity but which will function together as an integral part of the city. It will be an area where daily needs can be met within comfortable walking distance for most residents and where access to wider employment, retail, leisure and cultural destinations is provided by excellent pedestrian, transit, cycling and road connections.

Communities in the Plan Area will be designed to respect unique natural features, such as wetlands, native grasslands and topography; to protect existing ecosystem function and wildlife habitat; and to enable residents, workers and visitors to enjoy their natural surroundings.

The ASP refines and implements the strategic objectives and policies identified within the *Municipal Development Plan (MDP)*, *The Calgary Transportation Plan (CTP)* and *The North Regional Context Study* and has been influenced by The City of Calgary's (The City's) broader planning and Sustainability objectives. It has been informed by specific engineering, transportation and land use studies, and transportation and servicing constraints in the area. The ASP has evolved through a consultation process involving landowners, the general public, City Administration, school boards and other key stakeholders.

Through this process, detailed policies and guidelines have been developed. These will be used to direct land use, subdivision and Development Permit applications that will collectively shape the future development of the Plan Area in order to achieve the ASP vision.

2 INTRODUCTION

2.1 Vision & Objectives

The vision and objectives for the Area Structure Plan (ASP) outline the aspirations of The City of Calgary, its partners and stakeholders. Through a public engagement process, a range of stakeholder groups has provided input on the social, environmental and economic aspects of the ASP. The policies contained within this ASP aim to guide development in order to achieve the objectives and realize the vision.

2.1.1 Vision

In 25 years, the Plan Area is firmly established as a desirable place in which to live, work and recreate. It is a place that provides three distinct residential Communities and one Industrial/Employment Area that function together as an integral part of the city. Each Community is walkable, culturally enriched, inclusive, diverse and sustainable, utilizing best practices in place-making and sustainable design. Public spaces, parks and vibrant, walkable Activity Centres will be the focus of daily social and economic activity. A range of stores, workplaces, restaurants, public spaces and community and leisure facilities allow for the development of Complete Communities. Each Community includes a heterogeneous housing mix to promote diversity and creative design. The Plan Area is a place where public amenities are within comfortable walking distance and excellent pedestrian connections, transit and cycling facilities provide access to wider employment, retail, leisure and cultural destinations. Effective use of capital funding and smart growth strategies have resulted in efficient, strategic development of the Plan Area.

The focal point of the Plan Area, and of the greater north Calgary area, is the Major Activity Centre (as defined in *Section 6.8, Keystone Hills Core Area*). Supported by the Primary Transit Network, the Major Activity Centre is the highest-Intensity node in the Plan Area. The Major Activity Centre is the hub of employment, services, and higher-density housing, integrated into a grid street pattern with a high quality of urban design, creating strong pedestrian connectivity and quality public spaces. **Bylaw 83P2019**

Conservation of the unique natural environment within the Plan Area ensures protection of the existing ecosystem and enables residents, workers and visitors to enjoy their natural surroundings. Development has responded to this natural environment, working with the terrain through conservation design and slope-adaptive building forms. Conserving these natural features enhances the individuality and identity of the area, increasing amenity value and ecosystem services such as air and water filtration. Water quality and quantity is protected by Low-Impact Development strategies for stormwater management and sustainable water use strategies.

The Plan Area seamlessly integrates into the long-term City vision, taking advantage of opportunities to optimize City infrastructure and advance the objectives of the *Municipal Development Plan (MDP)* and *Calgary Transportation Plan (CTP)*.



Each Community is walkable, culturally enriched, inclusive, diverse and sustainable, utilizing best practices in place-making and sustainable design.

2.1.2 Objectives

- 1. Foster Distinct, Attractive Communities With a Strong Sense of Place**
Develop integrated, well-connected, compact Communities built around a series of carefully-planned Neighbourhood Activity Centres providing access to schools, retail, services, and places to work and play.
- 2. Preserve Open Space, Agricultural Land, Natural Beauty and Critical Environmental Areas**
Conserve and enhance the existing wetlands, habitats, topography and agricultural land in order to provide a visually appealing and biologically diverse environment, where the built form is designed to respect the functions of the natural environment.
- 3. Support Compact Development**
Encourage a Compact Urban Form with the highest Intensity of development located in Pedestrian-Oriented Activity Centres served by transit.
- 4. Create Walkable Environments**
Promote safe, healthy, walkable neighbourhoods by designing Pedestrian-Oriented Communities with a built form that fosters a safe public realm and promotes healthy lifestyles.
- 5. Create a Range of Housing Opportunities and Choices**
Enhance Community diversity and Sustainability by providing access to a range of housing opportunities in different forms and at different levels of affordability.
- 6. Mix Land Uses**
Develop a mix of land uses focused around transit, with the broadest range of uses around Activity Centres. Additionally, encourage a mix of employment opportunities including Home-Based Businesses, Local Commercial Uses, and Live-Work Units around Activity Centres to maximize the opportunities for a balance of housing and employment.
- 7. Utilize Green Infrastructure and Buildings**
Encourage sustainable design solutions by creating Communities where energy and resource use are minimized and building designs incorporate green building methods and alternative energy solutions.

8. Provide a Variety of Transportation Options

Develop a grid-like network of streets built around comprehensive pedestrian and cycling connections, complemented by efficient transit, in order to increase accessibility to schools, retail, services, and places to work and play.

9. Provide Transportation Services in a Safe, Effective, Affordable and Efficient Manner That Ensures Reasonable Accessibility to all Areas of the City for all Citizens

Develop a comprehensive transportation network that provides convenient access for pedestrians, cyclists, transit users and vehicular traffic both within the Plan Area and to other parts of the Calgary region.

10. Connect People, Goods and Services Locally, Regionally and Globally

Develop an efficient multi-modal transportation network that provides easy access to other parts of Calgary and beyond.

2.2 Strategic Policies

The vision and policies for this ASP have been influenced by a wide range of existing plans, policies and guidelines. Please see Appendix I: Policy Frameworks for a list of referenced plans and policies. The ASP should not be considered a stand-alone document; the policies and guidance of other Council-approved policies and guidelines should also be considered as applicable.

2.3 Growth Rationale

The timing for the preparation of an ASP is determined by Council in accordance with criteria outlined in the MDP and the *North Regional Context Study*. The following information on the listed criteria is provided for this Plan Area:

1. Advancing the Objectives of the MDP, the CTP, and Other Initiatives

The ASP policies are in alignment with the MDP and CTP goals and objectives. The Plan Area will be served by public transit and will include a Major Activity Centre and *Urban Main Street (as defined in Section 6.8, Keystone Hills Core Area)* as focal points. The extent to which the development of the Plan Area advances the objectives of the MDP and CTP is contingent on achieving mixed-use Activity Centres and transit supportive land use in a reasonable time frame.

Bylaw 83P2019

2. **Assessment of The City's Financial Capacity**

A portion of the costs for Leading Infrastructure are noted in the 10-Year Capital Plan. Costs associated with transit are not currently noted in the 10-Year Capital Plan. Funds for the required infrastructure for the Plan Area have not been allocated in the 3-Year Capital Budget as of 2012. Departmental capital budgets will need to be aligned to support public investment needed to service the Plan Area, following Council's approval of the ASP. The priority of the ASP will be assessed within the Corporate *Framework for Growth and Change*. The estimated capital and operating costs for the Core Infrastructure components of the Plan Area are provided in Appendix B: Cost of Development.

3. **Demonstrated Need for Planned Land Supply**

The City has a general practice of maintaining a 13- to 15-year land supply with approved policy plans in place. As of February 2012, city-wide greenfield planned land supply in Calgary could accommodate 12 to 14 years of residential growth; this does not include redevelopment and intensification potential in established areas. The north sector contained seven to nine years of planned land supply (enough for approximately 50,900 people). Approval of this ASP will add 11 to 13 years of planned land supply, bringing the north sector planned land supply up to approximately 18 to 22 years. Over the next five years, the north sector is forecast to capture 27 per cent of Calgary's residential development market (*Draft Suburban Residential Growth 2012–2016*).

4. **Consideration of the Operating and Lifecycle Costs to The City in Supplying and Maintaining Infrastructure**

Development of the Plan Area will require new infrastructure that will incur operating and lifecycle costs. The projected annual infrastructure operating costs for the Plan Area total \$20.5 million (in 2011 dollars). See Appendix B: Cost of Development for details.

5. **The City's Ability to Provide Efficient and Cost-Effective Utility Servicing**

The Plan Area is relatively close to existing urban development. Utility services can be extended from the south and east. The current estimated infrastructure cost required for the development of the Plan Area is \$282 million (in 2011 dollars). This includes a new reservoir, several kilometres of feedermain, pump station upgrades, and over 2.5 km (1.6 miles) of sanitary storm trunks, as well as road and transit infrastructure, an operational workplace centre and an emergency services station. Some of

the infrastructure in the Plan Area is required for the future development of areas to the north. See Appendix B: Cost of Development for details.

6. **Opportunities for Land Use That Support the Primary Transit Network**

A light rail transit (LRT) station is forecast along the planned North-Central LRT line near the intersection of Centre Street and 144 Avenue N, within the Major Activity Centre. As well, an east-west Primary Transit Network line is identified along 160th Avenue N. Interim rapid transit service by bus along the future LRT alignment until the LRT is implemented may be a possibility.

7. **Landowner Interest**

The majority of landowners within Keystone Hills have expressed a desire to proceed with development plans for their lands.

8. **Community Interest**

No significant concerns were identified by the general public during the ASP engagement process. Positive feedback was received through a survey and focus groups supporting the general principles of Neighbourhood design and Complete Communities.

3 REGULATORY PROCESS

3.1 Purpose of the Plan

Land use planning is the process of shaping the physical environment to achieve an orderly, sustainable and compatible pattern of growth, and protecting the environment and its ecological functions with the goal of enhancing the quality of life of the Community's residents.

The purpose of an Area Structure Plan (ASP) is twofold. First, it refines and implements The City's broad planning objectives and policies of the *Municipal Development Plan* (MDP) and other policies by promoting logical, compatible and sustainable Community development. Second, an ASP guides and directs the specific land use, subdivision and development decisions that collectively determine the form that the Plan Area will take.

3.2 Authority of the Plan

ASPs are adopted by bylaw passed by Council in accordance with the *Municipal Government Act, R.S.A. 2000, c.M-26 (MGA)*. Section 633 of the MGA states:

- 633 (1) For the purpose of providing a framework for subsequent subdivision and development of an area of land, a council may by bylaw adopt an area structure plan.
- (2) An area structure plan
- (a) must describe
 - (i) the sequence of development proposed for the area,
 - (ii) the land uses proposed for the area, either generally or with respect to specific parts of the area,
 - (iii) the density of population proposed for the area, either generally or with respect to specific parts of the area, and
 - (iv) the general location of major transportation routes and public utilities,
 - and
 - (b) may contain any other matters the council considers necessary.

An ASP must conform to the MGA, the MDP and all statutory plans. Subdivision approvals may be made only where they comply with an ASP. Direct Control Districts must comply with ASPs.

3.3 Timeframe of the Plan

The ASP is future-oriented and depicts how the Plan Area is to be developed over an extended time period through a series of public and private sector initiatives. The time frame of this ASP will be determined by the criteria for prioritization and sequencing of growth areas determined as part of the *Corporate Framework for Growth and Change*.

3.4 Interpretation of the Plan

3.4.1 Map Interpretation

Unless otherwise specified within the ASP, the boundaries or locations of any symbols or areas shown on a map are approximate only, not absolute, and will be interpreted as such. They are not intended to define exact locations except where they coincide with clearly recognizable physical features or fixed boundaries such as property lines or road or utility rights-of-way. Precise location of these boundaries, for the purpose of evaluating development proposals, will be determined by City Administration at the time of application.

For greater clarity, all Land Use Areas, including those identified as Environmental Open Space, are not field verified and may not reflect actual site conditions. As such, these areas will be subject to further study and will be delineated upon development application and approval. Where adjustments are made as a result of delineation, the policies of the adjacent Land Use Area shall apply without requiring an amendment to maps within this ASP, including but not limited to Map 5: Land Use Concept and Map 15: Environmental Open Space Study Area.

Bylaw 83P2019

3.4.2 Policy Interpretation

Where a purpose statement accompanies a policy, it is provided for information only to illustrate the intent of and enhance the understanding of the policy. Should an inconsistency arise between the purpose statement and a policy, the policy will take precedence.

Most policies are written in the active tense, as deliberate statements or plans indicative of the direction that The City is proposing for future development or desired outcomes. In some of these policies, the word "should" is explicitly used to clarify the directional nature of the statement. Policies that use active tense or "should" are to be applied in all situations, unless it can be clearly demonstrated to the satisfaction of The City that the policy is not reasonable, practical or feasible in a given situation. Proposed alternatives must be to the satisfaction of The City with regards to design and performance standards.

Policies that use the word "encourage" in any tense support the ASP's objectives but may not be applicable in all cases; therefore, they should be interpreted on a contextual basis. In such cases, incentives may be appropriate to support implementation of the policy.

Regulatory Process

In some cases, policies are written to apply to all situations, without exception, usually in relation to a statement of action, legislative direction or situations where a desired result is required. The words “require”, “must”, “will” or “shall” are used within these policy statements.

3.4.3 Guideline Interpretation

Guidelines provide design details to aid in complying with ASP policies. There is recognition that other design solutions may exist, and therefore, the guidelines are not applied in a mandatory manner. Where the guidelines identify information or analysis to be submitted as part of an Outline Plan/Land Use Amendment application, such requirements are not to be applied in a mandatory manner and may be varied or expanded upon as determined appropriate given the specific circumstances that exist.

Where the guidelines identify standards to be addressed within an Outline Plan/Land Use Amendment application, the guidelines may be varied without an amendment to the ASP.

Where the policies of this ASP refer to compliance with the guidelines it is understood that the guidelines are provided for direction only.

3.5 Monitoring and Review

The policies within the ASP will be monitored over time in relation to development and in relation to monitoring of the MDP to ensure they remain current and relevant. Where determined necessary, these policies will be updated through the plan amendment process either generally or in response to a specific issue.

In order to ensure the ASP serves as a living document that reflects new policies adopted by Council over time, it should be reviewed and updated every 10 years from the time it is initially adopted until such time as the Approving Authority considers the Plan Area fully built-out.

3.6 Application-Based Plan Amendments

Any change to the text or maps within the ASP will require an amendment to the ASP, in accordance with the MGA. Where an amendment to the ASP is requested, the applicant shall submit the supporting information necessary, to evaluate and justify the potential amendment and ensure its consistency with the MDP and other relevant policy documents.

3.7 Plan Limitations

ASPs are long-term planning documents. As such, they promote a vision for a Community and put in place policies and guidelines that work towards achieving that vision over time. ASPs may be amended from time to time either in relation to a City initiative or a land use application.

Policies and guidelines in an ASP are not to be interpreted as an approval for a use on a specific site. No representation is made herein that any particular site is suitable for a particular purpose as detailed site conditions or constraints, including environmental constraints, must be assessed on a case-by-case basis as part of an application for land use, subdivision or development permit approval.

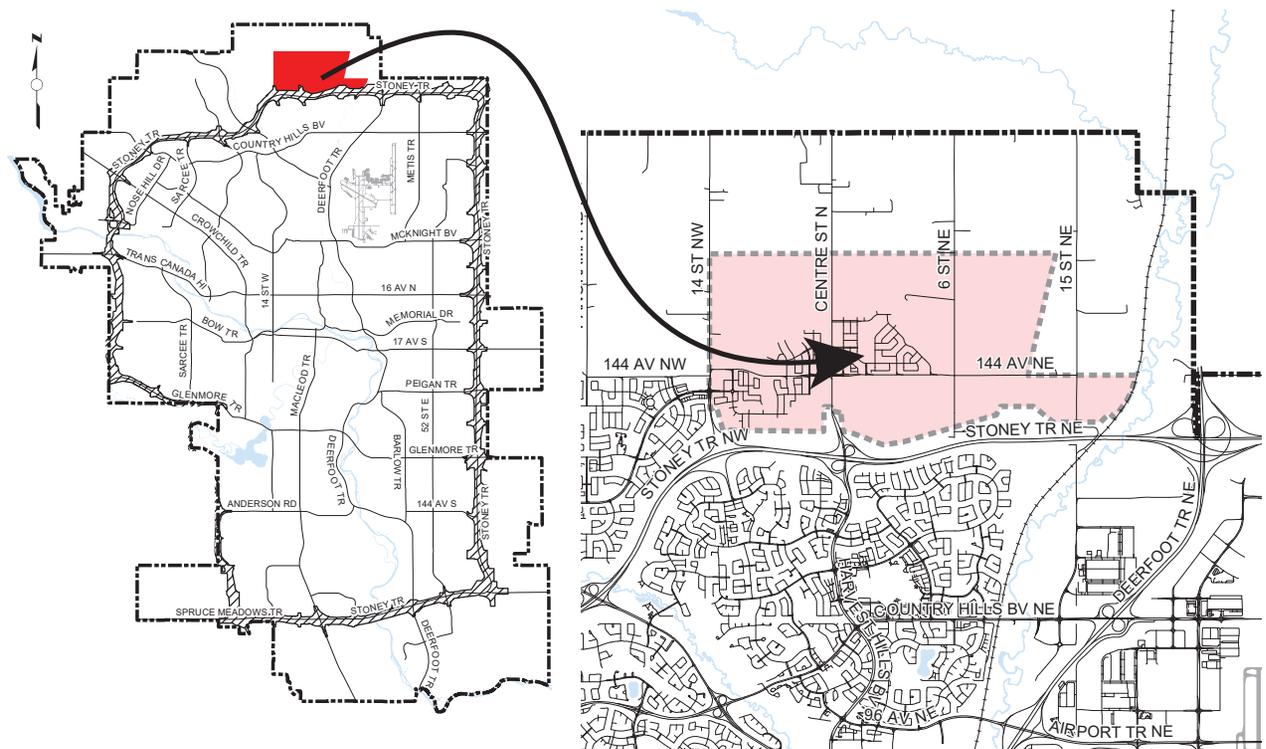
4 PLAN AREA

4.1 The Plan Area

The Plan Area, is located in the northwest and northeast quadrants of the City of Calgary on lands annexed from Rocky View County in 1989 and 2007. The area is bounded by Stoney Trail to the south, 160th Avenue N to the north, 14th Street N.W. to the west, and the Noise Exposure Forecast (NEF) contour to the east. Additionally, there is a panhandle of land included in the Plan Area, east of the NEF contour, bounded on the North by 144th Ave N.E., on the east by a Canadian Pacific rail line, and on the south by Stoney Trail (see Map 1: Plan Area Location and Map 2: Air Photo).

The Plan Area covers approximately 1,080 hectares (2,669 acres) of land located in the following sections:

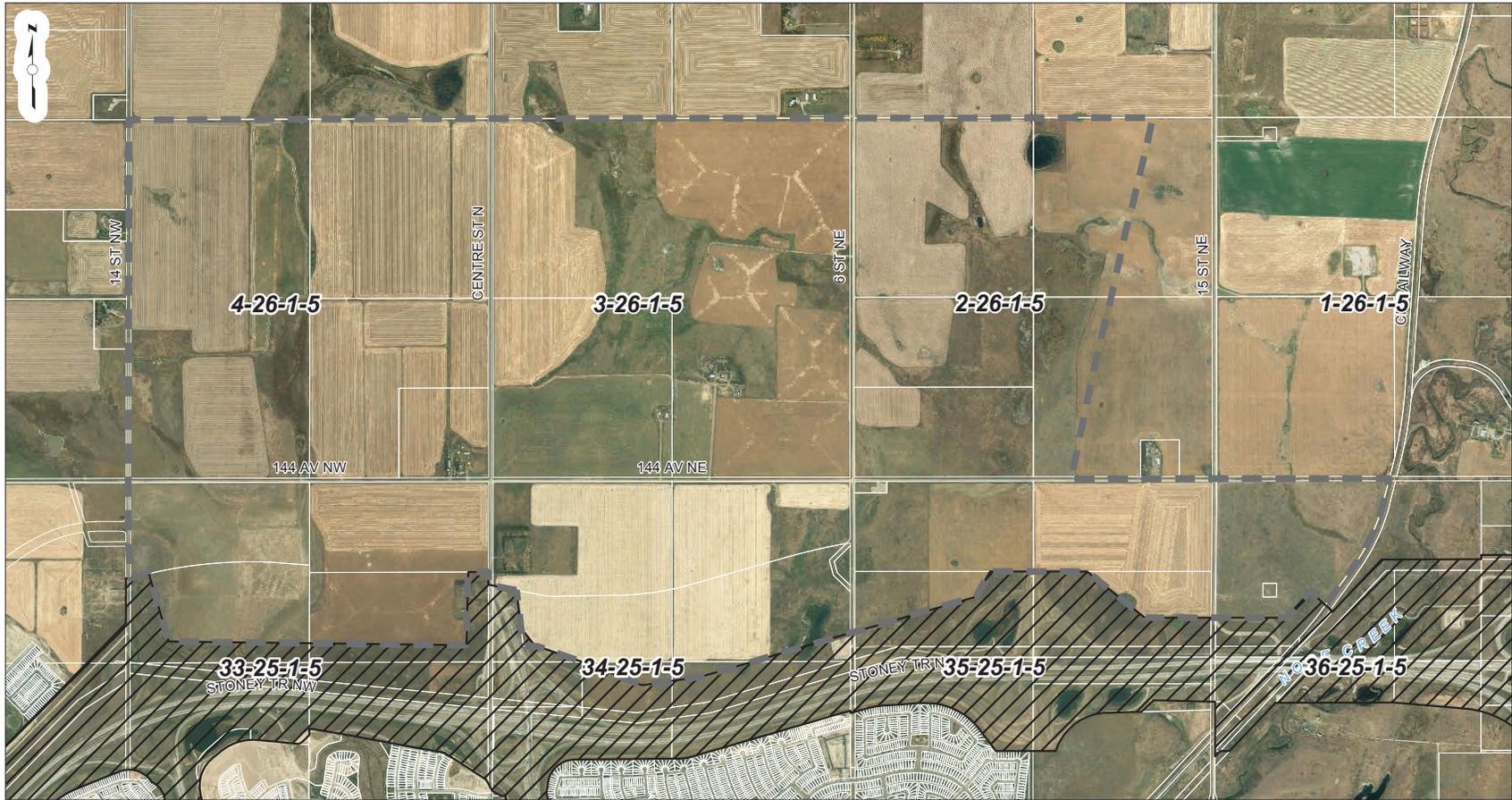
- Section 4, Township 26, Range 1, W5M
- Section 3, Township 26 Range 1, W5M
- West half and portions of LSD 10 and 15 of Section 2, Township 26, Range 1, W5M
- Portions of the northwest and northeast quarters of Section 33, Township 25, Range 1, W5M
- Portions of the northeast and northwest quarters of Section 34, Township 25, Range 1, W5M
- Portions of the northwest and northeast quarters of Section 35, Township 25, Range 1, W5M
- Portions of the northwest quarter of Section 36, Township 25, Range 1, W5M



Map 1
Plan Area Location

APPROVED: 15P2012

Plan Area



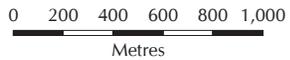
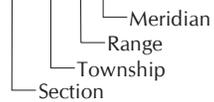
Map 2
Air Photo

APPROVED: 15P2012

Legend

-  Plan Area Boundary
-  Transportation/Utility Corridor

34-25-1-5 Alberta Township System - Section Number



4.2 Attributes of the Plan Area

This section provides a summary of the main physical features that will provide opportunities to create Community identity as well as those that pose constraints and may require special consideration when planning for development. This is not meant to be an exhaustive list of opportunities and constraints. Those developing in the area must practice due diligence in the development process. Map 3: Constraints shows physical features that pose constraints to development. This information may be subject to change and should be verified at the time of the Outline Plan/Land Use Amendment

4.2.1 Existing Land Uses and Development

Land use in the Plan Area is dominated by agricultural uses including crops and cattle grazing. The land consists predominantly of cropland and modified pasture land. There are also some areas of native grassland/native pasture, wetlands, shrubland, ephemeral draw, and woodland. There are three home sites and two former home sites. There is one known operating oil well, three known abandoned oil wells and a series of oil and gas pipelines.

4.2.2 Natural Environment Features

The Plan Area is located within the Foothills Fescue Subregion of the Grassland and Parkland Natural Ecoregion (*Cell G Lands Biophysical Assessment – Supplemental Report, Golder, 2010*). The Parkland Region is a transition zone between the drier, warmer grasslands to the east, and the cooler, wetter Rocky Mountains to the west. Parkland ecosystems cover a mosaic of prairie interspersed with aspen and tall shrubs found in the moister landscapes. Vegetation communities in the Plan Area are dominated by rough fescue, bluebunch fescue and oatgrass (*Golder, 2010*). Much of the Plan Area is considered to have higher agricultural capability soil rating (*Agricultural Land Analysis for Annexation Preparation, EBA Engineering Consultants, 2002*).

Areas of significant natural features include a number of wetland complexes, Water Bodies, a glacial landform features with surrounding views of the landscape, glacial erratic, and several patches of native prairie/pasture, trees, and small wetlands that act as habitat stepping stones. The diversity of ecological communities in the Plan Area provides a range of foraging opportunities for a variety of species. The drainage corridors may provide for wildlife movement.

These natural features are opportunities to enhance the communities of the Plan Area in terms of identity, attractiveness and ecological function.

4.2.3 Topography and Drainage

The topography is undulating and generally drains from north to south toward Nose Creek. There are two drainage corridors, one running north to south on the far west portion of the

Plan Area, and one running northwest to southeast from the centre to the southeast edge of the Plan Area. There are several ephemeral draws. A drainage gully located south of 144 Avenue N.E. drains from the north in an easterly direction linking into Nose Creek.

The major landforms in the Plan Area include a drainage corridor and ephemeral drainage ravine system directing overland flows towards Nose Creek; a glacial depositional feature located centrally, offering a high elevation with vistas of the surrounding landscape; and the rough broken slopes of the valley corridor paralleling Nose Creek, rising up to 20 m (66 ft) above the floodplain.

4.2.4 Historical Resources

Sites of First Nations activity have been identified near the Plan Area (*Biophysical Assessment and Historical Resources Overview, AMEC, 2001*); however, a detailed review of historical resources of the entire Plan Area has not been conducted. The areas of uncultivated land (native pasture) and the drainage gully are potential areas of historic resources. Structures may also be considered heritage resources. Additional investigation will be required by Alberta Culture and Community Spirit at the time of Outline Plan/Land Use Amendment application.

4.2.5 Transmission Lines

Adjacent to the Plan Area, within the Transportation/Utility Corridor (TUC), there is a 240 kV power line owned and operated by AltaLink. Where land abuts or contains a power line right-of-way, landowners and developers are encouraged to discuss their proposals with the transmission facility owner and the Alberta Electric System Operator, and development must comply with any setbacks required by the Province.

4.2.6 Noise Exposure Forecast (NEF 30 db) Area

The easterly part of the Plan Area falls under the 30 db Noise Exposure Forecast contour of the *Calgary International Airport Vicinity Protection Area Regulation*. All development within the contour must comply with the *Calgary international Airport Vicinity Protection Area Regulation*. Residences, schools, medical care facilities, and campgrounds are not allowed within the Noise Exposure Forecast (NEF) 30-35 area.

4.2.7 Oil and Gas Infrastructure

The status of all oil and gas infrastructure will be determined at the Outline Plan/Land Use Amendment stage. Prior to any development in this Plan Area, a Risk Assessment (as described in Appendix A: Required Studies, Analysis & Concept Plans) of these facilities will be required. A detailed evaluation of the potential nuisance issues around the operating facilities will also be required to evaluate and identify the need for mitigation strategies. Phasing of development will need to be considered around setback areas. Further

Plan Area

environmental site assessments of these areas will be required. Additional consultation may also be required as part of any proposed development near these facilities with the operators, The City and the Energy Resources Conservation Board (ERCB).

4.2.7.1 Operating Oil Well

There is one operating oil well within the Plan Area, as indicated on Map 3: Constraints. The ERCB requires a 100 m (328 ft) setback around this facility for the development of permanent additional overnight accommodation or public facilities (both as defined by the ERCB). In addition, The City applies a 200 m (656 ft) nuisance setback required to act as a buffer between urban residential development and potential industrial nuisances relating to the operation of the oil well (dust, noise, etc.). This oil well has an associated battery, which also has a 60 m (197 ft) setback, which completely falls within the 100 m (328 ft) setback for the well.

4.2.7.2 Abandoned Wells

ERCB records indicate that there are three abandoned wells within the Plan Area, as shown on Map 3: Constraints. Setback areas and access as mandated by the ERCB will be required around abandoned wells at the time of development.

4.2.7.3 Pipelines

There are several pipelines associated with oil and gas activity within the Plan Area, as shown on Map 3: Constraints. There is no additional ERCB Setback for these pipelines beyond the utility right-of-way.

4.2.7.4 Beddington Trap Facility

There is a trap facility for oil and gas lines within the Plan Area. There is no specific ERCB setback for this facility, but there is a potential for contamination and industrial nuisances to exist on and/or near this facility.

4.2.7.5 Sour Gas Setback

Adjacent to the northeast corner of the Plan Area, there is a level 2 sour gas pipeline. Although the pipeline itself does not fall within the Plan Area, the 500 m (1,640 ft) ERCB setback does, as indicated on Map 3: Constraints. Additionally, some of the Plan Area is affected by an Emergency Planning Zone (EPZ).



Topography is undulating and generally drains from north to south towards Nose Creek.

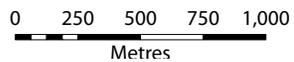


Map 3
Map 3
Constraints

Legend

- Plan Area Boundary
- Transportation/ Utility Corridor
- * Operating Well
- Abandoned Gas Well
- Sour Gas Pipeline
- Pipeline
- Operating Well 100 m Setback
- Operating Well 200 m Nuisance Setback
- Level 2 Sour Gas Pipeline Setback
- Beddington Trap Facility
- Noise Exposure Forecast Contour

REVISED September 2022
APPROVED: 15P2012
AMENDED: 29P2022



5 A PROSPEROUS ECONOMY

Municipal Development Plan (MDP) goal: “Build a globally competitive city that supports a vibrant, diverse and adaptable local economy; maintains a sustainable municipal financial system; and does not compromise the quality of life for current and future Calgarians.”

5.1 Urban Growth Policies

deleted

Bylaw 53P2023

A Prosperous Economy

Map 4 Growth Management Overlay

deleted

Bylaw 53P2023

6 SHAPING A MORE COMPACT URBAN FORM

Municipal Development Plan (MDP) goal: “Direct future growth of the city in a way that fosters a more compact, efficient use of land, creates Complete Communities, allows for greater mobility choices and enhances vitality and character of local neighbourhoods.”

6.1 Land Use Concept

The Land Use Concept for the Plan Area is shown on Map 5: Land Use Concept. The map is conceptual only and no measurements of distances or areas shall be taken from it.

The concept consists of three Complete Communities (Communities A, B, and C on Map 6: Community & Neighbourhood Concept) and an Employment/Industrial/Residential Area (Community D, See Sections 6.4.2 Neighbourhood D Policies and 6.11 Industrial/Employment Area). The Land Use Areas shown on Map 5: Land Use Concept provide the elements of a Complete Community. Each Land Use Area is defined in detail in this section of the document. Each Complete Community consists of a series of Neighbourhoods centred around Neighbourhood Activity Centres as well as a portion of a larger order Activity Centre or Retail Centre.

Bylaw 29P2022

The larger focus of the Plan Area is a central Major Activity Centre and *Urban Main Streets*, which integrate Communities A and B. A Community Activity Centre (Section 6.7) on the northeast corner of the Plan Area links Community C to future development to the east and north of the Plan Area. An additional Retail Centre on the west side of the Plan Area ensures that components of a Complete Community are provided for Community A. The Industrial/Employment Area, constrained by the Noise Exposure Forecast (NEF) contour, also contains a Retail Centre. The following policies expand on this concept and describe the intent of each of these Land Use Areas.

Bylaw 83P2019



Complete Communities contain a full range of housing choices as well as commercial, Recreational and Institutional land uses.

6.2 Complete Community Policies

The Plan Area will include three Complete Communities and one Employment/Industrial/Residential Area. The approximate size of each Community is shown in Table 1: Community Size and Anticipated Population and Jobs. Each Complete Community within the Plan Area will be developed with a full range of housing, commercial, recreational, institutional land uses and public spaces to utilize land and infrastructure efficiently; provide housing choices, local services and employment at transit-supportive Densities; and promote mobility options.

Bylaw 29P2022

1. Physical Definition of Complete Communities

Three distinct Complete Communities (as shown conceptually on Map 6: Community & Neighbourhood Concept) should be physically defined by

- a series of distinct Neighbourhoods, each centered around a focal point such as a central amenity space, which may include non-residential uses within easy walking distance for Neighbourhood residents; and
- a distinct edge defined by features such as major roadways, utility corridors, rivers, creeks, open space or other constructed or geographical features.

2. Composition of a Complete Community

Each Complete Community should provide the following:

- a broad range of housing choices covering a mix of built forms at Densities that support transit viability and changing demographics within the Community;

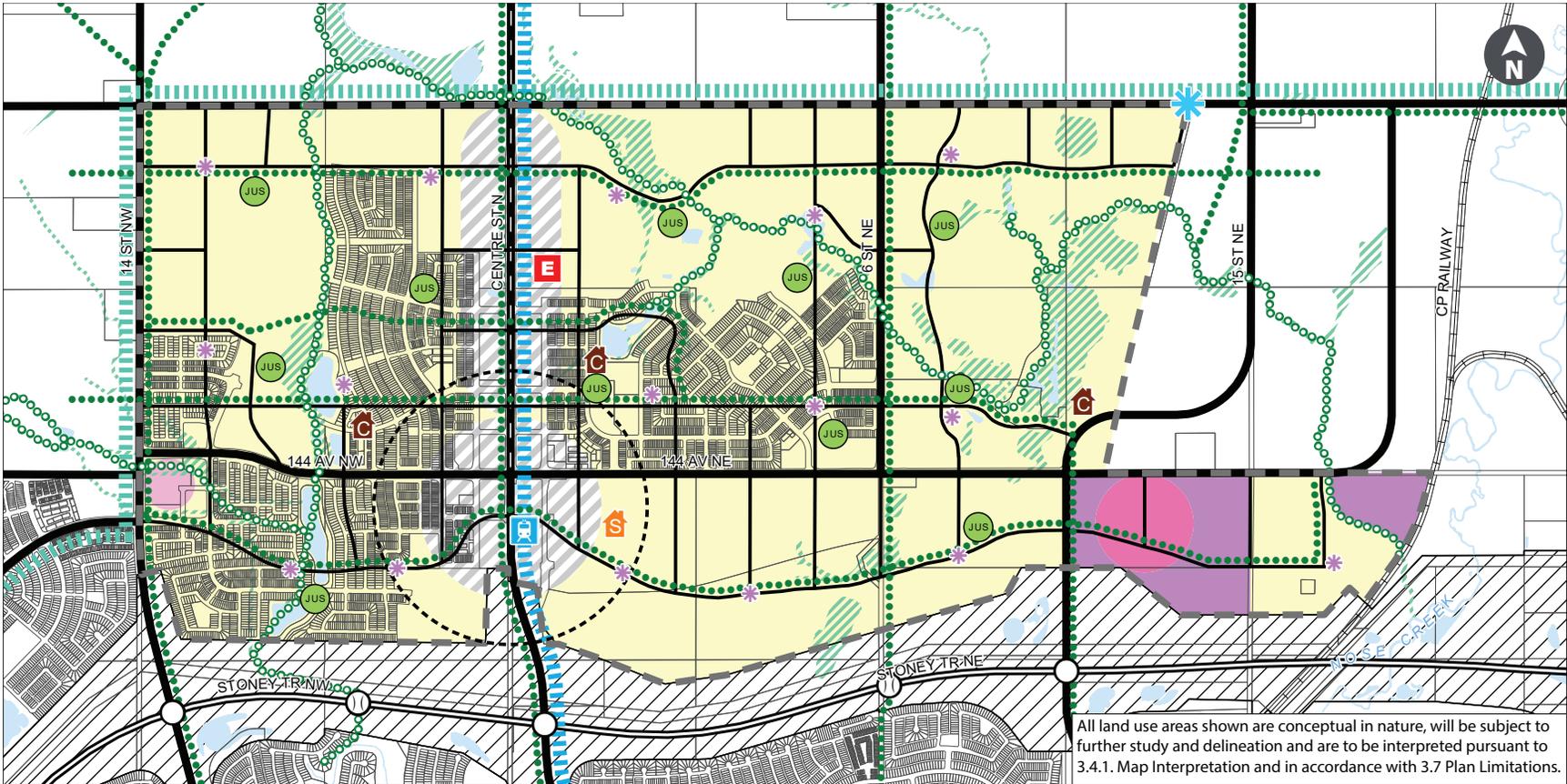
Table 1: Community Size and Anticipated Population and Jobs

Community (Map 6)	Area (ha/ac)	Anticipated Population	Anticipated Jobs
A	375 ha (927 ac)	25,900	3,200
B	392 ha (969 ac)	21,800	8,700
C	233 ha (576 ac)	12,700	2,000
D*	82 ha (203 ac)	100	5,600
Total	1,082ha (2,674 ac)	60,500	19,500

*For Community D, anticipated population and jobs for the Neighbourhood area will be determined through the Outline Plan/Land Use Amendment process.

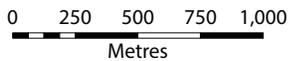
Bylaw 29P2022

Shaping a More Compact Urban Form



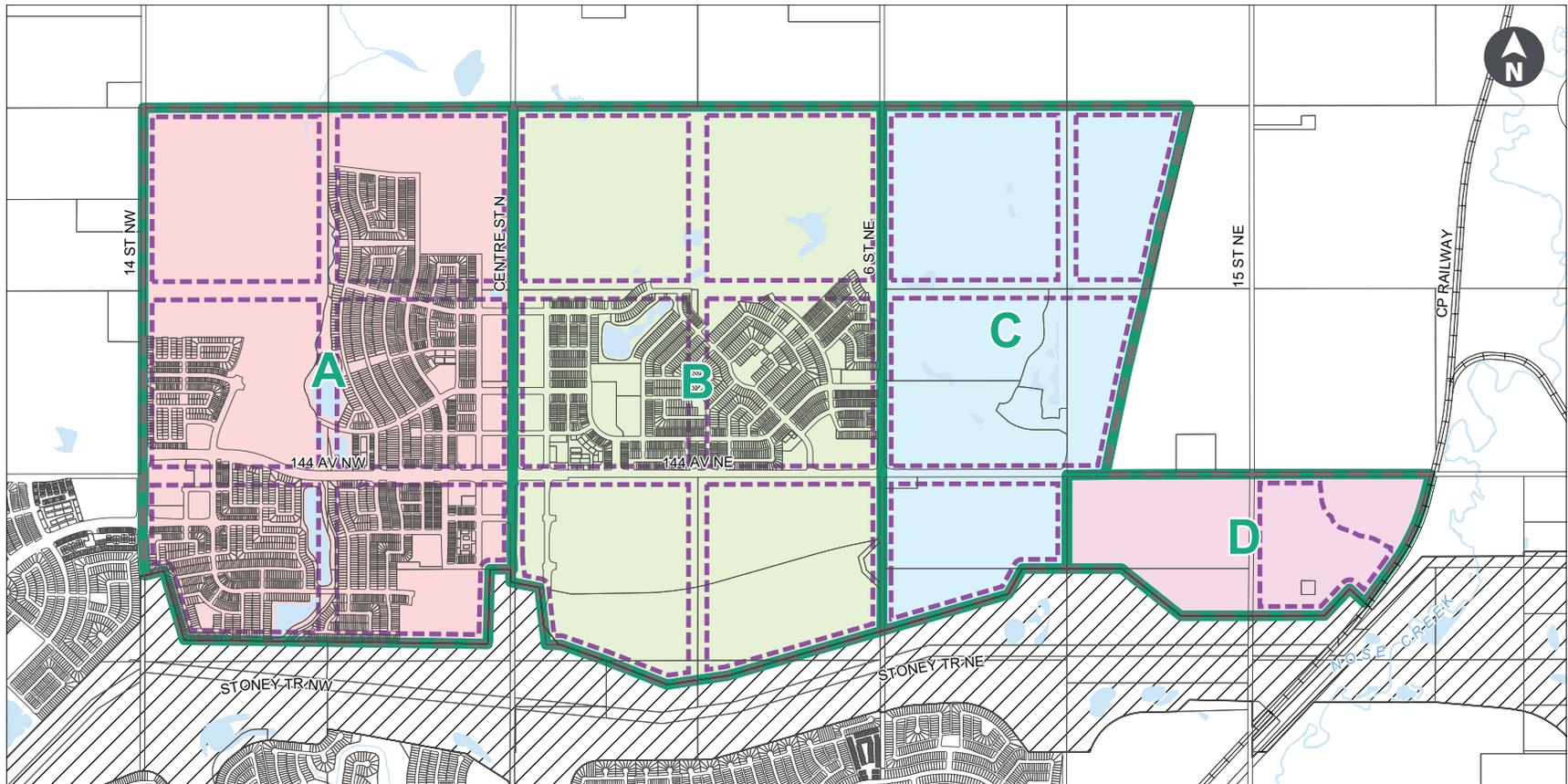
Map 5
Land Use Concept

REVISED September 2022
APPROVED: 15P2012
AMENDED: 29P2022, 80P2023



Legend

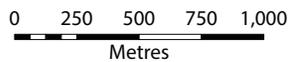
- | | | |
|---|-------------------------------|-----------------------------|
| Transportation/Utility Corridor | Transit Station Planning Area | Arterial Street |
| Plan Area Boundary | Emergency Response Station | Urban Boulevard |
| Neighbourhood Area | Community Activity Centre | Primary Collector/Collector |
| Special Study Area (Major Activity Centre & Urban Corridor) | Neighbourhood Activity Centre | Full Interchange |
| Regional Retail Centre | Community Centre | Pedestrian Overpass |
| Community Retail Centre | Green Corridor | BRT Route |
| Industrial/ Employment Area | Regional Pathway | LRT Alignment |
| Environmental Open Space Study Area | Skeletal Road | LRT Station |



Map 6
Community &
Neighbourhood Concept

Legend

-  Plan Area Boundary
-  Transportation/ Utility Corridor
-  Communities
-  Neighbourhoods
(To Be Refined at Outline Plan Stage)



REVISED September 2022
APPROVED: 15P2012
AMENDED: 29P2022, 80P2023

Shaping a More Compact Urban Form

- b. a range of Local Commercial Uses uses that both provide employment and allow residents to meet most of their basic needs without leaving the Community;
- c. schools, Places of Worship, culture and leisure spaces, child care facilities, Care Facilities and community services;
- d. spaces for community gardens and local food production;
- e. an inter-connected pathway, bikeway, sidewalk and roadway network allowing convenient pedestrian and vehicle access to focal points within the Community such as schools and facilities, Activity Centres and *Main Street*;
- f. convenient and accessible transit service;
- g. Green Infrastructure and energy efficient design and site planning;
- h. public spaces, parks and recreation facilities;
- i. distinctive, attractive Neighbourhoods designed with natural elements that contribute to local identity and provide a sense of place;
- j. permeability to allow all modes of travel to move easily between Communities; and
- k. a healthy natural environment.

3. Community Identity

Community identity should be enhanced through the provision of

- a. street names and identification signage that reflect the area's historical context and/or natural features;
- b. a high quality of architecture and urban design to create attractive streetscapes convenient for all modes of travel, particularly in Activity Centres;
- c. preservation and integration of unique natural features;
- d. branding of significant local parks;
- e. landmark buildings or structures;
- f. public art to be integrated with public places; and
- g. identification of historical resources and development of interpretive features about such sites.

6.3 General Policies for all Land Use Areas

These policies will apply to all of the Land Use Areas.

1. Mobility

- a. Connectivity and mobility throughout each Land Use Area will be facilitated by a block-based road network comprised of walkable streets fronted by Street-Oriented Development. This will allow for short and direct pedestrian connections with multiple routing options to the various destinations within the Plan Area.
- b. Transit facility design should accommodate efficient transit access, comfortable passenger waiting areas, bicycle parking, and safe, direct and unobstructed routes for pedestrians and cyclists connected to the pedestrian network of a site.



Community identity is enhanced through high quality architecture and attractive streetscapes integrating natural features.

2. Design

- a. Design within all Land Use Areas should conform to the policies in Section 8, Urban Design, and Section 9, Connecting Communities, as well as the guidelines in Appendix D: Neighbourhood Design.
- b. Design of all Land Use Areas should take into consideration the Environmental Open Space so as to minimize disturbance and maximize connectivity, as well as provide sightlines and/or public access. Where the Environmental Open Space is not protected through an environmental reserve or other means, it may be considered developable, subject always to Section 3.7 Plan Limitations and the policies of the adjacent Land Use Area.
- c. The use of Form-Based Controls emphasizing the importance of the public realm is recommended in order to meet the design policies for the Transit Station Planning Area, Activity Centres and the *Urban Main Street* (see Section 12.3, Form-Based Control Opportunities).
- c. A list of required studies for the evaluation of Outline Plan/Land Use Amendment application is contained in Appendix A: Required Studies, Analysis & Concept Plans.
- d. Applications using Form-Based Controls may have alternate requirements, agreed upon by the developer and The City (see Section 12.3, Form-Based Control Opportunities).

Bylaw 83P2019

3. Environmental Sustainability

- a. Design of all Land Use Areas should conform to the policies in Section 10: Greening Communities, and the guidelines in Appendix E: Environmental Design Guidelines.
- b. Development of District Energy and innovative green building technology are encouraged in accordance with Appendix E: Environmental Design Guidelines.
- c. A District Energy Assessment may be required at the Outline Plan/Land Use Amendment stage for applications containing or within the Major Activity Centre, the *Urban Main Street*, Retail Centres, the Community Activity Centre, the Industrial/Employment Area and any other area deemed appropriate by the Approving Authority.

Bylaw 83P2019

4. Evaluation

- a. The detailed uses and size of each Land Use Area will be determined at the time of Outline Plan/Land Use Amendment application.
- b. A Concept Plan shall be submitted with the Outline Plan/Land Use Amendment application that demonstrates how the Land Use Area functions comprehensively and integrates with and connects to the surrounding uses.

Shaping a More Compact Urban Form

6.4 Neighbourhoods

Purpose

The Communities within the Plan Area will be composed of a series of Neighbourhoods as demonstrated conceptually on Map 6: Community & Neighbourhood Concept. The boundaries of Neighbourhoods may be refined at the time of the Outline Plan without amending this ASP. Each Neighbourhood will be based generally on one quarter section of land in order to promote the MDP goals of walkability, accessibility and a sense of place. Neighbourhoods typically consist of a Neighbourhood Area (as defined in Section 6.5) and an Activity Centre or *Main Street* forming a cohesive and functional arrangement of parks, transit stops and a mix of uses. The following sections provide policy guidance for the planning and design of Neighbourhoods. **Bylaw 83P2019**

6.4.1 General Neighbourhood Policies

1. Size of Neighbourhoods

- a. All lands within Communities A, B and C shall be identified as part of a Neighbourhood (as shown conceptually on Map 6: Community & Neighbourhood Concept) with the exception of Environmental Open Space that forms the boundary of one or more Neighbourhoods.
- b. There should be a minimum of 15 Neighbourhoods in the Plan Area, as shown in Table 2: Community Size and Anticipated Number of Neighbourhoods. The number of Neighbourhoods and Neighbourhood boundaries may vary provided the design is in accordance with the policies in this section.

2. Composition of Neighbourhoods

- a. In order to provide residents with a walkable, Pedestrian-Oriented environment, a Neighbourhood
 - i. shall be composed of a Neighbourhood Area that is designed around an Activity Centre, *Main Street* or Retail Centre; and **Bylaw 83P2019**
 - ii. should range in size between 40 and 75 hectares (99 and 185 acres), including the Neighbourhood Area and the Activity Centre, *Main Street* or Retail Centre). **Bylaw 83P2019**
- b. Multi-Residential Developments may be located in the Neighbourhood Area only if such development does not compromise the viability of similar development in the Activity Centre, *Main Street* or Retail Centre, to the satisfaction of the Approving Authority. **Bylaw 83P2019**

- c. When Multi-Residential Development is deemed appropriate in the Neighbourhood Area, it should be located
 - i. in close proximity to transit stops;
 - ii. adjacent to natural features, open space or other amenities; and
 - iii. on sites integrated with other types of housing, preferably conforming to the block pattern.
- d. Multi-Residential Developments should not be used as a buffer between road alignments (such as the Transportation/Utility Corridor or Arterial streets) and other types of development.

3. Design of Neighbourhoods

- a. A Neighbourhood should provide a distinct identity for its residents, created through the use of natural features including sightlines and access to Environmental Open Space, public parks, gathering places, streetscape design, distinctive buildings, landmarks and public art.
- b. The design of Neighbourhoods, including Activity Centres and *Main Street*, should conform to the policies in Section 8: Urban Design and Section 9: Connecting Communities. Appendix D: Neighbourhood Design Guidelines provides a set of examples and illustrations that demonstrate ways these policies might be achieved. **Bylaw 83P2019**

6.4.2 Neighbourhood D Policies

Bylaw 29P2022

1. A portion of the lands within Community D have been identified as a Neighbourhood as shown conceptually on Map 6: Community & Neighbourhood Concept.
2. Neighbourhood D should be composed of a Neighbourhood Area that is designed around a Neighbourhood Activity Centre (NAC).
3. Neighbourhood D should range in size between 30 and 35 hectares (74 and 86 acres), including the Neighbourhood Area and the NAC. **Bylaw 80P2023**
4. The NAC policies listed in section 6.6.1 shall apply except the NAC is not required to meet the minimum requirements for non-residential uses as set out in policy 6.6.1(3) given the adjacent Regional Retail Centre and Industrial/Employment Area located in the western portion of Community D.
5. Neighbourhood D should achieve a minimum intensity of 60 people and jobs per gross developable hectare.
6. While a Joint Use Site within Neighbourhood D has not been shown on Map 12: Joint Use Sites, the need for and potential location, and size of a Joint Use

Site for Neighbourhood D will be determined through the Outline Plan/Land Use Amendment process.

7. While a Community Centre Site within Neighbourhood D has not been shown on Map 12: Joint Use Sites, the need for and potential location, and size of a Community Centre Site for Neighbourhood D will be determined through the Outline Plan/Land Use Amendment process.
8. Utility Servicing for Neighbourhood D will be determined through the Outline Plan/Land Use Amendment process.

Table 2: Community Size and Anticipated Number of Neighbourhoods

Community (Map 6)	Area (ha/ac)	Anticipated Number of Neighbourhoods
A	375 ha (927 ac)	6-9
B	392 ha (969 ac)	6-9
C	233 ha (576 ac)	3-5
D	82 ha (203 ac)	0-1
Total	1,082 ha (2,674 ac)	15-24

Bylaw 29P2022

6.5 Neighbourhood Areas

Purpose

Neighbourhood Areas consist primarily, though not exclusively, of residential uses. A well-designed Neighbourhood Area provides a range of housing choices that meets the needs of Calgary's diverse population, as well as convenient access to amenities such as parks, community gardens, schools, recreation facilities and the Activity Centre or *Main Street* via a transportation network that balances the needs of pedestrians, cyclists and drivers.

Bylaw 83P2019

6.5.1 Neighbourhood Area Policies

1. Size and Intensity of the Neighbourhood Area

- a. In order to ensure the ASP meets the Intensity requirements of the MDP, a minimum average residential Density of 20 units per hectare (8 units per acre) is required in the Neighbourhood Area within each Neighbourhood. The Density of specific developments may vary, but Outline Plan/Land Use Amendment applications should be monitored to ensure that each Neighbourhood within the Plan Area meets the minimum required Density for the Neighbourhood Area.

2. Composition of Neighbourhood Areas

- a. Neighbourhood Areas shall provide a variety of housing forms and affordability levels (e.g. single-detached, semi-detached, townhouses, rowhouses, ground-oriented Multi-Residential Development and secondary suites) in accordance with the policies in Section 7.1, Housing Diversity.
- b. Neighbourhood Areas should include opportunities for residential-based commercial uses such as Live-Work Units, Bed and Breakfasts and Home-Based Businesses, including child care.
- c. Neighbourhood Areas may also provide opportunities for a variety of compatible uses, only if such development does not compromise the viability of similar development in Neighbourhood Activity Centres. Uses include, but are not limited to, the following:
 - i. Civic Uses including Cultural, Recreational and Institutional uses;
 - ii. Child care and Care Facilities in accordance with policies in Section 7.2, Community Supportive Uses;
 - iii. Neighbourhood Retail Centres in accordance with the policies in Section 6.11.1, Retail Centres Policies; and
 - iv. other compatible uses as deemed appropriate by the Approving Authority.
- d. If present in Neighbourhood Areas, uses listed in c. should be well connected to pedestrian routes, located near transit stops or adjacent to an Activity Centre, wherever practical.

3. Mobility in Neighbourhood Areas

- a. In order to provide residents with a Pedestrian-Oriented environment, the transportation network in Neighbourhood Areas
 - i. shall be designed with a block-based pattern, and
 - ii. should provide multiple routing options for residents to access the Activity Centre or *Main Street* safely and conveniently using walkways, pathways and/or streets. **Bylaw 83P2019**
- b. P-loops, culs-de-sac and other single-access street patterns should be avoided wherever practical. In cases where this is deemed impractical by the Approving Authority, safe and attractive pedestrian and bicycle connections shall be provided to link streets.

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6.6 Neighbourhood Activity Centres

Purpose

Neighbourhood Activity Centres (NAC) provide Neighbourhoods with focal points that contain a mix of transit supportive residential and non-residential uses. Connected to their surrounding Neighbourhood Areas by a network of converging streets, walkways and pathways, they are designed to provide a positive pedestrian environment and establish activity in the public realm. A Neighbourhood Main Street may serve the same purpose as a NAC and will adhere to the same policies.

Bylaw 83P2019

The approximate locations of NACs are identified on Map 5: Land Use Concept.

6.6.1 Neighbourhood Activity Centre Policies

1. Location of Neighbourhood Activity Centres

- a. A NAC shall be located
 - i. central to the surrounding Neighbourhood Area in order that all Neighbourhood residents live within a 700 m (0.4 mile) walking distance via the transportation network;
 - ii. along Collector streets to allow access for transit services; and



Residential uses in the Neighbourhood Activity Centre shall accommodate a range of Medium-Density Multi-Residential Development.

- iii. in the general location as shown on Map 5: Land Use Concept, to be refined at the Outline Plan/Land Use Amendment stage without an amendment to the ASP.

2. Size and Intensity of Neighbourhood Activity Centres

- a. NACs should be comprised of a mix of land uses that reach a minimum Intensity of 100 people and jobs per gross developable hectare.
- b. A NAC should comprise an area of approximately 2 to 4 hectares (5 to 10 acres).

3. Composition of Neighbourhood Activity Centres

- a. Each NAC shall be comprehensively planned, Mixed-Use area consisting of a central amenity space, Medium-Density Multi-Residential Development and a non-residential use.
- b. Residential uses in the NAC
 - i. shall include a range of Medium-Density Multi-Residential Development (such as ground-oriented units and low- to medium-profile apartment complexes) in accordance with the policies in Section 7.1, Housing Diversity;
 - ii. should be developed on multiple small-scale sites (less than 1 hectare (2.5 acres) in size); and
 - iii. should include opportunities for residential-based commercial uses such as Live-Work Units, Bed and Breakfasts and Home-Based Businesses, including child care.
- c. At least 300 m² (3, 229 ft²) of building use area should be provided in the NAC to provide for non-residential uses such as Local Commercial, Civic (Cultural, Recreational or Institutional), and/or Employment (office) Uses in a Mixed-Use or stand-alone format.
- d. Non-residential development in the NAC
 - i. shall be oriented to the street and have direct pedestrian connections from the public sidewalk to building entrances;
 - ii. should be small in scale, consistent with nearby residential areas;
 - iii. should have limited use sizes;
 - iv. may provide for only limited automotive uses; and
 - v. may also include other compatible uses as deemed appropriate by the Approving Authority.

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- e. The central amenity space in the NAC
 - i. shall be designed as a multi-functional space, such as a plaza or park;
 - ii. shall comprise a land area of 0.2 to 1.0 hectares (0.5 to 2.47 acres);
 - iii. should be bounded by streets and/or active building facades;
 - iv. should be located on a prominent site; and
 - v. should be located in close proximity to one or more transit stops.
 - f. In order to create an appropriate level of activity and sense of spatial enclosure, no more than 25 per cent of dwelling units adjacent to the central amenity space should be provided in the form of single detached houses.
- 4. Mobility in Neighbourhood Activity Centres**
- a. In order to provide a high degree of connectivity for pedestrians, cyclists and drivers, the design of the transportation network in and around the NAC
 - i. shall be composed of a block-based network of interconnected streets, walkways and pathways;
 - ii. should provide safe and convenient walkway and pathway access; and
 - iii. should restrict culs-de-sac, P-loops and other single-access street patterns.
 - b. Transit facilities should be a well-integrated focal point of the NAC.
- 5. Modification of Neighbourhood Activity Centre Composition**
- a. In the situation where a Neighbourhood contains a higher-order Activity Centre or *Main Street* such as a Community Activity Centre, Major Activity Centre, *Urban Main Street* or Retail Centre (or significant portion of one), the following changes may be made to the composition and design of the Neighbourhood: **Bylaw 83P2019**
 - i. The Medium-Density Multi-Residential Development and the non-residential components required in the NAC (as per 6.6.1(3) b. – d) may instead be located in the higher-order Activity Centre, *Urban Main Street* or Retail Centre; and **Bylaw 83P2019**
 - ii. The transportation network in the Neighbourhood Area should provide a high degree of connectivity to the higher-order Activity Centre, *Urban Main Street* or Retail Centre. **Bylaw 83P2019**

- b. The NAC should always provide a central amenity space for residents, even in the case where the Neighbourhood contains a higher-order Activity Centre, *Urban Main Street* or Retail Centre. **Bylaw 83P2019**
- c. In order for a NAC to be subject to 6.6.1(5) a. i. above, an Outline Plan/Land Use Amendment application must demonstrate that the appropriate land uses necessary to constitute a higher-order Activity Centre, *Main Street* or Retail Centre are located elsewhere in the Neighbourhood, to the satisfaction of the Approving Authority. **Bylaw 83P2019**



Each Neighbourhood Activity Centre shall be a comprehensively planned, Mixed Use area.

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6.7 Community Activity Centre

Purpose

The purpose of the Community Activity Centre (CAC) is to provide a comprehensively planned, Mixed-Use area serving the needs of one or more Communities. It should consist of a mix of commercial uses, ground-oriented and Medium- to High-Density Multi-Residential Development, as well as Recreational, Institutional and Cultural uses. It should provide a balance of mobility for pedestrians, cyclists, transit vehicles and automobile drivers through thoughtful design and placement of buildings, streets and infrastructure. The land use Intensity of the CAC promotes a vibrant street environment that may be supported by the Primary Transit Network, allowing residents and employees safe and convenient mobility options. The approximate location of the CAC is identified on Map 5: Land Use Concept.

6.7.1 Community Activity Centre Policies

1. Location of Community Activity Centre

- a. The CAC should be located
 - i. central to one or more Communities;
 - ii. along or in proximity to the Primary Transit Network; and
 - iii. in the general location as shown on Map 5: Land Use Concept, to be refined at the Outline Plan/Land Use Amendment stage without an amendment to the ASP.

2. Size and Intensity of Community Activity Centre

- a. The Intensity of a CAC should achieve 150 people and jobs per gross developable hectare at full build out.
- b. The CAC should be a minimum of 4 hectares (10 acres) in size.
- c. No more than 70 per cent of the land use Intensity in a CAC should be achieved with any one general land use type (residential, Employment, Retail, Institutional, etc.) in order to ensure an appropriate mix of uses.

3. Composition of the Community Activity Centre

- a. To create a cohesive urban environment, the CAC shall include an integrated mix of residential and commercial uses along with an appropriate amount of amenity space.
- b. Commercial development in the CAC
 - i. shall include a mix of Retail, Small-Format and Retail, Medium-Format uses totaling between 2,800 m² (30,139 ft²) and 19,000 m² (204,514

ft²), plus or minus 5 per cent;

- ii. shall be integrated horizontally and/or vertically with other uses;
 - iii. should include a site for a Community-scale food store; and
 - iv. should accommodate Employment Uses totaling up to 19,000 m² (204,514 ft²), plus or minus 5 per cent;
- c. Residential development in the CAC
- i. should include a broad range of ground-oriented and medium- to High-Density Multi-Residential Development;
 - ii. shall be integrated horizontally and/or vertically with other uses;
 - iii. should comprise no less than 30 per cent of the land use Intensity of the CAC; and
 - iv. should be distributed throughout the CAC on multiple small- and medium-scale sites.



Community Activity Centres shall contain Medium-to High-Density Multi-Residential Development.

- d. Amenity space(s) in the CAC
 - i. shall be designed to accommodate active and passive recreation, such as plazas or parks;
 - ii. shall comprise no less than 5 per cent of the total land area of the CAC; and
 - iii. should include a Transit Plaza central to the CAC.
 - e. Other uses are also encouraged in the CAC and may include the following:
 - i. Cultural, Recreational and Institutional Uses;
 - ii. Child Care Facilities and Care Facilities in accordance with policies in Section 7.2, Community Supportive Uses; and
 - iii. other compatible uses as deemed appropriate by the Approving Authority.
 - f. Employment Uses within the CAC should achieve a minimum Floor Area Ratio (FAR) of 0.5.
 - g. Retail Uses within the CAC should achieve a minimum FAR of 0.3.
- 4. Mobility Within the Community Activity Centre**
- a. In order to provide a high degree of connectivity for pedestrians, cyclists and drivers, the design of the transportation network in and around the CAC
 - i. shall be composed of a block-based network of interconnected streets, walkways and pathways;
 - ii. should provide safe and convenient walkway and pathway access between different uses and sites throughout the CAC including connections through larger surface parking lots; and
 - iii. should restrict culs-de-sac, P-loops and other single-access street patterns from the network in and around the CAC.
 - b. The CAC should be served by the Primary Transit Network, with a stop located at the Transit Plaza allowing transfers to and from feeder lines. Transit facilities should be a focal point of the CAC.
 - c. Where a CAC spans one or more Arterial streets, the Arterial street(s), including the roadway and roadside, shall be designed to accommodate the safe and convenient movement of pedestrians and cyclists.

5. Applications Containing a Community Activity Centre

- a. An application for Outline Plan and/or Land Use Amendment that contains a CAC should include all lands contained within the CAC.
- b. Alternately, a detailed Concept Plan shall be submitted for all lands within the CAC, following a process of consultation with adjacent landowners.
- c. All landowners deemed by the Approving Authority to be located within the CAC are strongly encouraged to reach agreement on the overall Concept Plan prior to approval of the first Outline Plan/Land Use Amendment application within the CAC.



Residential and commercial uses shall be integrated in the Community Activity Centre to create a cohesive urban environment.

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6.8 Keystone Hills Core Area

Bylaw 83P2019

6.8.1 Introduction

6.8.1.1 Background

In 2012 Calgary City Council approved this Plan and included basic policy criteria and ideas for a Major Activity Centre (MAC) and Urban Main Street located on Centre Street North between Stoney Trail and 60 Avenue North (Map 7: Keystone Hills Core Area). The intent of the policies were to serve as the framework for the development of the subsequent Centre Street Corridor and MAC Special Study.

In 2015 the Keystone Hills Core Plan (KHCP) was completed after engagement with City Departments, land owners, developers and consultants. Based on City Council approved policies from the Municipal Development Plan, Calgary Transportation Plan and the Keystone Hills Area Structure Plan, the KHCP translated these policies into specific proposals for lands in the defined Special Study area.

In 2019 City Council adopted amendments to this Plan to provide policy guidance for the Keystone Hills Core Area (or Core Area). The policies within this Section are based on the work undertaken as part of the KHCP, as well as additional work with key area stakeholders. The subsequent policies and guidelines contained in this Section are specific to the Core Area while also supplementing the general area-wide policies in this Plan.

6.8.1.2 Policy Context

The ASP identified two typologies within the Core Area as defined by the Municipal Development Plan (MDP). The MAC, as shown on Map 7, is located south of 144 Avenue N and includes land on both sides of Centre Street N surrounding the future LRT station. As defined by the MDP, it is intended to serve as a catalyst for commercial, residential, institutional and business growth. It will be the centre of activity for the Core Area and beyond, fulfilling a role similar to a town centre area for the greater Keystone communities.

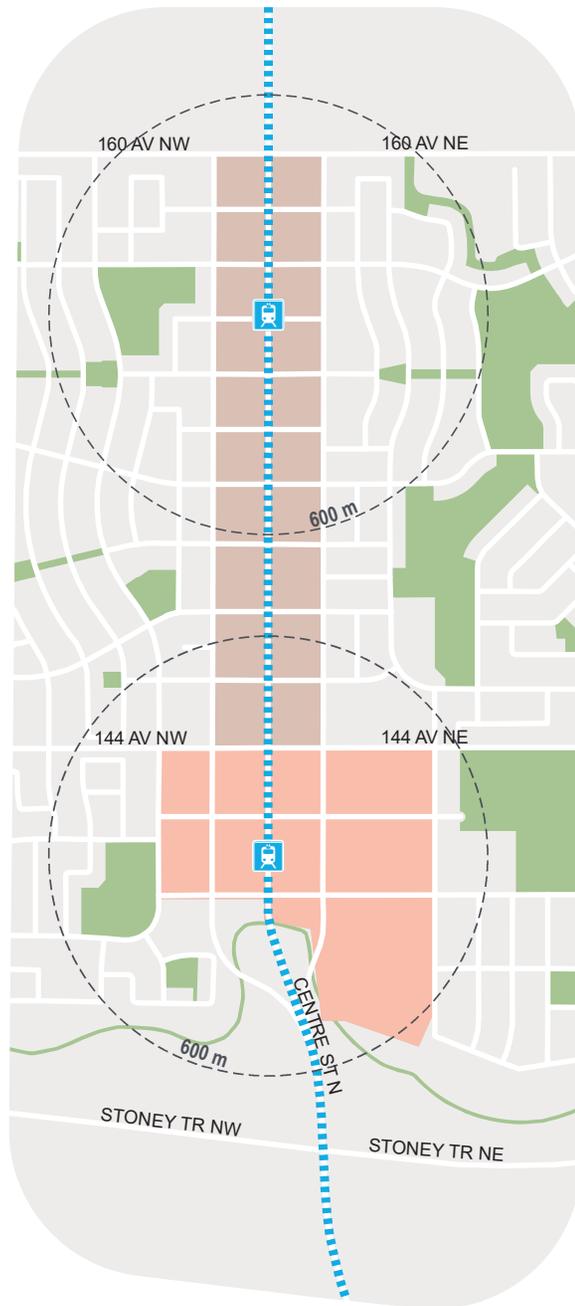
North of 144 Avenue N is the Urban Main Street extending along Centre Street from the MAC to the northern Plan Area boundary, 160 Avenue N. The Urban Main Street will provide a variety of housing and commercial opportunities with a transit supportive uses and active street frontages along strategic east-west streets and surrounding the future LRT station.

The MDP sets out a minimum intensity target for both the MAC and the Urban Main Street of 200 jobs and people per gross developable hectare. These intensity targets are intended to be met when the Core Area is fully built out. Land use districts within these areas should provide for a density that will allow for high levels of residential and employment intensification throughout the Core Area to be achieved over time. As a large-scale use is a critical component for the success of the MAC, should this use not be possible in the area, an amendment to this Plan may be required to re-evaluate the function and the potential intensity of the area in the future.



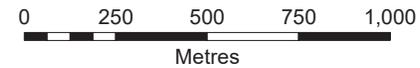
The following is a development concept for the Keystone Hills Core Area that was developed as part of the Keystone Hills Core Plan.

Map 7 Keystone Hills Core Area



Legend

- Major Activity Centre
- Urban Main Street
- Parks and Open Space
- Distance from LRT Station
- LRT Station
- LRT Alignment



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6.8.1.3 Keystone Hills Core Plan

The Keystone Hills Core Plan (KHCP) was completed by The City of Calgary in collaboration with consultants and local land owners. The goal of the project was to plan a Major Activity Centre (MAC) and Urban Main Street that consists of high-density residential, institutional, employment and local commercial uses with a sustainable transportation system that supports all modes including pedestrians, cyclists and public transit. The key components and features of the KHCP that influenced the policies within this section include:

- Intensity planned in nodes – the primary node at the transit station within the MAC and a series of secondary nodes at important intersections and the northern transit station;
- Accommodation within the MAC of a combination of a major institutional use, small-, medium and large-format retail, flex uses and medium and high density multi-residential;
- A grid of streets, designed to provide balanced access to these land uses for all modes in attractive streetscapes;
- Centre Street as the focal point of the area, functioning as the transit spine and bicycle and pedestrian corridor, while also providing for limited vehicular mobility function;
- A road framework predicated on separating the traffic mobility function from Centre Street by distributing most of the vehicular traffic to two adjacent north/south collector roadways, parallel to Centre Street;
- A robust east-west grid network crossing the Urban Main Street allows traffic to circulate within the area or distribute throughout the adjacent neighbourhoods.

6.8.1.4 Vision

The Keystone Hills Core Area is intended to be centralized around the future Green Line and form a high employment hub, including services, and higher density housing. It is integrated into a grid street pattern creating strong pedestrian connectivity and quality public spaces. The Core Area is an area that will be highly supportive of sustainable travel choices for pedestrians, cyclists, and transit customers. It is an area for people of all ages and lifestyles and provides residents the opportunity to live, work, shop, socialize, gather and recreate locally.

The Urban Main Street will primarily consist of medium-density residential, employment and local commercial uses with a strong pedestrian environment providing active street frontages. The Major Activity Centre is anticipated to incorporate a significant institutional use, either a major hospital or post-secondary institution, in addition to other high-intensity uses including residential, retail, entertainment and employment uses focused around the future LRT station.

The Green Line is planned to be the central spine of the Keystone Hills Core Area. Direct connections to major employment, retail, recreation and entertainment will be provided by this important new corridor. BRT should be coordinated with the initial development within the Core Area and in adjacent communities to encourage transit use early rather than establish car commuter behavior patterns.

The ultimate vision for the Core Area will happen over a longer-term development plan which will likely be phased over time with the eventual construction of the LRT. Interim uses and lower intensity development typologies will be considered appropriate initially, while still protecting for the higher intensity development envisioned in this Plan in the future.

6.8.1.5 Guiding Principles

The Core Area is a Place

The development of the Core Area will create a place that has a distinct identity and promotes a clear sense of place in its residents, employees and visitors. The Core Area will not simply be an area to travel through, but instead a neighbourhood that people desire to live and work, where people come to spend leisure time, and which becomes well known locally and throughout the city.

Through the development of a connected, diverse and attractive residential and urban environment, the Core Area will complement the lifestyle that Calgarian's value making it an attractive area to residents and visitors alike. A high quality of design, a strong sense of place, and multiple mobility options will attract current city residents to this developing neighbourhood.

Development will transition over time

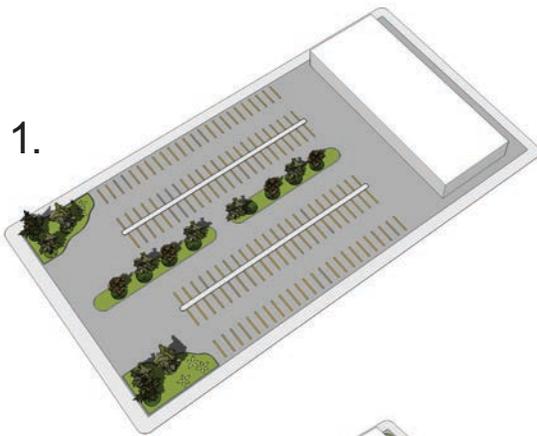
A key consideration in the overall development of the Core Area is time. This is a long-term Plan – it is expected to unfold over the next few decades. Allowing for appropriate phasing of the development process is essential to ensure the feasibility of the development and future redevelopment of the area. While the policies in this section will establish the guiding framework for the realization towards the ultimate development of a complete community, it will also incorporate sufficient flexibility for the design and character of development to evolve according to market requirements.

Some land uses such as retail, are dependent on a critical mass of residential land uses providing an adequate market to support retail. As such, the initial phases of development on a block may be of a lower intensity level than what is required overall at built-out. In the initial stages of development, the Core Area will still require pedestrian-oriented design and a street network with connections through the area but will not require the ultimate intensity levels of development everywhere. However, certain key blocks are required to build-out to the desired intensity and interim building and parking forms are not appropriate. Ultimately, to ensure the most valued elements of this new neighbourhood endure, the public realm and the built form of new development must be designed to last through time, meeting the needs of today's and tomorrow's generations.



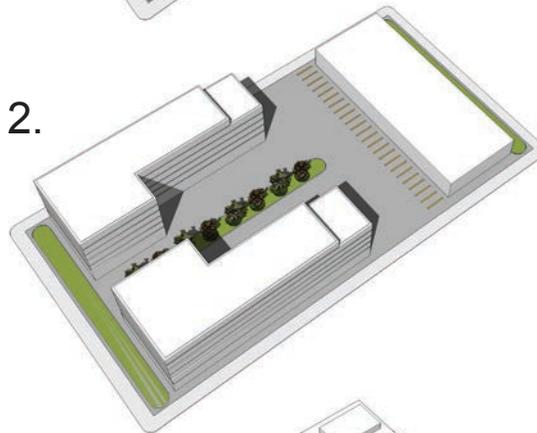
Public plaza along with high density mixed-use development adjacent to a LRT Station.

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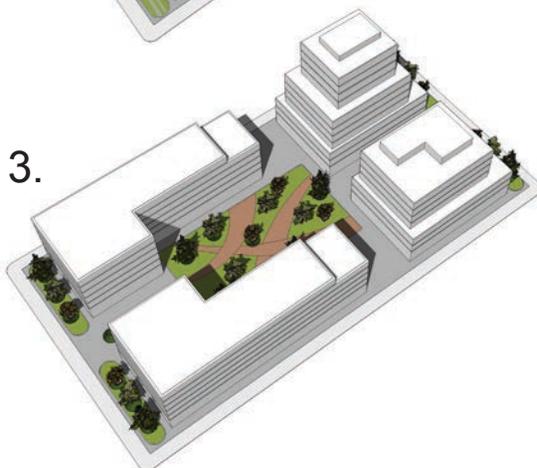


Example of the transitioning of development over time.

1. Initial low scale development sited along a street frontage and allowing for potential future development on the remainder of the site.



2. Higher density redevelopment of a portion of the site with parking provided underground.



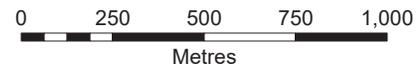
3. Redevelopment of the remaining portion of the site to higher density mixed-use development.

Map 8 Core Area Land Use Zones



Legend

- Employment Zone
- Flex Zone
- Station Area Zone
- Parks and Open Space
- LRT Station
- LRT Alignment



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6.8.2 Land Use

This section provides direction for the land use areas identified on Map 8: Core Area Land Use Zones. It also provides policy direction to implement the vision and intent of the Core Area. Each of the Land Use Zones provide a structure to achieve the overall vision of the Core Area, at present and with the construction of the Green Line in the future. All Land Use Zones can facilitate a mix of uses including institutional, office, retail and residential. Some Zones will focus on certain uses more than others based on their location within the Core Area. Specific land use designations will be determined at the land use amendment and outline plan stage.

Allowing for a wide variety of uses, at an appropriate level of density, is necessary to achieve a development pattern that encourages walking, transit and bicycle trips and provides convenience for local residents. This higher density mix of uses will support increased levels of street activity and provide for a range of amenities and services for local residents. While a mix of uses is encouraged, certain inappropriate uses are discouraged in order to achieve a desirable development outcome of use, scale and mix.

As the Core Area is expected to take many years to build-out, policies within this section are intended to allow for market changes over time that cannot be predicted today. By having flexibility of use, office, higher density multi-residential and commercial can be provided if market demand is more robust in any one category while also allowing for development to transition over time.

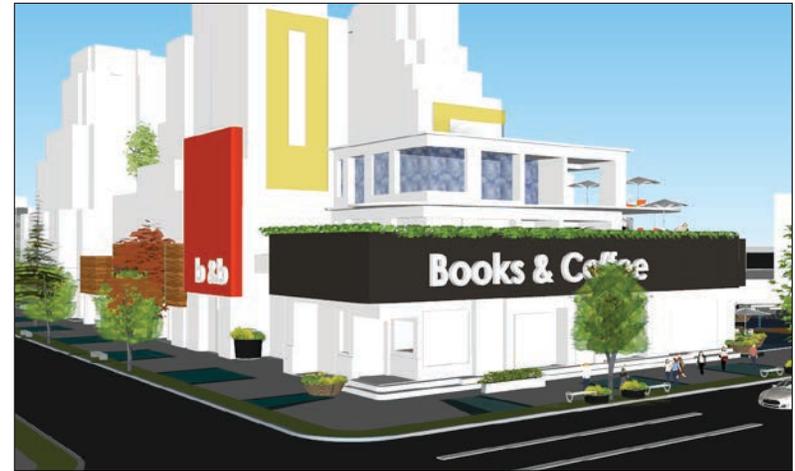
6.8.2.1 General Policies

1. Land use redesignations should be consistent with the Land Use Zones shown on Map 8: Core Area Land Use Zones. Refinements may be made at the Outline Plan/ Land Use Amendment stage if the intent and overall balance of elements is maintained in the overall Core Area.
2. Uses that are encouraged throughout the Core Area include, but are not limited to:
 - a. Employment uses such as offices and research facilities;
 - b. Institutional uses such as hospitals, places of worship and educational institutions;
 - c. Residential uses including low-rise townhomes and rowhouses, mid-rise buildings and high rise towers;
 - d. Services including hotels, daycares and medical clinics;
 - e. Retail uses, either standalone or integrated into mixed use buildings; and
 - f. Entertainment uses including recreation and culture facilities, theatres, fitness centres and libraries.
3. Uses that are discouraged throughout the Core Area, unless specifically mentioned in the following sections, include:
 - a. Vehicle oriented uses such as gas stations, automobile repair and service, car washes, drive-throughs and vehicle sales;
 - b. Low intensity industrial uses including bottle depots, warehouses and storage facilities; and
 - c. Low density single or semi-detached housing.
4. Interim uses may be considered within the Plan area including such opportunities such as seasonal markets, events or other temporary uses that do not require permanent structures or services.
5. The provision of a broad range of residential housing types is encouraged throughout the Core Area, for different types of households, income levels, age groups and lifestyles, including older adult housing. Provision of larger unit sizes appropriate for families with children are particularly encouraged.

6.8.2.2 Station Area Zone

The Station Area Zone is found in two locations in the Core Area. One of these is south of 144 Avenue surrounding the future LRT Station and the second is located north along Centre Street N around the second future LRT Station. Lands within these areas should ultimately accommodate higher density development with a mix of uses, including multi-residential, office and retail/commercial. These areas should feature wider sidewalks and buildings set close to the public realm to support higher levels of commercial and residential intensity that will help generate daytime and evening activity.

1. New development within the Station Area Zone should incorporate a mix of land uses. The mix of uses should include ground floor retail / commercial development, office and multi-residential.
2. Residential development within this area should be limited to medium to high-density multi-residential developments and includes townhouses, apartments, and live/work units.
3. Retail / commercial development should be provided on sites facing the LRT Station or along active frontages identified in Section 6.8.3.1 and is optional elsewhere in the area. It is recognized that the demand for retail in this area may not occur in the short term. Therefore, other uses may be acceptable at the street level, but buildings should be designed to allow conversion to retail in the future.
4. Small-scale retail / commercial establishments are encouraged to be located in this area especially fronting the future LRT Stations or active frontages. Larger retail / commercial establishments should limit the store frontage by locating a portion of their floor area on upper stories or by wrapping it behind other units in order to maintain the small-scale, pedestrian oriented retail character at street-level. Exceptions should be made for uses such as supermarkets, pharmacies and other similar uses which provide various daily goods and services for residents. Exceptions may also be allowed in the initial stages of development with the consideration of conversion to more active uses in the future.



Mixed-use high intensity development.

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6.8.2.3 Flex Zone

The Flex Zone areas are located adjacent to the Station Area Zones and act as a transition from these higher intensity mixed-use areas to the lower intensity of the adjacent residential areas outside of the Core Area. The Flex Zone areas will consist of a wide variety of uses including multi-residential of different levels of intensity, as well as a range of retail, services, office uses. Institutional uses, such as private schools or places of worship as well as low intensity industrial and support commercial uses, may be located in the Flex Zone area where they meet the Built Form and Urban Design policies of within this Section and do not preclude future higher intensity development.

1. Residential development within this area should be limited to low to medium-density multi-residential developments and includes townhouses, apartments, and live/work units.
2. Commercial development within this area should primarily be intended to serve the day-to-day needs of residents and be compatible with the adjacent residential uses.
3. Institutional uses, such as private schools or places of worship, may be appropriate in the Flex Zone area where they are of high quality design and meet the intent of the Core Area policies. Applications for such uses should demonstrate how these sites can be developed over time to higher intensity development.
4. Low intensity industrial uses as well as vehicle-oriented uses may be allowed in this area where they are located away from LRT stations and active frontages and meet the Built Form policies of this Plan. Where possible such uses should be incorporated into buildings with other uses and should not negatively impact adjacent residential developments.

6.8.2.4 Employment Zone

The Employment Zone area is located within the MAC, east of the future LRT Station. This area is specifically located to accommodate convenient access from Stoney Trail, Centre Street N and the future LRT Station. The area is made up of larger parcels of land and may accommodate a larger scale institutional use such as a hospital or a post-secondary institution, which is a critical component for the success of the MAC. Large format retail stores will also be allowed to locate in this area in order to facilitate future redevelopment of the lands. This type of retail can be a catalyst that helps create a vibrant and successful retail area and can complement the retail uses provided within the Station Area Zone. Entertainment uses are encouraged to locate in this area in order to stimulate nighttime activity in the area.

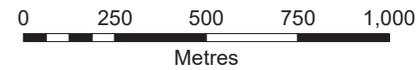
1. A major institutional use, such as a hospital, recreation or cultural use or educational facility, is encouraged within this area in order to provide for significant employment as well as support for other land uses within the MAC.
2. This area is encouraged to become a regional retail destination by allowing a variety of retail and service uses, including large and midsize format retail and entertainment uses.
3. A diverse range of retail and commercial establishment sizes are encouraged provided they are well-integrated within the larger building, maintain a pedestrian-orientation and contribute to active street frontages.
4. Development in this Zone may accommodate residential and / or office development. Along active frontages office development should not be located on the ground floor. Exceptions may be allowed in the initial stages of development with the consideration of conversion to more active uses in the future.
5. Residential development within this area should be limited to medium-density multi-residential developments and includes townhouses, apartments, and live/work units.
6. Institutional uses, such as private schools or places of worship, may be appropriate in the Employment Zone area where they are of high quality design and meet the intent of the Core Area policies. Applications for such uses should demonstrate how these sites can be developed over time to higher intensity development.
7. Low intensity industrial uses as well as vehicle-oriented uses may be allowed in this area where they are located away from the future LRT station and active frontages and meet the Built Form policies of this Plan. Where possible such uses should be incorporated into buildings with other uses and should not negatively impact adjacent residential developments.



Map 9
Core Area Active Frontages

Legend

- Primary
- Secondary
- Parks and Open Space
- Study Area
- LRT Station
- LRT Alignment



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6.8.3 Built Form and Urban Design

The intent of this section is to define important built form and design elements of the Core Area to ensure high quality streetscapes and public realm that encourages social interaction among residents, shoppers and employees. A certain degree of flexibility will be applied to ensure the intent of the Core Area is achieved in a manner that responds to the context.

6.8.3.1 Active Frontages

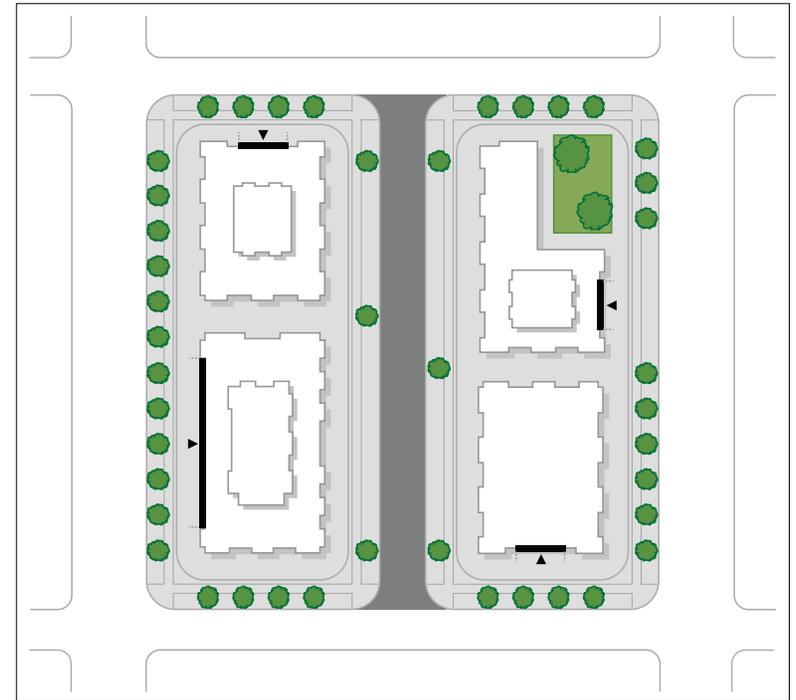
Active frontages are identified on Map 9: Core Area Active Frontages, and are defined as the portions of buildings where the ground floor faces a public sidewalk. Buildings, when located along an active frontage, should be sited and designed properly to create a more vibrant pedestrian environment and contribute to activity on the streets throughout the day and evening. Two types of active frontages have been identified for the Core Area, primary and secondary. Primary active frontages are the higher activity areas with the secondary active frontages being less active, more flexible with a greater variety of uses. Exceptions to the policies for secondary active frontages may be allowed in the initial stages of development where buildings are designed with the consideration of conversion to a finer grained frontage with more active uses in the future.

1. Along all identified active frontages development should do the following:
 - a. Locate buildings and building entrances close to the street. Buildings may be set back from the street if the space between the building and the street is utilized for outdoor cafes, pedestrian plazas or other areas that can be occupied by pedestrians;
 - b. Provide public entrances for uses along a public street, while also minimizing long expanses of building frontage without any entrances along street;
 - c. Provide for individual entrances oriented towards the street for ground floor residential dwellings. Increased setbacks may be appropriate to ensure adequate security and amenity space;
 - d. Limit the frontage for large commercial uses, such as grocery stores, large format retail and department stores or provide for multiple entrances or incorporate smaller commercial units along the street frontage;
 - e. Ensure that landscaped areas are designed to allow for convenient movement of pedestrians between the sidewalk and building entrances; and
 - f. Keep vehicular access along active frontages to a minimum except where required. Where vehicular access is located along an active frontage it should be designed to provide pedestrian priority.
2. Along primary active frontages new development should be designed to do the following:
 - a. Provide active commercial uses at grade, including but not limited to retail, personal services, consumer services, supermarkets and restaurants, and community service uses, including child care. Other uses that may not generate significant pedestrian activity may also locate on the ground floor provided buildings are designed to allow conversion to commercial in the future, frontages are limited in length and/or the frontage is designed to enhance the pedestrian experience (e.g. use of transparent glazing or provision of amenity space or seating);
 - b. Create a finer-grained building frontage with multiple uses and entrances along the ground floor. Larger uses should limit the frontage by locating a portion of their floor area on upper stories or by wrapping it behind other units in order to maintain a small-scale, pedestrian oriented character at street-level;
 - c. Provide a minimum building height of two (2) storeys in order to establish a consistent streetwall and ensure that new development will contribute sufficient activity to the area; and
 - d. Minimize the width of entrances to lobbies for multi-floor buildings so as not to take up a large amount of space along the street.

6.8.3.2 Site & Building Design

Buildings within the Core Area will ultimately establish a continuous streetwall with building frontages sited along streetfronts. Higher buildings should be strategically located on sites that are chosen for their development potential and context. Building facades should be designed and located such that they generate a sense of enclosure around public spaces and streets, provide for active streetwalls and contribute to comfortable and inviting pedestrian experience.

1. Larger sites should be designed to provide direct, convenient and accessible pedestrian connections across and through the site to allow for connections to transit service, open space and other community services and amenities.
2. Mid-block breaks, lanes or mews are encouraged where possible to allow for pedestrian and vehicular connections and a finer grain of circulation.
3. Buildings should be sited close to public streets, with primary entrances accessed from the public sidewalk.
4. Where development is low intensity (e.g. single story, standalone uses) the design of the site and the location of buildings should consider potential redevelopment in the future.
5. Longer building façades should develop front façade articulation including changes in massing, height, materials or other architectural techniques to reduce the overall bulk and length of the building and enhance visual variety.
6. Larger mid-rise (six storeys or greater) and high-rise/tower developments should provide a podium-tower format with a two to three storey podium. Step-backs should be provided on upper floors to mitigate massing and shadowing.
7. Building heights should be sensitive to the surrounding context of the site and consider such features as adjacent uses, pedestrian connections, public spaces and access to sunlight.
8. Prominent corners of mid-rise and higher intensity buildings should be architecturally distinct, emphasize a pedestrian scale and be clearly articulated on the street facing building facade.
9. Residential units at ground level facing a street or lane should be provided with front entrances with direct connections to the public sidewalk.
10. For multi-residential development primary common building entrances should be oriented towards a public street or internal drive aisle.
11. Commercial units on the ground floor should utilize transparent glazing to allow visibility between the building and the street.



Development of a mid-block break or lane to allow for pedestrian and vehicular access.

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6.8.3.3 Public Realm

Ensuring a quality public realm that encourages walking and community activity is essential to the success of the Core Area. Streets are an essential part of the public realm and lively streetscapes comprised of a variety of design elements are key to a pleasurable pedestrian experience. Collectively, these design elements are the physical infrastructure of placemaking throughout the pedestrian realm.

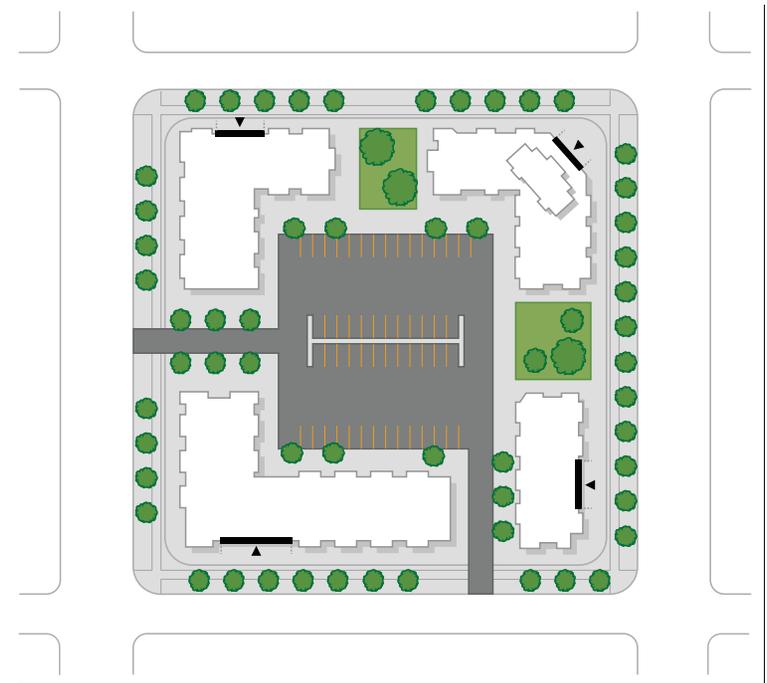
Parks and open spaces are also key public realm components, providing valuable spaces for outdoor activity and leisure as well as social interaction and community participation. These spaces should be designed as part of a safe and comfortable pedestrian realm and as important elements in the overall placemaking strategy for the area.

1. Street furniture, lighting, signage and landscaping should be oriented towards the pedestrian and the cyclist where applicable.
2. Disruptions to the pedestrian network from curbcuts, parking access or above ground utilities should be minimized or consolidated where possible.
3. Weather protection should be incorporated into streetscape design such as the use of canopies, shelters, and street trees.
4. Developments should include strategically located bicycle parking posts or racks. Bike racks should be located in visible areas with adequate nighttime lighting in accordance with the provisions of the Bicycle Parking Handbook and the Land Use Bylaw.
5. Opportunities for public art should be incorporated throughout the pedestrian realm as part of the streetscape design.
6. Bus zones, including waiting and amenity areas, should be carefully designed as part of the streetscape. Amenities may include shelters, benches, garbage cans, electronic fare machines and next bus information displays. Waiting areas should be separate from pedestrian through space.
7. The Access Design Standards of The City of Calgary should be applied in all streetscape designs.
8. The design of the streetscapes are encouraged to consider incorporating features that enhance the environmental performance of the streetscape. permeable paving. This could include low impact development measures such as bioswales and
9. Both private and public open space are encouraged within the Core Area. Private landscaped and amenity areas are encouraged to complement the public open space system.
10. Encourage the addition of open space throughout new development through the use of publicly accessible plazas, courtyards and pocket parks.
11. Development is encouraged to provide for open spaces or plazas in proximity to the future LRT Stations. The design and programming of these spaces should be based on the intended uses and character of the adjacent blocks. The spaces may be retained as private land provided that they are publicly accessible and designed in conjunction with the private development.
12. Municipal reserve dedication is required within the Core Area and should be provided adjacent to Centre Street N within close proximity of the future LRT Stations.
13. Parks and open spaces should be located and designed:
 - a. To be accessible to people of all ages and abilities, and to a wide variety of interests;
 - b. For a variety of recreation functions and may include active recreational areas, informal passive space, natural landscapes and formal urban parks;
 - c. With adequate street frontage in order to provide an interactive streetscape that enhances visibility, safety and security; and
 - d. To accommodate the anticipated activity and intensity of use in a manner that complements the character of the surrounding area.

6.8.3.4 Parking & Loading

The purpose of the Core Area policies is to provide a land use and urban structure that supports transit use and other alternatives to private automobile trips. Although the Core Area will still accommodate personal vehicle use for occasional trips and tasks, it is not the intent to provide an oversupply of parking for every possible use and trip. Providing too much parking may promote further use of the automobile, diluting the intent of creating a walkable, transit-oriented area. Parking should be well managed to reduce demand and be in balance with other travel modes and urban design goals.

1. Minimum and maximum parking requirements may be evaluated on a site-by-site basis without a precedent-setting implication.
2. Developments in close proximity (150 metres) to an LRT Station should provide only the minimum number of parking spaces required by the Land Use Bylaw or less. If parking stalls exceed these minimum requirements, they should be accommodated in a structured and/or underground parking facility, unless otherwise determined by the Development Authority.
3. Parking relaxations for small-scale, ground floor commercial uses should be supported, particularly where they are located in mixed-use buildings and close to transit. This should include no minimum parking requirement for smaller ground floor uses (less than 465 square meters).
4. Developers are encouraged to adopt Transportation Demand Management (TDM) measures such as transit reimbursement, van/car pool programs, car co-ops and telecommuting. Reductions in required parking rates will be considered with the adoption of proven and effective TDM measures.
5. Parking requirements may be further reduced, subject to the discretion of the Development Authority, by providing parking facilities that serve multiple uses with peak parking demands at different times of the day.
6. Shared parking facilities are encouraged to reduce the total number of spaces required, reduce development costs and reduce the amount of space required to facilitate parking.
7. All new development should make provisions for the common private parking and storage of bicycles. Developments are encouraged to provide showers and lockers for use by active mode commuters. Where bicycle parking is provided in excess of the Land Use Bylaw consideration should be given to reductions in the required number of parking spaces.
8. Loading and service entrances for buildings should be located internally within a site, away from public sidewalks.
9. Surface parking should be provided internally to a site and not between a building and a street. Where surface parking is provided it should be located and designed to allow for future redevelopment.
10. Where surface parking lots are provided, the design shall include provision for pedestrian circulation within and outside of the site.
11. For residential developments above six storeys, the majority of off-street parking should be provided underground.
12. Above grade parking structures should be screened from streets with active uses at grade such as commercial or residential. Architectural treatments should be used that make the parking areas indistinguishable from other buildings.



Surface parking provided internally on the site and behind buildings.

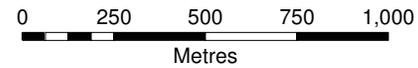
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Map 10
Core Area Pedestrians and Bicycles

Legend

- Local Pathway
- Regional Pathway
- Bike Lane
- Parks and Open Space
- Study Area
- LRT Station
- LRT Alignment



APPROVED: 83P2019

6.8.4 Mobility

The street network is one of the most important pieces of the Core Area. The street network is primarily a grid of streets, with Centre Street as the focal point of the Core Area, functioning as the transit spine as well as a bicycle and pedestrian corridor, while also providing the vehicular mobility function. Streets are planned to be pedestrian-friendly and well connected to adjacent pathways, schools, parks, and community facilities. Bicycle infrastructure is provided throughout the Core Area including shared multi-use pathways and bike lanes providing connections within and to the adjacent communities.

Accommodation of vehicles within the Core Area is based on separating most of the vehicular traffic to the two-adjacent north-south roadways and away from Centre Street. The east-west grid network crossing Centre Street allows traffic to circulate within the Core Area as well as to and from the adjacent neighbourhoods.

6.8.4.1 Pedestrian Circulation

Walking as a choice mode is an underlying principle in the Core Area. Streets are planned to be pedestrian-friendly and connected to the facilities and amenities of the adjacent communities. Pedestrian linkages that dead-end or are discontinued through parking lots, peripheral roadways, landscaping, either at the periphery or within the site should be avoided. Midblock breaks, pedestrian mews and laneways can provide for an additional route added to the grid structure on blocks.

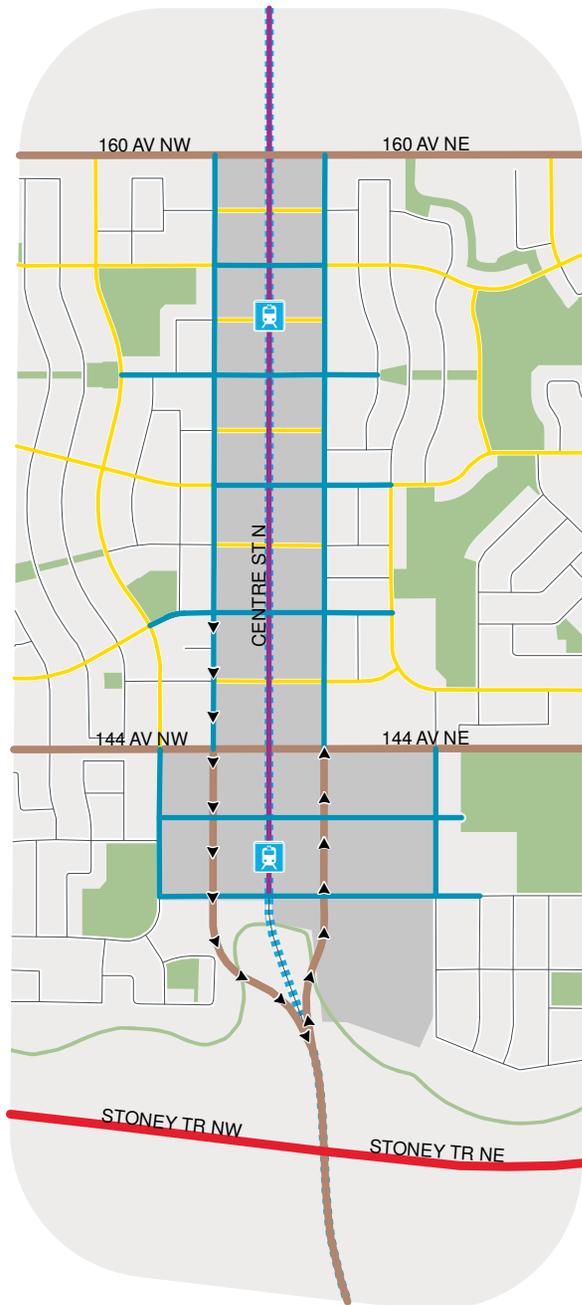
1. Public sidewalks should provide a pedestrian pathway clear of utility poles, trees, bicycle racks and other impediments for the entirety of the block.
2. A minimum throughway zone dimension of 2 metres should be provided for all sidewalks. More clear width may be required in certain locations within the Core area to accommodate to higher pedestrian volumes.
3. Crossings for pedestrians and cyclists should incorporate the use of distinctive pavement treatments that may include enhanced paint marking and differentiated paving materials to enhance crossing visibility.
4. Wayfinding to transit stops and key pedestrian and bicycle routes should be incorporated into the Core area.

6.8.4.2 Cyclist Circulation

Calgary's regional bike network connects through Keystone Hills and specifically, the Core Area. The street typology includes a variety of bike facilities from shared multi-use paths for the Primary Cycling Network on 144 Avenue to cycle tracks associated with Regional Pathways on the east-west Collector system. Bicycling will be an important local and regional travel mode in the Core Area. A range of bike parking facilities are encouraged from ground-mounted racks along sidewalks to lockers and covered bike sheds near the transit stations and within development.

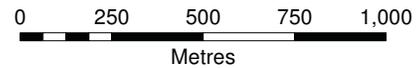
1. Off-street bicycle routes should be continuous.
2. Where feasible, on-street bike routes should be physically separated from parking lanes with curbs, posts, planters or other devices.
3. On-street bike routes should be provided between the parking lane and the sidewalk, where possible, to avoid conflicts between cyclists and vehicle doors.
4. Bicycle parking facilities should be provided at a variety of locations for year round use and integrated into the overall architecture of the building design or streetscape.

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Map 11
Core Area Vehicles and Transit

- Legend**
- Skeletal Road
 - Arterial
 - Urban Boulevard
 - Primary Collector
 - Collector
 - Residential Street
 - Parks and Open Space
 - Study Area
 - LRT Station
 - ⋯ LRT Alignment



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6.8.4.3 Transit Network

The Centre Street Transit Greenway will be designed for low-floor BRT and LRT. Transit operations will be similar to Downtown Calgary with speeds complementary to adjacent traffic (slower), line-of-sight/un-gated intersections and limited pedestrian barriers along the transitway. BRT station facilities will be designed in a way that can be adapted and extended in the future for LRT. Stations will have a more direct relationship to urban streetscape and adjacent plazas with low platforms. Station design will reflect streetscape scale while still providing comfortable waiting in Calgary's winters. Transfers from Local Feeder Buses will occur from adjacent, intersecting collector streets with bus stops flanking both sides of Centre Street at primary transit stations or on Centre Street itself, near these stations.

1. Centre Street N will be designed for low-floor BRT and LRT, transit operations similar to downtown Calgary with speeds complementary to adjacent traffic.
2. All transit service shall be accommodated within the road right-of-way.
3. Pedestrian connections to transit stops should be as direct as possible.
4. A transit plaza should be located immediately adjacent to each of the LRT stations. These plazas should incorporate heated and sheltered waiting areas, transit route information, bicycle storage and other travel services and amenities for transit users.
5. Public or private art projects should be incorporated into the designs for LRT Stations and adjacent transit plazas.
6. As the LRT is expected to take many years before it is built, the City should consider allowing for activities or uses to occur within the right-of-way prior to design and construction. This could include opportunities such as pop up parks or cafes, seasonal markets, events or other temporary uses that do not require permanent structures or services as well as temporary bicycle facilities.

6.8.4.4 Road and Street Network

A diversity of street types will accommodate a variety of travel modes and purposes. The street network is comprised of streets that have been designed to enhance the quality and character of adjacent developments and land uses such as retail/commercial, residential and parks. Streets will provide a high-quality pedestrian environment that will accommodate bicycles, transit and automobiles. Walking, cycling and transit movements should receive the highest priority, but accommodation of goods and auto performance will also be considered.

As part of the work on this Plan alternative street sections have been developed for Centre Street and 144 Avenue as illustrated in Figures 1 and 2. These street sections are conceptual only and the exact design and dimensions of these streets will be determined at the applicable outline plan stage. .

1. The street network shall be provided generally as shown on Map 11: Vehicles and Transit.
2. The Development Authority should consider the approval of customized street cross sections where they will implement the guiding objectives of this Plan.
3. Intersections within the Core Area should be all-turns with turning restrictions only when necessary during peak travel times.
4. Sound attenuation should not be provided along any street within the Core Area.
5. Utility structures and poles should be located to minimize interruptions to the public realm as well as their visual impact along the street edge.



A Transit Plaza should be located central to the Major Activity Centre.

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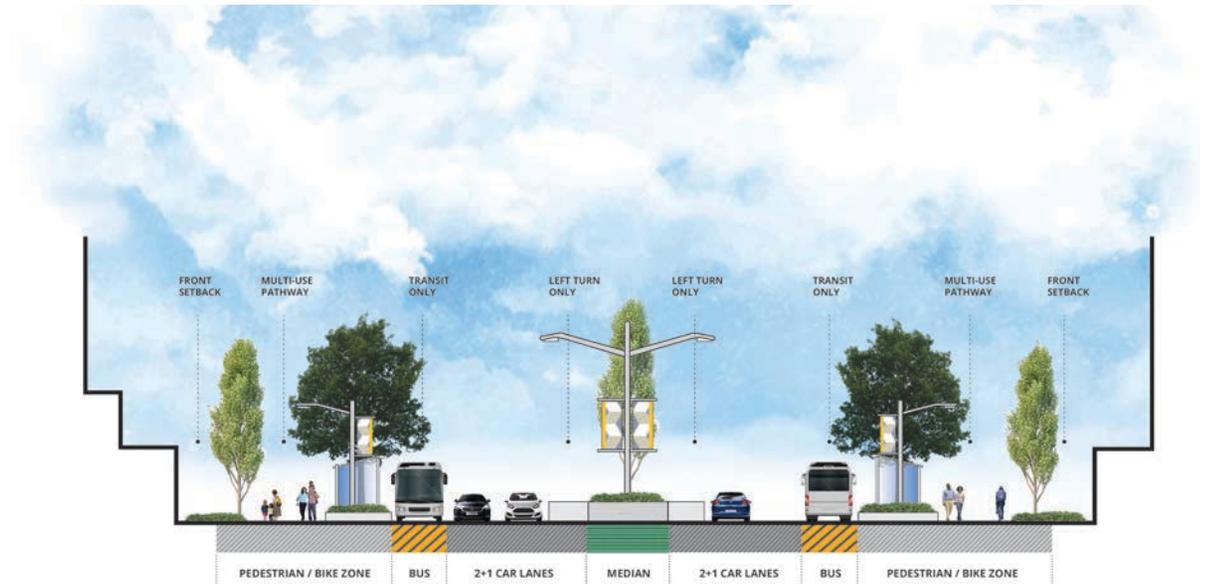
Figure 1: Centre Street N Section – Potential BRT



Key Elements:

- Wide Sidewalks/bike lanes
- Boulevard trees
- On street parking
- Separated transit lanes (BRT)

Figure 2: 144 Avenue N Section – Dedicated Bus Lane



Key Elements:

- Wide Sidewalks/multi-use pathways
- Boulevard trees
- Landscaped median
- Dedicated transit only lanes (potential BRT)

6.8.5 Implementation

Successful implementation is the key to the achievement of the Core Area. This section outlines policies to ensure it is interpreted correctly and implemented in the manner it was intended.

1. Land use redesignations shall meet the intent of the plan. The exact land use districts will be determined at the land use redesignation stage.
2. At full build out, development within the Core Area should achieve a minimum intensity target of 200 jobs and people per gross developable hectare. Each subsequent Outline Plan/Land Use Amendment application shall demonstrate, to the satisfaction of the Approving Authority, that the minimum intensity target for the overall Core Area can ultimately be achieved.
3. Policies within the Core Area recognize that intensification will take place over time. In order to facilitate intensification, applications should provide the following:
 - a. Flexible land use districts that allow for a range of uses;
 - b. Initial development that generates activity by being pedestrian- oriented and facilitating direct and efficient transit connections;
 - c. Site design that enables infilling to occur; and
 - d. Development of an initial built form that facilitates intensification, such as buildings and uses that front onto public streets.
4. Each development block should be comprehensively planned. A concept plan should be submitted to the Development Authority as part of a development permit application within each block, particularly where the development is of a lower intensity (e.g. one storey buildings) or where only partial development of the block is proposed at that time. In such cases it should be shown how the block can be redeveloped over time to meet the intent of the Core Area vision.
5. At the discretion of the Approving Authority, any significant development permit applications located within the Core Area may be reviewed by the Urban Design Review Panel.
6. At the Outline Plan or Subdivision stage, a developer should prepare conceptual development plans for any parks and open space components, in consultation with Calgary Parks. Such plans should conceptually address the park requirements outlined in the 'Development Guidelines and Standards: Landscape Construction' or otherwise in effect at the time of application.

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6.9 Transit Station Planning Area

Bylaw 83P2019

Purpose

The Transit Station Planning Area includes land within 600 m (0.4 miles) of any LRT, future LRT or bus rapid transit (BRT) station. The intent of designating a Transit Station Planning Area is to focus the composition and design of the land use, transportation network and streetscape within the 600 m (0.4 mile) zone in a way that both supports transit use and takes fullest advantage of the significant investment that primary transit service represents. The Transit Station Planning Area will often act as an overlay for another planning typology such as an Activity Centre or *Main Street*. In such cases, the Transit Station Planning Area consists of an area inside a designated Activity Centre or *Main Street* area and another area outside.

Bylaw 83P2019

6.9.1 Transit Station Planning Area Policies

1. General Transit Station Planning Area Policies

- a. Development in the Transit Station Planning Area shall provide a transition of land use Intensities with the highest in proximity to the transit station and lowest further from the station.
- b. Streets, walkways and pathways shall converge toward the transit station providing pedestrians and cyclists with safe, direct and convenient access from all parts of the Transit Station Planning Area.
- c. *Within the designated Keystone Hills Core Area, plans shall comply with applicable policies found in Section 6.8, Keystone Hills Core Area.*

Bylaw 83P2019

- d. Portions of the Transit Station Planning Area that are outside the *Keystone Hills Core Area* shall comply with the policies of section 6.5, Neighbourhood Areas.
- e. Development within the Transit Station Planning Area should be in accordance with The City of Calgary's Transit Oriented Development Policy Guidelines.

Bylaw 83P2019



A Transit Plaza should be located central to the Major Activity Centre.

6.10 Retail Centres

Bylaw 83P2019

Purpose

Retail Centres, as defined in the MDP Section 4.1 Retail Areas, serve the retail, service and employment needs of area residents and vary in scale from Neighbourhood Retail Centres to Regional Retail Centres. A Community Retail Centre and Regional Retail Centre are shown generally on Map 5: Land Use Concept. Neighbourhood Retail Centres may be proposed within Neighbourhoods according to the policies of this ASP. Retail Centres should exhibit high-quality design, providing unique opportunities for retailers to distinguish themselves and provide a sense of place for residents. They are distinct from Community Activity Centres and Major Activity Centres, typically lacking primary transit service and having less stringent Intensity targets. Regardless of scale, these areas should be designed in such a way that they may transition into Activity Centres in the future. The development of Retail Centres should not compromise the viability of development of the Major Activity Centre or Community Activity Centre.

6.10.1 Retail Centre Policies

Bylaw 83P2019

1. Location of Retail Centres

- a. In order to enhance the range of goods and services available within walking distance of residents, all Neighbourhood Retail Centres:
 - i. should be located in, adjacent or proximal to a NAC; and
 - ii. should not be permitted along Arterial streets.
- b. The Community Retail Centre should be located in the general vicinity as shown on Map 5: Land Use Concept along Arterial and/or Collector street(s).
- c. The Regional Retail Centre should be located in the general vicinity as shown on Map 5: Land Use Concept along an Arterial street, at the intersection of Arterial streets or at the intersection of an expressway and an Arterial street.
- d. The location of the Regional Retail Centre may be flexible if integrated with Employment Uses and the total amount of Retail Uses is not exceeded.

2. Size and Intensity of Retail Centres

- a. Neighbourhood Retail Centres should consist of Local Commercial Uses totalling less than 2,800 m² (30,139 ft²), plus or minus 5 per cent.
- b. The Community Retail Centre should consist of

- i. between 2,800 m² (30,139 ft²) and 9,300 m² (100,104 ft²), plus or minus 5 per cent, of stand-alone Retail Uses (not including Retail Uses on the ground floor of office or residential buildings);
 - ii. a maximum of 9,300 m² (100,104 ft²), plus or minus 5 per cent, of Employment Uses; and
 - iii. the opportunity for on-site ground-oriented and Medium- to High-Density Multi-Residential Development integrated horizontally and/or vertically with other uses.
- c. The Regional Retail Centre should consist of
 - i. between 9,300 m² (100,104 ft²) and 46,500 m² (500,522 ft²), plus or minus 5 per cent, of Retail Uses; and
 - ii. between 9,300 m² (100,104 ft²) and 46,500 m² (500,522 ft²), plus or minus 5 per cent, of Employment Uses.

3. Composition of Retail Centres

- a. Retail Centres should be comprehensively planned to integrate Retail Uses, Employment Uses and other uses.
- b. In accordance with Section 4 of the MDP, Retail Centres shall provide a public amenity space (or spaces) which will serve as a gathering area.
- c. The Community Retail Centre should include a site for a Community-scale food store and may also include the following:
 - ii. Retail Uses in Retail, Small Format and Retail, Medium Format and other similar uses;
 - iii. Employment Uses;
 - iv. Cultural, Recreational and Institutional Uses; and
 - iv. other compatible uses as deemed appropriate by the Approving Authority.
- d. The Regional Retail Centre may include the following:
 - i. Retail Uses in Retail, Small Format, Retail, Medium Format, and Retail, Large Format, and other similar uses;
 - ii. Employment Uses, including Office Uses and compatible light industrial uses;
 - iii. Cultural, Recreational and Institutional Uses; and
 - iv. other compatible uses as deemed appropriate by the Approving Authority.

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4. Mobility in Retail Centres

- a. In order to accommodate land use Intensification and diversity of land uses over time, the public and private street network in a Retail Centre, should feature a block-based street pattern.
- b. Sidewalks and pathways should be integrated throughout the commercial site to provide pedestrians and cyclists with safe, convenient access to and between store entrances.
- c. Automobile access to residential development should be separated from automobile access to commercial development, except in the case of Mixed-Use development.
- d. Pedestrian and bicycle access between residential areas and Retail Centres should be free from conflict with automobile traffic through thoughtful design and arrangement of buildings and infrastructure.
- e. Retail Centres should be planned around transit stops and provide convenient and safe access from transit stops to store entrances.

5. Approval of Retail Centres

- a. The Community Retail Centre and Regional Retail Centre should be distinct in character from the Major Activity Centre and Community Activity Centre. Prior to approval of an Outline Plan/Land Use Amendment application for these Retail Centres, a Retail Market Analysis may be required to demonstrate that the development will not compromise the viability of development in the Major Activity Centre or Community Activity Centre. (See Appendix A: Required Studies Analysis, & Concept Plans for more details on the required Retail Market Analysis.)



Retail Centres shall provide a public amenity space to serve as a gathering area.

6.11 Industrial/Employment Area

Bylaw 83P2019

Purpose

The purpose of the Industrial/Employment Area, as identified on Map 5: Land Use Concept, is to provide for a variety of Office and industrial Uses which will provide for non-retail jobs in the Plan Area. All development within the Industrial/Employment Area will be designed to provide an appropriate interface design along Stoney Trail N as a prominent expressway in the City of Calgary in accordance with *Improving Calgary's Entranceways: A Guide for Development Adjacent to Entranceways*.

6.11.1 Industrial/Employment Area Policies

Bylaw 83P2019

1. Location of Industrial/Employment Area

The Industrial/Employment Area is shown on Map 5: Land Use Concept.

Bylaw 29P2022

2. Size and Intensity of the Industrial/Employment Area

a. *The Industrial/Employment Area should be comprised of approximately 25 hectares (62 acres) of land.*

Bylaw 29P2022, 80P2023

3. Composition of the Industrial/Employment Area

- a. The Industrial/Employment Area should be comprised of light industrial and industrial-supportive uses.
- b. Employee-supportive uses such as restaurants, retail sales, child care, health services and other uses to support local employees should be provided.
- c. The Industrial/Employment Area may also contain Employment Uses (offices) where it does not compromise the viability of development in the Major Activity Centre. The following location criteria for office uses in the Industrial/Employment Area should be considered:
 - i. Office Uses should be located adjacent to major roads, transit routes and/or open space amenities; and
 - ii. Office Uses should be located in close proximity to services and amenities (restaurants, entertainment, parks, recreational facilities, etc.).
- d. Heavy industrial and limited service industrial uses will not be supported by the Approving Authority in the Plan Area.

e. The Industrial/Employment Area may also contain other compatible uses as deemed appropriate by the Approving Authority.

f. Development of an Eco-Industrial Park in accordance with MDP policy 3.7.1 g. is strongly encouraged in this area.

4. Mobility in the Industrial/Employment Area

- a. The transportation network should be designed to provide connectivity for pedestrians, cyclists and drivers from surrounding areas to destinations within the Industrial/Employment Area. This will be achieved by
 - i. using a block-based street network, such as a grid or modified grid;
 - ii. providing safe and convenient walkway and pathway access from other areas of the Community and within the Industrial/Employment Area to provide access as well as recreation opportunities for employees;
 - iii. restricting culs-de-sac, P-loops and other single-access street patterns from the network (exceptions to this such as access ways to utilities and other public service facilities may be considered); and
 - iv. ensuring that convenient transit access and facilities are provided.

7 CREATING GREAT COMMUNITIES

Municipal Development Plan (MDP) goal: “Create great communities by maintaining quality living and working environments, improving housing diversity and choice, enhancing community character and distinctiveness and providing vibrant public spaces.”

7.1 Housing Diversity

Providing for housing diversity ensures that housing needs of all ages, abilities, incomes and sectors of society are met. Furthermore, diversity in housing forms allows residents to remain in their Community through all stages of life.

7.1.1 Housing Diversity Policies

1. Housing Forms

- a. The variability in housing mix needs to be attractive to, and meet the needs of, all ages, abilities, incomes and sectors of society.
- b. A minimum of 30 per cent of the housing units within each Neighbourhood should be non-single-detached housing units in order to meet the needs of different income groups and lifestyles. Outline Plan/Land Use Amendment applications will be monitored to ensure that each Neighbourhood within the Plan Area achieves a minimum 30 per cent non-single-detached housing.
- c. Non-single-detached housing units may include, but are not restricted to, the following:
 - i. attached housing (duplexes, semi-detached dwellings, townhouses and rowhouses);
 - ii. Multi-Residential Developments (triplexes, fourplexes, stacked townhouses, apartments and other types with three or more units in one building);
 - iii. Live–Work Units;
 - iv. housing that is designed to allow residents to convert their space to meet their changing needs;
 - v. community housing projects such as co-operative housing (shared ownership) and co-housing (private ownership with shared amenities); and
 - vi. cottage housing developments.

- d. Multi-Residential Development with units with three or more bedrooms are strongly encouraged.

2. Accessible Housing

- a. Development of housing units that are accessible for persons with limited mobility is strongly encouraged in each Neighbourhood as an important component of inclusivity and aging in place.
- b. Accessible Housing units are encouraged to be developed in all forms of housing including Multi-Residential Developments and single detached dwellings in both market and Affordable Housing.
- c. Buildings with Accessible Housing units should be designed in accordance with the City of Calgary’s *Access Design Standards (2010)*.

3. Affordable Housing

Affordable Housing is housing for which the price is income-driven rather than market-driven and provides for the housing needs of low- and moderate-income households at costs below those generally found in the Calgary market. Affordable Housing may include non-market rental and non-market home ownership and be provided by a builder, non-profit organization or The City (or through partnerships).

- a. Opportunities for Affordable Housing should be provided in each Neighbourhood with a goal of 10 per cent of housing units within a Neighbourhood being Affordable Housing. This target is in keeping with the target of 10 per cent Affordable Housing in all residential developments greater than 10 units contained in *Affordable Housing Development and Design Guidelines, 2011*. Although The City cannot legally require the provision of Affordable Housing, The City may work on its own or in collaboration with private developers and other organizations to meet this objective.
- b. An Affordable Housing Needs Assessment may be required at the Outline Plan/Land Use Amendment application stage, or when deemed appropriate by The City, in order to assess housing needs within the Plan Area. Considerations should include the financial viability of the development, the viability from an operator’s perspective, the availability of public funding and the availability of cost offsets and incentives. The City will work with applicants to determine the location, size and type of Affordable Housing.

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- c. Affordable Housing should be dispersed at suitable locations throughout a Community, without concentrating in any one area. Potential Affordable Housing should, wherever possible and practical, be located
 - i. in close proximity to the Major Activity Centre, Community Activity Centre, a Neighbourhood Activity Centre and/or the Transit Station Planning Area;
 - ii. near transit stops on the Primary Transit Network, close to well-connected pedestrian routes; and/or
 - iii. in conjunction with complementary community facilities and amenities.
- d. Affordable Housing should be visually indistinguishable in quality from market housing and well integrated within the Neighbourhood.
- e. Small-scale Affordable Housing and Affordable Housing within market residential developments are encouraged.
- f. Parking relaxations should be considered for the Affordable Housing units in developments that include an Affordable Housing component.
- g. Affordable Housing units should be provided and designed in accordance with *The City's Affordable Housing Development and Design Guidelines, 2011*.



Affordable Housing should be visually indistinguishable in quality from market housing.

7.2 Community Supportive Uses

Purpose

To provide a broad range of community facilities considered necessary to serve the recreational, cultural, educational, social and spiritual needs of the residents within the Community and enhance their quality of life.

7.2.1 Community Supportive Uses Policies

Uses that provide a sense of community or meet the social, spiritual and family needs of residents are encouraged and supported in the Plan Area.

These uses may include, but are not restricted to, Child Care Facilities, Care Facilities, Places of Worship and other similar uses.

1. Child Care Facilities

Child Care Facilities are crucial components in meeting the needs of a diverse population to help support community stability.

- a. Child care needs should be provided for through such measures as
 - i. accommodating Child Care Facilities in locations with good transportation access by all modes within Neighbourhoods;
 - ii. dispersing Child Care Facilities throughout Communities in order to maximize coverage and avoid traffic congestion issues that may result from clustering facilities in one area; and
 - iii. providing for various sizes and types of Child Care Facilities.
- b. Child Care Facilities should be located
 - i. within or in close proximity to Neighbourhood Activity Centres;
 - ii. close to open space, parks and other amenity areas; and
 - iii. along Collector streets, where possible.
- c. Child Care Facilities should be planned and designed in accordance with the City's *Child Care Service Policy and Development Guidelines (2009)*.

2. Care Facilities

Specialized housing and care needs are an integral part of Complete Communities. Being part of a community is important for Care Facility residents' well-being and provision of such facilities is critical to meeting the growing need for a diverse range of specialized accommodation and care in Calgary.

- a. Specialized housing and care needs should be provided for by encouraging Care Facilities, such as residential care, assisted living, addiction treatment and custodial care, to be located in Residential and Mixed-Use areas.
- b. The size and scale of facilities should be consistent and reflect the context of the surrounding Neighbourhood.
- c. Care Facilities shall be planned and designed in accordance with the City's *Planning Principles for the Location of Care Facilities and Shelters (2011)*.

3. Places of Worship and Other Similar Uses

Places of Worship and other similar uses provide a sense of community and contribute to strengthening of community identity.

- a. Cultural, leisure and spiritual needs in the community will be provided for through such measures as
 - i. accommodating development of Places of Worship and other similar community supportive uses in locations with good transportation access by all modes within residential communities;
 - ii. encouraging the development of Places of Worship and other similar community supportive uses where they can serve as community focal points, such as in Neighbourhood Activity Centres, Community Activity Centres, in conjunction with a Community Retail Centre or in proximity to a Joint Use Site;
 - iii. dispersing Places of Worship and other similar community supportive uses at appropriate locations throughout the Plan Area in order to maximize coverage and avoid traffic congestion issues that may result from clustering of such facilities in one location; and
 - iv. ensuring that Places of Worship and other similar community supportive uses to be compatible in height, scale and size with other buildings in the community.
- b. Other similar community supportive uses may include such things as cultural centres, health centres and social service facilities, as deemed appropriate by the Approving Authority.

7.3 Joint Use Sites

Purpose

The purpose of Joint Use Sites is to provide for the development of public and separate schools together with sports fields and recreational areas on sites dedicated as reserve land pursuant to the *Municipal Government Act* (MGA). Joint Use Sites are jointly owned, designed and built by The City of Calgary and the respective school board in accordance with the principles of the *Joint Use Agreement* (JUA). Detailed criteria for school sites and building requirements can be found in the Site Planning Team approved *Preferred Standards for School Sites* and Appendix C: Joint Use Sites. The timing of the development of Joint Use Sites is dependent on school board needs and funding. School needs may be met by transporting children to adjacent communities where facilities exist during the interim until schools are built.

7.3.1 Joint Use Sites Policies

1. Location of Joint Use Sites

- a. The Joint Use Sites are shown conceptually on *Map 12: Joint Use Sites*.
- b. A Joint Use Site should be suitably located in relation to its student catchment area and optimal walking distance radii.
- c. In order to comply with subsection 1(a) above, a Joint Use Site shown on *Map 12: Joint Use Sites* may be relocated to the opposite side of an adjacent Collector or local road within an Outline Plan/Land Use Amendment application without requiring an amendment to the map.
- d. Joint Use Sites are required to have dual frontages to accommodate separately on-street parent and bus pick-up and drop-off areas.
- e. Where Joint Use Sites are located within or adjacent to Activity Centres, the school building envelope should be located closest to and integrated with the Activity Centre.
- f. The school building envelope within a Joint Use Site should be located at the intersection of two Collector roads or a Collector road and a residential road with a Collector-width standard road immediately adjacent to the site.
- g. Prior to Outline Plan/Land Use approval, a Concept Plan showing the proposed layout for a Joint Use Site within the application area and a preliminary grading plan should be prepared to the satisfaction of the Approving Authority and the respective school board, having regard to the requirements of the *Joint Use Agreement* and the *Preferred*

Standards for School Sites. The requirements of the Joint Use Site Concept Plan are found in Appendix A: Required Studies, Analysis & Concept Plans.

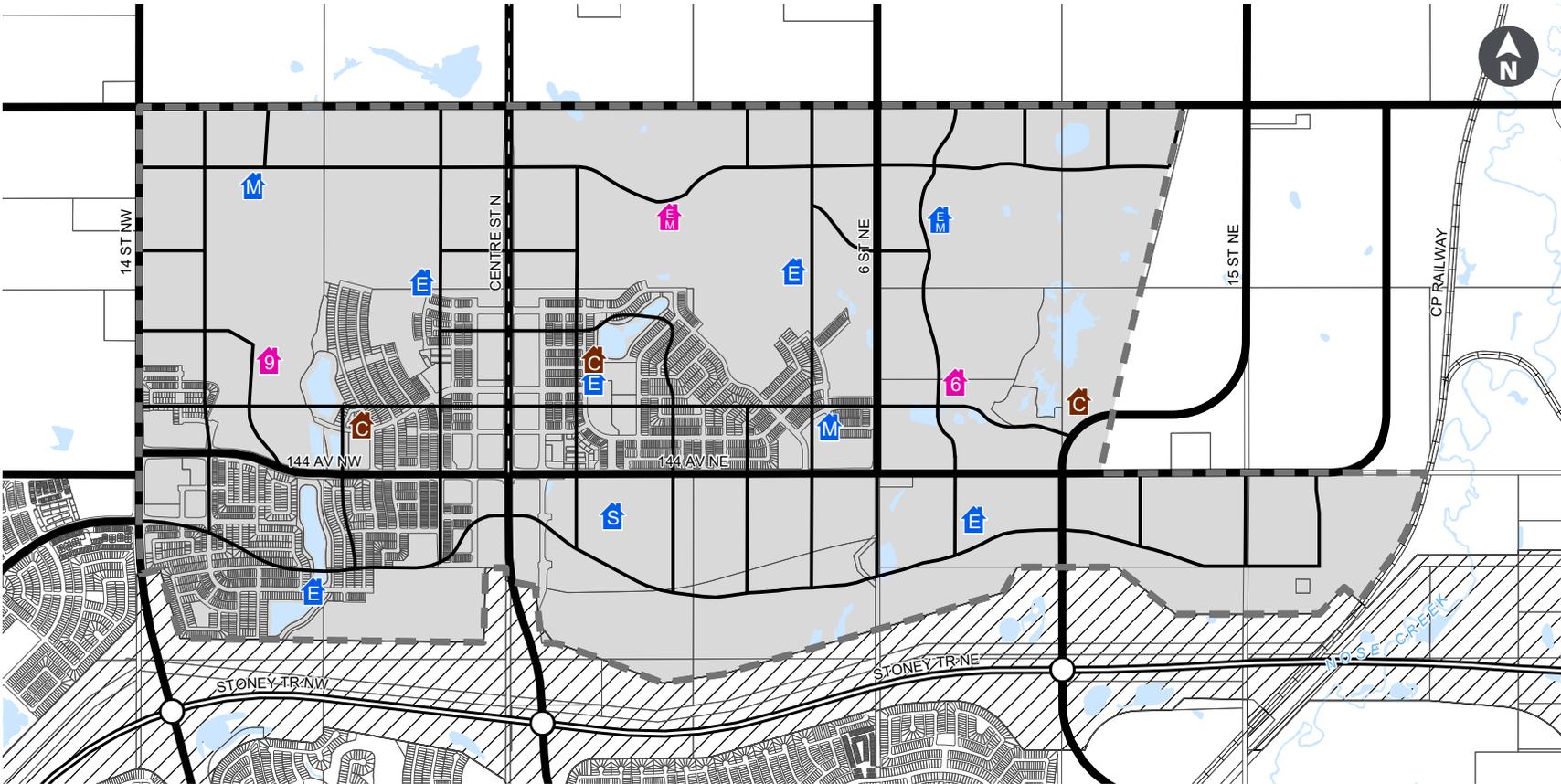
2. Size of Joint Use Sites

- a. The size of a Joint Use Site should be determined through the Outline Plan/Land Use Amendment process in accordance with the requirements of the Subdivision Authority, the *Joint Use Agreement* and the *Preferred Standards for School Sites* and having regard to Appendix C: Joint Use Sites.
- b. In conjunction with the school building envelope within a Joint Use Site, suitable land shall be provided for active playfields and park space to meet the recreational needs of the students.
- c. The size of the Joint Use Site may be reduced if required facilities and open space are suitably shared with an adjacent use, to the satisfaction of the Approving Authority.
- d. See Section 7.6.4 for Creditable Reserve Policies.

3. Composition of Joint Use Sites

- a. The predominant use of land within a Joint Use Site shall be for educational and recreational uses including, but not limited to, public and separate schools, sports fields, parks and playgrounds.
- b. Flexible design of school buildings is encouraged in order to provide opportunities to accommodate community uses within school buildings.
- c. Joint Use Sites should provide comprehensive pedestrian and bicycle route connections to the surrounding Neighbourhood and Community and have adequate transit service.

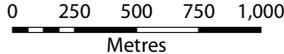
Bylaw 83P2019



Map 12
Joint Use Sites

Legend

-  Transportation/Utility Corridor
-  Plan Area
-  Community Centre
-  CBE - Elementary School
-  CBE - Elementary/Middle Combined School
-  CBE - Middle School
-  CBE - High School
-  CCSD - Elementary/Middle Combined School
-  CCSD - K-6
-  CCSD - K-9
-  Skeletal Road
-  Arterial Road
-  Urban Boulevard
-  Primary Collector/Collector
-  Interchange



REVISED: September 2022
 APPROVED: 15P2012
 AMENDED: 29P2022

7.4 Community Centre Sites

Purpose

Three Community Centre Sites are provided for in the Plan Area to serve the physical, cultural, recreational and social needs of the community to enhance residents' quality of life.

7.4.1 Community Centre Sites Policies

1. **Location of the Community Centre Sites**
 - a. One Community Centre Site per Community is shown conceptually on *Map 12: Joint Use Sites*. **Bylaw 83P2019**
 - b. Community Centre Sites should be appropriately integrated with a Joint Use Site, Neighbourhood Activity Centre or other suitable Public, Recreational, Cultural, Institutional or Local Commercial Uses where possible.
 - c. The exact location of community centre sites may be refined at the time of Outline plan/Land Use Amendment.
2. **Size of Community Centre Sites**
 - a. Community Centre Sites should be approximately 1.2 hectares (3 acres) to 1.6 hectares (4 acres) in size.
 - b. The size of Community Centre Sites may be reduced if required facilities and open space are shared with an adjacent use, to the satisfaction of the Approving Authority.
 - c. See Section 7.6.4 for Creditable Reserve Policies.
3. **Composition of a Community Centre Sites**
 - a. The Community Centre Site should comprise Municipal Reserve (MR) land that is suitably sized and configured to accommodate facilities managed by a community association. These facilities may include, but are not limited to, the following uses:
 - i. a community association building;
 - ii. recreational uses;
 - iii. community gardens; and
 - iv. open space.
 - b. Community Centre Sites should be located in proximity to transit routes and be well connected to bicycle and pedestrian routes.

7.5 High School Site

Purpose

A high school, as identified on *Map 5: Land Use Concept* and *Map 12: Joint Use Sites*, is required to provide for the educational needs of senior high school students within surrounding Communities and recreational and community space for residents. The location of the high school site shown is conceptual. Its exact location, size and configuration will be determined through the Outline Plan/Land Use Amendment process. **Bylaw 83P2019**

7.5.1 High School Site Policies

1. **Location of High School**
 - a. The high school should be located within 500 m (0.3 miles) of the site identified for the light rail transit (LRT) station. The exact location will be determined at the Outline Plan /Land Use Amendment application stage and indicated on the Concept Plan for the Transit Station Planning Area.
 - b. The high school site should have two frontages, ideally located at the corner of two Collector roads.
2. **Size of High School Site**

The high school site will require approximately 9.2 hectares (23 acres) of land, but this may be refined through the Land Use Amendment/Outline Plan process without an amendment to this ASP.
3. **Composition of the High School Site**
 - a. The high school site will contain a high school and associated recreational and educational facilities, and it may also contain other facilities as required by the school board.
 - b. As an integral part of the Transit Station Planning Area, the school board is encouraged to develop partnerships to provide other Public or Institutional Uses, or complementary uses, on the high school site.
 - c. The high school site should
 - i. connect to sidewalks and regional pathways and be conveniently and directly accessible to pedestrians both within and adjacent to the site; and
 - ii. have a convenient and efficient road and regional pathway network; have sidewalk, pedestrian and cyclist connections from the surrounding residential area; and be near transit nodes and the LRT station.

7.6 Open Space System

Purpose

The Open Space System will promote, conserve and enhance an interconnected ecological and recreational system within the Plan Area. It is a system of active and passive open space, with physical and pathway connections to the Environmental Open Space (see Section 10.4.1, Environmental Open Space Policies).

The Open Space System should be an interconnected system of parks, schools, public plazas, neighbourhood parks, natural areas and other open spaces, utility corridors and rights-of-way that will provide social, biophysical and aesthetic functions.

1. Social Function

The social function recognizes the need to create an overall sense of individual well-being and to encourage social gathering. To achieve this function, the following policies should be incorporated into the open space design where appropriate and feasible.

- a. Integrate the open space into the wider Community through safe, pleasant and efficient pedestrian and bicycle routes.
- b. Ensure seasonal adaptability for year-long usability through appropriate landscaping, site design, provision of street furniture and recreational facilities.
- c. Provide public visibility to the open space through visual corridors and/or single-loaded streets.
- d. Design and locate amenities such as playfields and seating areas appropriately to limit negative impacts such as noise from major roads.
- e. Encourage a diversity of user activities and opportunities through provision of recreational equipment or interpretative trails and signage.
- f. Encourage residential and commercial development to incorporate vistas into open space.
- g. Promote “eyes on the street” by using active building edges to frame and define neighbourhood parks, plazas and playgrounds where possible.
- h. Support linear parks and linkages where appropriate to promote connectivity and facilitate walking and cycling.
- i. Design parks and open spaces to provide opportunities for cultural enjoyment and artistic pursuits.
- j. Ensure open spaces and amenities are located and designed in accordance with principles of universal access and barrier-free design.

- k. Provide opportunities to connect people with nature and provide environmental education, where appropriate and feasible.
- l. Provide opportunities for local food production such as community gardens.

2. Biophysical Function

The biophysical function promotes biodiversity and contributes to a positive impact on air and water quality as well as the ecology of the physical environment. To achieve this function, the following policies should be incorporated into the open space design where appropriate and feasible.

- a. Encourage the protection and planting of native species and landscapes to enhance and/or restore the overall biodiversity and carbon sequestration capacity of the area.
- b. Provide habitat blocks through corridors to ecological areas such as creeks, natural drainage systems, mature vegetation and biologically diverse areas to sustain and enhance viable natural plant and animal populations.
- c. Encourage connections to Green Infrastructure such as bioswales and vegetated street corridors.
- d. Provide drought-tolerant vegetation and xeriscaping strategies to lower irrigation demands.

3. Aesthetic Function

The aesthetic function contributes to the overall visual attractiveness of urban areas. To achieve this function, the following policies should be incorporated into the open space design where appropriate and feasible.

- a. Design open spaces to provide view corridors and focal points throughout the Communities.
- b. Size and design open spaces to create spaces that are functional, safe, flexible and provide for a variety of recreational opportunities and passive use for various ages and abilities.
- c. Encourage sunlight penetration into open spaces by avoiding extensive overshadowing from buildings.
- d. Protect and restore natural features including but not limited to wetlands, natural vistas and slopes, mature vegetation, native prairie/native pasture grasslands and biologically diverse areas.
- e. Design open spaces for passive and active recreational functions and locate them within an approximate 400 m (0.25 mile) walking radius for all residents in the Communities.

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7.6.1 Irrigation of Open Space

In order to assist achieving the *Nose Creek Watershed Water Management Plan* release rate and volume targets, manicured open space, including sports fields for school sites, should be located adjacent to stormponds to allow for the use of storm water for irrigation purposes.

7.6.2 Acquisition of Open Space

Acquisition of land for the Open Space System may occur through the dedication of a municipal reserve (MR), municipal school reserve or environmental reserve (ER), as defined in the MGA; a conservation easement; voluntary conservation; voluntary reserve dedication; land purchase or other means.

7.6.3 Private Open Space

Private open spaces and recreational amenities of various sizes and forms are encouraged to be provided within Multi-Residential, Mixed-Use and commercial developments. Public access to these amenities is encouraged where appropriate.

7.6.4 Creditable Reserve Policies

These policies provide for the dedication of reserve land in order to meet the educational, recreational and social needs of residents.

1. Reserve Dedication

- a. Reserve shall be dedicated through the subdivision process in the full amount owing in residential and Mixed-Use areas in accordance with the requirements of the Approving Authority, Joint Use Coordinating Committee (JUCC) and pursuant to the MDP and MGA.
- b. The allocation of reserve shall be determined at the time of Outline Plan/Land Use Amendment application in accordance with the priority of use of reserve lands as set out in the Joint Use Agreement, at the discretion of the Approving Authority.
- c. Joint Use Sites and Community Centre Sites serving the Plan area shall be comprised of reserve land and located and sized as indicated on *Map 12: Joint Use Sites*. **Bylaw 83P2019**
- d. A minimum of 4 hectares (10 acres) of reserve land shall be dedicated to the identified high school site, at the discretion of the JUCC.
- e. Cash-in-lieu may be accepted in place of reserve land for the subdivision of land within industrial areas, subject to the approval of the JUCC and in compliance with the MDP and MGA.

- f. Reserve dedication will not be accepted within oil and gas well setback areas.

2. Transfer of Municipal Reserve

- a. A transfer of creditable reserve between Communities where land is owned by the same landowner will be permitted, if agreed by the landowner, in accordance with the MGA and subject to approval by JUCC, as outlined in 2(b) to achieve:
 - i. optimal distribution/location of school sites within communities;
 - ii. optimal distribution/location of open space typologies as outlined in the *City of Calgary Open Space Plan*;
 - iii. optimization of reserve contribution towards the high school site; and
 - iv. flexibility to utilize MR for integration of Environmental Open Space that otherwise do not qualify as ER.
- b. In accordance with the MGA and subject to approval by JUCC, the permitted allocation is as follows:
 - i. approximately 2.8 hectares (7 acres) of the MR owing from Community A to be located in Community B; and
 - ii. approximately 2 hectares (5 acres) of the MR owing from Community A to be located in Community C.

Provided that the above does not compromise the provision of adequate open space in any Community.

- c. As a condition of subdivision approval, transfer of MR must be registered on the appropriate titles.

7.7 Recreation Facilities

A site for a public recreation facility has not been identified in the Plan Area. Cardel Place, a multi-use recreation facility, is located in Country Hills Village at 11950 Country Village Link N.E., approximately 3 km (1.9 miles) from the centre of the Plan Area. A future small public recreation facility has been identified in Cell H of the North Regional Context Study, immediately east of the Plan Area along 144 Avenue N.E. There is also a large regional public recreation facility identified in Cell F, just north of the Plan Area. These facilities should be linked to the Plan Area by pedestrian and transit connections.

7.8 Library Site

A public library site has not been identified in the Plan Area. There is a public library located in Country Hills Village at 11950 Country Village Link N.E., which is approximately 3 km (1.9 miles) from the centre of the Plan Area. A future public library site has been identified for Cell F of the North Regional Context Study, immediately north of the Plan Area on Centre Street N. These libraries should be linked to the Plan Area by pedestrian and transit connections.

7.9 Emergency Response Station

1. A new emergency response station is required to serve the Plan Area.
2. The location has been identified conceptually on Map 5: Land Use Concept. The proposed location will be further refined at the Outline Plan/Land Use Amendment stage.



Joint Use Sites shall be composed of reserve land..

7.10 Oil & Gas Policies

Within the Plan Area, there exists some significant oil and gas infrastructure. With urban development encroaching on these facilities, it is important that public safety is considered as a part of all development and Neighbourhood design in order to minimize potential environmental hazards and disruption of future residential areas by oil and gas facilities (wells, batteries, pipelines, processing plants, etc.), such as by developing around operating wells in later stages, while adhering to Energy Resources Conservation Board (ERCB) setbacks.

1. Prior to, or in conjunction with, an Outline Plan/Land Use application on land on which oil and gas facilities, associated setbacks and/or Emergency Planning Zones (EPZ) are located, a Risk Assessment shall be required. Terms of Reference for this study are to be developed in consultation with The City of Calgary. This assessment will be used by The City of Calgary to determine whether the development should be submitted to a greater setback distance and whether additional mitigation measures should be integrated at the time of development. More details on the requirements for the Risk Assessment are in Appendix A: Required Studies, Analysis & Concept Plans.
2. Prior to any Outline Plan/Land Use application within the setback area of an oil and gas facility and/or EPZ (whichever is greater), additional consultation with The City, the operator of the facility and the ERCB will be required.
3. The developer should identify the location of all oil and gas facilities in its marketing information.

7.10.1 Abandoned Wells

Within the Plan Area there are three known abandoned wells.

1. All development around an abandoned well site must comply with ERCB directives and regulations and any other applicable laws or regulations.
2. In conjunction with an Outline Plan/Land Use or Development Permit application for any parcel containing an abandoned well, the applicant shall provide
 - a. surveyed locations of abandoned wells and pipelines and confirmation from the ERCB of any setbacks;
 - b. a Phase I Environmental Site Assessment specific to the abandoned well;
 - c. a Phase II Environmental Site Assessment specific to the abandoned well as deemed appropriate by the Approving Authority;

- d. an evaluation of the integrity of the well abandonment; and
 - e. a reclamation certificate for the well, if possible.
3. The City shall not provide credit for MR located within ERCB abandoned well setbacks.
 4. Pending the results of a Risk Assessment, abandoned wells may be incorporated into MR areas at the discretion of the Approving Authority.
 5. Roads shall not be located over abandoned wells.

7.10.2 Operating Wells

Within the Plan Area, there is one known operating oil well with an associated battery. At the time of the approval of this ASP, it is not known how long this facility will remain in operation.

1. Development around an operating well site must comply with all ERCB directives and regulations and any other applicable laws or regulations.
2. Development around an operating battery must comply with all ERCB directives and regulations and any other applicable laws or regulations.
3. The *Subdivision and Development Regulation* prohibits development of permanent additional overnight accommodation or public facilities (as defined by the ERCB) within 100 m (328 ft) of an oil well.
4. In addition to the ERCB setback, the City applies a 200 m (656 ft) nuisance setback to mitigate the associated nuisance effects of the well (dust, noise, etc.).
5. A Phase I Environmental Site Assessment specific to the operating well and battery is required for any Outline Plan/Land Use application within the quarter section containing the well, and where deemed appropriate by the Approving Authority, a Phase II Environmental Site Assessment may also be required.
6. The City will not accept road or reserve dedications of any land encumbered by a land lease for an operating well.
7. The City will not accept road or reserve dedications within the 100 m (328 ft) well setback or the 60 m (197 ft) battery setback.
8. Upon abandonment of the operating well, the policies of Section 7.10.1 Abandoned Wells shall apply.

7.10.3 Pipelines

Within the Plan Area, there are several oil and gas related pipelines. These pipelines currently exist within a utility right-of-way. This section applies to those pipelines that transect the Plan Area, and do not contain sour gas.

1. Lands containing pipeline rights-of-way should have separate title and not be granted a residential land use designation. All land uses on pipeline rights of way shall have regard for the safe, ongoing operating of these facilities.
2. The City will not grant credit for MR land containing pipeline rights-of-way.
3. Crossing and access agreements must be in place prior to tentative plan approval over lands encumbered by a pipeline right-of-way.
4. Pathways and other recreational uses may be permitted on pipeline rights-of-way at the discretion of the Approving Authority.

7.10.4 Sour Gas Pipeline

Adjacent to the northeast corner of the Plan Area is a Level 2 sour gas pipeline. Associated with this pipeline is a 500 m (0.3 mile) development setback. In addition, there is an Emergency Planning Zone (EPZ). The EPZ is a geographical area surrounding a sour gas facility that requires specific emergency response. At the time of approval, the EPZ fell entirely within the 500 m (0.3 mile) setback area, but the EPZ is subject to change. The contents of the pipeline, as well as site specific topographical features, population distribution and access/ egress are taken into account when determining the actual shape of the EPZ..

Any landowner affected by the setback is encouraged to build a relationship with the pipeline operator so that a timeframe for the pipeline is understood and setbacks and EPZs are confirmed.

1. At the time of approval of this Plan, the Sour Gas Pipeline was classified by the ERCB as a Level 2 Pipeline, with an associated 500 m (0.3 mile) setback in which urban development cannot occur. This setback will remain in place until the classification of the pipeline is changed by the ERCB, or the pipeline is decommissioned.
2. The developer should regularly provide the pipeline operator with updates on the status of development.
3. Outline Plan/Land Use applications within 1.5 km (0.9 miles) of the pipeline shall verify the current EPZ of the pipeline with the operator at of the time of application.



Pathways and other recreational uses may be permitted on pipeline rights-of-way. The City shall not provide credit for Municipal Reserve located within ERCB setbacks.

4. The ERCB shall be circulated any Outline Plan/Land Use Amendment application within 1.5 km (0.9 miles) of a pipeline facility.
5. The ERCB should be circulated any Outline Plan/Land Use Amendment application within the EPZ.
6. Community design within the EPZ should take into account all risks associated with development within the proximity of a sour gas pipeline.
7. A Risk Assessment shall be required as a part of all Outline Plan/Land Use applications within the EPZ.
8. The developer should identify the location of the sour gas pipeline and the associated setback in its marketing information.

7.10.5 Beddington Trap Facility

The Beddington Trap Facility falls within the Plan Area. Though the ERCB has no formal setback requirements for a facility such as this, there is a heightened risk of contamination in the surrounding area.

1. Due to the potential for contamination to exist around this facility, additional Environmental Site Assessment(s) will be required for any Outline Plan/Land Use application within 100 m (328 ft) of the facility.

8 URBAN DESIGN

Municipal Development Plan (MDP) goal: “Make Calgary a liveable, attractive and functional city by recognizing its unique setting and dynamic urban character and by creating a legacy of quality public and private development for future generations.”

Purpose

The policies in this section are intended to guide important design elements of the streetscape, including buildings in new Communities, with a goal of ensuring a high-quality public realm. All of these policies are achievable through a variety of design solutions, allowing developers and builders flexibility to achieve the policies in a manner that suits the context of individual sites.

8.1 Neighbourhood Design Policies

1. Incorporating the principles of universal design contained in the *City of Calgary Access Design Standards* is encouraged in all parts of the Neighbourhood.
2. Development adjacent to Environmental Open Space should strive to maintain the environmental integrity and amenity value of these areas. Sightlines and/or access to the Environmental Open Space should be provided where possible.

8.2 Activity Centre and Main Street Design Policies **Bylaw 83P2019**

1. Activity Centres and *Main Street* shall be designed with a focus on providing vibrant, Mixed-Use pedestrian environments that support transit services. **Bylaw 83P2019**
2. The scale, form and character of buildings in Activity Centres and *Main Street* should transition gradually in order to provide an appropriate interface with surrounding areas. **Bylaw 83P2019**
3. Activity Centres and *Main Street* should be designed in accordance with the policies of Section 6: Shaping a More Compact Urban Form, the guidelines in Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines. **Bylaw 83P2019**

8.2.1 Streetscape Design Policies

1. The design of the streetscape in Activity Centres and *Main Street* shall accommodate elements such as street trees, street furniture, bicycle parking and appropriate lighting in order to enhance the experience of cyclists and pedestrians. **Bylaw 83P2019**

2. Parcels facing amenity spaces or other open space in Activity Centres and Main Streets shall utilize lane access only in order to provide pedestrians with sidewalks that are free from conflict with automobiles. **Bylaw 83P2019**
3. Public art should be incorporated at prominent locations along streets in order to provide points of interest and to serve as landmarks for local residents, business patrons and visitors.

8.2.2 Building Design Policies

1. In order to provide a high-quality pedestrian environment, buildings in Activity Centres and *Main Street* shall be designed to provide
 - a. a consistent setback from the sidewalk; and
 - b. active frontages with primary public entryways facing the public sidewalk. **Bylaw 83P2019**
2. Multi-Residential Developments in Activity Centres and along *Main Street* shall be designed to provide ground floor units with individual entryways to the sidewalk. **Bylaw 83P2019**



The design of streetscapes in Activity Centres shall accommodate elements to enhance the experience of cyclists and pedestrians

3. Buildings adjacent to amenity spaces should be designed to provide an appropriate sense of enclosure for the space. The Enclosure Ratio (ratio of building height to width) varies depending on the type of Activity Centre as per Table 3: Activity and Enclosure Ratio.

Table 3: Activity Centre Enclosure Ratio

Type of Activity Centre or Main Street	Minimum Enclosure Ratio (height to width)	Maximum Enclosure Ratio (height to width)
NAC, Neighbourhood Main Street	1:6	1:3
CAC	1:6	1:2
MAC, <i>Urban Main Street</i>	1:6	1:1

Bylaw 83P2019

4. The design of buildings over 1,000 m² (10,764 ft²) of gross floor area should include architectural treatments that reduce the perceived massing of the building.

8.2.3 Parking Design Policies

In order to increase density, improve the pedestrian environment and encourage other forms of mobility such as cycling and transit use, the following policies shall apply to development in Community Activity Centres, the *Keystone Hills Core Area* and Retail Centres.

Bylaw 83P2019

1. Parking should include a mix of short- and long-term parking, bicycle parking and on-street parking in order to accommodate different users and mitigate any potential parking impacts on adjacent residential areas.
2. Surface parking facilities shall be located away from transit and pedestrian areas in order to enhance the pedestrian function of the streetscape and reduce conflict between active modes of travel and automobile traffic.
3. Surface parking facilities should be designed to provide safe and convenient sidewalk and pathway connections for pedestrians and cyclists to access building entrances.
4. The minimum number of motor vehicle parking stalls required should be reduced by 10 per cent for all uses where a building is located within 400 m (0.25 miles) of a current or future bus rapid transit (BRT) or light rail transit (LRT) stop.
5. Developments and buildings should be designed in order to

- a. limit the amount of long-term parking stalls wherever possible;
- b. utilize strategies that qualify for parking requirement reductions, such as
 - i. installation of bicycle parking stalls, and
 - ii. installation of locker and shower facilities;
- c. provide structured and/or underground parking to accommodate any parking stalls that exceed the minimum requirements established by the *City of Calgary Land Use Bylaw* and the policies contained in this ASP.

8.2.4 General Amenity Space Design Policies

Amenity spaces, including central amenity spaces in Neighbourhood Activity Centres and Transit Plazas in higher-order Activity Centres and *Main Street* should act as destinations for people to spend time, socialize and access services and amenities. **Bylaw 83P2019**

1. Amenity spaces shall be designed as multi-functional areas meeting the needs of a broad range of residents. In higher-order Activity Centres and *Main Street*, these functions may be achieved across separate amenity spaces (as opposed to each amenity space being multi-function). **Bylaw 83P2019**
2. Public art should be incorporated into the design of amenity spaces to create a unique sense of place and to serve as distinctive landmarks in the Neighbourhood.
3. In addition to the policies found here in Section 8, amenity space design should also comply with the policies found in Section 6.6, Neighbourhood Activity Centres, Section 7.6, Open Space System and Appendix D: Neighbourhood Design.



Amenity spaces may provide for passive and/or active recreation.

8.2.5 Central Amenity Space Design Policies

1. To serve as a focal point and destination for local residents, the central amenity space found in Neighbourhood Activity Centres shall
 - a. provide residents with a multi-functional area that can accommodate both passive and active recreation as well as local gatherings and events;
 - b. be located close to one or more transit stops; and
 - c. provide bicycle parking.
2. The length to width ratio of the central amenity space should not exceed 3:1 in order to create an appropriate focal point for the Neighbourhood.

8.2.6 Transit Plaza Design Policies

1. Each Transit Plaza should be designed to provide
 - a. heated, well-lit structures that effectively shelter transit patrons from inclement weather;
 - b. seating areas;
 - c. space to accommodate convenient transfer of transit patrons between feeder lines and primary transit routes, to the satisfaction of Calgary Transit;
 - d. bicycle parking;
 - e. route information and appropriate signage; and
 - f. services and amenities such as stores, food services, civic facilities and other active uses.

8.2.7 Streetscape Design Policies

1. The design of the streetscape in Activity Centres and *Main Street* shall accommodate elements such as street trees, street furniture, bicycle parking and appropriate lighting in order to enhance the experience of cyclists and pedestrians. **Bylaw 83P2019**
2. Public art should be incorporated at prominent locations along streets in order to provide points of interest and to serve as landmarks for local residents, business patrons and visitors.

8.3 Transit Station Planning Area Design Policies

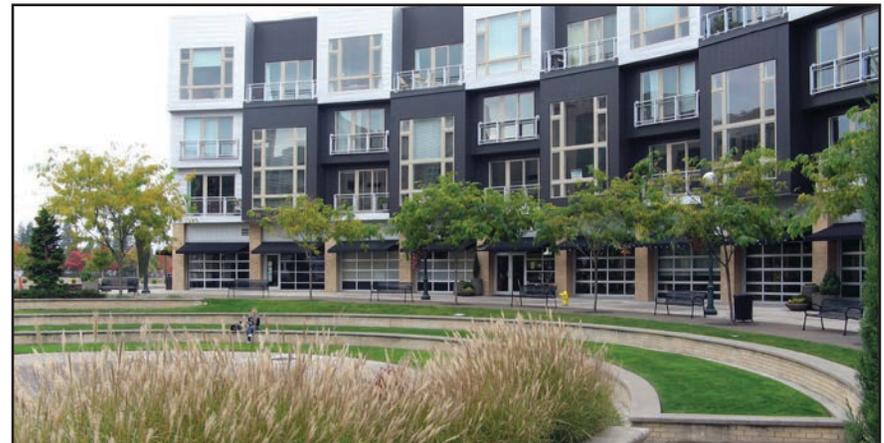
1. All development within the Transit Station Planning Area should be transit-oriented and Pedestrian-Oriented in its design;
2. Development in this area should be designed in accordance with Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines.

8.4 Retail Centre Design Policies

1. Retail Centres shall be designed with a focus on providing Retail and Employment Uses integrated with residential uses wherever possible.
2. Retail Centres should be designed in accordance with the Neighbourhood Design Guidelines in Appendix D and Appendix E: Environmental Design Guidelines.

8.4.1 Streetscape Design Policies

1. The design of the streetscape in Retail Centres should incorporate elements such as street trees, street furniture, bicycle parking and appropriate lighting in order to enhance the experience of cyclists and pedestrians. Public art should be incorporated at prominent locations along streets in order to provide points of interest and to serve as landmarks for local residents, business patrons and visitors.



The Central Amenity Space in Neighbourhood Activity Centres shall provide residents with a multifunctional area that can provide local gathering spaces.

8.4.2 Building Design Policies

1. In order to provide a high-quality pedestrian environment, buildings in Retail Centres should be designed to provide
 - a. a consistent setback from the sidewalk; and
 - b. active frontages with primary public entryways facing the public sidewalk.
2. Multi-Residential Developments in Retail Centres should provide ground floor units with individual entryways to the sidewalk.

8.4.3 Parking Design Policies

1. Surface parking facilities should be located away from transit and pedestrian areas in order to enhance the pedestrian function of the streetscape and reduce conflict between active modes of travel and automobile traffic.
2. Surface parking facilities should be designed to provide safe and convenient sidewalk and pathway connections for pedestrians and cyclists to access building entrances.

8.5 Industrial/Employment Area Design Policies

1. The design of the Industrial/Employment Area should
 - a. provide a visually appealing interface on buildings visible from major transportation routes in accordance with *Improving Calgary's Entranceways: A Guide for Development Adjacent to Entranceways*;
 - b. provide conveniently located, safe and accessible pedestrian linkages that connect building and site entrances with internal and public pedestrian networks and transit stops;
 - c. provide conveniently located amenity spaces for employees; and
 - d. be designed in accordance with Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines.
2. Development adjacent to Environmental Open Space shall be sensitively treated to maintain the amenity values of these areas.
3. Any industrial development adjacent to Environmental Reserve (ER) or Municipal Reserve (MR) sites, an entranceway road, Stoney Trail, a boundary road or a residential area shall present a visually attractive image to the public by coordinating the elements of site design and building

architecture in a suitable and appropriate manner, and shall provide for a compatible and appropriate interface treatment.

4. Development adjacent to ER or MR sites, Stoney Trail, a boundary road, or a residential area shall provide compatible design elements to minimize visual, operational, traffic and other significant offsite impacts.

8.6 Joint Use Sites Design Policies

1. Joint Use Sites should not be located in Neighbourhood Activity Centres.
2. Where a Joint Use Site is located adjacent to a Neighbourhood Activity Centre, the school building should be situated next to the Neighbourhood Activity Centre.
3. A pedestrian and bicycle circulation plan should be provided for a Joint Use Site where a Joint Use Site is contained within an Outline Plan/Land Use Amendment application.
4. School yards that incorporate natural features and vegetation are encouraged.

8.7 High School Site Design Policies

1. The high school site should
 - a. provide for a compatible interface treatment with adjacent development;
 - b. contain a visually appealing site design and landscaping treatment, particularly when visible from roads with higher volumes of traffic;
 - c. be well integrated with and/or connected to the Major Activity Centre;
 - d. be suitably integrated with other institutional, recreational and public uses within or adjacent to the site; and
 - e. employ Street-Oriented Design.
2. Design of the high school is encouraged to follow the *City of Calgary Access Design Standards*.

8.8 Community Centre Site Design Policies

1. The community centre and its site should be designed and landscaped in a manner that supports and enhances the pedestrian environment and is compatible with the overall community vision.
2. The community centre and its site should be designed to adapt to the changing needs of residents over time.
3. The community centre should be located on a site to allow direct pedestrian access to the primary entrance from the sidewalk.
4. The architectural design of the community centre should signify the importance of the building, enhance its role as a community landmark and provide a strong relationship to the street.
5. Design of community association facilities and amenities are encouraged to follow the *City of Calgary Access Design Standards*.



Examples of amenity spaces with seating areas and public art.

8.9 Design for Safety Policies

The planning of sustainable, smart communities should incorporate “emergency services safe design” community principles, which promote and maintain safe and healthy behaviours, support effective emergency responses, and offer protection to people and their property. These include, but are not limited to, the following:

1. protecting Calgarians by ensuring an appropriate level of emergency protection, an adequate and equitable distribution of response service across Calgary and coverage to all communities and developments;
2. safeguarding Communities through transportation, land use, community, building and housing designs that are safe for emergency service providers;
3. provision of essential public safety services such as fire protection, police services, emergency medical care and bylaw enforcement;
4. effective planning for response to a variety of emergencies that reduces the occurrence of emergencies and should limit the extent of damage in those that do occur; and
5. enhancing Community safety through Community and building design that reduces opportunities for crime, controls fire spread, provides access for emergency vehicles, ensures adequate water supply for the fire load and locates emergency service stations and resources within the appropriate response time.



9 CONNECTING COMMUNITIES

Calgary Transportation Plan (CTP) goal: “Maintain automobile, commercial goods and emergency vehicle mobility in Calgary while placing increased emphasis on walking, cycling and transit.”

9.1 Calgary Transportation Plan (CTP)

The CTP and *Municipal Development Plan (MDP)* represent a shift for transportation and land use planning in Calgary. More compact forms of development as directed in the MDP will bring homes, jobs, services and amenities closer together, giving Calgarians more choices when travelling around the city. More travel choices means that Calgary’s transportation system will

- improve overall mobility;
- better withstand rising energy costs or other economic shocks;
- reduce energy use and emissions;
- provide travel options to all Calgarians, regardless of age or income; and
- increase Calgary’s competitive advantage in the global marketplace.

It is recognized that the automobile will still be a common choice for some Calgarians, but other modes of travel that provide many of the benefits listed above will be emphasized, encouraged and supported through the transportation network and policies to follow.

All policies within this section should follow the principles, guidelines, policies and goals contained within the CTP adopted by City Council, September 2009. One important policy of the CTP that directs transportation input to the Area Structure Plan (ASP) is transportation choice and providing travel options to Calgarians.



The CTP and MDP represent a shift for transportation and land use planning to provide more modal choices.

9.2 Pedestrian and Bicycle Circulation

Purpose

The purpose of these policies is to provide for direct and convenient pedestrian and bicycle circulation within and through the Communities.

9.2.1 Pedestrian and Bicycle Circulation Policies

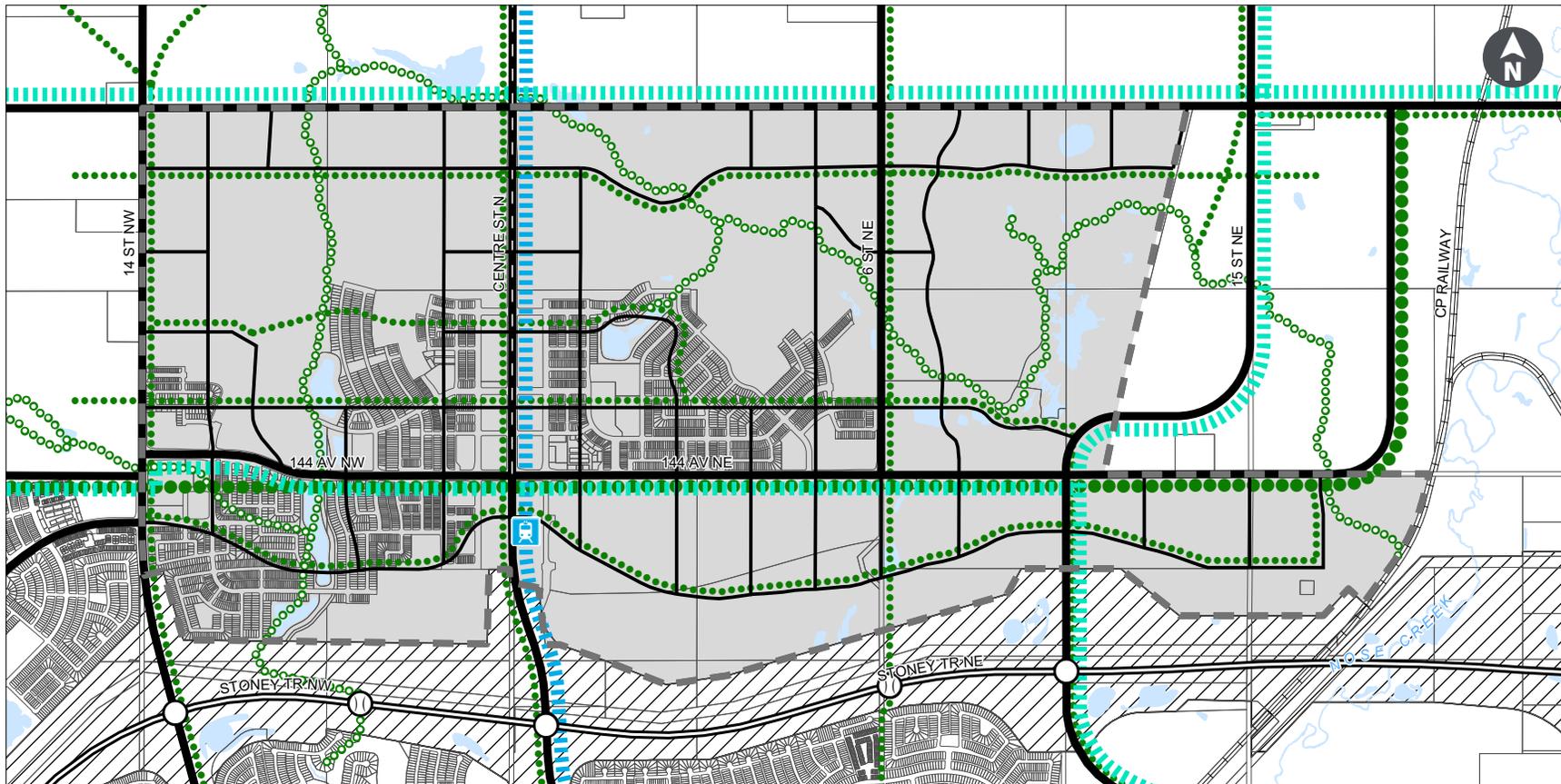
1. Regional Pathways

- a. The regional pathway network should
 - i. generally be aligned as shown on *Map 13: Transportation*;
 - ii. not be in conflict with commercial driveways or aisles;
 - iii. be designed in accordance with the *City of Calgary Access Design Standards*;
 - iv. aim to be located within or integrated with a park, linear park or natural feature;
 - v. be aligned with the Calgary greenway system and/or the Green Corridor (as defined in Section 10.4.3) where possible and suitable; and
 - vi. aim to connect with other Communities outside of the ASP area.
- b. Where the regional pathway cannot be located within or integrated with a park or natural feature, it may be located within a road right-of-way in the form of a multi-use or regional pathway or designated bikeway separated from vehicle traffic. **Bylaw 83P2019**

2. Local Pathways, Sidewalks and Walkways

- a. The alignment of local pathways, sidewalks and walkways should be determined at the time of Outline Plan/Land Use Amendment application.
- b. The local pathway, sidewalk and walkway system should be designed to
 - i. achieve short, convenient, direct and non-motorized connections to Activity Centres, *Main Street* and transit stops; **Bylaw 83P2019**
 - ii. promote walking and cycling to connect residential, commercial, institutional and industrial areas;
 - iii. provide convenient and practical access to transit stops;
 - iv. be designed in accordance with the *City of Calgary Access Design Standards*;
 - v. link origin and destination points within the Plan Area; and
 - vi. connect to the regional pathway system and the Green Corridor.

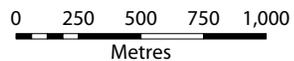
Connecting Communities



Map 13
Transportation

Legend

- | | | |
|---|---|---|
|  Transportation/Utility Corridor |  Primary Collector/Collector |  BRT Route |
|  Plan Area |  Full Interchange |  Primary Cycling Network |
|  Skeletal Road |  Pedestrian Overpass |  Regional Pathway |
|  Arterial Street |  LRT Alignment |  Green Corridor |
|  Urban Boulevard |  LRT Station | |



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AMENDED: 29P2022

3. On-Street Bicycle Routes

On-street bicycle route design treatments should be determined at the Outline Plan/ Land Use Amendment stage in accordance with the *City of Calgary Bicycle Policy* and the *City of Calgary Pathway and Bikeway Plan* and should generally coincide with the Primary Cycling Network as shown within the *North Regional Context Study*.

4. Active Mode Connectivity

- a. Active Mode Connectivity shall be maximized for pedestrians and cyclists within the ASP as per the CTP.
- b. Pedestrian and bicycle connectivity should be established between the Plan Area and facilities to the south of the Plan Area through future pedestrian overpasses and Stoney Trail interchanges.
- c. All outline plans must provide quantitative measures demonstrating the Active Mode Connectivity achieved for that specific outline plan and/or subdivision.



Primary transit will serve the Plan Area.

9.3 Transit Service

Purpose

The purpose of these policies is to provide for direct, convenient and efficient transit service within the Plan Area. The Plan Area will eventually be served by light rail transit (LRT), bus rapid transit (BRT) and feeder bus transit routes that will extend throughout the Plan Area.

Bylaw 83P2019

9.3.1 Transit Service Policies

1. Connectivity

- a. Transit service area requirements should be achieved through the provision of
 - i. direct and convenient road, pedestrian and street connections and transit stops;
 - ii. transit stops located to facilitate direct pedestrian access; and
 - iii. transit facility location and design that adheres to the principles of universal design contained in the *City of Calgary Access Design Standards*.

2. Primary Transit

Primary transit including LRT and BRT can generally be seen in *Map 13: Transportation* running in and through the Plan Area. The LRT and BRT are located to connect the Major Activity Centre, *Urban Main Street*, Community Activity Centres and other major destinations outside of the Plan Area by high levels of frequent transit service.

Bylaw 83P2019

- a. The LRT is to run generally north to an LRT station in the Major Activity Centre just to the south of 144 Avenue N and continue north through the *Urban Main Street* out of the Plan Area north of 160 Avenue N. Specific alignment is to be determined. A park and ride facility may be incorporated into the LRT station design.
- b. The BRT is to run generally from the BRT hub in the community of Sage Hill, through the community of Evanston, up 14 Street W northwards to 160 Avenue N and eastwards to the east boundary of the Plan Area.
- c. Interim BRT service may be provided along the future LRT alignment until the LRT is implemented.

Bylaw 83P2019

3. Feeder Bus Transit

- a. Feeder bus routes can generally be seen as in *Map 14: Transit*. The conceptual feeder bus routes are intended to provide direct and convenient connections within the Plan Area and to/from the Primary Transit Network to allow Plan Area residents and employees more direct and convenient connections to outside the Plan Area. Feeder bus routes can be refined without an amendment to this ASP. **Bylaw 83P2019**
- b. Bus transit stops should be located to
 - i. *serve High-Density Mixed-Use development in Activity Centres (such as in the Keystone Hills Core Area, Community Activity Centres and Neighbourhood Activity Centres), schools, major institutional uses, industrial and commercial uses and standard suburban residential uses in the Plan Area;* **Bylaw 83P2019**
 - ii. provide direct, convenient transit service; and
 - iii. be within a five-minute walk (400 m or 0.25 miles) of 90 per cent of homes to encourage transit ridership.
- d. The developer shall equip bus transit stops with suitable amenities such as benches, shelters and other amenities deemed necessary by the Approving Authority
- e. The design of the street network should provide for efficient transit routes within the Plan Area.
- f. *The transit routes are conceptually identified on Map 14: Transit, but they will be further refined at the Outline Plan/Land Use Amendment stage.* **Bylaw 83P2019**

9.4 Regional Road Network

Purpose

The purpose of these policies is to provide for a functional, safe and efficient Regional Road network. The general alignment of the Regional Roads is shown on *Map 13: Transportation*. **Bylaw 83P2019**

9.4.1 Regional Road Network Policies

1. Regional Road Network Design

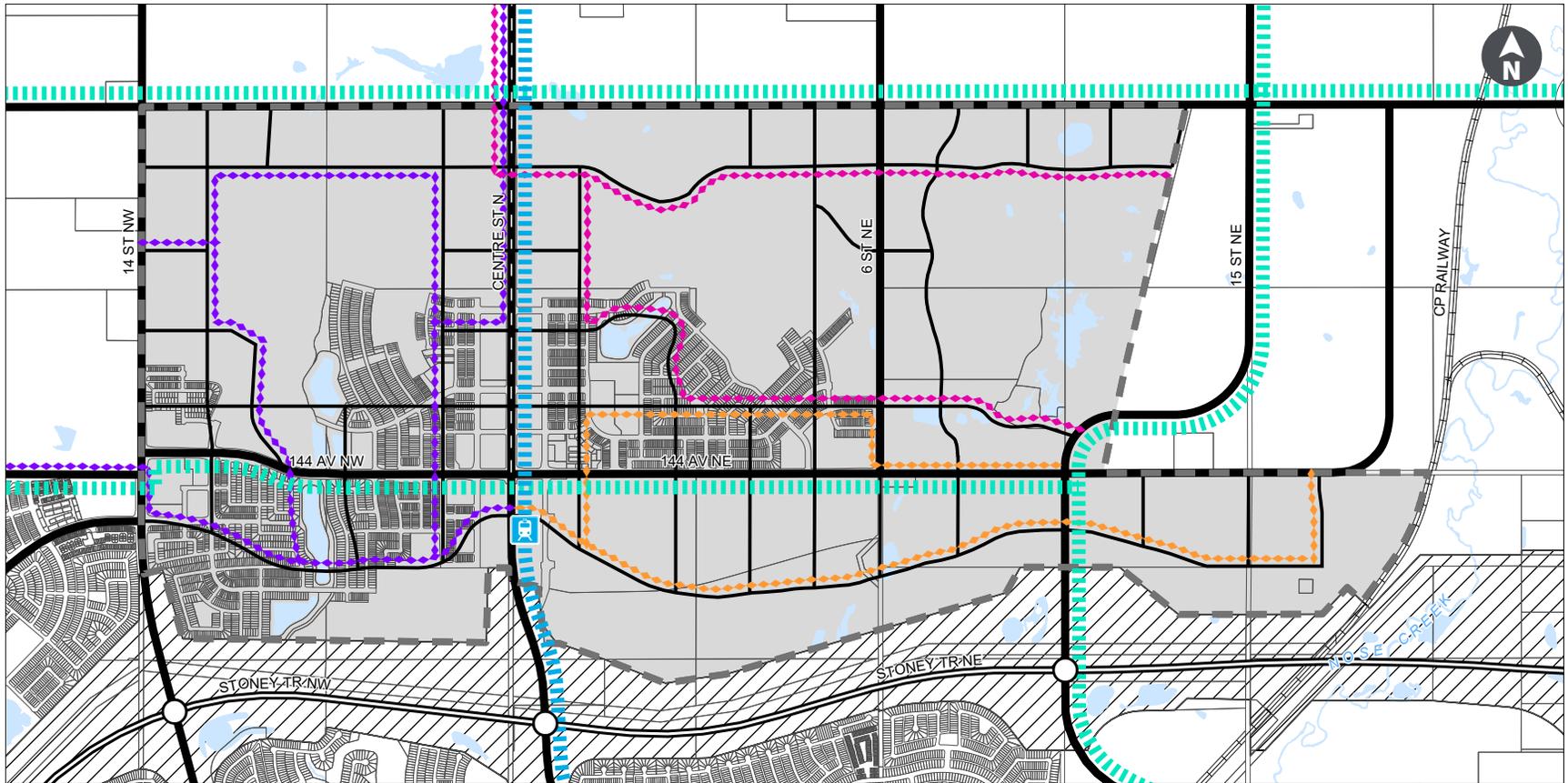
The Regional Road rights-of-way, and the related interchange areas, should generally be located as shown on *Map 13: Transportation*. The only Regional Road directly adjacent to the Plan Area is Stoney Trail, which is under Provincial jurisdiction. **Bylaw 83P2019**

2. Emergency Access

As required, emergency access to the developing portion of the Communities shall be identified at the Outline Plan/Land Use Amendment stage and be maintained in a satisfactory manner.

3. Interchange Function and Design

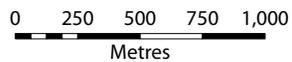
Three interchanges will provide regional access to the Plan Area at Stoney Trail and 14 Street N.W., Stoney Trail and Centre Street N, and Stoney Trail and 11 Street N.E., which are under Provincial jurisdiction.



Map 14
Transit

Legend

- | | | |
|---------------------------------|-----------------------------|----------------|
| Transportation/Utility Corridor | Primary Collector/Collector | Feeder Route 2 |
| Plan Area | Full Interchange | Feeder Route 3 |
| Skeletal Road | LRT Alignment | BRT Route |
| Arterial Road | LRT Station | |
| Urban Boulevard | Feeder Route 1 | |



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9.5 Internal Street Network

Purpose

The policies provide for an Internal Street network within the Plan Area that accommodates transit, non-motorized and vehicular traffic in a safe, efficient and balanced manner. The policies and design guidelines aim to balance the need for motor vehicle movement and parking with the need for using streets to create a sense of community and Active Mode mobility.

9.5.1 Internal Street Network Policies

1. Local Transportation Connectivity

- a. Streets should refer to the applicable typologies, guidelines and principles set out in the *City of Calgary Complete Streets Guide*.
- b. *The classifications of the street network shown on Map 13: Transportation are preliminary and shall be refined at the Outline Plan/Land Use Approval process without requiring an amendment.*
Bylaw 83P2019
- c. Road and street typologies should allow Neighbourhoods to be linked together with many routes of travel being available for all modes of transportation.
- d. Emergency vehicle and vehicular connectivity shall be maximized for emergency vehicles and passenger vehicles in the Plan Area as per the CTP.

2. Collector Street/Arterial Street Network

- a. Arterial and Collector streets comprising the internal street network within the Plan Area shall be generally shown as identified on *Map 13: Transportation*.
Bylaw 83P2019
- b. An Urban Boulevard will be located along Centre Street N between 144 Avenue N and 160 Avenue N.
- c. Green Infrastructure should be incorporated at the design stage, where it is deemed appropriate.
- d. Roundabouts shall follow the *City of Calgary Roundabout Policy*.

- e. *The exact road and street pattern, including detailed design, typology/ classification, street sizing and intersection/access spacing will be determined at the Outline Plan/Land Use Amendment stage to the satisfaction of the Approving Authority.*
Bylaw 83P2019

deleted
Bylaw 83P2019

3. Local Street Network

- a. The local street network is not shown on *Map 13: Transportation* but shall be defined in the context of an Outline Plan/Land Use Amendment application.
Bylaw 83P2019
- b. The layout of the local street network should
 - i. provide direct connections and multiple route choices to origin/ destination points and connectivity between parts of the Plan Area for all modes of transportation;
 - ii. provide street connections for all modes that converge toward the Major Activity Centre, Community Activity Centre and Neighbourhood Activity Centres and towards the *Urban Main Street* along Centre Street N,
Bylaw 83P2019
 - iii. allow for efficient and direct transit routes; and
 - iv. form an internal street network comprised of interconnected streets creating multiple routing options for pedestrians, cyclists and motorists.

4. Goods Movement

All Arterial streets may generally act as Goods Movement Routes and truck routes, but Goods Movement Routes shall be determined at the Outline Plan/Land Use Amendment stage to the satisfaction of the Approving Authority.

9.6 Transportation Demand Management

Purpose

The purpose of these policies is to enhance people's travel choices in order to improve the efficiency of the transportation system.

9.6.1 Transportation Demand Management Policies

At the Development Permit stage, developers are strongly encouraged to develop Transportation Demand Management (TDM) programs to

- a. increase the attractiveness and convenience of employee and resident commuting by public transit, carpooling, cycling, walking, telecommuting and other appropriate methods;
- b. reduce the use of personal motor vehicles for commuting by employees and residents;
- c. reduce the peak-period demands on the transportation system; and
- d. reduce the need for existing rates of on-site employee parking.

10 GREENING COMMUNITIES

Municipal Development Plan (MDP) goal: “Conserve, protect and restore the natural environment.”

Purpose

The purpose of these policies is to conserve, protect and restore the natural environment, aligning with the MDP Section 2.6, Greening the City. These policies aim to reduce the ecological footprint created by development in the Plan Area, restore biodiversity and facilitate the natural functions of land, water and air that sustain life. More detailed guidelines are provided in Appendix E: Environmental Design Guidelines.

10.1 Green Infrastructure Policies

1. An interconnected Green Infrastructure network should be incorporated into community, road and street design. The network may include, but is not limited to,
 - a. Environmental Open Space;
 - b. natural or constructed wetlands;
 - c. natural vegetated areas;
 - d. native prairie and native pasture lands;
 - e. naturalized landscaping;
 - f. community gardens;
 - g. significant trees;
 - h. tree-lined streets;
 - i. Water Bodies;
 - j. rain gardens and bioswales;
 - k. permeable pavement areas;
 - l. absorbent landscape; and
 - m. buildings with Green Roofs.

2. The design of the interconnected Green Infrastructure network should incorporate the principles of Green Infrastructure by
 - a. conserving or minimizing loss of natural green elements including vegetation and topography prior to and during development;
 - b. maintaining and increasing ecosystem connectivity by identifying and protecting strategic parcels, blocks, and corridors as identified on *Map 15: Environmental Open Space Study Area*; **Bylaw 83P2019**
 - c. supporting natural functions such as water and air filtration, storm-water control, food production and composting;
 - d. designing engineered green systems to mimic nature; and
 - e. integrating Green Infrastructure horizontally and vertically through measures such as green buildings and Green Roofs.
3. The protection of Environmental Open Space should be provided in accordance with the City of Calgary Open Space Plan and the MDP.
4. To support urban forestry, the existing significant trees should be protected and incorporated into the site and street design. Tree planting opportunities are strongly encouraged in development. Developers should refer to Calgary . . . A City of Trees: Parks Urban Forest Strategic Plan. This may include planting of trees, bushes and shrubs on public and private land, in front and back yards, courtyards, plazas and rooftops.
5. The City should work with applicants to facilitate the implementation of Green Infrastructure initiatives through its approval, construction and acceptance process.

10.2 Land Policies

1. Disruption and fragmentation of natural habitats should be minimized by
 - a. incorporating ecological features such as natural vegetation, topography, and Water Bodies into design at the Outline Plan/ Land Use Amendment and Development Permit stages;
 - b. clustering housing to retain greater amounts of open space and natural areas where possible and appropriate; and
 - c. using slope adaptive design and conservation planning in accordance with the *City of Calgary Slope Adaptive Development Policy and Guidelines and Conservation Planning and Design Guidelines*.

Greening Communities

10.3 Water Policies

1. Watershed protection, conservation and enhancement of water quality and quantity should be achieved by
 - a. protecting and integrating critical ecological areas such as wetlands, floodplains and riparian corridors; critical aquifer recharge areas, hazardous slopes and geologically hazardous areas; and protective buffer zones into development areas;
 - b. minimizing run-off and maximizing infiltration of stormwater by minimizing development on undisturbed lands and other measures where appropriate such as preserving large areas of absorbent open space, using natural vegetation to increase infiltration, reducing land required by vehicles and designing to include pervious surfaces;
 - c. encouraging Low-Impact Development solutions for Outline Plan and Development Permit applications in accordance with the *North Regional Stormwater Master Drainage Plan* (to be revised) including, but not limited to,
 - i. natural water balance modelling (using natural water storage and drainage solutions such as rain gardens, bioswales, bioretention areas, reduced flow and run-off rates, pervious surfaces and absorbent landscaping, etc.),
 - ii. Green Roofs (rooftop gardens, vegetated roof surfaces and walls), and
 - iii. stormwater source control best management practices;
 - d. promoting water conservation measures such as
 - i. water efficient open space, parks and other landscaped areas, including the use of drought-tolerant vegetation for landscaping and xeriscaping strategies; and
 - ii. matching water quality to water use by incorporating rainwater collection systems on site and architectural design for the use of rainwater for irrigation and other uses, in accordance with applicable codes at the time of application; and
 - e. achieving the water quality and quantity objectives and policies within the *North Regional Stormwater Master Drainage Plan* (revised) and the MDP.



Watershed protection should be achieved by maximizing infiltration of storm water through use of natural vegetation.

10.4 Ecological Networks Policies

1. Biodiversity and landscape diversity should be retained by
 - a. giving the highest priority to protection of Environmentally Significant Areas when assigning land uses in accordance with Section 2.6.4 of the MDP;
 - b. creating an interconnected open space system within and between watersheds to develop a regional open space system that respects and enhances the region's ecological infrastructure;
 - c. aligning land uses and landscape elements to increase functional connectivity;
 - d. integrating natural features of the surrounding landscape into the design of urban development (including sites) to maintain a high degree of interconnectivity and permeability; and
 - e. locating and designing parks and open spaces to connect with Green Streets, green alleys and lanes.
2. Promotion of the provision and maintenance of a healthy, viable urban forest should be achieved by
 - a. conserving existing trees in the site design and layout of new buildings;
 - b. meeting the target tree canopy for the Plan Area as outlined in Appendix J: Indicators and following the *Calgary . . . A City of Trees: Parks Urban Forest Strategic Plan* guidelines for tree planting intentions and opportunities;
 - c. providing street trees wherever possible within boulevards on residential roads in the community;
 - d. ensuring tree Sustainability through tree-planting plans, proper planting practices, appropriate location of shallow utilities and development phasing; and
 - e. encouraging the planting of trees and green spaces in yards, rooftops and plazas.

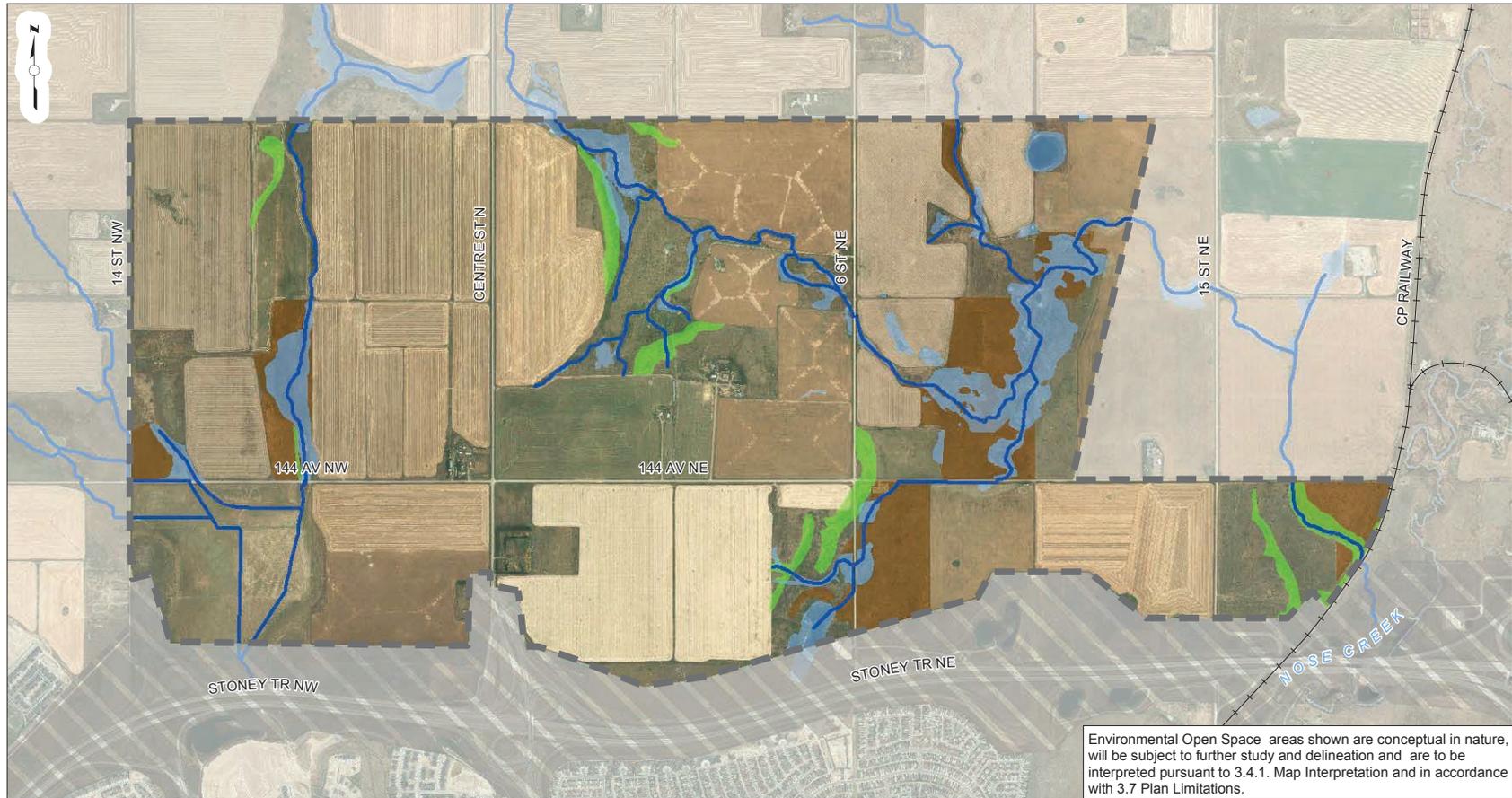
10.4.1 Environmental Open Space Policies

Purpose

Environmental Open Space (shown on *Map 15: Environmental Open Space Study Area*) is composed of the River Valley System, the urban forest, Environmentally Significant Areas and Natural Environment Parks including wetlands, natural Water Bodies, escarpments, riparian corridors, natural grasslands and native pasture and woodlots that are protected through land use designations, conservation easements, or other mechanisms. Environmental Open Space policies provide direction to the Approving Authority for the acquisition of open space by The City for the purposes of **Bylaw 83P2019**

- systematic conservation of land and water by creating an interconnected open space system within and between watersheds or Environmentally Significant Areas to reduce habitat fragmentation;
- protection of the Plan Area watershed in its natural form, pursuant to the *Water Act*, *Environmental Protection and Enhancement Act* (EPEA), the *Municipal Government Act* (MGA) and the *Nose Creek Watershed Water Management Plan*;
- enhancing air, soil and water quality through watershed and groundwater protection and carbon dioxide sequestering;
- ensuring that the ecological integrity of public open spaces is recognized and protected as the most critical element of the Plan Area's Green Corridor (see Section 10.4.3, Green Corridor Policies);
- allowing for the modification of natural areas to increase their capacity to buffer more sensitive ecological areas from urban effects and strategically protecting Water Bodies to safeguard fresh water resources;
- strengthening the connection between natural areas, public parks and Neighbourhoods, enhancing opportunities for outdoor recreation, retaining Calgary's natural and cultural heritage and conserving biodiversity and important environmental systems;
- protecting, enhancing and integrating critical ecological areas such as wetlands, floodplains and riparian corridors with surrounding developed areas;
- protecting strategic parcels, blocks and corridors that increase ecosystem connectivity, providing opportunities for source control of stormwater infiltration, promoting food production and composting, and encouraging play and learning;
- adding to the aesthetics of the urban fabric by means of natural features and diverse landscapes; and
- contributing to the physical, emotional and spiritual well-being of Calgarians by providing areas of respite from the built environment.

Greening Communities



Map 15
Environmental Open
Space Study Area

Legend

-  Plan Area Boundary
-  Transportation/Utility Corridor
-  Native Prairie
-  Escarpments
-  Wetlands
-  Potential Water Body

0 200 400 600 800 1,000
Metres

APPROVED: 15P2012

Lands within the Environmental Open Space qualify as both or either Environmental Reserve (ER) as defined in the MGA or Environmentally Significant Area as defined in the *Calgary Open Space Plan*. Delineation of these lands will occur with development application. The Environmental Open Space on Map 5: Land Use Concept identifies those areas of regional significance only, as per the *Nose Creek Watershed Water Management Plan* in association with the *Open Space Plan*. See *Map 15: Environmental Open Space Study Area* for the composition of Environmental Open Space, as applicable, for wetlands potential, Water Bodies, native prairie and pasture and other Environmentally Significant Areas. Policies herein are to be read in conjunction with Section 7.6, Open Space System; Section 10.4.3, Green Corridor Policies; and Section 10.4.2, Wetland Policies.

Bylaw 83P2019

For greater clarity, currently, the Environmental Open Space areas are not field verified and may not reflect site conditions, and as such, are subject to further study and will be delineated upon development application and approval. In accordance with Policy 10.4.1 3(c) below, only Environmental Open Space dedicated, acquired or otherwise protected by the City pursuant to 10.4.1 3(b) are subject to the use and preservation oriented Environmental Open Space policies in this ASP.

Policies

Environmental Open Space policies apply to those areas as identified on Map 5: Land Use Concept and *Map 15: Environmental Open Space Study Area* **Bylaw 83P2019**

(2) Direct Administration to confirm and review native prairie grassland area location as part of the Environmental Open Space at the outline plan stage and to consider all related policies. Landowners are encouraged to explore opportunities to incorporate native prairie into innovative neighbourhood design.

1. Applicable Legislation and City Policy

Environmental Open Space shall be protected, restored, salvaged, enhanced and managed in accordance with the provisions of the *Water Act*, *EPEA*, *MGA*, *MDP*, *Open Space Plan*, *Calgary Wetland Conservation Plan*, *Nose Creek Watershed Water Management Plan* and other existing legislation and policy at time of development.

2. Composition of Environmental Open Space

a. Recreational amenities such as pathways, observation areas, regional pathways, the Green Corridor, nature trails and boardwalks shall be allowed within the Environmental Open Space where it is demonstrable that there is no negative impact or net loss on ecological and hydrological connectivity.

- b. Treated stormwater releases into existing Water Bodies may be acceptable if it can be demonstrated that the water contributes to the function of these natural features and provides for quality habitat, as demonstrated in a stormwater management plan in conjunction with the *Nose Creek Watershed Water Management Plan* release rates.
- c. Treated stormwater may be allowed in Environmental Open Space where a net benefit to the ecological function can be demonstrated.
- d. Roads may be allowed to cross the Environmental Open Space provided that ecological and recreational connectivity is maintained under the road, where feasible and appropriate.
- e. Pathway crossings shall be located to integrate the Green Corridor into the Communities.
- f. The general categories of uses identified shall be refined through the land use districts applied within the Environmental Open Space.

3. Protection of Lands Within Environmental Open Space

- a. Where lands within the Environmental Open Space are determined to qualify as ER in accordance with the MGA, these lands are to be dedicated as ER through the subdivision approval process, subject to the discretion of the Director of Parks.
- b. Where Environmental Open Space does not qualify as ER, the lands may be acquired and protected through alternative means where deemed appropriate by the Approving Authority. These alternative means include, but are not limited to
 - i. a land transfer or exchange undertaken in accordance with the “no net loss” policy pursuant to the *Calgary Wetland Conservation Plan*;
 - ii. the application of the *City of Calgary Slope Adaptive Development Guidelines Policy and Conservation Planning and Design Guidelines*;
 - iii. dedication of the lands as reserve pursuant to the MGA;
 - iv. registration of a conservation easement on title as per the provisions of the *Alberta Land Stewardship Act*;
 - v. purchase of the lands; and
 - vi. introduction of development controls or incentives to encourage voluntary conservation of the lands, which may include, but are not limited to,

- A. density bonusing or credit systems;
 - B. increased building setbacks;
 - C. site grading restrictions; and
 - D. enhanced landscaping treatments.
- c. Notwithstanding subsection (3)(b) above, where lands within the Environmental Open Space are not dedicated, acquired or otherwise protected by The City, the lands shall be considered to be developable, subject always to section 3.7 Plan Limitations and the policies of the adjacent Land Use Area shall apply to these lands without requiring an amendment to Map 5: Land Use Concept.
- d. Notwithstanding subsection (3)(c) above, where these lands are subject to a Land Use Amendment application without subdivision, the landowner and the Approving Authority may agree the lands may be acquired or protected through alternative means referenced in Section 10.4.1 (3) (b) above, or by applying the Special Purpose – Urban Nature (S-UN) District or another applicable district under the *City of Calgary Land Use Bylaw* where appropriate, or as per the policies in the *Open Space Plan*.
- e. At all times, prior to disturbing any Water Body, an applicant shall obtain an approval(s) from the Province pursuant to Part 4 of the *Water Act*, at the applicant's sole cost and expense.

4. Interface With Environmental Open Space

- a. Where land abuts the Environmental Open Space, development shall occur in a sensitive manner such that
- i. runoff is diverted from the Environmental Open Space, unless identified within a detailed drainage strategy provided at the Outline Plan/Land Use Amendment stage, that the runoff is required to supplement the existing wetland habitat or drainage corridor; and
 - ii. an aesthetically appealing visual transition is provided between development and the Environmental Open Space.
- b. In order for the area to be visually accessible and to create viewsheds in the Environmental Open Space, single loaded roads and/or pedestrian connections should be located adjacent to Environmental Open Space where deemed appropriate by the Approving Authority.
- c. When developing adjacent to the Environmental Open Space, development should meet Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines.

- d. Site grades for communities surrounding the Environmental Open Space shall demonstrate that the natural drainage channels and areas will remain viable in a post-development state.
- e. Grade matching or development disturbance should occur only outside of the Environmental Open Space, unless otherwise approved by the Director of Parks.
- f. Any consideration for Water Body crossings (for transportation and infrastructure purposes) should be determined within the wider context of urban need and treated with the utmost environmental sensitivity. Factors to be considered when planning, designing and constructing these crossings include
- i. city-wide street connectivity that integrates (as opposed to separates) stream corridors into the Community;
 - ii. waterway constraints (stream corridor considerations and riparian areas);
 - iii. location and design of stream channel crossings;
 - iv. minimizing impacts on adjacent Communities and parks;
 - v. incorporating river crossing design principles; and
 - vi. adapting road design to accommodate at-grade crossings to recognize the highest priority of pedestrian and ecological connectivity of the Environmental Open Space (road bulb-outs, traffic calming devices, reduced speed limit, textured paving, tree plantings, etc.).

5. Natural Area Management Plan

- a. A natural area management plan should be completed prior to the approval of an Outline Plan or detailed land use planning for lands protected within Environmental Open Space. See the *Calgary Parks and Recreation Natural Area Management Plan* or most updated version for report guidelines and specifications.

6. Development

- a. At the time of the Outline Plan submission, construction level details for road crossings and typical cross-sections of adjacent properties will be required.
- b. Prior to tentative plan or stripping and grading permit approval, it should be demonstrated that critical ecological material such as native grasses, forbs and trees from development areas are to be salvaged

and integrated into the Environmental Open Space, where determined practical and feasible by the Director of Parks.

- c. Prior to tentative plan or stripping and grading permit approval, it shall be demonstrated that critical cultural material such as glacier erratics from the development areas are to be salvaged and integrated into the Environmental Open Space, where determined practical and feasible by the Director of Parks..
- d. Land owners should restore the land within the Environmental Open Space to native habitat through the use of native plant species, as per the *Calgary Parks and Recreation Natural Area Management Plan* .

10.4.2 Wetland Policies

Purpose

The purpose of these policies is to provide for the protection and enhancement of wetlands and their related uplands within the Plan Area. The policies also address the potential to allow development of certain wetlands within the Plan Area, in accordance with the “no net loss” wetlands policy, pursuant to the *Calgary Wetland Conservation Plan*.

Appendix A: Required Studies, Analysis & Concept Plans identifies any additional studies that may be required to assess these wetlands in detail at the Outline Plan/Land Use Amendment, Subdivision and/or Development Permit stage.

Policies

1. Wetlands That Qualify as Environmental Reserve: Protection and Acquisition

Applicants must comply with the terms of these wetland policies and the *Calgary Wetland Conservation Plan* at all times:

- a. Wetlands that are considered Class III and above (as defined by the *Stewart and Kantrud Wetland Classification System*) qualify as ER in accordance with the provisions of the MGA and the *Calgary Wetland Conservation Plan*. These lands shall be dedicated as ER through the subdivision process unless the Approving Authority determines, in its sole and unfettered discretion, not to require the dedication.
- b. Where wetlands qualifying as ER are not dedicated to The City, the landowner shall provide compensation, as per the *Calgary Wetland Conservation Plan*, to the satisfaction of the Approving Authority.

- c. When a Land Use Amendment application is submitted without subdivision, and when the wetlands meet the criteria required pursuant to section 664 of the MGA, the landowner and the Approving Authority may agree that the wetlands may be acquired or protected through alternative means referenced in Section 10.4.2 (3) below, or by applying the Special Purpose – Urban Nature (S-UN) District or another applicable district under *The City of Calgary Land Use Bylaw* to the area of the wetland, or as per policies identified in the *Open Space Plan* (for example a conservation easement).
- d. When a Development Permit application is submitted without subdivision, and when the wetlands meet criteria required pursuant to section 664 of the MGA, the wetlands should be protected by applying a setback pursuant to The City's *Environmental Reserve Setback Guidelines*.

2. Wetlands That Qualify as Environmental Reserve: Disturbance

The Approving Authority may exercise its discretion to permit an applicant to disturb Class III and above wetlands (as defined by the *Stewart and Kantrud Wetland Classification System*) pursuant to the *Calgary Wetland Conservation Plan*.

In the event the Approving Authority permits an applicant to disturb Class III and above wetlands, the applicant shall execute a Wetland Compensation Agreement with The City, with contents and form acceptable to The City of Calgary Parks and Law departments. Where a wetland is not dedicated, acquired or otherwise protected, the lands shall be considered developable, subject always to Section 3.7: Plan Limitations, and the policies of the adjacent Land Use Area shall apply to these lands without requiring an amendment to Map 5: Land Use Concept.

3. Wetlands or Related Habitat That Do not Qualify as Environmental Reserve

Where wetlands which are considered Class I or II wetlands (as defined by the *Stewart and Kantrud Wetland Classification System*) or their related upland or native grassland/native pasture habitat, do not qualify as ER, the lands may be acquired and protected through alternative means where deemed appropriate by the Approving Authority. These alternative means include, but are not limited to,

- a. a land transfer or exchange undertaken in accordance with the “no net loss” policy pursuant to the *Calgary Wetland Conservation Plan*;
- b. the application of *The City of Calgary Slope Adaptive Development Guidelines Policy* and *Conservation Planning and Design Guidelines*;

Greening Communities

- c. dedication of the lands as Municipal Reserve pursuant to the MGA;
- d. registration of a conservation easement on title as per the provisions of the *Alberta Land Stewardship Act*;
- e. purchase of the lands;
- f. introduction of development controls or incentives to encourage voluntary conservation of the lands, which may include, but are not limited to,
 - i. density bonusing systems;
 - ii. increased building setbacks;
 - iii. site grading restrictions; and
 - iv. enhanced landscaping treatments.

Wetlands that are not protected are considered suitable for development under the policies of this plan.

4. Additional Protective Measures

- a. Developers should restore the land within the ER setback area, pursuant to The City's *Environmental Reserve Setback Guidelines*, to its native habitat through the use of native plant species.
- b. Developers should create a compatible interface with land adjacent to Environmental Open Space and retain the natural function of the interface area through such measures as the use of native plant species and increased building setbacks.



The Green Corridor is intended to create a connected pathway system within and beyond the Plan Area

5. Water Act Approval

At all times, prior to disturbing any wetland(s), an applicant shall obtain approval from the Provincial government pursuant to Part 4 of the *Water Act*, at the applicant's sole cost and expense.

6. In accordance with policies 10.4.1.2(b), 10.4.1.2(c) and 11.4.1.2(b), existing waterbodies, that are not designated Environmental Reserve, may be designed, amended or realigned with restorative principles to be receiving bodies for treated stormwater where it can be demonstrated that the quality and quantity of water contributes positively to the function and habitat of these waterbodies.

10.4.3 Green Corridor Policies

Purpose

The Green Corridor is the recreational component of Environmental Open Space. Green Corridors are intended to

- create a connected pathway system within and beyond the Plan Area;
- connect culturally and ecologically significant natural features and passive recreation areas within the Plan Area, while being contiguous and multi-purpose oriented;
- integrate with the city-wide regional pathway and bikeway network and the Calgary Greenway;
- connect natural features of the surrounding landscape into the design of urban development to maintain a high degree of interconnectivity and permeability; and
- provide mobility networks to connect citizens with major employment areas, places of learning and cultural and recreational destinations.

The land area for the Green Corridor should be provided within the Environmental Open Space (see Section 10.4.1).

Policies

1. Recreational Amenities

The Green Corridor will

- a. provide opportunities for a diversity of user access and activity;
- b. incorporate seasonal adaptability to provide year-long usability;
- c. where appropriate, connect to or be integrated with parks, recreation spaces and Joint Use Sites; and
- d. be 3.5 m (11 ft) in width, where feasible and appropriate.

2. Accessibility

The Green Corridor will

- a. achieve connections to open spaces and the local and regional pathway network;
- b. provide walking and cycling opportunities;
- c. link major origin and destination points within the Communities; and
- d. maximize opportunities to connect with natural features and large ecological areas such as watersheds, Water Bodies, significant vegetation and biologically diverse areas.

3. Acquisition

See Section 10.4.1.3, Environmental Open Space, for policies regarding acquisition of land for the Green Corridor.

10.5 Energy Policies

1. Energy efficiency should be part of the design considerations for all subdivisions and buildings. Design considerations should include
 - a. neighbourhoods, streets, buildings and parks oriented to maximize passive solar gain;
 - b. Densities and a land use pattern that support district energy and co-generation/combined heat and power;
 - d. creating tree corridors to serve as windscreens that protect buildings and activity areas from extreme temperature fluctuations;
 - e. Mixed-Use buildings to balance heat and power demand;
 - f. resource and energy-saving design and building techniques and standards, such as green building standards (e.g., Leadership in Energy and Environmental Design [LEED] or Built Green Alberta Standards); and
 - g. solar orientation, natural light and ventilation, xeriscaping and ecological landscaping that supplements efficient heating and cooling systems.
2. In consultation with Calgary Roads, developers are encouraged to use street light fixtures that are energy efficient, minimize light pollution and are aesthetically pleasing.
3. Urban forms and infrastructure that support alternative and renewable energy production, sources, and systems, and reduced energy consumption are strongly encouraged.

4. Incorporation of micro-energy systems such as solar panels or similar are encouraged in site and Community design.
5. A district energy and co-generation/combined heat and power assessment should be conducted for all Outline Plan/Land Use Amendment applications that include all or a portion of the Major Activity Centre, the *Urban Main Street*, or a Community Activity Centre to determine feasibility and plan for future infrastructure, where appropriate. **Bylaw 83P2019**

10.6 Waste Management Policies

1. The City of Calgary's 80/20 by 2020 Waste Diversion Strategy sets a target of recycling 80 per cent of current product being taken to city landfills by 2020. The City's goals and targets for waste reduction should be met by
 - a. encouraging design practices that reduce construction waste;
 - b. giving consideration to access points for the removal of waste and diversion friendly design elements;
 - c. designing buildings to be adaptable to changing uses and needs of occupants and to minimize demolition costs; and
 - d. ensuring that all development be of a high standard and adaptable to changing use over time, favouring re-use and adaptation of existing buildings rather than demolition and new-build.
2. One Community Recycling/Diversion Depot should be provided in each of Communities A, B, and C, and be located in conjunction with a non-residential use in an Activity Centre.

10.7 Agricultural Operations Policies

Purpose

As much of the land within the Plan Area is currently being used for extensive agricultural production, the intent of the following policies is to ensure the protection of agricultural resources in accordance with the MDP.

1. Existing agricultural operations should be protected until the land is serviced for urban development in accordance with MDP policy 4.3.2(b) by
 - a. ensuring that stripping and grading limits adhere to the phasing boundaries of the associated Outline Plan/Land Use Amendment;
 - b. maintaining access to agricultural lands for farm machinery;

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- c. working with agricultural operators to limit any nuisance impacts to adjacent residents, if applicable; and
 - d. ensuring that adjacent or nearby development and building activities do not negatively impact land being used for agricultural production.
2. Compatible and appropriate agricultural operations may be incorporated into community design in order to provide for local food production.

11 UTILITY SERVICING POLICIES

11.1 Utility Infrastructure

Purpose

The purpose of these policies is to ensure that adequate utility infrastructure is provided to service urban development throughout the Plan Area.

11.1.1 Utility Infrastructure Policies

1. Municipal and Shallow Utilities

- a. Urban development in the Plan Area will be serviced with municipal water, sanitary sewer, a stormwater system and shallow utilities (i.e., gas, cable, electricity and telephone).
- b. The provision, alignment and capacity of water distribution mains and feeder mains, sanitary sewer mains and trunks, and stormwater mains and trunks should be in accordance with City standards, based upon utility servicing studies and analysis.
- c. The location of all shallow utilities and the provision of rights-of-way and easements and related line assignments should be addressed to the mutual satisfaction of The City, the landowner and the utility companies.
- d. Utility rights-of-way and easements shall be provided to accommodate municipal utilities at the discretion of the Approving Authority and shallow utilities as determined necessary by utility providers.
- e. Utility rights-of-way and easements, public utility lots and road rights-of-way may be required as determined necessary to facilitate orderly and sequential urban development.
- f. Utility rights-of-way should be designed to reduce the setback of buildings from the street wherever possible, with particular attention on the Activity Centres and *Main Street* and other High-Density areas where the pedestrian environment is paramount. **Bylaw 83P2019**
- g. Utility rights-of-way and easements should be located to ensure the long-term viability of street trees in the Plan Area.

2. Utility Alignments

- a. Utility alignments may be refined at the Outline Plan/ Land Use approval stage without an amendment to this ASP.

- b. Utility rights-of-way and easements and public utility lots must be provided as required to accommodate the development or the extension of municipal utilities necessary for development.
- c. Prior to Outline Plan/Land Use approval, a developer shall submit studies and information determined necessary to identify the location and alignment requirements for utilities within the development.
- d. A developer may be required to provide, or enter into an agreement to provide when required, the utility rights-of-way or easements necessary to accommodate the extension of municipal utilities through or adjacent to a site in order to allow for the servicing of a site.
- e. Utilities should be aligned to avoid Environmental Open Space including Environmental Reserve lands and Environmentally Significant Areas, unless otherwise approved by the Director of Parks. Temporary disturbance to Environmental Open Space for utility installation shall be reclaimed to the satisfaction of the Director of Parks.

3. Growth Management

deleted

Bylaw 53P2023

Utility Servicing Policies

11.2 Water Servicing

Purpose

The purpose of these policies is to provide for a suitable water supply system designed to service the urban development requirements throughout the Plan Area, as identified on *Map 16: Water Services*. The water distribution system should be aligned to minimize its impact on natural features.

Bylaw 83P2019

Pressure Zone. Some upgrades to the Spy Hill north pump station are required before the maximum day demand of the pressure zone is exceeded.

Bylaw 83P2019

The area within the North Hill Pressure Zone will be serviced via the existing 900 mm (35 inch) Airdrie feedermain, which runs parallel to the railway. In order to service the Plan Area by this Airdrie feedermain, the existing water metre chamber will need to be relocated northward to the current city boundary and ownership of the feedermain within the city boundary will need to be transferred to the City of Calgary.

11.2.1 Water Servicing Policies

1. Design of Water Distribution System

The water distribution system for the Plan Area should be designed to adequately, safely and efficiently serve the full build out of the Plan Area as per the Area Structure Plan (ASP). General alignments of the water distribution system are illustrated on *Map 16: Water Services*.

2. Review of Water Distribution System

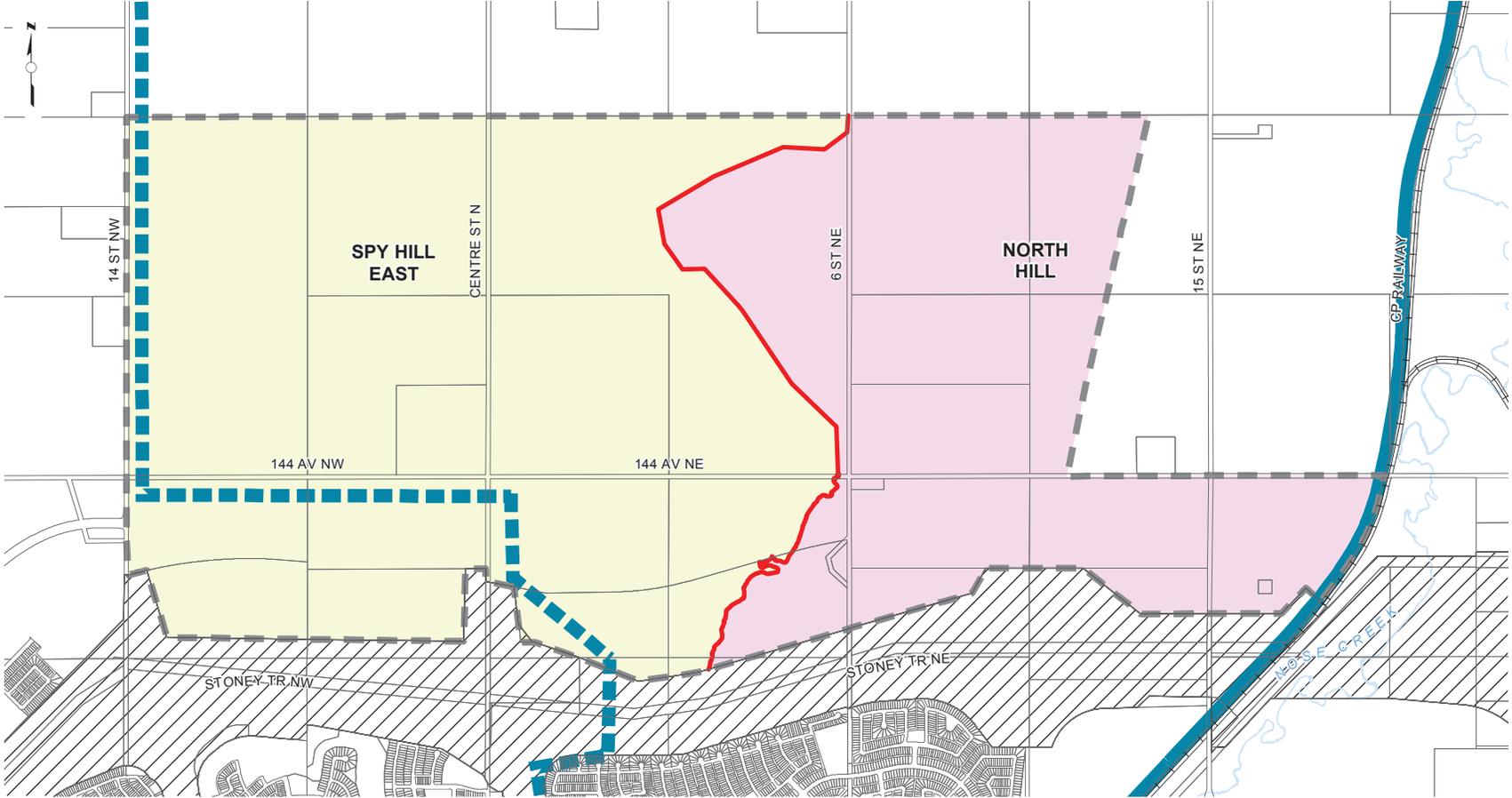
- a. Any proposed distribution systems for the Outline Plan area shall be reviewed and, if required, modelled by The City as part of an Outline Plan/Land Use Amendment application.
- b. As of 2012, there is limited capacity in the existing distribution system to service initial development in the Plan Area. Therefore, Water Resources will identify any off-site distribution mains and/or transmission feeder mains that may be required to be installed to provide municipal water to an Outline Plan/Land Use Amendment Area.
- c. Water alignments are shown conceptually on *Map 16: Water Services*. Alternative and more cost-effective alignments and locations may be considered at the Outline Plan stage at the discretion of the Approving Authority. Impact to Environmental Open Space shall be minimized.

Bylaw 83P2019

The Plan Area encompasses two water pressure zones: The Spy Hill East Pressure Zone and the North Hill Pressure Zone (See *Map 16: Water Services*).

Bylaw 83P2019

The majority of the Plan Area is within the Spy Hill East Pressure Zone. Developments in the Spy Hill East Pressure Zone will require construction of the North Ridge feedermain and new North Ridge reservoir. The proposed conceptual alignment of the feedermain is shown on *Map 16: Water Services*. The North Ridge Reservoir needs to be built when the storage criteria of Spy Hill East Pressure Zone exceeds the firm pumping capacity for the zone. As of 2011, firm pumping capacity can supply 85 per cent of the population of the Spy Hill East



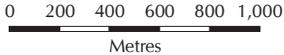
Map 16
Water Services

Legend

- Plan Area Boundary
- Transportation/Utility Corridor
- Proposed Feedermain
- Existing Feedermain
- Pressure Zone Boundary

Pressure Zones

- North Hill
- Spy Hill East



APPROVED: 15P2012

Utility Servicing Policies

11.3 Sanitary Servicing

Purpose

The purpose of these policies is to provide for a suitable sanitary sewer trunk system designed to serve the urban development requirements throughout the Plan Area as identified on *Map 17: Sanitary Services*. **Bylaw 83P2019**

11.3.1 Sanitary Servicing Policies

1. Design of Sanitary Sewer System

The sanitary sewer system for the Plan Area must be designed to adequately and efficiently serve the full build-out of the Plan Area as per the ASP. General alignments of the sanitary sewer system are illustrated in *Map 17*.

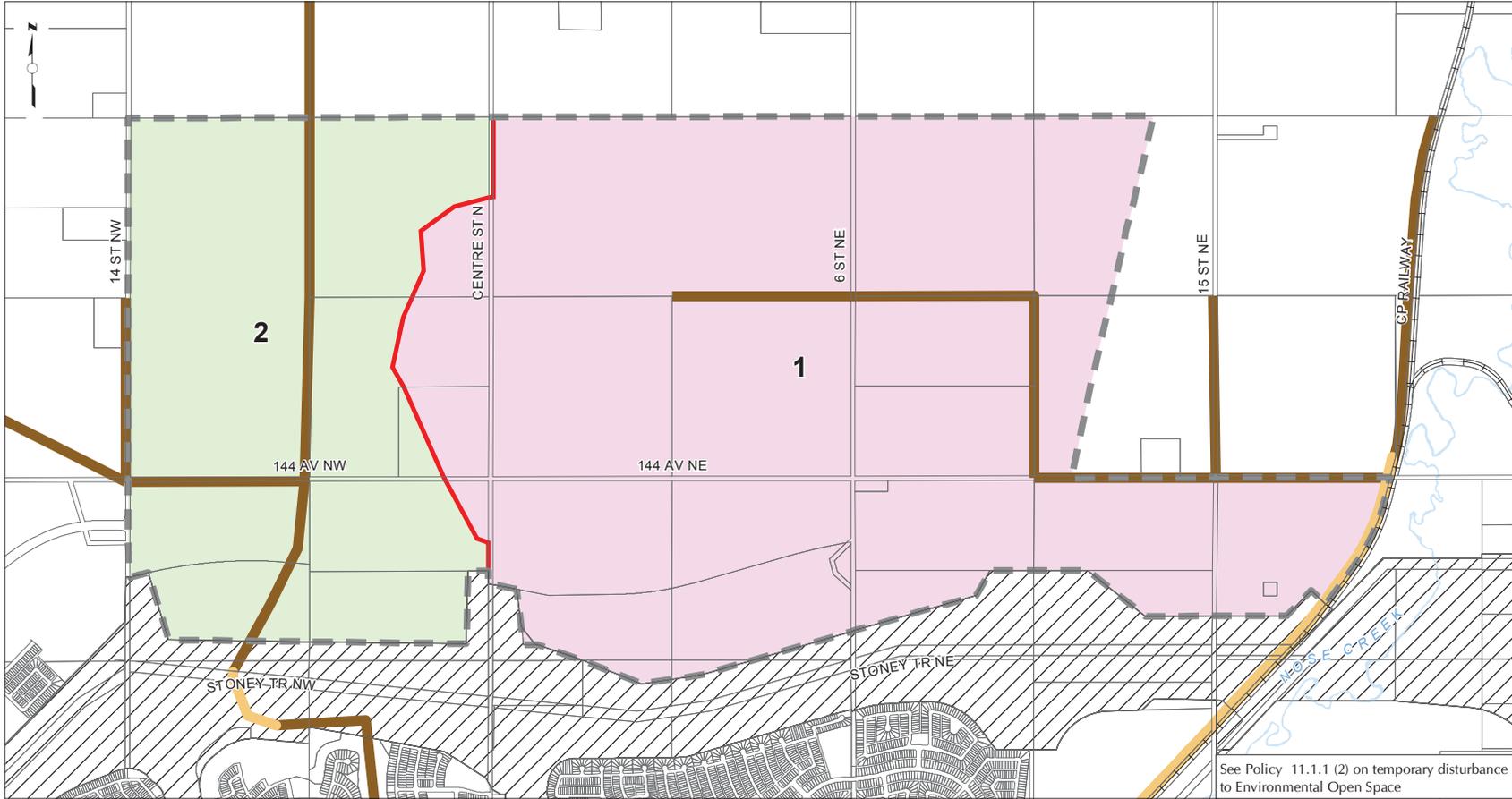
2. Analysis of Sanitary Sewer System

As part of an Outline Plan/Land Use Amendment application, a Sanitary Sewer Servicing Study/Analysis may be required at the discretion of the Approving Authority to demonstrate that the subject site can be serviced in accordance with the overall design of the sanitary sewer system for the area.

3. Sanitary Sewer Information

- a. There are two catchments within the Plan Area. The western portion of the Plan Area is comprised of catchments that generally drain to the south. These catchments will require extensions to the existing Panorama Hills Trunk, which is approximately 500 m (0.3 miles) south of the Transportation/Utility Corridor. There is a small section of this trunk already constructed under Stoney Trail as indicated on *Map 17*. The servicing of cells D, E and F of the North Regional Context Study, which will be the subject of future ASPs, also require this infrastructure.
- b. The east half of the Plan Area is comprised of catchments that generally drain to the east. The sanitary trunk needed to service this catchment will connect to the existing Nose Creek Trunk just north of the Transportation/Utility Corridor. Given the topography of the catchment, modification to the alignment of this trunk may be required to achieve an appropriate balance between pipe depth and pipe alignment. Landowner boundaries and the absence of community plans in the adjacent areas should be considered if an alternative trunk alignment is chosen.

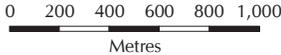
- c. Sanitary alignments are shown conceptually on *Map 17*. Alternate and more cost-effective alignments and locations may be considered at the Outline Plan stage without requiring an amendment to the ASP. Impacts on Environmental Open Space shall be minimized.
- d. At the time of an Outline Plan/Land Use Amendment application, a developer shall contact Water Resources to discuss opportunities for reclaimed water use. **Bylaw 83P2019**



Map 17
Sanitary Services

Legend

Plan Area Boundary	Existing Sanitary Trunk	Sanitary Catchment Areas
Transportation/Utility Corridor	Catchment Area Boundary	
Proposed Sanitary Trunk		1
		2



APPROVED: 15P2012

Utility Servicing Policies

11.4 Stormwater Management

Purpose

The purpose of these policies is to provide for the design and development of a suitable and efficient stormwater management system to serve urban development while preserving the stream network within and beyond the Plan Area. (see Sec. 10.4 for more details on streams and Water Bodies).

The Plan Area is located in the Nose Creek watershed basin. Stormwater from the development will drain into required stormwater facilities located within the Plan Area and will ultimately discharge into the local stream network connected to Nose Creek at controlled release rates and volumes (see *Nose Creek Watershed Water Management Plan*, January 2007).

A *North Regional Stormwater Master Drainage Plan* (Stantec Consulting Ltd and Focus Corporation, 2010) has been prepared for these lands. This Master Drainage Plan will be revised/amended to address stormwater solutions for the Plan Area and to address stormwater requirements to sustain Environmental Open Space features prior to any Land Use/Outline Plan application. Revisions to the Master Drainage Plan will be done in conjunction with the Staged Master Drainage Plan, will consider all impacted storm catchments (including areas beyond the ASP boundaries, for which drainage system modifications are required, to sustain stream courses, wetlands or other hydrologic features and functions), and may not require an ASP amendment, dependant on the extent of changes and at the discretion of the Approving Authority.

11.4.1 Stormwater Management Policies

1. Stormwater Targets

- a. The stormwater management system for the Plan Area must align with the targets set in the Master Drainage Plan (to be revised), The *City of Calgary Stormwater Management Strategy*, the *Nose Creek Watershed Water Management Plan*, and the Municipal Development Plan.
- b. Recommendations for maximum allowable release rate and runoff volume control targets identified within the *Nose Creek Watershed Water Management Plan* shall be adhered to for the Plan Area.

2. Stormwater Detention Ponds

- a. Stormwater detention ponds should be located on a public utility lot wherever possible and should not be located in Environmentally Significant Areas as documented by a Biophysical Impact Assessment accepted by the Director of Parks.

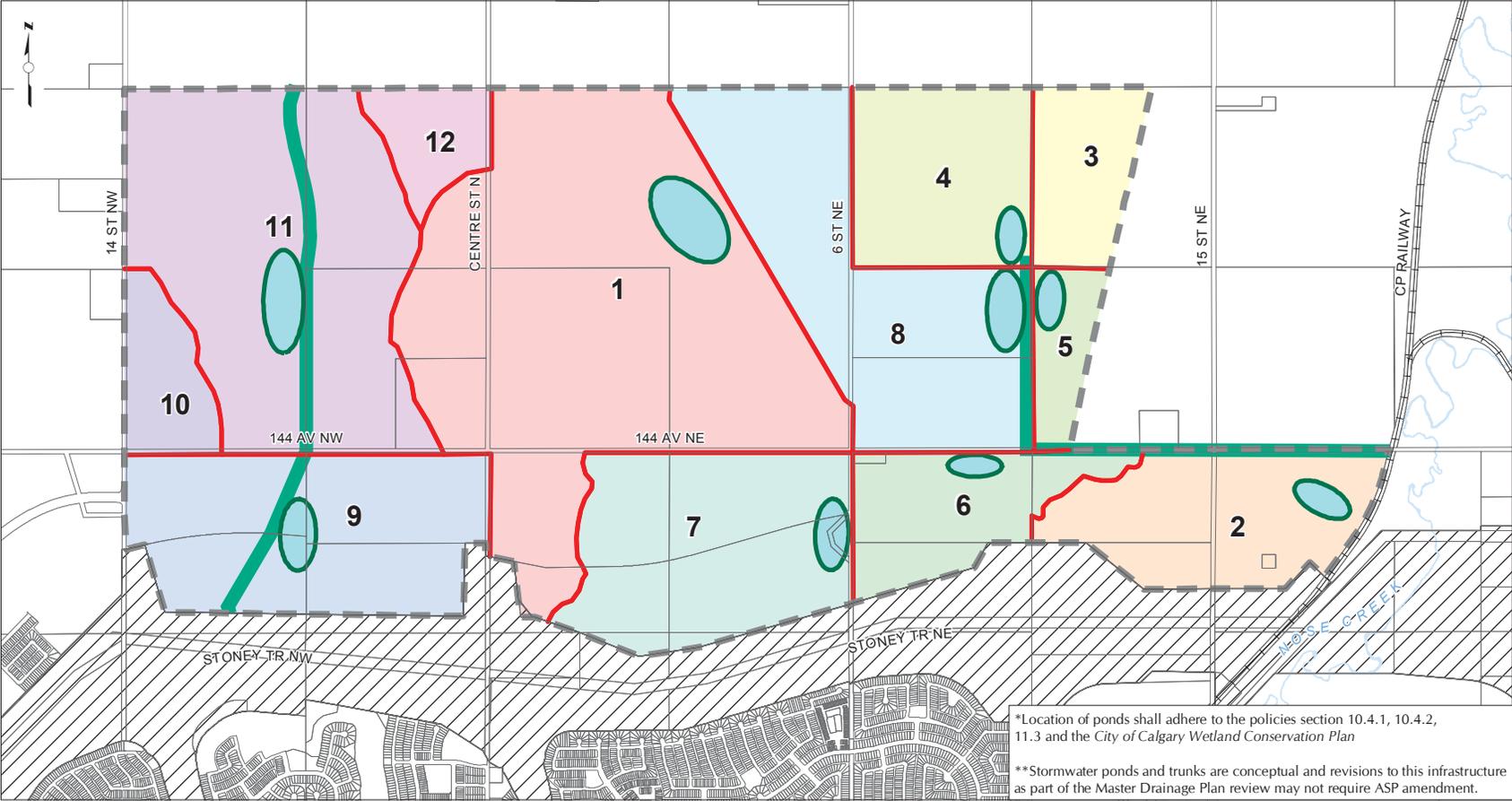
- b. Treated stormwater releases into existing water bodies may be acceptable, consistent with 10.4.1 (2) b, if it can be demonstrated that the water contributes to the function of these natural features and provides for quality habitat, as demonstrated in a stormwater management plan in conjunction with the Nose Creek Watershed Water Management Plan release rates, as applicable.

3. Design of Stormwater Management System

- a. The stormwater management system for the Plan Area shall be designed to adequately and efficiently serve the full build-out of the Plan Area as per the ASP, while preserving the local stream network and adhering to the Master Drainage Plan (as revised) and *Nose Creek Watershed Water Management Plan*.
- b. Prior to an Outline Plan/Land Use Amendment approval, and in conjunction with the Staged Master Drainage Plan, the *North Regional Stormwater Master Drainage Plan* shall be revised and approved by Water Resources and Parks.
- c. As part of an Outline Plan/Land Use Amendment application, a developer shall submit a Staged Master Drainage Plan consistent with the overall design of the stormwater management system for the area as per the approved (revised) Master Drainage Plan.
- d. The Staged Master Drainage Plan will also be required to comply with the most current stormwater management policies at the time of Staged Master Drainage Plan preparation.
- e. Stormwater facilities are shown conceptually on *Map 18: Storm Services*. Alternate and more cost-effective alignments may be considered at the Outline Plan stage that may require amendments to the Master Drainage Plan. Amendments to a Master Drainage Plan significant enough to alter drainage philosophy or land use may require an amendment to *Map 18: Storm Services*. Impacts to Environmental Open Space shall be minimized. **Bylaw 83P2019**

4. Best Management Practices for Staged Master Drainage Plans

- a. As part of the preparation of Staged Master Drainage Plans, best management practices and alternatives for stormwater quality and quantity enhancement should be assessed with regard to introducing
 - i. stormwater facilities with a preference for source controls as opposed to end-of-pipe solutions;



Map 18
Storm Services

Legend

- Plan Area Boundary
- ▨ Transportation/Utility Corridor
- Proposed Storm Trunk
- Conceptual Stormwater Pond Locations
- Catchment Area Boundary

Storm Catchment Areas	
1	7
2	8
3	9
4	10
5	11
6	12

0 200 400 600 800 1,000
Metres

APPROVED: 15P2012

Utility Servicing Policies

- ii. Low-Impact Development methods, such as constructed wetlands and bioswales, to mitigate the effects of stormwater run-off into local water bodies as opposed to hard engineering measures;
 - iii. stormwater measures that reduce impermeable surface runoff and correspondingly increase the permeable area such as permeable pavement, rain gardens, etc., to achieve 10 per cent effective imperviousness as per the MDP; and
 - iv. stormwater reuse such as irrigation, to the satisfaction of the Approving Authority.
- b. Where appropriate, the stormwater management system should be designed to
- i. operate on a gravity basis and preserve the function of the existing wetlands pursuant to the *City of Calgary Wetland Conservation Plan*; and
 - ii. introduce mitigation measures to address the potential impact of water quality on existing wetlands and Nose Creek, pursuant to the *Nose Creek Watershed Water Management Plan*.

5. Floodway/Floodplain

Design of utilities, transportation and other infrastructure features must address flood conditions in Nose Creek.

6. Outline Plan/Land Use Amendment

As a condition of approval of an Outline Plan/Land Use Amendment application that provides for the discharge of stormwater from the application area to privately-owned lands, a public utility easement or equivalent legal instrument, to the satisfaction of the Approving Authority, shall be registered against the title of the subject privately-owned lands addressing and resolving issues relating to the discharge of the stormwater flows to those lands.

12 IMPLEMENTATION POLICIES

Purpose

The purpose of these policies is to establish how Density thresholds and Intensification shall be implemented for residential and industrial Communities, Activity Centres and *Main Street*. The Keystone Hills Area Structure Plan (ASP) will be implemented primarily through Outline Plan/Land Use Amendment applications in addition to Development Permit and subdivision applications.

Bylaw 83P2019

12.1 Intensity Policies

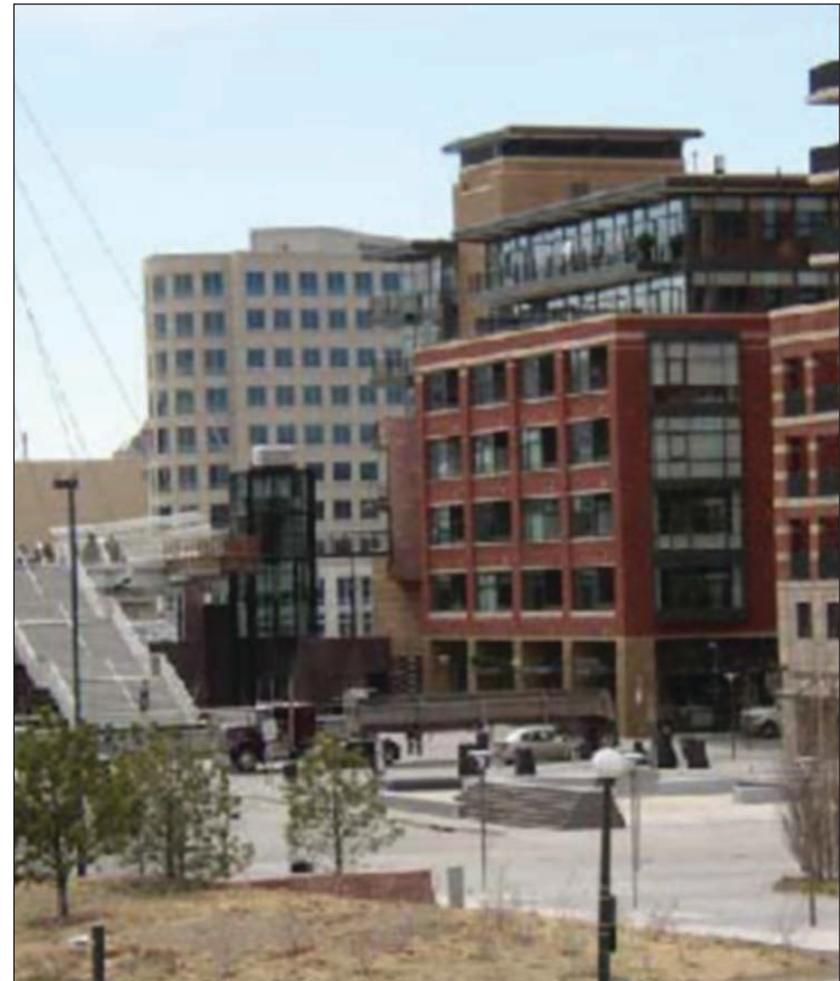
1. Density

- a. Each Neighbourhood shall achieve a minimum residential Density of 20 units per hectare (8 units per acre). Density calculations will include Neighbourhood Activity Centres, the Community Activity Centre and the *Urban Main Streets*.
Bylaw 83P2019
- b. Each subsequent Outline Plan/Land Use Amendment application shall demonstrate, to the satisfaction of the Approving Authority, that Density requirements for the overall community are being achieved.
- c. Each Outline Plan/Land Use Amendment application shall demonstrate how the application lands can accommodate additional housing and/or jobs to achieve a Density of 25 units per hectare (10 units per acre), an equivalent amount of employment Intensity, or a combination thereof.
- d. A shadow plan should be provided with each Outline Plan/Land Use Amendment application to demonstrate how Intensification may occur.
- e. Land Use approvals should allow for the additional residential Density or employment Intensity to be achieved.

2. Intensification

- a. A fine-grain block-based road network pattern should be provided in Activity Centres and *Main Street* to facilitate Intensification in these areas.
Bylaw 83P2019
- b. Intensification should be strategically directed to occur primarily in Activity Centres and *Main Street*.
Bylaw 83P2019
- c. Intensification may occur through means including, but not limited to,
 - i. flexible land use districts that allow for Mixed-Use development;
 - ii. initial development that generates activity by being Pedestrian-Oriented and facilitating direct and efficient transit connections;

- iii. site design that enables infilling to occur; and
- iv. development of an initial built form that facilitates intensification, such as buildings and uses that front onto public streets.



Intensification should be strategically directed to occur primarily in Activity Centres and *Main Street*.
Bylaw 83P2019

12.2 Evaluation of Neighbourhood Composition and Design Policies

1. Application Requirements

- a. All applications shall provide a design statement in accordance with Appendix G: Design Statement indicating how the proposed development conforms to the policies of this ASP and any other relevant policies.
- b. An Outline Plan/Land Use Amendment application shall provide
 - i. a concept plan for one or more complete Neighbourhoods, with defined boundaries between each Neighbourhood;
 - ii. a concept plan showing the boundaries of the Activity Centre or Corridor and how it connects with surrounding Neighbourhood Areas; and
 - iii. sufficient information for the Approving Authority to ensure the concept complies with the policies in this ASP.
- c. Where a Neighbourhood encompasses the land of more than one owner, an Outline Plan may be composed of less than a complete Neighbourhood, but it must be accompanied by a shadow plan demonstrating how the entire Neighbourhood could be planned in accordance with this ASP.
- d. Where an Activity Centre encompasses the land of more than one owner, an Outline Plan may be composed of less than a complete Activity Centre, but it must be accompanied by a shadow plan demonstrating how the subject site could be planned to connect and integrate with adjacent lands in accordance with this ASP.
- e. Community Activity Centres, Major Activity Centres and *Urban Main Street* may become the subject of future policy plans incorporating Form-Based Controls. In such cases, the Form-Based Controls will be developed by The City in consultation with land owners and stakeholders and should comply with the policies of this ASP. **Bylaw 83P2019**
- f. A District Energy Assessment may be required at the Outline Plan/Land Use Amendment stage for applications containing or within a Community Activity Centre or Major Activity Centre, at the discretion of the Approving Authority.
- g. Sites of First Nations heritage and significance should involve First Nations in any discussions and planning.

12.3 Form-Based Control Opportunities

Purpose

Given the importance of the Major Activity Centre, *Urban Main Street*, and Community Activity Centre, a special approach for dealing with the subdivision and development of land within these areas may be used. A separate Local Area Plan may be developed containing Form-Based Controls. **Bylaw 83P2019**

Form-Based Control is a method of development regulation that focuses more attention on attaining a specific desired urban form with less emphasis on individual land use. Form-Based Controls have a number of characteristics that are not found in conventional land use controls, including:

- a. a strong focus on the context of the site and the quality of the public realm;
- b. an emphasis on built form and streetscape appearance with considerable flexibility conveyed to the use of the land;
- c. the coordination of the subdivision and development processes through a common set of rules;
- d. the “right-sizing” of standards for roads, parks and services; and
- e. the inclusion of a broad range of design elements, primarily through diagrams and maps as opposed to text.

Form-Based Controls provide direction to the Approving Authority in making decisions on subdivision applications and Development Permit applications within the Plan Area. These controls supplement the land use district rules applied to the subject site through the *City of Calgary Land Use Bylaw*, as well as the conditions of the approved Outline Plan.

Form-Based Controls are appropriate to be used in the Activity Centres and *Main Street* to ensure compact, walkable development. Form-Based Controls should be applied for the entire area of an Activity Centre or Corridor. When used, the Form-Based Controls should reflect the intent of the guidelines in Appendix D: Neighbourhood Design. **Bylaw 83P2019**

1. Statutory Plan

Any Outline Plan/Land Use Amendment application including a Major Activity Centre, Community Activity Centre or the *Urban Main Street*, and utilizing Form-Based Controls, should include a proposed ASP amendment or separate Local Area Plan to be adopted by Statutory Plan, and may be accompanied by Direct Control Bylaws. The proposed ASP amendment or Local Plan Area Plan should include: **Bylaw 83P2019**

- a. An outline of the extent of each Activity Centre or Corridor within the Outline Plan area where Form-Based Controls will be utilized, including
 - i. land use pattern,
 - ii. block layout to allow for staged subdivision,
 - iii. development intensity,
 - iv. parking requirements,
 - v. street cross sections which may include widths of travel lanes and sidewalks, street tree and street furniture placement, and locations of transit and bicycle lanes,
 - vi. the placement of buildings, building envelopes, configuration, features and functions of buildings,
 - vii. physical form of public spaces vegetation and furniture placement within parks, and
 - viii. any other content as deemed necessary by the Approving Authority to define the area; and
 - b. A demonstration of the above using maps, tables and diagrams that work together in a coordinated manner.
- 2. Form-Based Control Policy Compliance**
All Form-Based Controls proposed within the Plan Area must reflect the policies contained in this ASP and any other relevant policies.

12.4 Approval Process Policies

Purpose

The purpose of these policies is to provide for the implementation of the ASP's policies through the Outline Plan/Land Use Amendment process.

1. Land Use Approval

- a. The timing, direction and extent of urban growth within the Plan Area should be determined primarily through the Outline Plan/Land Use Amendment process, which establishes the design and land use pattern for the subject site and enables subdivision and development to proceed.
- b. Each submitted Outline Plan/Land Use Amendment application shall be no more than 150 hectares (370 acres) in size. Where servicing or infrastructure solutions warrant a larger catchment area, Outline Plans in excess of 150 ha may be considered. Additionally, master planning for an entire community is encouraged to provide context for the Outline Plan/Land Use Amendment applications within it.
- c. Each submitted Outline Plan/Land Use Amendment application within Communities A, B, and C shall consist of one or more complete Neighbourhoods, unless the area comprising a Neighbourhood is owned by two or more landowners.
- d. Where the area comprising a Neighbourhood is owned by two or more landowners,
 - i. Outline Plan/Land Use Amendment applications shall include a detailed Concept Plan for all lands within the Neighbourhood, following a process of consultation with adjacent landowners; and
 - ii. landowners are strongly encouraged to reach agreement on an overall Concept Plan prior to approval of the first Outline Plan/Land Use Amendment application.
- e. An Outline Plan/Land Use Amendment application should not be supported until all associated infrastructure and servicing costs have been addressed, in accordance with the Urban Growth Policies of Section 5.1 and the Corporate *Framework for Growth and Change*.
- f. The land use designations in effect at the time of approval of the ASP shall

- i. continue to apply in accordance with the provisions of the *Municipal Government Act*; and
- ii. remain in effect until a land use amendment application is approved by Council in accordance with the policies of the ASP, as amended.

2. Outline Plan Approval

Land Use approval should not be granted unless an Outline Plan for the site has been approved.

3. Transitional Development

The uses allowed under the *City of Calgary Land Use Bylaw* in the Special Purpose Future Urban Development District that do not compromise development of the site and do not impact the objectives of the ASP may be allowed where determined to be compatible and appropriate by the Approving Authority.

4. Comprehensive Studies

- a. A Design Statement (see Appendix G) and a Sustainability Checklist (Appendix L) shall be submitted as part of any Outline Plan/Land Use Amendment or Development Permit application for major developments (10 or more dwellings, or commercial development with 1,000 m² or more of commercial floor space). The sustainability and design statement should demonstrate to the Approving Authority how environmental sustainability and urban design considerations have been incorporated within the site and building design and should address the relevant policies in this ASP
- b. Prior to Outline Plan/Land Use approval, an applicant may be required to submit further supporting information in order to assist Council and the Calgary Planning Commission in evaluating a proposal in terms of its conformity with the ASP.
- c. When an applicant does not provide the required supporting information in a satisfactory manner, the Outline Plan/Land Use Amendment application may not be approved.

12.5 Intermunicipal Coordination Policies

Purpose

The purpose of these policies is to ensure circulation to Rocky View County and enable Rocky View County an opportunity to comment on applications as described in the Rocky View/Calgary Intermunicipal Development Plan (IDP). The IDP identifies areas of mutual interest between the City of Calgary and Rocky View County and establishes policies and processes for dealing with issues that may arise within these areas. The entire Plan Area is located within the Policy Area as defined in the IDP. As such, alignment with the policies of the IDP is required.

1. Intermunicipal Referral

- a. Applications shall be circulated to Rocky View County in accordance with the IDP, including statutory and non-statutory plans within the Plan Area and proposed amendments to such plans, applications for Outline Plan/Land Use Amendments, subdivision and development permits, and any other applications specified by the IDP.
- b. Unless otherwise agreed to by both municipalities, Rocky View County shall have twenty (20) days to review development permits and thirty (30) days from date of receipt to reply to all other intermunicipal circulations.

2. Intermunicipal Consultation

The City will endeavour to consult and co-operate with Rocky View County on planning, transportation and servicing matters that may arise within the Plan Area that are intermunicipal in nature in order to achieve a co-operative and co-ordinated outcome.

12.6 Design Innovation Area

Purpose

The purpose of these policies is to provide a means to address and promote design innovation within the Plan Area. Implementation of these policies is on a voluntary basis.

These policies will include the following steps

1. Identification of the area that is the subject of the innovation as a Design Innovation Area, where new standards can be applied on a test basis without setting precedent for other areas of the city;
2. A review process for evaluating the innovations to be introduced within the Design Innovation Area and administering them by the Approving Authority; and
3. Introduction of a monitoring process for the Approving Authority to assess the success and benefits of the innovations introduced.

12.6.1 Development Within a Design Innovation Area

1. Promoting Design Innovation

- a. Design innovation should be encouraged within the Plan Area provided that the innovation
 - i. promotes sustainability;
 - ii. provides public benefits; and
 - iii. can be developed in a safe and practical manner.
- b. Based on the policies within the ASP, candidates for design innovation within the Plan Area include, but are not limited to, the introduction of
 - i. revised street standards for providing tree-lined streets;
 - ii. best management practices for stormwater control;
 - iii. Local Commercial Use in Neighbourhoods;
 - iv. Green Infrastructure and building techniques not required through existing City of Calgary policies;
 - v. revised street standards for providing marked, on-street bicycle routes (e.g., bike lanes on collector roads);
 - vi. slope adaptive design;
 - vii. energy efficiency measures including district heating, solar energy, etc.; and

viii. other approaches to the satisfaction of the Approving Authority.

- c. Design innovation should be supported through interdepartmental co-ordination across The City to facilitate innovative initiatives.

2. Designating a Design Innovation Area

- a. Where innovations involving the introduction of new standards for public infrastructure (e.g., utilities, parks, streets, etc.) or private development are proposed within the Plan Area and are determined to provide sustainable development benefits, the applicant may request that Council identify the area that is the subject of the innovation as a Design Innovation Area on Map 5: Land Use Concept, through an amendment to the ASP.
- b. Where a Design Innovation Area is identified by Council,
 - i. new standards for public improvements or private development may be applied within that area that are not available city-wide, where the standards are determined to be practically, financially and legally acceptable;
 - ii. new public or private sector financing and/or funding methods for dealing with the maintenance or operational costs of the innovations may be introduced; and
 - iii. a process for evaluating innovations proposed by an applicant in an efficient and timely manner, that includes a review of the risks and benefits, should be created.
- c. An ASP amendment to apply a Design Innovation Area may be processed in conjunction with an associated application.

13 GLOSSARY

13.1 Abbreviations

ASP:	Area Structure Plan
BIA:	Biophysical Impact Assessment
BRT:	Bus Rapid Transit
CPTED:	Crime Prevention Through Environmental Design
CTP:	Calgary Transportation Plan
ER:	Environmental Reserve
EOS:	Environmental Open Space
ESA:	Environmentally Significant Area
FAR:	Floor Area Ratio
GDHa:	Gross Developable Hectare
HRIA:	Historical Resources Impact Assessment
IDP:	Intermunicipal Development Plan
JUS:	Joint Use Site
LEED:	Leadership in Energy and Environmental Design
LID:	Low Impact Development
LRT:	Light Rail Transit
MDP:	Municipal Development Plan
MGA:	Municipal Government Act
MR:	Municipal Reserve
SSIP:	Stormwater Site Implementation Plan
TUC:	Transportation and Utility Corridor

13.2 Definitions

The following definitions shall apply:

3-Year Capital Budget: A document that establishes funding for City projects and programs, including infrastructure investments. They are approved by Council as part of the three-year business planning and budgeting cycle.

10-Year Capital Plan: A document that outlines the major City investments that are anticipated over a 10-year time frame. It ensures appropriate planning for required projects and their related funding to demonstrate the complete impact of major, multi-year projects.

Accessible Housing: Dwellings that provide barrier-free, adaptable design in both common areas and individual units to meet the needs of the disabled.

Active Mode: Any form of human-powered transportation including, but not limited to, walking, running, cycling, using a wheelchair, in-line skating or skateboarding.

Active Mode Connectivity: An assessment of the degree to which a comprehensive, connected network for Active Modes is achieved in the Plan Area.

Activity Centres: All areas identified on the Land Use Map as either a Major Activity Centre, Community Activity Centre or Neighbourhood Activity Centre.

Affordable Housing: The City of Calgary Council approved definition of affordable housing addresses the housing needs of those households that can qualify for a housing subsidy. These households are both low income (defined using 2006 census terms as being below \$44,000 of combined household income) and are paying a minimum of 30% of their pre-tax-income on shelter.

Affordable Housing Needs Assessment: Examines the need for non-market and entry-level housing in the local community based on the current and future supply of and demand for non-market and entry-level housing. It should take into consideration characteristics such as housing form, number of bedrooms, accessibility and barrier-free design and income levels. The Affordable Housing Needs Assessment should be completed to the satisfaction of The City of Calgary's Affordable Housing Division.

Approving Authority: The Subdivision Authority, Development Authority or Subdivision and Development Appeal Board of The City of Calgary, as the context implies.

Arterial: A common type of street that accommodates all modes of transportation in a high quality environment. Arterial streets provide reasonably direct connections between multiple communities and major destinations. Ideally, Arterials should be spaced approximately 800 to 1,600 m (0.5 to 1 mile) apart and may include Green Infrastructure strategies such as vegetated swales, rain gardens, filter strips, and native vegetation.

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Bed and Breakfast: A use where the provision of overnight accommodation is provided to guests in a bedroom within a home that is occupied by its owner or operator, who may provide breakfast but no other meals to the guests.

Biophysical Impact Assessment (BIA): A commonly required report used to outline the environmental impact of a project on the biological features of a community. In preparing a BIA, baseline data are usually collected on soil, vegetation, wetlands, wildlife, and hydrology.

Calgary Greenway System: A planned linear pathway that will encircle the city and will encompass off-leash dog parks, rest areas, family fitness parks and educational wetlands.

Calgary Planning Commission: The Calgary Municipal Planning Commission constituted pursuant to the *Municipal Planning Commission Bylaw*.

Calgary Transportation Plan (CTP): The document that guides the transportation system and its development in Calgary.

Care Facilities: Provide a broad range of accommodation and care within residential communities to meet the physical, emotional and rehabilitative needs of residents as they change over time, such as nursing homes, adult group homes, youth care facilities, rehabilitative homes and transitional facilities.

Centre Street Corridor and Major Activity Centre Special Study: Refers to the functional transportation and land use plan to be undertaken by The City for lands encompassing the Major Activity Centre and *Urban Main Street*.
Bylaw 83P2019

Child Care Facility: A place where temporary care and supervision is provided to seven or more children for periods of less than 24 consecutive hours.

The City: The Corporation of The City of Calgary.

City Administration: Employees of The City.

Civic Use: Civic uses may include neighbourhood-scale cultural, recreational and educational uses as well as childcare and other care facilities.

Collector: A low- to moderate-capacity road that serves to move traffic from local residential streets to higher capacity streets such as Arterials.

Community: A logical, physical and social planning area, defined by significant natural or man-made features and containing an adequate population base to support schools, parks and community facilities.

Community Recycling/Diversion Depot: A facility or location where the public can deposit mixed paper, cardboard, newspaper, magazines, clear or coloured glass, food and beverage containers, metal food cans and lids, milk jugs and cartons, plastic bags, plastics, and other items for recycling.

Compact Urban Form: A land-use pattern that encourages efficient use of land, walkable neighbourhoods, mixed land uses (residential, retail, workplace, and institutional all within one neighbourhood), proximity to transit and reduced need for infrastructure.

Complete Community: A community that is fully developed and meets the needs of local residents through an entire lifetime. Complete Communities include a full range of housing, commercial, recreational, institutional and public spaces. A Complete Community provides a physical and social environment where residents and visitors can live, learn, work and play.

Concept Plan: A plan that may be required, at the discretion of the Approving Authority, to be submitted at the time of Outline Plan/Land Use Amendment application, showing the relationship between the design of the subject site and adjoining parcels, the possible development of adjoining parcels, and/or the next phases of development.

Core Infrastructure: Water, sanitary sewer, storm, transportation and emergency response facilities required to accommodate subdivision and development activity in the ASP area.

Council: The elected Council of The City of Calgary.

Creditable Reserve Land: The reserve owing on a parcel of land that is to be dedicated as municipal reserve (MR), school reserve (SR) or municipal and school reserve (MSR) through the subdivision approval process in accordance with the Municipal Government Act.

Crime Prevention Through Environmental Design (CPTED): Promotes design principles in planned environments that encourage safe behaviour and reduce the opportunities for crime to occur.

Cultural Uses: Use of land, buildings or structures for the purpose of arts, educational, or recreational activities. Cultural uses may include, but are not limited to, galleries, museums, libraries, and recreation centres.

Density: A measure of the number of dwelling units on a parcel of land, expressed in units per hectare.

Design Innovation Area: Provides a means to address and promote design innovation by identifying an area of land, defined by an Outline Plan/Land Use Amendment, where new standards can be applied on a test basis.

Development Permit: A Development Permit indicates an approval from the Approving Authority for development in accordance with the *City of Calgary Land Use Bylaw*.

Direct Control District: A land use district providing for developments that, due to their unique characteristics, innovative ideas or unusual site constraints, require specific regulation unavailable in other land use districts.

District Energy: The distribution of thermal energy using a pipeline distribution system (Canadian District Energy Association). District Energy systems produce steam, hot water or chilled water at a central plant and then pipe that energy out to buildings in the district for space heating, domestic hot water heating and air conditioning (International District Energy Association).

District Energy Assessment: An assessment of the feasibility of establishing a District Energy system. A District Energy Assessment may examine, but is not limited to, the technical, cost, regulatory and ownership options. District Energy Assessments may be done at the Outline Plan/Land Use Amendment or Development Permit stage.

Eco-Industrial Park: Development of Industrial/Employment Areas in accordance with Municipal Development Plan policy 3.7.1 g., including water conservation, clean production, reduced energy needs, maximum efficiency, and best environmental practices.

Emergency Planning Zone (EPZ): A geographical area surrounding a sour gas well, pipeline, or facility that requires specific emergency response planning by the operator. The EPZ is the area in which response measures are initially focused during an incident. The size and shape of the EPZ must reflect site-specific features of the area, such as population density, topography, and access/egress, as well as the hydrogen sulphide content of the well, pipeline, or facility.

Employment Uses: Uses that are employment intensive and determined to be compatible and appropriate in the context of employment areas such as Activity Centres and Industrial/Employment Areas. Employment Uses may include, but are not limited to, offices, manufacturing plants, colleges and laboratories, and do not include Retail Uses.

Enclosure Ratio: Defined by the ratio between the horizontal dimension and the vertical dimension of a space. These ratios typically fall into whole number categories ranging from 1:1, 2:1, 3:1, and greater. Generally, the closer the horizontal dimension is to the vertical dimension (e.g., 1:1), the greater the sense of enclosure and the stronger the spatial feeling.

Energy Resources Conservation Board (ERCB): An independent, quasi-judicial agency of the Government of Alberta that regulates the safe, responsible, and efficient development of Alberta's energy resources: oil, natural gas, oil sands, coal and pipelines.

Environmental Open Space: A city-wide network composed of the River Valley System, the urban forest, Environmentally Significant Areas, and natural environment parks. Lands within the Environmental Open Space qualify as both or either Environmental Reserve or Environmentally Significant Area. Where an area identified as Environmental Open Space is not protected or acquired, it may be considered developable according to the policies of this Area Structure Plan, subject always to section 3.7 Plan Limitations.

Environmentally Significant Area: A natural area site that has been inventoried prior to potential development and which, because of its features or characteristics, is significant from an environmental perspective to Calgary, and has the potential to remain viable in an urban environment. (See *Open Space Plan* (current edition) for complete definition.)

Floor Area Ratio (FAR): The ratio of the total floor area of a building to the size of the parcel of land on which it is located. Floor Area Ratio is calculated by dividing the total area of a building by the total area of the parcel the building is located on.

Foothills Fescue Subregion of the Grassland Ecoregion: A subregion of one of the five ecoregions of Alberta. This grassland community is dominated by rough fescue with lesser quantities of Parry oat grass, June grass, and wheat grass. Grazing and tillage have disturbed most of the native land cover in this region. Soils that have formed in the region are deep black with high organic matter due to the combination of favourable climate over thousands of years, grassland vegetation and geology.

Form-Based Controls: Policies or guidelines that address such design matters as the land use pattern, block layout, street network, development intensity, parking requirements, building envelopes and open space system. Such policies or guidelines place a strong

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emphasis on built form and the quality of the public realm, and they contain maps, tables and diagrams that work together in a co-ordinated manner.

Corporate Framework for Growth and Change: A directive that will guide the future sequencing of growth in Calgary to ensure investments in infrastructure and services are within The City's financial capacity.

Goods Movement Routes: A network of designated routes, identified by City bylaws, on which heavy and medium trucks are permitted while travelling within Calgary city limits.

Green Corridor: The recreational component of Environmental Open Space, providing pathways and linking ecological networks.

Green Infrastructure: An interconnected network of natural green and engineered green elements applicable at multiple scales in the land use and mobility framework. Natural green elements include the conservation and integration of traditional green elements such as trees, wetlands and riparian areas and parks. Engineered green elements include systems designed to mimic ecological functions or to reduce impacts on ecological systems.

Green Roofs: An extension of an above grade roof, built on top of a human-made structure, that allows vegetation to grow in a growing medium. A green roof assembly includes, as a minimum, a root repellent system, a drainage system, a filtering layer, a growing medium and plants, installed on a waterproof membrane.

Green Street: A street and a component of Green Infrastructure that seeks to reduce stormwater runoff and associated pollutants, bring natural elements into streets, and improve access for pedestrians and bicycles.

Home-Based Business: The operation of a business or occupation within a dwelling and/or its accessory building(s), on a parcel on which a dwelling is located and where one or more residents of the parcel is/are involved in the occupation or business.

Housing Affordability: Addresses the housing needs of those households that do not qualify for subsidy but cannot afford market housing.

Industrial/Employment Area: An area consisting of a mix of Employment Uses which may include, but are not limited to, fully serviced industrial, research park, and offices. Other uses such as institutional and ancillary commercial uses may be considered in an Industrial/Employment Area where considered appropriate.

Institutional Use: Use of land, buildings or structures for the purpose of religious, charitable, educational, health, welfare or correctional activities. Institutional Uses may include, but are not limited to, Places of Worship, public or private schools, post-secondary institutions, hospitals, reformatory or correctional facilities, medical clinics, cemeteries and Child Care Facilities.

Intensification: The development of land at a higher intensity than currently exists. Intensification can be achieved through redevelopment, development of vacant or underutilized land, conversion of existing buildings to a higher-intensity use or through infill development in previously developed areas.

Intensity: A measure of the concentration of people and jobs within a given area calculated by totaling the number of people either living or working in a given area.

Internal Street: An industrial major road, standard road, or other type of road that provides internal access to sites within the Plan Area and connections to the regional road network.

Jobs to Housing Balance: A measure of the relationship between the number of residents and the number of jobs in a specific area, calculated by dividing the number of residents by the number of jobs in that specific area.

Joint Use Site: Lands set aside for or including a school building, a location for a school building or a school playing field and community playing fields with facilities and grounds that are accessible to both school and non-school users.

Land Use Area: Refers to one of the categories of land uses delineated on the Land Use Concept Map and described in one of the policy sections of the ASP.

Land Use Bylaw: Refers to the *City of Calgary Land Use Bylaw*, as it may be amended from time to time.

Leadership in Energy and Environmental Design (LEED): A green building rating system that encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria. LEED is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high-performance green buildings.

Leading Infrastructure: The Core Infrastructure required at the start of development, including water, sanitary sewer, storm water, transportation and emergency response facilities.

Live–Work Unit: A land use where a business is operated from a dwelling unit by the resident of the dwelling unit.

Local Commercial Use: The use of land, buildings or structures for the purpose of providing retail goods and services on a limited scale, primarily to employees or residents in the area. It may include, but is not limited to, restaurants, convenience stores, service stations, gas bars and financial institutions.

Low-Impact Development: An approach to land development that uses various planning and engineering practices and technologies that create and/or utilize natural resource systems to replace traditional engineering systems, reducing infrastructure costs.

Master Drainage Plan: A stormwater drainage plan prepared for a large drainage area, usually serviced by one or more outfalls.

Mixed Use: The development of land, a building or a structure with two or more types of uses, such as residential, office and retail.

Multi-Residential Development: A residential development of one or more buildings, each containing one or more units, with a minimum of three units in total.

Municipal Development Plan (MDP): The planning policy document guiding growth and development within The City of Calgary. It reflects the kinds of communities Calgarians would like to see in the future. It is visionary, strategic and long term, and it provides the basis for actions and decisions both to protect and to improve quality of life for all Calgarians, present and future.

Natural Environment Park: A city-owned park where the primary role is the protection of an undisturbed or relatively undisturbed area of land or water, or both, and which has existing characteristics of a natural/native plant or animal community and/or portions of a natural ecological and geographic system. Examples include wetlands, escarpments, riparian corridors, natural grasslands and woodlots. Note: A relatively undisturbed Natural Environment Park would either retain or have re-established a natural character, although it need not be completely undisturbed.

Natural Water Balance Modelling: A model used to determine if development can comply with specific stormwater targets.

Neighbourhood: A portion of a Community generally based on 40 to 75 hectares of land (99 to 185 acres) in which residents are within a five-minute walk of a Neighbourhood Activity Centre.

Net Developable Area: The area of a site that can be developed.

Office Use: A land use where business, professional, clerical and administrative staff work in fields, other than medical or counselling, that provide services to either select clients or no clients, and therefore has limited contact with the public at large.

Outline Plan/Land Use Amendment: Detailed planning and design of new communities, or the redevelopment of large areas of existing communities, is done through the outline plan and subdivision process. This involves design details such as the preservation of environmental areas, open space locations and reserve dedications, development patterns, land use mixes and local street networks.

Parkland Ecoregion: The Parkland Ecoregion of Alberta is located in central eastern Alberta. The region includes lands, woodlands, grasslands, shrublands, wetlands, badlands and hoodoos. The landscape of the Parkland Ecoregion can be described as grassy and shrubby with green meadows.

Pedestrian-Oriented: An environment facilitating safe, convenient, attractive and comfortable foot travel for pedestrians of all ages and abilities. Considerations include providing direct pedestrian routes, safety, separation of pedestrians from traffic, attractiveness of the pedestrian route including visual interest, street furniture, sidewalk width and material, intersection treatment, curb cuts, ramps and landscaping.

Place of Worship: A place where people assemble for religious or spiritual purposes.

Plan Area: The physical land area applicable to this Area Structure Plan. The Plan Area is bounded by Stoney Trail to the south, 160 Avenue N to the north, 14 Street N.W. to the west, and the Noise Exposure Forecast (NEF) contour to the east. Additionally, there is a panhandle of land included in the Plan Area, east of the NEF contour, bounded on the North by 144 Ave N.E., on the east by a CP Rail line, and on the south by Stoney Trail (see Map 1: Plan Location and Map 2: Air Photo).

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Primary Cycling Network: A network of high-priority bicycle routes that will connect major destinations such as Activity Centres, corridors and major institutions. Each segment of the network will include the best possible cycling infrastructure that can reasonably be accommodated. Connections will be as direct as possible, making cycling between these locations expedient while also safe and appealing. The Primary Cycling Network should have high priority for maintenance and be kept clear of debris, snow and ice.

Primary Transit Network: A permanent network of high-frequency transit services, regardless of mode, that operates every 10 minutes or better, 15 hours a day, seven days a week.

The Province: The Province of Alberta.

Public Use: The use of land, buildings or structures for the purpose of accommodating public or quasi-public services, utilities or facilities and may include, but is not limited to, essential public services, municipal utilities and municipally owned facilities.

Recreational Use: The use of land, buildings or structures for the purpose of active or passive leisure pursuits, cultural activities, sporting activities and other customary and usual recreational pursuits which may include, but is not limited to, golf courses and driving ranges, ice skating rinks, sport fields, recreational centres, and parks and playgrounds.

Regional Road: A major road, expressway or freeway that accesses the Plan Area.

Residential Densities: Within the Plan Area, may be defined as Low, Medium or High Density.

a. **Low Density** (up to 35 units per hectare)

Low-Density residential development consists of grade-oriented housing forms, including

- Single-detached;
- Single-detached with secondary suites;
- Semi-detached;
- Duplex;
- Rowhouses;
- Townhouses; and
- Manufactured homes.

b. **Medium Density** (up to 148 units per hectare)

Medium-Density residential development consists of grade-oriented and low-profile multi-residential housing forms, including

- At-grade multi-dwelling housing forms with a minimum of three units per building; and
- Low-profile multi-dwelling buildings.

c. **High Density** (over 150 units per hectare)

High-density residential development includes high-density multi-residential housing forms with a minimum density of 150 units per hectare (60 units per acre). These include low-, medium- and high-rise building forms that meet the density criteria.

Retail, Large Format: Retail units of over 6,000 m² (60,000 ft²) in floor area.

Retail, Medium Format: Retail units ranging in size from 1,200 m² to 6,000 m² (12,000 to 60,000 ft²) in floor area.

Retail, Small Format: Retail units of less than 1200 m² (12,000 ft²) in floor area.

Retail Uses: The use of land, buildings or structures for the purpose of selling retail goods and services to the final consumer; includes the storage of merchandise on or about the premises in quantities sufficient to supply the establishment, and may include, but is not limited to convenience food stores, supermarkets, restaurants, auto service centres, theatres and financial institutions.

Risk Assessment: The process of identifying and documenting actual and perceived risks to human health or the environment, to allow further evaluation and appropriate responses. Risk assessments should include potential risks, their likelihood, their consequences and recommended mitigation measures.

River Valley System: Includes all land within the geographic and visual limits of the city's river valleys and creek corridors, as described in the City's *Open Space Plan*.

Skeletal Road: A high-volume road that promotes the movement of vehicular traffic over longer distances, typically operating at high speeds and having little direct access and interaction with adjacent land uses. Skeletal roads may present opportunities to implement green infrastructure in order to maximize water infiltration; slow, detail and filter roadway runoff; and preserve and enhance biodiversity.

Staged Master Drainage Plan: A stormwater drainage plan prepared for a large area that may or may not be serviced by an outfall. The Staged Master Drainage Plan generally covers a portion of the area served by the Master Drainage Plan.

Street-Oriented Design: Design that supports orienting building frontages and primary entranceways towards the street rather than internal to a site. Also known as Street-Oriented Development.

Sustainability: Meeting the needs of the present without compromising the ability of future generations to meet their own environmental, economic and social needs.

Transit Plaza: An area developed to serve as a public transportation centre, including on-site driveways, walkways, benches, bus shelters and landscape areas.

Urban Boulevard: The backbone of higher-density corridors and Activity Centres. Urban Boulevards give the highest priority to walking, cycling and transit, but they accommodate reasonably high volumes of vehicular traffic, are fully integrated with adjacent land uses, and provide high levels of connectivity to surrounding communities or destinations. High quality urban design and Green Infrastructure are critical components of Urban Boulevards.

Urban Main Street: *Urban Main Street* provide for a high level of residential and employment Intensification along an Urban Boulevard street type. Urban Corridors emphasize a walkable pedestrian environment fronted by a mix of higher-intensity residential and business uses.

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Water Body: Any location where water flows or is present, whether the flow or the presence of water is continuous, intermittent or occurs only during a flood, and includes but is not limited to wetlands and aquifers. See *Water Act*, Province of Alberta, for a complete definition.

APPENDIX A: REQUIRED STUDIES, ANALYSIS & CONCEPT PLANS

This section identifies the specific technical studies and concept plans that may be required, at the discretion of the Approving Authority, to be submitted with an Outline Plan/Land Use Amendment application.

A.1 Concept Plans

Purpose

The purpose of these guidelines is to provide for the submission of Concept Plans with an Outline Plan/Land Use Amendment application. Concept Plans will be required to demonstrate that a site will be suitable in terms of size and configuration to accommodate the intended future development or to ensure that a subdivision design will be appropriately integrated with adjacent areas. A Concept Plan is provided for information purposes only, has no legal status, and is subject to change.

Guidelines

1 Concept Plans

- a. Prior to Outline Plan/Land Use Amendment approval and as determined necessary, a developer may be required to submit a Concept Plan in order to assist the Approving Authority in evaluating a proposal in terms of its conformity with the Keystone Hills Area Structure Plan (ASP).
- b. Where a Concept Plan is required either through a policy in the ASP, or as part of the Outline Plan/Land Use review process, the Concept Plan
 - i. may be shown on the Outline Plan; and
 - ii. should show the proposed
 - A. land use areas,
 - B. building locations,
 - C. vehicular access/egress routes,
 - D. parking areas,
 - E. public roads,
 - F. transit stops,

- G. pedestrian connections,
- H. regional pathways,
- I. bikeways,
- J. utility alignments,
- K. public parks,
- L. stormwater ponds,
- M. Green Infrastructure,
- N. slope adaptive areas of interest, and
- O. adjacent roads and development.

- c. The above requirements may be relaxed or modified as determined necessary in response to a specific proposal.
- d. Where a Concept Plan is required and is not provided in a satisfactory manner, the Outline Plan/Land Use Amendment may not be approved.

A.1.1 Specific Concept Plans

The Sustainable Suburbs Study identifies a number of unique elements based upon new urban planning principles that need to be addressed in the design of the Concept Plan. In order to evaluate these elements, a series of Concept Plans may be required in conjunction with an Outline Plan/Land Use Amendment application, at the discretion of the Approving Authority. These Concept Plans are as follows:

- a. Neighbourhood Concept Plan,
- b. Community Activity Centre Concept Plan,
- c. Pedestrian and Bicycle Circulation Concept Plan,
- d. Transit Station Planning Area Concept Plan,
- e. Neighbourhood Street Network Concept Plan, and
- f. Park Concept Plan.

The general content of these Concept Plans and the content of the guidelines that follow are to be incorporated into land use controls and Outline Plan conditions applied to the site or introduced directly through the subdivision and development approval process. Inherent in these Concept Plans and guidelines is the recognition that alternative design solutions are possible. As such, these guidelines will be applied in a flexible manner and may be varied or revised as determined appropriate provided that it can be demonstrated that the proposed design is equivalent to or is an improvement over what would be achieved if the

Appendix A

guidelines were followed. In an effort to reach the optimal design solution, it is anticipated that negotiation, trade offs, and innovation will occur.

A.1.2 Neighbourhood Concept Plan

Purpose

The purpose of a Neighbourhood Concept Plan is to identify the edge conditions of a neighbourhood and address the design and density of the Neighbourhood Activity Centre(s).

Guidelines

- 1. Neighbourhood Concept Plan Submission**
 - a. In conjunction with an Outline Plan/Land Use Amendment application, a Neighbourhood Concept Plan for each Neighbourhood contained within the application should be submitted.
 - b. Where an Outline Plan/Land Use Amendment application comprises a portion of a Neighbourhood, the entire Neighbourhood should be included within the Neighbourhood Concept Plan.
- 2. Neighbourhood Concept Plan Requirements**

A Neighbourhood Concept Plan should

 - a. demonstrate compliance with the requirements of Section 6.4, Neighbourhoods; 6.5, Neighbourhood Areas; 6.6, Neighbourhood Activity Centres; Section 8: Urban Design, and all other relevant policies within the ASP;
 - b. demonstrate compliance with Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines;
 - c. contain the elements listed in A.1(1)b of this Appendix;
 - d. provide information addressing the design and density of the Neighbourhood(s);
 - e. show the 400 m (0.25 mile) pedestrian shed from focal points, including stores, services, open space and transit stops;
 - f. show connections to and integration with the Environmental Open Space and/or Green Corridor as applicable;
 - g. include a Neighbourhood name and street name application for the neighbourhood; and

- h. contain such other information as determined necessary by the Approving Authority to evaluate the compliance of the proposal with the policies of the ASP.

A.1.3 Community Activity Centre Concept Plan

Purpose

The purpose of the Community Activity Centre Concept Plan is to provide details of the design of each Community Activity Centre.

Guidelines

- 1. Community Activity Centre Concept Plan Submission**

In conjunction with an Outline Plan/Land Use Amendment application for lands which include part or all of a Community Activity Centre, a Community Activity Centre Concept Plan encompassing the entire Community Activity Centre should be submitted.
- 2. Community Activity Centre Concept Plan Requirements**

A Community Activity Centre Concept Plan should

 - a. demonstrate compliance with the requirements of Section 6.7, Community Activity Centre, Section 8: Urban Design, and all other relevant policies within the ASP;
 - b. demonstrate compliance with Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines.
 - d. Contain the elements listed in A.1(1)b of this Appendix.
 - e. Include information addressing the urban design and retail density of the Community Activity Centre;
 - f. Show a 400 m (0.25 mile) pedestrian shed from focal points, including neighbourhood stores, services, open space and transit stops, and
 - g. Contain such other information as determined necessary by the Approving Authority to evaluate the compliance of the proposal within the policies of the Plan.

A.1.4 Pedestrian and Bicycle Circulation Concept Plan

Purpose

The purpose of the Pedestrian and Bicycle Circulation Concept Plan is to define the regional and local pedestrian and bicycle routes within the community and, in particular, the connections to transit service, educational and recreational facilities, Neighborhood, Community, and Major Activity Centres, community centres and other key destinations for residents.

Guidelines

1. Pedestrian and Bicycle Circulation Concept Plan Submission

In conjunction with an Outline Plan/Land Use Amendment application, a Pedestrian and Bicycle Circulation Plan is required.

2. Pedestrian and Bicycle Circulation Plan Requirements

The Pedestrian and Bicycle Circulation Plan should

- a. demonstrate compliance with the policies of Section 9.2.1, Pedestrian and Bicycle Circulation Policies, and all other relevant policies within the ASP;
- b. contain the elements listed in A.1(1)b;
- c. identify pedestrian and bicycle destinations such as schools, shopping, parks, pathways, etc., as well as
 - ii. pedestrian destinations such as parks, light rail transit (LRT) stations, recreational facilities and public amenities within a 1 km (0.6 mile) radius of the community;
 - ii. bicycle destinations such as parks, LRT stations, recreational facilities and public amenities within a 3 km (1.9 mile) radius of the community;
 - iii. other notable pedestrian destinations (e.g., parks, LRT stations, recreational facilities, public amenities, etc.) outside the 1 km (0.6 mile) radius of the community; and
 - iv. other notable bicycle destinations (e.g., parks, LRT stations, recreational facilities, public amenities, etc.) outside the 3 km (1.9 mile) radius of the community; and
- d. demonstrate that a convenient and efficient routing network is provided for local and commuter pedestrian and bicycle trips in relation to the

site and the surrounding community including sidewalks, walkways, pathways, bikeways and crosswalks;

- e. show the location of pedestrian routes to the LRT station;
- f. provide for efficient connections to educational, recreational, commercial and other key destinations within the community;
- g. identify the barriers to pedestrian and bicycle circulation (such as high volume roads, natural areas, stormwater management facilities, etc.);
- h. address how barriers to pedestrian and bicycle connectivity can be mitigated or overcome; and
- i. contain such other information as determined necessary by the Approving Authority to evaluate the compliance of the proposal with the policies of the ASP.

A.1.5 Transit Station Planning Area Concept Plan

1. Transit Station Planning Area Concept Plan Requirements

The Transit Station Planning Area Concept Plan should

- a. demonstrate compliance with the requirements of Section 6.10, Transit Station Planning Area, Section 8: Urban Design and all other relevant policies within the ASP;
- b. demonstrate compliance with Appendix D: Neighbourhood Design and Appendix E: Environmental Design Guidelines;
- d. contain the elements listed in A.1(1).b of this Appendix;
- e. include information addressing the urban design of the Transit Station Planning Area;
- f. show a 400 m (0.25 mile) pedestrian shed from focal points, including stores, services, open space and transit stops; and
- g. contain such other information as determined necessary by the Approving Authority to evaluate the compliance of the proposal within the policies of the ASP.

A.1.6 Neighbourhood Street Network Concept Plan

Purpose

The purpose of a Neighbourhood Street Network Concept Plan is to describe an internal street pattern for the Neighbourhood that balances the needs of motorists, transit service, pedestrians and cyclists, and that treats the street as an important component of the public realm.

Guidelines

1. **Street Network Concept Plan Submission**
In conjunction with an Outline Plan/Land Use Amendment application, a Street Network Concept Plan should be submitted.
2. **Street Network Concept Plan Requirements**
The Street Network Concept Plan should
 - a. demonstrate compliance with the policies of Section 9: Connecting Communities, and any other relevant policies of the ASP;
 - b. show the internal road network for the application area and adjacent areas;
 - c. contain the elements listed in A.1(1)b;
 - d. identify the classification of the roads within the network;
 - e. include cross sections showing the standard of improvements within the roadways;
 - f. identify road sections that will incorporate Green Infrastructure and serve as Green Streets that connect parks, open space and natural areas; and
 - g. contain any other such information as determined necessary by the Approving Authority to evaluate the compliance of the proposal with the policies of the ASP.

A.1.7 Park Concept Plan

Purpose

The purpose of a Park Concept Plan is to illustrate the proposed park concept and layout for an Outline Plan Area, identify connectivity between park areas and describe proposed park landscaping, park equipment, structures and features. Guidelines are found in the *Parks*

Development Guidelines and Standard Specifications Landscape Construction.

Guidelines

1. **Park Concept Plan Submission**
In conjunction with an Outline Plan/Land Use Amendment application, a Park Concept Plan should be submitted.
2. **Park Concept Plan Requirements**
The Park Concept Plan should
 - a. demonstrate compliance with the policies of Section 7.6, Open Space System; 10.4.1, Environmental Open Space Policies; and all other relevant policies of the ASP;
 - b. show all planned parks for the application area;
 - c. contain the elements listed in A.1(1)b;
 - d. illustrate all pedestrian and cyclist connections between planned parks;
 - e. illustrate and describe all planned landscaping and uses of park areas;
 - f. identify and describe all park features, equipment and structures; and
 - g. contain any other such information as determined necessary by the Approving Authority to evaluate the compliance of the proposal with the policies of the ASP.

A.2 Environmental Background Studies

Purpose

The purpose of these guidelines is to provide for the evaluation of the environmental impacts of an Outline Plan/Land Use Amendment application. This evaluation will involve the circulation of a proposal to the appropriate external agencies for review and comment and the submission of the appropriate environmental, biophysical, historical resources and grading information deemed necessary to undertake this review. All environmental background studies shall be prepared to the satisfaction of The City of Calgary.

Guidelines

1. **Environmental Site Assessment**
 - a. Prior to Outline Plan/Land Use approval, a developer

- i. shall submit a current Phase 1 Environmental Site Assessment report for the subject site. The report shall
 - A. identify actual and potential soil and groundwater contamination; and
 - B. be used to determine if the site is suitable for the intended use, as related to environmental issues.
 - ii. may be required by the Approving Authority to submit a current Phase 2 Environmental Site Assessment and resulting Remedial Action Plan and/or Risk Management Plan for the subject site.
 - b. The Remedial Action Plan and/or Risk Management Plan shall document how the site would be remediated or risk managed to such an extent that the site would be suitable for the intended land use.
 - c. A Environmental Site Assessment report shall be
 - i. prepared by a qualified professional;
 - ii. reviewed to the satisfaction of the Environmental Development Review; and
 - iii. circulated to the appropriate regulatory agencies for review, as required.
 - d. Where required, a developer shall undertake those mitigative measures identified by the Environmental Site Assessment report for the subject site.
 - e. Additional environmental information or monitoring at later stages of site development or as outlined in the Environmental Site Assessment report may be required.
- 2. Biophysical Impact Assessment**
- a. Prior to Outline Plan/Land Use approval the developer shall submit a Biophysical Impact Assessment report prepared by a qualified professional to evaluate the impact on biophysical resources and ecosystems and identify any mitigating measures to be introduced.
 - b. Where required, the developer shall undertake those mitigating measures identified in the Biophysical Impact Assessment report for the subject site.
- 3. Historical Resources Impact Assessment**
- a. Prior to Outline Plan/Land Use approval, a Historical Resources Impact

Assessment report may be required for the subject site, as determined by Alberta Culture and Community Spirit.

- b. Where required, the developer shall, to the satisfaction of Alberta Culture and Community Spirit, undertake those protective or mitigative measures identified in the Historical Resources Impact Assessment report for the subject site.

A.3 Density Analysis

Purpose

The purpose of these guidelines is to provide for the submission of appropriate information in order to allow for the evaluation of a proposal in terms of its compliance with the Density requirements of the ASP. This information will take the form of a Density Analysis submitted as part of an Outline Plan/Land Use Amendment application that is, in turn, refined and resubmitted at the subdivision approval stage.

Guidelines

1. Density Analysis

In conjunction with an Outline Plan/Land Use Amendment application, information shall be submitted identifying

- i. the minimum, maximum and anticipated residential density of the site; and
- ii. the minimum, maximum and anticipated density of non-residential development expressed in terms of square footage of space.

2. Density Monitoring

The Density Analysis under subsection A.3(1) should

- i. be updated and resubmitted with each subsequent plan of subdivision and, if determined necessary, each Development Permit for a residential project within the original Outline Plan/Land Use Amendment application area; and
- ii. identify the actual number of dwelling units proposed within the subdivision or Development Permit plans in relation to the actual and anticipated dwelling units within the balance of landowners' lands within the community.

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A.4 Reserve Analysis

Purpose

The purpose of these guidelines is to provide for the review of the allocation of creditable Municipal Reserve (MR) and Environmental Reserve (ER) within a Community.

Guidelines

1. Creditable Reserve Analysis

Prior to approval of an Outline Plan/Land Use Amendment application, a Reserve Analysis shall be submitted by a developer identifying

- i. the amount of creditable reserve owing on an ownership basis within the community and the subject site; and
- ii. the proposed allocation of this reserve.

2. Environmental Reserve (ER) Analysis

In conjunction with the Outline Plan/Land Use Amendment application, the following should be submitted when ER is to be dedicated:

- i. a field surveyed boundary of any ER lands with the boundary shown on the Outline Plan;
- ii. a Biophysical Impact Assessment report prepared by a qualified professional;
- iii. a Preliminary Grading Plan showing the extent of any grading or disturbance proposed on reserve lands, including grading for roads, pathways and stormwater management facilities;
- iv. a Restoration Plan showing the proposed landscape and method of restoration for any ER lands that have been or are to be graded or disturbed;
- v. a Concept Plan showing the design of the stormwater facility and any related recreational amenities;
- vi. a Stormwater Management Report consistent with the Master Stormwater Drainage Plan; and
- vii. any other analysis or information considered necessary to evaluate the proposal.

A.5 Mobility Assessment & Plan

Purpose

The purpose of a Mobility Assessment & Plan (MAP) is to assess the multi-modal transportation influences of new developments. The MAP is intended to be conducted around higher-density transit nodes or transit corridors.

Guidelines

1. Mobility Assessment & Plan

- a. Unless determined otherwise, a Mobility and Assessment Plan shall be submitted in conjunction with an Outline Plan/Land Use Amendment application.
- b. The Mobility and Assessment Plan shall address
 - i. the internal road network, including the design, capacity and timing of the network improvements and transportation policy/service changes necessary to serve the subject site;
 - ii. the perimeter road network, including the design, capacity and timing of network improvements and transportation policy/service changes required to serve the subject site; and
 - iii. the coordination of the development of the subject site with timing of construction and capacity of any transportation improvements, or necessary transportation policy/service changes that need to be implemented.

2. Update of Mobility Assessment & Plan

The Mobility and Assessment Plan may be required to be updated and resubmitted with a subsequent subdivision or Development Permit application within the Outline Plan/Land Use Amendment application area.

A.6 Transportation Impact Assessment

Purpose

The purpose of these guidelines is to provide for the submission of a Transportation Impact Assessment to address the network improvements required to serve a proposed development.

Guidelines

1. Transportation Impact Assessment

- a. Unless determined otherwise, a Transportation Impact Assessment must be submitted in conjunction with an Outline Plan/Land Use Amendment application.
- b. The Transportation Impact Assessment should address
 - i. the internal road network, including the design, capacity and timing of the network improvements necessary to serve the subject site;
 - ii. the perimeter road network, including the design, capacity and timing of construction required to serve the subject site; and
 - iii. the coordination of the development of the subject site with timing of construction and capacity of any transportation improvements.

2. Update of Transportation Impact Assessment

The Transportation Impact Assessment may be required to be updated and resubmitted with a subsequent subdivision or Development Permit application within the Outline Plan/Land Use Amendment application area.

- C. estimated timing of transit service provision in terms of percentage of community build-out,
- D. cost of transit provision,
- E. estimated ridership,
- F. residential dwellings within and beyond the prescribed transit coverage areas, and
- G. any enhanced transit facilities; and
- ii. demonstrate that the internal road network will accommodate
 - A. convenient and efficient pedestrian connection to transit service; and
 - B. suitable transit coverage.
- b. In addition to subsection A.7(2)a, the Transit Coverage Plan should contain such other information as determined necessary by the Approving Authority to evaluate transit service coverage within the community.

A.7 Transit Coverage Plan

Purpose

The purpose of a Transit Coverage Plan is to show the location and extent of transit service and coverage within the community.

Guidelines

1. Transit Coverage Plan

A Transit Coverage Plan may be required in conjunction with an Outline Plan/Land Use Amendment application, at the discretion of the Approving Authority.

2. Transit Coverage Plan Requirements

- a. The Transit Coverage Plan should
 - i. show the proposed
 - A. routing of public transit buses,
 - B. location of transit bus stops,

A.8 Market Demand and Impact Analysis

Purpose

The purpose of these guidelines is to establish criteria and a review process for evaluating a Retail Centre from a market perspective. This will involve the submission of a Market Demand and Market Impact Analysis in conjunction with a Land Use Amendment application for a Retail Centre.

Guidelines

1. Submission of Market Demand and Impact Analysis

Where determined appropriate and necessary due to its scale or composition, a Retail Centre may be required to be analyzed in terms of its market demand and market impact on the existing and planned retail hierarchy in the area.

2. Review of Market Demand and Impact Analysis

Where a Market Demand Analysis or a Market Impact Analysis is submitted, it may be required to be evaluated by an independent consultant as part of the review process with the cost of this evaluation to be borne by the developer.

- 3. Local Commercial Policy: New Communities in Calgary**
The Local Commercial Policy: New Communities in Calgary must be reviewed in association with all new studies completed. Appropriate justification and analysis must be provided for any deferral from its findings.

A.9 Utility Servicing Background Studies

Purpose

The purpose of these guidelines is to provide for the submission of municipal servicing studies and analysis considered necessary to evaluate a proposal.

Guidelines

- 1. Water Distribution System**
In conjunction with an Outline Plan/Land Use Amendment application, a Water Distribution Analysis shall be completed to demonstrate that the subject site can be serviced in accordance with the overall design of the water distribution system for the area.
- 2. Sanitary Sewage System**
In conjunction with an Outline Plan/Land Use Amendment application, a Sanitary Sewer Servicing Study shall be submitted to demonstrate that the subject site can be serviced in accordance with the overall design of the sanitary sewage system for the area.
- 3. Stormwater Management System**
In conjunction with an Outline Plan/Land Use Amendment application, a Staged Master Drainage Plan, consistent in format with the North Regional Stormwater Master Drainage Plan (to be revised) as approved by The City and the Province, shall be submitted to demonstrate that the subject site can be serviced in accordance with the overall design of the stormwater management system for the area.

A.10 Growth Management Analysis

Purpose

The purpose of these guidelines is to ensure that major transportation and utility infrastructure improvements and facilities required to serve development within the Plan Area are identified prior to Outline Plan/Land Use Amendment approval.

Guidelines

- 1. Growth Management Analysis**
 - As part of an Outline Plan/Land Use Amendment application, an applicant shall identify the following:
 - the major on-site and off-site transportation and utility infrastructure improvements and facilities necessary to serve the subject site;
 - the financial obligations for these improvements and facilities;
 - the anticipated timing of construction of the transportation and utility infrastructure improvements and facilities relative to projected land absorption rates;
 - the timing or development thresholds required for any provincially-, municipally- or developer-financed transportation and utility infrastructure improvements and facilities; and
 - as determined appropriate, the timing of any off-site transportation and utility infrastructure improvements and facilities.
- 2. Public Infrastructure Improvements in Relation to Council's 3-Year Capital Budget**
The Administration shall identify budgeting priorities in relation to any major provincially- or municipally-funded transportation or utility infrastructure improvements and facilities necessary to serve the subject site identified under subsection 1.
- 3. Report to Council**
The report to Council accompanying a Land Use Amendment application should address the proposal in the context of Section 5.1, Urban Growth Policies, and the Corporate *Framework for Growth and Change*.

A.11 Risk Assessment

Purpose

While the Energy Resources Conservation Board (ERCB) outlines basic setbacks and guidelines for oil and gas facilities, further investigation, such as a Risk Assessment, is necessary to determine appropriate land uses adjacent to specific facilities. The purpose of a Risk Assessment is to evaluate the potential long- and short-term risks associated with urban development in proximity to existing oil and gas infrastructure such as sour gas infrastructure, oil wells, abandoned wells, pipelines, and other oil and gas facilities. The Risk Assessment will identify and document actual and perceived risks to human health or the environment, their likelihood, their consequences and any required mitigation. The Approving Authority will consider the Risk Assessment and any associated mitigation strategies prior to approval of an Outline Plan/Land Use Amendment application.

Guidelines

1. Risk Assessment Requirements

- a. The Risk Assessment should include, as applicable,
 - i. brief project description,
 - ii. source of risk,
 - iii. existing ERCB setbacks,
 - iv. likelihood of an incident occurring,
 - v. analysis of the consequences of an incident,
 - vi. Emergency Planning Zone area and specific response provisions,
 - vii. proposed risk mitigation measures,
 - viii. a risk communication plan,
 - ix. potential nuisance effects, such as odor, lighting, noise, flaring, etc., and
 - x. analysis regarding how the facility will integrate with existing and future developments.

APPENDIX B: COST OF DEVELOPMENT

The purpose of the cost information is to provide an approximation of the magnitude of the investments required to support the Plan Area, including capital costs as well as operating and maintenance costs. It is recognized that the costs incurred by development of lands within the Plan Area and future services for the Communities will be covered through a variety of revenue sources including acreage assessments, user fees, and general municipal revenue collected through the mill rate. Additional costs of growth, such as the light rail transit (LRT) station will require infrastructure and services outside of the Plan Area, which are not included in this document.

It is important to note that some of these costs will not apply for several years after development begins. The operating costs for transit service will increase as the population and demand for service grows over time. Conversely, it is likely that the majority of the utility servicing infrastructure cost is required in order for initial development to occur. The costs provided within Table B1: Infrastructure Costs are the costs for full build-out and are estimates only. Utility servicing costs include infrastructure that may benefit future ASP cells identified in the *North Regional Context Study (2010)*.

The figures contained in Table B1 can be refined at the Outline Plan/Land Use Amendment stage without requiring an amendment to this ASP.

It is also important to note that these costs do not represent the full costs to service the community. Complete Community costs would also include costs associated with program and service delivery of various city business units (such as social workers, community recreation coordinators, parks programs, community and neighbourhood services staff, waste and recycling operations, etc.) that serve community needs and are an essential part of a Complete Community. Furthermore, there may be costs associated with the potential purchase of Environmentally Significant Areas and or land for a regional park, if so decided by Council.

Costs were calculated based on the best information available at the time of the writing of this ASP, but may be different at the time of development. Furthermore, there may be additional costs not foreseen at this time.

Table B1: Infrastructure Costs

Required Infrastructure	Tracked in 10-Year Capital Plan	Proposed in 3-Year Capital Budget	Estimated Capital Cost ¹	Estimated Annual Operating Cost ²
Facilities				
Emergency Services Station	Yes	No	\$14.4 million	\$4.0 million
Operational Workplace Centre	Yes	No	\$25.9 million	\$1.0 million ³
Transportation				
Primary Transit (LRT)	No	No	\$154.2 million ⁴	\$8.3 million
Transit (bus)	No	No	\$1.3 million	\$4.6 million
Pedestrian, cycle and streets	N/A	N/A	N/A ⁵	\$0.5 million
Utility Servicing				
Water	Yes	No	\$47.4 million	\$0.9 million
Sanitary	Yes	No	\$15.3 million	\$0.5 million
Storm	Yes	No	\$23.3 million	\$0.7 million
Total			\$281.8 million	\$20.5 million

¹Capital cost estimates in 2011 dollars.

²Operating cost estimates in 2011 dollars.

³Including Operation and Maintenance and Corporate Properties and Buildings staff only (the centre may also include other business units, which would have their own costs). The Operational Workplace Centre is not located in the Plan Area but is needed to service the Plan Area.

⁴Cost of LRT extension from future Coventry Station to Keystone Hills. Does not include cost of LRT construction to Coventry Station. Cost of construction for North Central LRT line from downtown to Coventry Station has not been determined.

⁵Cost of pedestrian, cycling and streets is borne by developers.

APPENDIX C: JOINT USE SITES

Overview

The purpose of the Joint Use Site guidelines is to address the type, school jurisdiction and size of the Joint Use Sites shown on *Map 12: Joint Use Sites*. **Bylaw 83P2019**

Joint Use Site

The Joint Use Site requirements for the Plan are identified in Section 7.3: Joint Use Sites and shown on *Map 12*. Table C1: Joint Use Site Requirements is provided for reference purposes. The exact type of school, school board jurisdiction and size of the Joint Use Site will be determined at the Outline Plan/Land Use Amendment stage. As such, if an inconsistency between Section 7.3 and an Outline Plan/Land Use Amendment approval by Calgary Planning Commission and Council should arise, an amendment to Section 7.3 will not be required.

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The number of Joint Use Sites may be reviewed by the Joint Use Coordinating Committee when detailed planning for communities is undertaken through review of Outline Plan/Land Use Amendment applications. Should it be determined that an additional school site is required, then an amendment to the ASP will be necessary.

Table C1: Joint Use Site Requirements

SITE LABEL (SEE MAP 12)	SCHOOL TYPE	SCHOOL BOARD	NUMBER REQUIRED	SIZE PER SITE
6	K-6	Calgary Separate School Board	1	3.6 hectares (9 acres)
9	K-9	Calgary Separate School Board	1	4.9 hectares (12 acres)
EM	Elementary/ Middle	Calgary Separate School Board	1	6.9 hectares (17 acres)
E	Elementary School	Calgary Board of Education	5	4.0 hectares (10 acres)
M	Middle School	Calgary Board of Education	2	4.9 hectares (12 acres)
EM	Elementary/ Middle	Calgary Board of Education	1	6.9 hectares (17 acres)
S	High School	Calgary Board of Education	1	9.2 hectares (23 acres)
TOTAL AREA REQUIRED:				61.3 hectares (151 acres)

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APPENDIX D: NEIGHBOURHOOD DESIGN

This section is intended to illustrate the policies of Section 6: Shaping a More Compact Urban Form and Section 8: Urban Design, demonstrating some of the ways in which those policies may be met. These guidelines do not present an exhaustive list of possible design solutions and innovative approaches but help illustrate the intent of neighbourhood design policies. Creative approaches that extend beyond these guidelines while meeting the intent of the policies are encouraged.

Figure D1 shows some of the design principles that are desired in Calgary's new neighbourhoods. Some of these principles are required by policy while others are recommended. Figure D1 also demonstrates that a well-designed neighbourhood that complies with policy by focusing on walkability and mixing uses may be achieved in a variety of ways.

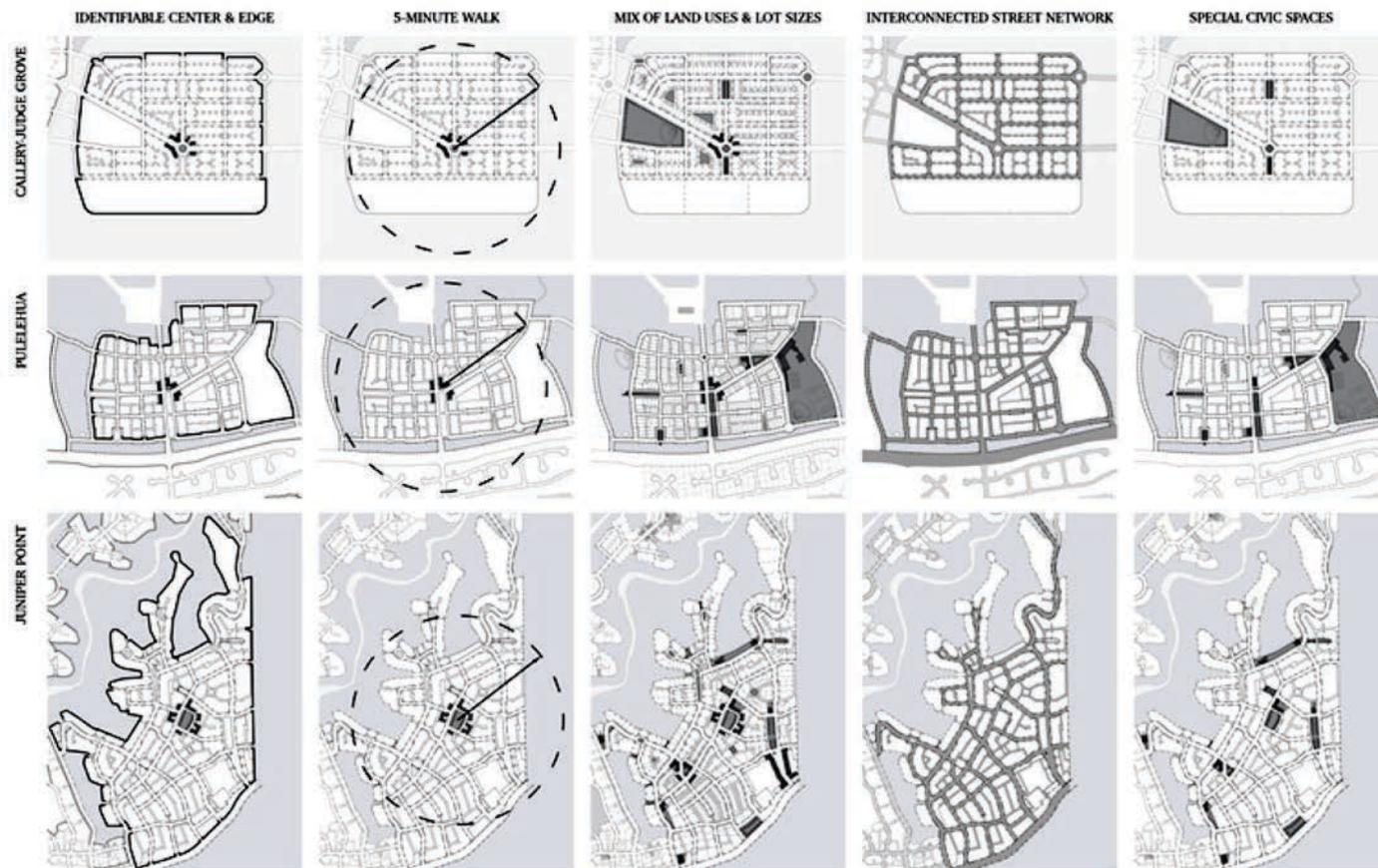


Figure D1: Illustration of three development projects highlighting several factors important to sound neighbourhood design. (Source: Farr, D. *Sustainable Urbanism*)

Neighbourhood Design Guidelines

D.1 Size and Shape of Neighbourhoods

A neighbourhood is meant to be a walkable component of the urban landscape, providing residents with access to a number of daily needs and amenities, including transit services, within a reasonable walking distance from their home. Both the size of the neighbourhood and the network walking distances (from the central amenity space to any residence in the neighbourhood) are limited in order to meet this objective (see Figure D2).

Where an Environmental Open Space forms part of the boundary or edge of a neighbourhood, it will be excluded from the size calculation of the neighbourhood. If an environmental open space is contained within a neighbourhood, it shall be counted as part of the neighbourhood area.

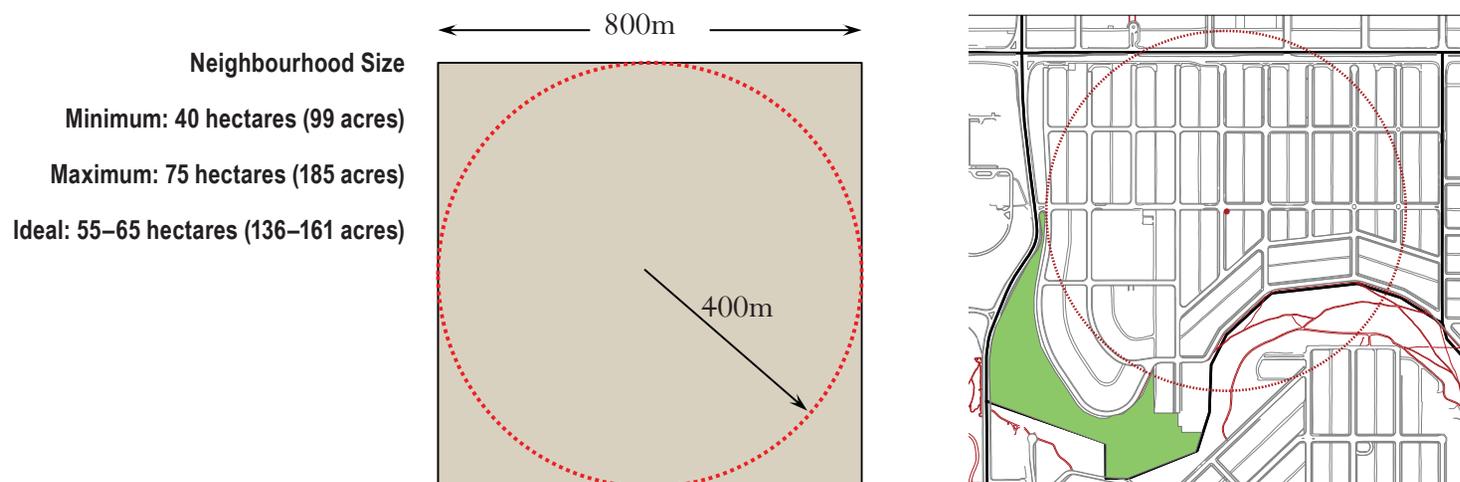


Figure D2: On the left, a quarter section of land measuring approximately 65 hectares. The red, dashed line represents the pedestrian shed, the theoretical distance people are willing to walk to access basic amenities. On the right, the community of Rosedale measuring 66 hectare. The southern boundary, however, is partially delineated by Environmental Reserve that measures about 6 hectare, bringing the total neighbourhood size to 60 hectare. This illustrates an ideal neighbourhood size.

The shape of the neighbourhood may vary, but whatever configuration proposed, the design of the neighbourhood must comply with the size and walking distance metrics. Only in unique circumstances may either of these metrics be exceeded (see Figure D3).

D.2 Defining the Neighbourhood Edge

Creating a well-defined neighbourhood edge helps provide residents with a sense of identity as well as giving them visual cues that help them navigate around the city. This not only generates an added sense of pride regarding where one lives, but it also encourages individuals to take a greater role in the welfare of the neighbourhood (see Figures D4 and D5).

Network Walking Distance
Maximum: 700 m (0.43 miles)
Ideal: < 600 m (0.37 miles)

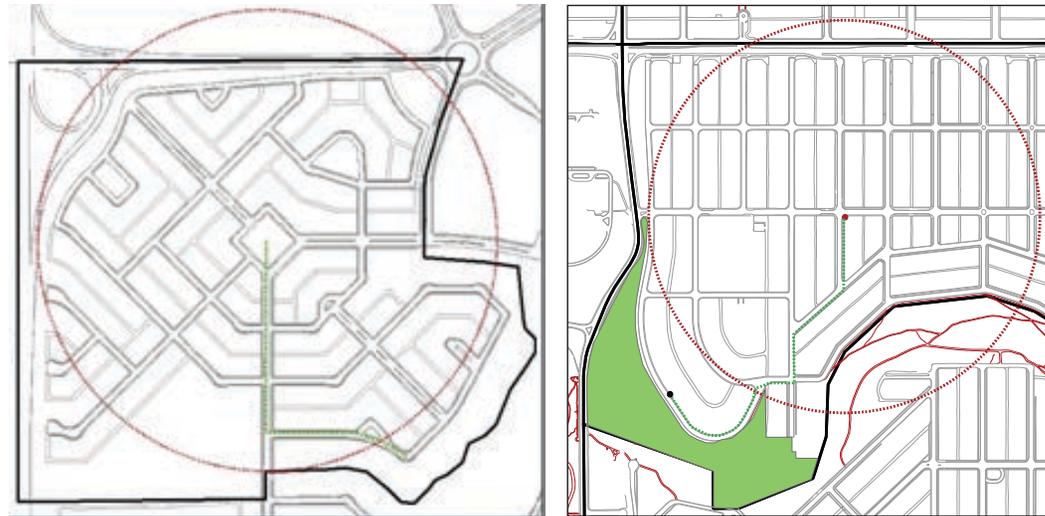


Figure D3: On the left, Inverness, a neighbourhood that measures 60 hectare. Due to a thoughtful orientation of well-connected streets and pathways, the maximum walking distance between the central amenity space and any residence in the neighbourhood (green dashed line) is less than 600m. On the right is Rosedale. The grid-iron network provides a maximum walking distance between the centre of the neighbourhood and the furthest residence of 700m.

Some features, such as natural areas, topographical elements or large streets and expressways create clear and distinctive edges to neighbourhoods. In some cases, however, portions of the neighbourhood may need to be defined by design. Other elements that may be used to create a neighbourhood edge include

- school sites,
- pathways and linear parks,
- water bodies, and
- large building/office complex.



Figure D4: This image shows a neighbourhood with a well-defined edge. The orange line roughly delineates the edge of Inverness, a neighbourhood in southeast Calgary. The edge is composed of an expressway to the west and Arterial streets to the north and northeast. The remainder of the neighbourhood is delineated by school sites (southwest) and linear parks and a small community lake (southeast).



Figure D5: In contrast, the second image shows the community of Queensland (black outline), also in southeast Calgary. Queensland covers an area about the size of three neighbourhoods. Although the community is separated from other communities by an expressway, open space and a school site, there are no distinct edges between neighbourhoods. Consequently, this is no longer an acceptable standard of design.

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D.3 Location of Local Commercial Development

Local Retail Centres that are <math><2,800\text{ m}^2\text{ (30,139 ft}^2)</math> provide a range of retail goods and services to neighbourhood residents. In the proper location, these centres can be a destination for residents of a neighbourhood that can be reached on foot or by bicycle. However, many of these centres are located along Arterial streets favouring convenient access by automobiles over that of pedestrians or cyclists.

Local commercial sites should

- be located in, adjacent to or near the Neighbourhood Activity Centre;
- strike a balance between maximizing pedestrian/cyclist access and accommodating automobiles; and
- not be located on or adjacent to an Arterial street, as shown in Figure D5.

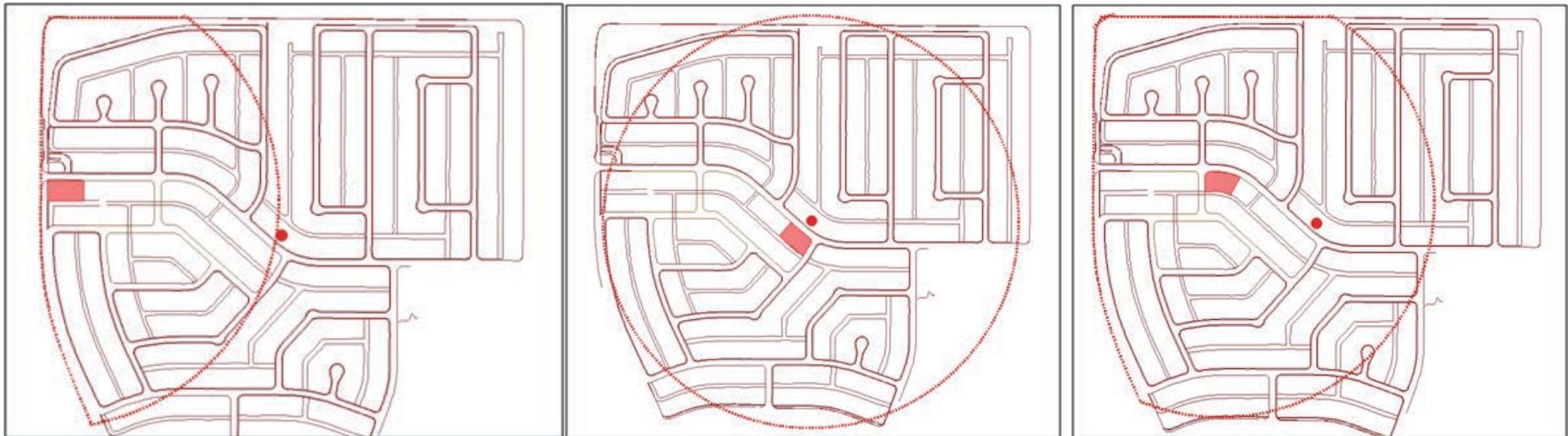


Figure D5: The first map shows the location of a local retail centre on the edge of a hypothetical neighbourhood. A 400 m (0.25 mile) pedestrian shed extends only to the surrounding Arterial street network, which acts as a barrier to pedestrian movement. This location is not considered acceptable. The second map illustrates how locating the commercial centre in a NAC places the greatest number of residents within walking distance. The third map shows a location close to, but not in the NAC. This location provides ease of access for pedestrians and cyclists while also accommodating automobile trips.

D.4 Central Amenity Space

The central amenity space is the focal point of the neighbourhood. It should act as the hub of local activity and provide residents with a place to interact with their neighbours, access transit services and enjoy a variety of recreational pursuits. It may take the form of a plaza or a park or some mixture of soft and hard landscaping and be designed in such a way as to be an engaging space during all seasons of the year.

Characteristics of a central amenity space, as shown in Figures D6 and D7:

- between 0.2 and 1.0 hectares (0.5 and 2.5 acres);
- multi-function design;
- edges should be defined by streets and/or active building fronts ;
- close to one or more transit stops;
- provide bicycle parking;
- contain public art or landmark structures; and
- avoid elongated, linear designs.



Figure D6: A variety of well-designed parks and plazas are appropriate models for designing a central amenity space.

The first image shows a traditional European town square featuring a prominent fountain at its centre, with a mixture of paved and landscaped areas and seating throughout.



Figure D7: Haultain Park is a large, 1 hectare (2.5 acre) park in Calgary's beltline featuring a playground, plaza area with seating, small sports field and other recreational facilities. A smaller amenity space could utilize some of these design elements effectively.

D.5 Transit Plaza

The Transit Plaza is a particular type of amenity space required in Community Activity Centres and Major Activity Centres. It should be located prominently and provide an area in which residents may access transit services or conveniently transfer between transit routes. The Transit Plaza should also incorporate a mix of uses to generate activity during off-peak hours, as illustrated in Figures D8, D9 and D10.

Characteristics of a transit plaza:

- contains space designed as a transfer point between transit routes;
- has a transit building to protect patrons from inclement weather;
- has edges defined by streets and active building fronts;
- provides bicycle parking; and
- contains public art.



Three transit station concepts featuring transit plazas each demonstrate how the design principles may be achieved through a variety of forms.

Figure D8: The first image shows a rendering of the Sunalta transit station in southwest Calgary.



Figure D9: The second image is a conceptual transit station in a mixed-use centre providing a transfer point between bus lines.



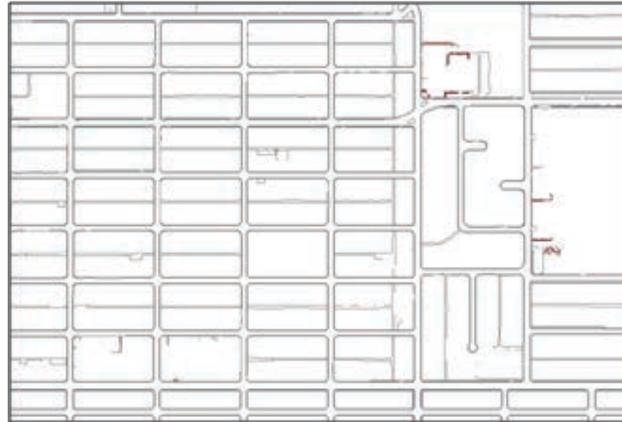
Figure D10: The third image shows a conceptual transit station in Baltimore, Maryland. (Source: Klaus Philipsen, ArchPlan Inc.)

D.6 Block-Based Street Network

Walkability is one of the most important objectives of neighbourhood design, and a well-connected street network is a key characteristic to its achievement. Although a grid-iron network has the ability to provide a highly connected network with multiple routing options, it is not always the most practical or environmentally sensitive option. Instead, a block-based network featuring short block faces and multiple routing options is required. See Figures D11, D12 and D13.

Street network characteristics:

- block-based pattern;
- ± 900 m (0.6 mile) block perimeter in Neighbourhood Area;
- ± 600 m (0.4 mile) block perimeter in Activity Centres;
- single entry streets (such as cul-de sac and P-loops) should be avoided; and
- provide safe, convenient pathways to shorten walking distances to the Activity Centre.



These figures illustrate three street patterns found in Calgary. Grey lines outline streets and red lines indicate pathways.

Figure D11: A traditional gridiron pattern in West Hillhurst. This is an example of an acceptable street network design.



Figure D12: A modified-grid pattern in Inverness. This is another example of an acceptable street network design.



Figure D13: A curvilinear street network in the community of Hawkwood. This is not an acceptable standard of design.

D.7 Neighbourhood Focal Point

Typically, the focal point of a neighbourhood will be a Neighbourhood Activity Centre. This may not be the case, however, if a higher-order activity centre such as a Community Activity Centre, Major Activity Centre, *Urban Main Street* or Community-scale commercial centre (>2,900 m² or 31,125 ft² of floor space) is present in the neighbourhood. In such cases, the higher-density housing component and the non-residential component normally required in a NAC may be located in the higher-order Activity Centre, *Urban Main Street* or adjacent to the Community commercial centre. A Central Amenity Space is still required in the Neighbourhood Activity Centre. See Figures D14, D15, and D16.

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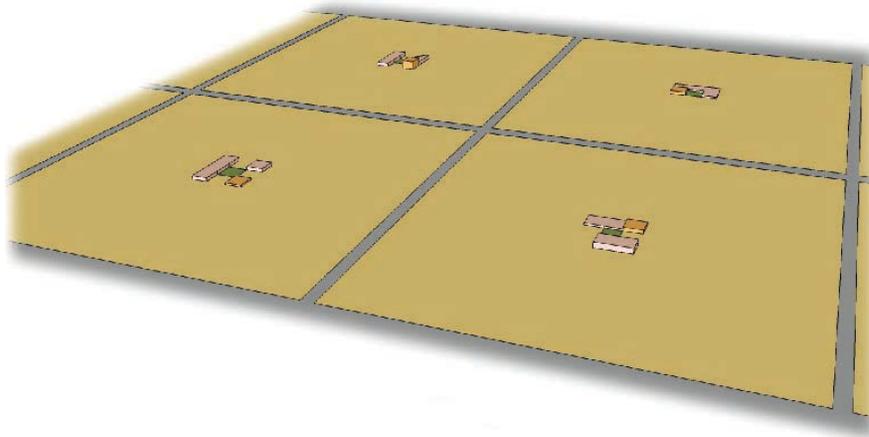


Figure D14: This illustration shows a set of four neighbourhoods, each with its own Neighbourhood Activity Centre (NAC). Each NAC consists of a Central Amenity Space, a concentration of housing and a non-residential use. There are no higher-order Activity Centres or *Main Street* in these neighbourhoods.

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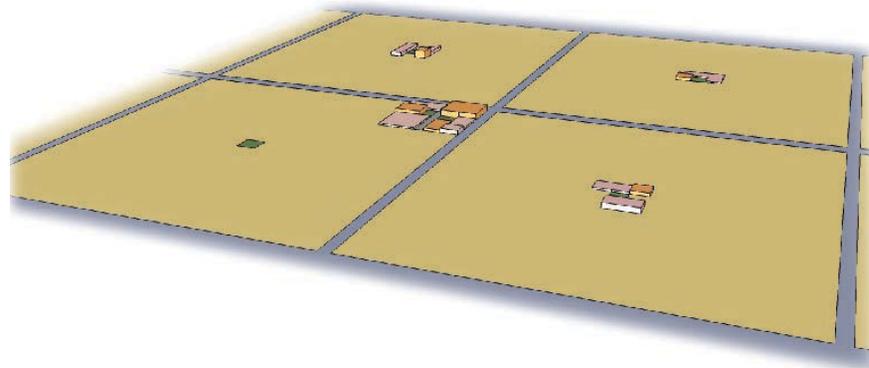


Figure D15: In this illustration, one of the neighbourhoods contains a Community Retail Centre. As a result, the concentration of housing and the non-residential use are clustered as part of the Retail Centre instead of the NAC. The Central Amenity Space remains in the NAC as a central feature of the neighbourhood.

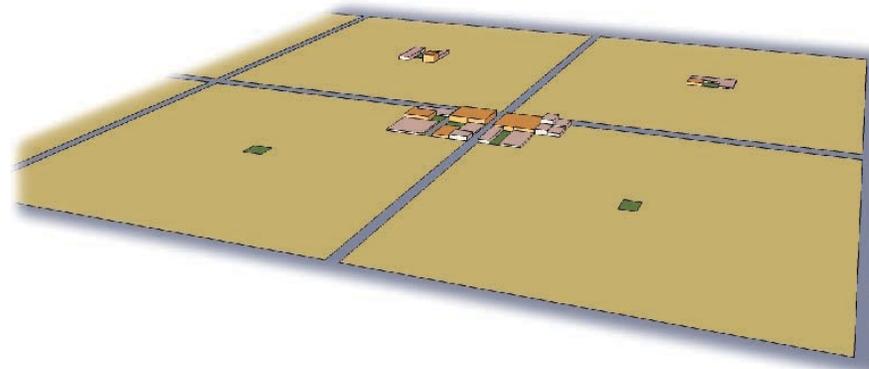


Figure D16: Where a higher-order centre spans a Collector or Arterial Street, the NAC may be modified in the neighbourhoods affected. In this case, two neighbourhoods contain portions of a Community Activity Centre (CAC). As a result, the corresponding NACs each consist of a Central Amenity Space, with the concentration of housing and non-residential use located in the CAC.

D.8 Mix of Uses

A fundamental characteristic of an Activity Centres is that it provides a mix of uses. The ways in which uses are mixed may include either vertical mixing, such as a residential building with retail uses at grade (see Figure D17), or horizontal mixing, such as a row of townhouses located beside a row of office and retail frontages along a corridor (see Figure D18). An important point, whatever form the mixed-use development take is that it provide convenient pedestrian movement between uses. Placing residential uses on one side of an arterial or collector street with retail uses on the other, for example, is not considered a mixed-use design (see Figure D19).

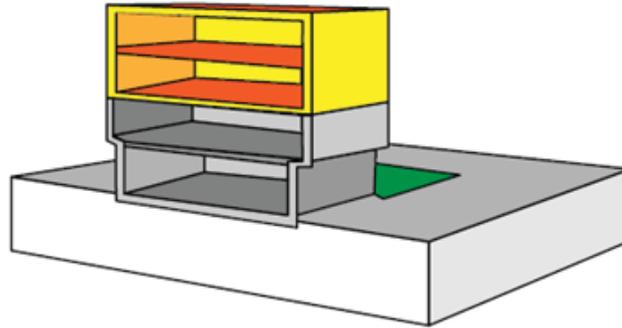


Figure D17: This illustration shows a vertically mixed-use building with residential uses occupying the top two floors and commercial uses occupying the bottom floors.

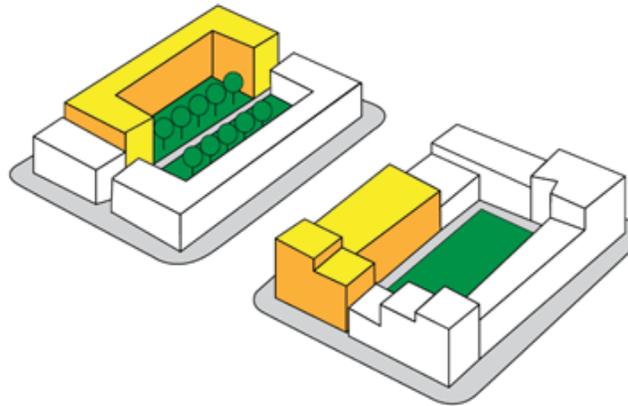


Figure D18: This illustration shows a horizontally mixed-use development. In this case, residential uses occupy one building on each block with commercial uses occupying the others.

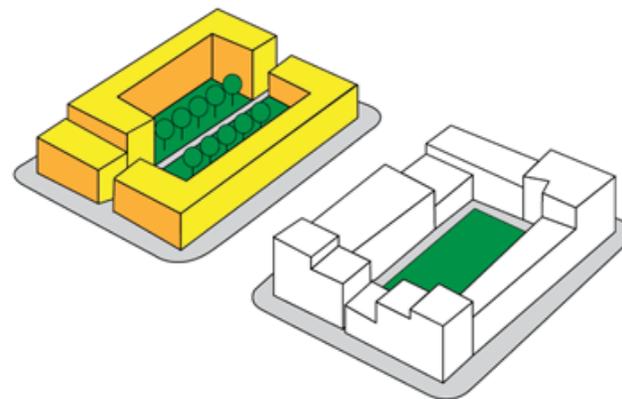


Figure D19: This illustration shows two blocks, one occupied by residential uses and the other occupied by commercial uses. This is not considered an ideal mixed-use development as uses are separated by a street. This configuration would require a street designed to prioritize pedestrian crossings.

D.9.1 Roadway Design

In Activity Centres, the roadway zone (providing travel and parking lanes for motorized vehicles and bicycles) should be designed to match the context of the surrounding land uses, as per direction in the MDP and CTP. Efforts should be made to enhance the pedestrian experience by minimizing roadway widths, particularly at pedestrian crossings, and reducing traffic speeds through the use of various traffic calming measures, as illustrated in Figures D21, D22 and D23.



Figure D21: This image shows how the use of curb extensions, a centre median and on-street parking enhance a pedestrian street.



Figure D22: Angled parking provides a barrier between pedestrians on the sidewalk and traffic. The potential that a parked car will back out of a spot also serves to slow traffic on the street.



Figure D23: This shows a section of Stephen Avenue in downtown Calgary. The street may be used by automobile drivers but pedestrians have priority right-of-way, similar to a Woonerf Street in Europe.

Appendix D

D.9.2 Roadside Elements

The roadside portion of a street provides space for many elements that create a sense of safety, comfort and activity along a street. In Activity Centres, streets shall provide the following elements, as shown in Figures D24, D25 and D26:

- trees,
- street furnishings,
- appropriate lighting,
- bicycle parking, and
- wide sidewalks.



Figure D24: This image shows a well-designed roadside zone in Bridgeland, Calgary. It includes a boulevard with trees and streetlamps, a generously sized sidewalk lined with landscaping and an attractive transit shelter.



Figure D25: This image shows a bicycle shelter located at a transit stop in Toronto. The shelter provides secure lock-up in a prominent location.



Figure D26: This image shows a streetscape complete with a tree-lined boulevard, attractive streetlamps, benches and a wide sidewalk. This image also illustrates a well-designed mixed-use development that adds to the activity along the street.

Other roadside elements that may be considered in Activity Centres and elsewhere in the neighbourhood, as deemed appropriate and as shown in Figures D28, D29 and D30, include

- green infrastructure,
- bicycle paths, and
- public art



Other features that may be included in the roadside portion of a streetscape are shown in these three images.

Figure D28: This shows a rain garden designed to capture rain water from adjacent rooftops. It has been incorporated in such a way as to delineate the private realm from the public realm and provide enclosure to a patio.



Figure D29: This image shows a set of bike lanes separated from automobile traffic and set between a boulevard and sidewalk. The physical barrier between cyclists and motorists creates a heightened sense of safety for cyclists.



Figure D30: This bicycle rack in Portland, Oregon doubles as public art and also serves as a landmark for the bakery that paid for its design and installation.

Appendix D

Lane Access Only

The streetscape along the Central Amenity Space in Activity Centres and Neighbourhood or *Urban Main Street* shall be designed to provide a public realm free of conflict between pedestrians and automobiles; see Figures D31, D32 and D33. This will be achieved by **Bylaw 83P2019**

- providing lane access only – no front driveways;
- providing lane access from side streets; and
- restricting the location of drive-through services to the rear of buildings only.

Local commercial centres may provide a single access point that crosses the sidewalk in an Activity Centre (though NOT along a corridor). However, the preferred design is for shops fronting the sidewalk with on-street parking and/or parking behind the building.

Designing other parts of the Activity Centre for lane access is also encouraged.



Figure D31: This image, a corner along 4th street S.W. in Mission, demonstrates ideal streetscape design for an Activity Centre. In this case, the building provides active fronts on both streets with parking accommodated on-street or in a small area behind the building.



Figure D32: This image demonstrates unacceptable streetscape design further south on the same street: A commercial building with a parking area between the building and sidewalk creates conflict between automobiles and pedestrian movement.



Figure D33: Finally, this image shows a residential street with front drives leading to cars on the sidewalk. This creates an unnecessary obstacle for pedestrians that would be remedied by parking in rear lanes.

D.9.3 Interface Zone

Consistent Building Setbacks

Buildings in Activity Centres shall be built with a consistent setback from the sidewalk in order to enhance the pedestrian experience. The setback may be varied somewhat to accommodate for spaces such as plazas and patios that bring increased activity to the street; see Figures D34, D35 and D36.



Figure D34: This photo shows a portion of 9th Avenue S.E. in Inglewood. The buildings provide a consistent setback from the street, creating a comfortable space for pedestrians.



Figure D35: This photo shows a portion of Kensington Road in Hillhurst. This photo demonstrates that some degree of variation to the setback can work well in the right circumstances. In this case, the extra space is used to accommodate a small patio, which serves as an informal gathering space for pedestrians to socialize with neighbours.



Figure D36: This photo shows Centre Street N.W. Adjacent buildings have widely varying setbacks. This not only diminishes the pedestrian environment from an aesthetic perspective, but it also poses the possibility of conflict between pedestrians and drivers.

Appendix D

Active Frontages

Buildings in Activity Centres and along *Main Street* must provide active entrances to the street in order to enhance the amount of activity along the street. Examples are shown in Figures D37, D38 and D39. In addition,

- commercial buildings shall provide entryways at regular intervals along sidewalks;
- commercial frontage shall provide extensive window coverage along sidewalks; and
- multi-unit residential buildings shall provide access from each main-floor unit to the sidewalk.

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Figure D37: This photo shows a well-designed mixed-use street in Bridgeland. The building provides entryways to businesses at short and regular intervals, creating multiple points of interest for pedestrians. Extensive coverage of windows along the sidewalk also adds to pedestrian comfort by providing “eyes on the street.”



Figure D38: This multi-unit residential building, also in Bridgeland, has townhouses at grade, each with their own point of entry from the sidewalk. This demonstrates acceptable design in an Activity Centre.



Figure D39: This photo shows a multi-unit residential structure with no entryways facing the street. The interface between building and street is not considered an acceptable design standard in an Activity Centre.

Enclosure Ratio

The enclosure ratio refers to the ratio of average building height to the width of area it is meant to frame, such as a street or amenity space (see Figure D40). Appropriate enclosure ratios create a sense of shelter and comfort for pedestrians and park users. For smaller-scale centres such as a Neighbourhood Activity Centre, appropriate building heights range between one-sixth and one-third the width of the adjacent street or amenity space. In a Major Activity Centre, the building height ratios may range up to 1:1. In some circumstances, buildings may be taller than these guidelines, however building design should be modified to provide an appropriate sense of scale from street level.

Note: not all buildings surrounding an amenity space should necessarily be designed to this standard. In some cases appropriate enclosure may be provided by one prominent building framing an amenity space.



Figure D40: A simple schematic showing the range of building heights deemed appropriate in a Neighbourhood Activity Centre. In this case, ideal building heights range from one-sixth to one-third the width of y , which represents the width of a street (including sidewalk and boulevard), amenity space or both.

APPENDIX E: ENVIRONMENTAL DESIGN GUIDELINES

E.1 Overview

Council has directed that environmental sustainability is an important component in the growth of Calgary, including the *City of Calgary's Triple Bottom Line Policy*, the *City of Calgary's Environmental Action Plan*, *Municipal Development Plan (MDP)* and Council's adoption of the Melbourne Principles.

The Environmental Design Guidelines address specific topics for the application of environmental sustainability considerations within the ASP. Outline Plan/Land Use Amendment applications and Development Permit applications should demonstrate how proposals achieve the following guidelines. Alternative environmentally sustainable design solutions that are not outlined in these guidelines may be considered by the Approving Authority provided that the proposed design is equivalent to, or an improvement over, what would be achieved if the guidelines were followed. If an application does not address these guidelines, the developer should provide rationale for not complying.

E.2 Green Infrastructure

E.2.1 Purpose

The following guidelines provide an inventory of applicable Green Infrastructure initiatives for development within the Plan Area.

E.2.2 Guidelines

- a. Incorporate, develop and manage species-rich habitat through the preparation of Habitat Management Plans for the open space and landscaping associated with the application.
- b. Support Urban Forestry by protecting existing tree stands and incorporating them within development design whilst planting additional trees to optimize aesthetic, social, environmental and economic benefits in line with best practice and City of Calgary Urban Forestry guidelines and targets.
- c. Use Low-Impact Development solutions throughout the site, including, but not limited to,

- i. Green and Brown Roofs– encouraging the use of rooftop gardens, vegetated roof surfaces (green or brown roofs) and vegetated walls that support a variety of insect and bird life and mitigate against climate change through the intake of carbon dioxide;
- ii. Natural Boundaries – promoting the use of vegetation for boundary definition (e.g., hedgerow) rather than the use of man-made materials (e.g., fencing and walling) in order to support a variety of species, mitigate against climate change through the intake of carbon dioxide and provide benefits of shelter and shading from weather conditions;
- iii. Natural Water Balance Modelling – using natural water storage and drainage solutions as part of a Staged Master Drainage Plan/ Subdivision Stormwater Management Reports/DSSPs and Site Stormwater management reports (e.g., bioswales, bioretention areas, reduced flow and run-off rates, pervious surfaces and absorbent landscaping, etc.);
- iv. Conservation Landscaping – changing landscape designs and practices to optimize the use of stormwater runoff while encouraging low-water-use plants or xeriscaping; and
- v. Stormwater Capture and Reuse – promoting stormwater reuse for irrigation and other purposes, where potable water is not necessary, to encourage water conservation, reduce pollution discharges and stream erosion, and improve watershed hydrology and restoration of the natural hydrologic regime.

E.3 Water

E.3.1 Purpose

Development within the Plan Area should consider the whole water cycle through the implementation of a water management hierarchy as outlined in the guidelines below.

E.3.2 Guidelines

- a. Minimize demand for water by
 - i. ensuring all water fittings in buildings (residential and non-residential) are specified and installed as recognized low-flow technology while providing a suitable standard of service (e.g., low-flow and aerated shower heads, low-volume baths, etc.); and

- ii. limiting or eliminating the use of potable water for landscape irrigation by selecting and designing water-efficient open space, parks and other landscaped areas; selecting regionally appropriate plant species; ensuring a minimum soil depth of 15 cm (6 inches); encouraging the use of mulch; and installing efficient, high-performance irrigation infrastructure where irrigation is deemed necessary.
- b. Supply water from local sources by
- i. examining the potential for employing rainwater harvesting and non-potable water recycling for collection, storage and reuse for internal building functions requiring non-potable water (e.g., toilet and urinal flushing) with watermain back-up to ensure no loss of operation at times of rainwater or non-potable water shortage;
 - ii. providing rain barrels or other technology that capture and re-use rain water for use in landscape irrigation and as a method for water conservation and stormwater management;
 - iii. maximizing permeable surfaces and bioretention in appropriate areas (e.g., sidewalks, car parking and driveways) with the use of such materials as grasscrete, permeable asphalt and gravel pavers. This limits the disruption and pollution of natural water flows by managing stormwater runoff; and
 - iv. developing sustainable drainage systems, for example through the creation of wetlands, swales, ponds or vegetation strips, for the storage of stormwater and to act as a filtering and cleaning system, reducing the level of surface water run-off from the development in order to assist with stormwater management.
- i. maximizing passive solar design by considering lot orientation, building orientation and internal layout, particularly in order to capitalize on sunlight access for the main living areas of residential, commercial and retail development, and pedestrian sitting areas during cold periods of the year, while minimizing it during warm periods of the year;
- ii. each Outline Plan application should include a street design pattern that maximizes use of east-west streets for optimal solar orientation;
- iii. building orientation should address the roof space available for the efficient use of photovoltaic and solar thermal panels;
- iv. maximizing the energy efficiency of buildings (e.g., by reducing surface-to-volume ratio, increasing levels of insulation and minimizing air leakage, utilizing whole building efficient mechanical ventilation with heat recovery and installing all low-energy lighting and energy efficient appliances); and
- v. making new buildings constructed in the Plan Area solar-ready.
- b. Encourage local food production by individuals and the community through the provision of allotments, which act as strong magnets for community integration, reduce the energy used in transport (air and haulage) of food, and encourage healthy eating and lifestyles.
- c. Maximize efficiency of supply by
- i. encouraging local supply and community energy schemes such as District Energy and Co-generation/Combined Heat and Power (CHP) plants where feasible. Promoting a compact, high-density mix of land uses and multi-use buildings will assist in moderating heat and power demand over the day and increase the feasibility of on-site energy supply, district heating or community CHP. As a minimum, buildings with over 5,000 m² (53,820 ft²) of floor area should complete an analysis on the technical and economic feasibility of employing a district energy and CHP scheme; and
 - ii. All Outline Plan applications including all or part of a Major Activity Centre, *Urban Main Street* or Community Activity Centre should include an analysis of the feasibility of employing district energy for areas contained within the Activity Centre or Corridor.
- d. Apply low- and zero-carbon energy generation by

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E.4 Energy

E.4.1 Purpose

The following guidelines provide an inventory of applicable energy reduction initiatives for development within the Plan Area.

E.4.2 Guidelines

- a. Reduce energy demand by utilizing measures that include, but are not limited to,

Appendix E

- i. Encouraging the use of low-carbon and renewable energy sources at both the site-wide and individual unit level in order to reduce environmental impacts and climate change associated with fossil fuel energy use, such as ground and air source heat pumps, solar thermal (hot water), photovoltaic (PV), hydroelectric, wind turbines, etc.

E.5 Waste Reduction

E.5.1 Purpose

Development within the Plan Area should consider implementing the waste reduction measures outlined in the guidelines below.

E.5.2 Guidelines

- a. Minimize waste generated in the construction and refurbishment of development by implementing waste management methods such as Site Waste Management Plans, centralized materials handling, Modern Methods of Construction and Environmental Management Systems that outline waste recovery targets and a waste monitoring protocol with monthly reporting on waste generation and progress.
- b. Provide the space and facilities to encourage the diversion of waste in all buildings and within the public realm.
- c. Provide information for occupants of the Plan Area on matters related to minimizing waste (e.g., through refurbishment by providing design information, as-built information, maintenance recommendations and future refurbishment strategies).
- d. Maximize the re-use of materials and the use of recycled materials in construction.
- e. Consider the lifecycle of buildings and infrastructure by implementing a strategy for adaptability and flexibility that allows easy maintenance and refurbishment cycles for all buildings and the public realm to be carried out with minimum demolition and reconstruction and maximum re-use of building structures and materials.
- f. Consider composting at the individual, community or business scale in order to reduce valuable resources going to landfill by using individual composting bins for residential units with gardens or by promoting the use of community composting units, such as those associated with allotments.

APPENDIX F: PUBLIC FACILITIES DESIGN GUIDELINES

EMERGENCY RESPONSE STATION	SITE DETAILS	COMMENTS
Site Size/Site Considerations	Fire only or fire/EMS 0.8 hectares (2 acres)	Rectangular lot, wide frontage Preferably situated at the highest elevation in the district
Access	High Importance	Minimum of two vehicular access points (one for public, one for apparatus) Dedicated, all turns direct access to major roadway for apparatus Control of signals if required
Response Time	Provision of first response in emergency within seven minutes at fire rescue incidents, and within six minutes and 30 seconds at life threatening emergency medical incidents, 90 per cent of the time	Minimize response times to all areas within service district

PARK & RIDE	SITE DETAILS	COMMENTS
Site Size/Site Considerations	1.6 hectares (4 acres)	Co-location to allow shared parking with facilities with different peak hours is preferable
Access	High Importance	Locate on a collector or major road

HIGH SCHOOL	CALGARY BOARD OF EDUCATION	CALGARY CATHOLIC SCHOOL DISTRICT
Population Base	50,000 to 60,000	90,000 to 120,000
Students per School	1,500	1,000 to 1,200
Site Size	9 hectares (23 acres)	9 hectares (23 acres)
Synergies (applies to both Calgary Board of Education and Calgary Catholic School District)	No single model exists, although it is preferable to locate adjacent to an LRT or transit facility. Other possible uses near a high school could include one or a combination of the following: a recreation centre, library, skating rink, swimming pool, retail and/or community hall. Transportation impacts need to be considered when locating such facilities close to one another.	

RECYCLING DEPOTS	SITE DETAILS	COMMENTS
Site Size/Site Considerations	160 – 200 m ² (0.2 – 0.5 acres)	
Access	Adjacent to major or collector roads	Close to frequent household uses (e.g., shopping centre, recreation areas or transit)
Required Population	1 per 10,000 residents	

APPENDIX G: DESIGN STATEMENT

What Are Design Statements?

Statements are documents that explain the design thinking behind a development application. For example, they should show that the person applying for a development approval (the applicant) has thought carefully about how everyone, including disabled people, older people and very young children, will be able to use the places they want to build.

When Do They Apply?

A Design Statement should be part of the architectural drawings of the proposed application such as plan elevations and cross sections, in addition to the application requirements. A Design Statement should be included at the Outline Plan, Tentative Plan, Land Use Re-designation and Development Permit stages of the planning process but excluding householder applications or changes of use.

What Should They Include?

Statements should include a written description and explanation of the planning application. They should provide the opportunity for developers and designers to demonstrate their commitment to achieving good design and ensuring accessibility in the work they undertake and allow them to show how they are meeting, or will meet, the various obligations placed on them by legislation and policy.

Sometimes photos, maps and drawings may be needed to further illustrate the points made. They will be available alongside the application for anyone to see, so they should avoid jargon or overly technical language. It is important that they are written specifically for the application they accompany. They need not be very long but the amount of detail they contain should reflect how complex the application is. Thus, a statement for a major development is likely to be much longer than one for a single building.

Typically, Design Statements should explain the following points:

1. The design principles and concepts that have been applied to the development relating to the amount, layout, scale, landscaping and appearance of the development, and how the design of the development takes into account its context.
2. How the design has come about and what it is trying to achieve

3. How issues relating to access to the development have been dealt with, such as
 - a. how relevant City policies have been taken into account;
 - b. whether any consultation has been undertaken;
 - c. how any issues which might affect access have been addressed;
 - d. how prospective users will be able to gain access to the development from the existing transportation network, particularly pedestrians, cyclists and transit;
 - e. reasons for choosing the main points of access to the site and the layout of internal routes; and
 - f. how features will ensure access will be maintained.

Applications which need to be accompanied by a Design Statement but are submitted without one will not be validated until the statement has been received.

Design Statements Checklist

The Design Statement needs only be as simple or complex as the project it relates to. Below are headings that may need to be included in the statement if relevant to the application:

The Process

- Has the application assessed the site's full context, including physical, environmental, social and economic characteristics and relevant planning policies, particularly the MDP and Calgary Transportation Plan policies, in addition to relevant local area plan policies?
- Has the applicant demonstrated how the design has taken account of the results of any community involvement?
- Does the statement show that the scheme has emerged from a rigorous process of assessment, involvement, evaluation and design, rather than trying to justify retrospectively a pre-determined solution?

Environment and Landscaping

- How has the development been designed with the natural environment and the services it provides in mind? That is, how does the design conserve and enhance the existing natural environment?
- Has the environment and associated improvements and landscaping been properly considered from the start?

- Use**
- Will it help to make the place look good and work well and will it meet any specific aims for the site?
 - Has the application outlined the use or function of all buildings and spaces?
 - Would the application help to create an appropriate mix of uses in the area?
 - Would different uses work together well or are they in potential conflict?

- Amount**
- For residential development, how many units are proposed? For all other development, how much floor space is proposed? Is the density appropriate?
 - Could the neighbourhood's existing services and infrastructure support the amount of development planned?

- Layout**
- The Design Statement should show how the buildings, public and private spaces, and street furniture will be arranged on the site and the relationship between them, demonstrating why this is optimal in terms of access, walkability, connectivity, safety and the overall character and quality of the area.
 - The Design Statement should show the purpose of all spaces.
 - Will public spaces be practical, safe, overlooked and inclusive?
 - Will private spaces be adaptable, secure and inviting?

- Scale**
- Will the buildings sit comfortably with their surroundings?
 - Will they, and parts such as doors and windows, be of a comfortable scale for people?

- Appearance**
- How will the development (including built form, open space, pathways, etc.) visually relate to its surroundings?
 - Will it look attractive in terms of urban design, building materials, landscaping, art, and architectural and other details?

- Access & Connectivity**
- Will the place be safe and easy for everyone to move around?
 - What are the pedestrian, bikeway, transit and vehicular links, and why have the access points and routes been chosen?
 - How can everyone get to and move through the place on equal terms, regardless of ethnicity or social grouping?

- General**
- Does the approach to access run through the whole document, rather than being considered as a discreet issue?
 - Has the applicant clearly described the policy approach and consultation process, whether carried out or planned?

How Will Design Statements Be Used?

The Design Statements will be used as additional information within the City of Calgary planning application process. They will enable the applicant to provide the necessary information on how the development design has evolved to address to City of Calgary policies and guidance. They should help to ensure well-informed and balanced decisions and allow the planning applications system to work more smoothly.

APPENDIX H: BIOPHYSICAL BACKGROUND INFORMATION

Important Biophysical Resources

The following important biophysical resources have been identified in the Plan Area by Golder and Associates (July 2010):

- Grassland communities and native pasture.
- Wetlands and watercourses.
- Several species listed as “Sensitive” or “May Be at Risk” by Alberta Sustainable Resource Development (2006) were observed in the Plan Area. These are Baird’s Sparrow (May Be at Risk), broad-winged hawk (Sensitive), short-eared owl (May Be at Risk), sora (Sensitive), Sprague’s Pipit (Sensitive), and Swainson’s hawk (Sensitive).
- Two federally-listed avian species under the federal *Species at Risk Act* (SARA 2002) were observed within the Plan Area. The Sprague’s Pipit is listed in Schedule 1 as “Threatened” and the short-eared owl is listed in Schedule 3 as “Special Concern.” Nests were not observed in the Plan Area at the time of field reconnaissance. Any development activities in the Plan Area will be required to comply with the SARA 2002, the *Migratory Birds Convention Act* (1992), the Province’s *Wildlife Act* (2002) and any provincial species-specific guidelines in accordance with Alberta Sustainable Resource Development.

APPENDIX I: POLICY FRAMEWORK

- Access Design Standards, 2010
- Affordable Housing Development and Design Guidelines, 2011
- Affordable Housing Implementation Plan, 2003
- Affordable Housing Strategy, 2002
- Alberta Land Stewardship Act, 2009
- Calgary . . . A City of Trees: Parks Urban Forest Strategic Plan, 2007
- Calgary International Airport Vicinity Protection Area Regulation
- Calgary Parks and Recreation Natural Area Management Plan, 1994
- Calgary Transportation Plan, 2010
- Calgary Wetland Conservation Plan, 2009
- Child Care Service Policy and Development Guidelines (2009)*
- The City of Calgary's Environmental Action Plan, 2007
- City of Calgary Cycling Strategy, 2011
- City of Calgary Roundabout Policy, 2011
- City of Calgary Slope Adaptive Development Policy & Conservation Planning and Design Guidelines, 2009
- Corporate Framework for Growth and change
- Crime Prevention Through Environmental Design, www.cpted.net
- Environmental Development Review Policy, 2006
- Environmental Protection and Enhancement Act, Government of Alberta, 2000
- Environmental Reserve Setback Guidelines, 2007
- Improving Calgary's Entranceways: A Guide for Development Adjacent to Entranceways, 2012
- Joint Use Agreement, City of Calgary, Calgary Board of Education, Calgary Roman Catholic Separate School Board District No. 1., 1994
- Municipal Development Plan, 2010
- Municipal Government Act, Government of Alberta, 2000
- Nose Creek Watershed Water Management Plan, 2008
- North Regional Context Study, 2010
- Open Space Plan, 2002
- Options for Reducing Greenhouse Gas Emissions in Calgary, 2011
- Parks Urban Forest Strategic Plan, 2007
- Pathway and Bikeway Plan, 2000
- Planning Principles for the Location of Care Facilities and Shelters, 2011
- Public Lands Act, Government of Alberta, 2000
- Preferred Standards for School Sites
- Rocky View/City of Calgary Intermunicipal Development Plan, 2010
- Stormwater Management Strategy, 2006
- Subdivision and Development Regulation, Government of Alberta, 2002
- Suburban Residential Growth 2012-2016 (Draft)
- Transit-Oriented Development Policy Guidelines, 2004
- Triple Bottom Line Framework, 2006
- Water Act, Government of Alberta, 2000

APPENDIX J: INDICATORS

Indicators serve as an evaluation tool for the policies contained in the Plan. Each indicator is accompanied by a target that provides a desired performance outcome over a specific period of time. In order to measure the success of policies contained in the Plan effectively, implementation of a monitoring and reporting program will be required.

Core Indicator	Metric	Baseline	60-Year MDP target	25-Year ASP target	Discussion
Connectivity	Number of roadway links divided by the number of roadway nodes. P-loops, roads intersecting with themselves and T-intersections are not counted as intersections.			Connectivity index of 1.4	Intended to provide a quantitative measurement of route choice for both motorized and non-motorized traffic. Dead end and cul-de-sac streets decrease connectivity value. Measured for each individual Outline Plan/Land Use Amendment application to ensure compliance with this objective.
Transit Access	Per cent of population and jobs	0		90 per cent of population 100 per cent of jobs	Measured by percentage of population within 400 m (0.25 mile) walking distance of a transit stop.
Land Use Diversity Index		0.53 city-wide	0.7	0.7	Activity Centres and <i>Main Street</i> should provide a heterogeneous mix of land uses. Land use diversity index for each individual Outline Plan/Land Use Amendment application should be monitored throughout life of the Plan. Overall Land Use Diversity Index in the Plan should meet Municipal Development Plan city-wide target of 0.7 by time of ultimate build-out of the Plan. 83P2019
District Energy Use	Per cent district energy use	0	1.7 per cent citywide	1.7 per cent	Should be employed where sufficient intensity exists. Outline Plan/Land Use Amendment applications including an Activity Centre to include a District Energy Assessment.
Urban Forest	Size of overall tree canopy	0	14 per cent	14-20 per cent	Size of overall tree canopy in Plan Area. Tree cover and planting plans should be provided with Outline Plan/Land Use Amendment and Development Permit Applications demonstrating how sites will meet targets.
Intensity Targets	Jobs and people per hectare	0	MAC – 200 Urban Main Street – 200 CACs – 150 NACs – 100 Overall – 70	MAC – 200 Urban Main Street – 200 CACs – 150 NACs – 100 Neighbourhood Area – 70	Measured by typology. Monitoring over life of Plan should be conducted to ensure intensity targets are being met.
Watershed health	Percent of impervious surface	32 per cent city-wide	10-20 per cent		Land made up of roadways, parking and buildings that are impervious. Use of porous materials aids in natural drainage.

APPENDIX K: GUIDELINES FOR HOUSING AFFORDABILITY AND AFFORDABLE HOUSING

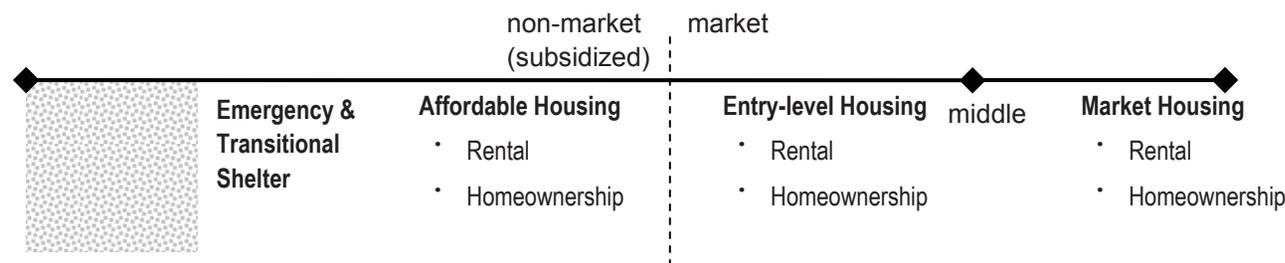
Affordable Housing is an important part of the social and economic infrastructure of a healthy city, and it is essential for attracting and maintaining a diverse workforce that ensures economic development and vitality. The need for Affordable Housing is consistent over time. In Calgary, this need has been recorded since 1991 at approximately 18 per cent of all households.

According to the 2006 Federal Census, there were 38,610 renter households and 33,585 owner households in need of Affordable Housing. This means that these households earn less than 65 per cent of the area median income (\$44,000 for Calgary) and spend greater than 30 per cent of their income on housing costs.

The Guidelines for Housing Affordability and Affordable Housing are intended to support and provide a framework for implementing the Neighbourhood Design Policies (Section 8.1) which recommend the inclusion of 10 per cent of new residential developments greater than 10 units as entry-level housing, and 5 per cent of new residential developments greater than 20 units as Affordable Housing.

The rationale for these thresholds is that 10% of 10 units results in one unit and 5% of 20 units results in one unit.

Housing Continuum



The housing continuum is made up of housing options that include non-market and market housing. The degree of affordability is determined by the relationship between the cost of the housing option and the household income.

For housing to be affordable, the Canada Mortgage and Housing Corporation (CMHC) states that “a household should not spend more than 30 percent of gross income on rental shelter costs. And no more than 32 percent of gross household income should be spent on home ownership, [which includes] payments for mortgage principal and interest; and property taxes; and payments for utilities (water, fuel, and electricity); as well as condominium fees, where the dwelling is a condominium.”

Land Use policies that promote a range of Housing Affordability encourage housing that can meet a broad range of household needs.

Housing Affordability is driven by the land use, building form, mix, size, design and location.

Appendix K

Entry-level housing includes rental and homeownership options generally provided by the market at or below average market rents and median home sale prices (also falling within the broad definition of “Housing Affordability”).

Within this broader spectrum of affordability, Affordable Housing is specifically non-market rental and non-market homeownership options.

The City sees Affordable Housing as adequately suiting the needs of low- and moderate-income households at costs below those generally found in the Calgary market.

The City of Calgary, working with other levels of government, non-profit and private sector organizations, communities and citizens, has chosen to focus its resources and efforts in the middle of the housing continuum – particularly on affordable and entry-level housing in both the rental and home ownership markets.

Opportunities

The Housing Diversity Policies (Section 7.1) and Appendix K provide an opportunity and a framework for residential builders and developers to enter into conversations with The City of Calgary and other housing interests regarding the voluntary contribution of housing that meets affordability criteria.

The previous section refers to the difference between Housing Affordability and Affordable Housing. With changing incomes and house prices, the affordability criteria for each will vary over time and therefore requires discussion at the time of development.

This applies to both new development and redevelopment.

The policies are broad to allow creativity and flexibility for how the housing units are created and managed. The developer could create the units (i.e., the developer could sell units at less than market value to a non-profit organization or to The City) or the units could be created by non-profit housing providers or The City, to sell or manage. There could be a partnership amongst several interested parties.

A range of housing types could be considered, including

- non-market rental;

For Affordable Housing, affordability is income-driven, whereby the housing is affordable to households that cannot afford market housing.

- entry-level market rental;
- non-market homeownership;
- entry-level market homeownership; and
- mixed-use or Live–Work Units.

Development opportunities could exist, including

- incorporation into key nodes (Activity Centres, Neighbourhood Corridors, etc.);
- incorporation into private residential and commercial developments, as well as institutional developments;
- incorporation into redevelopment areas and buildings;
- change of use on City-owned lands, including surplus or underutilized sites;
- multi-use facilities and developments on City-owned lands; and
- vertical and horizontal integration opportunities.

Suitable Mix

The suitable mix, as identified in Section 7.1, could be determined by a housing needs assessment and the reasonable of the contribution, including the financial viability of the development, the viability from an operator’s perspective, the availability of public funding, and the availability of cost off-sets and incentives.

Alternatives

Units should primarily be provided in the development, but cash, land, or units elsewhere can be provided in lieu of this requirement. A framework would have to be established to determine how voluntary contributions of cash, land or units would be administered.

Design

There are two documents to help guide the design of residential developments, particularly for Affordable Housing developments. These include the *Affordable Housing Development and Design Guidelines* (2011) and The City of Calgary's *Access Design Standards* (2010). The first document is intended to guide sustainability, appropriate mix, location and context, and good building design. The second is intended to support the principles of accessibility, visitability, universal design and adaptability.

Municipal Incentives and Cost Off-Sets

The City of Calgary, at various times, offers incentives for the inclusion of affordable and entry-level housing. As a current source of information on Affordable Housing programs, visit www.calgary.ca/affordablehousing. At the time of writing, the following incentives are available:

1. Density Bonusing

Municipalities may allow for increased density when Affordable Housing units are provided. This is not a requirement that Affordable Housing be provided when increased density is requested. Rather, it is the voluntary provision of a public need in exchange for increased density. The City of Calgary has developed several site-specific density bonus policies in areas such as the Chinook Station Area Redevelopment Plan and the Beltline ARP. Typically, a builder can choose from a list of amenities, including open space, cultural amenities, art and Affordable Housing.

A density bonus can help off set the cost of additional units of Affordable Housing.

2. Parking Relaxations

Municipalities may reduce the standard parking requirements of the *Land Use Bylaw* at the discretion of Council and through specific policies, like those of the South Shaganappi RCS (page 43), which support the consideration of parking relaxations for developments that include Affordable Housing.

The full cost of parking could prohibit the development of Affordable Housing. Alternatives to mitigate expenses include parking relaxations, leasing out extra spaces for revenue or redesigning the site to accommodate some surface parking.

3. Secondary Suites Grant Program

A secondary suite, also referred to as a basement suite, a mother-in-law

suite or a granny suite, is a self-contained living space consisting of a bedroom, bathroom and kitchen located within or on the same property as a single family home.

The Secondary Suite Grant Program offers a grant of up to \$25,000 to cover up to 70 per cent of the costs of developing or upgrading a legal secondary suite. The program was launched in April 2009 and will run until May 2012.

To apply and for more information, visit www.calgary.ca/secondariesuitesgrants, email affordablehousing@calgary.ca, or call 3-1-1.

4. Financial Incentive Pilot Program (FIPP)

The FIPP pilot runs from 2009–2011 and offers incentives targeted at both non-profit and private organizations for the creation of new rental housing, at less than average market rents. The incentives include pre-development funding grants of up to \$10,000, development and building permit application fee rebates (50 per cent), and property tax rebates (50 per cent of the municipal portion).

The incentives increase the feasibility of non-profit organizations to development Affordable Housing and can help mitigate the cost of developing Affordable Housing for for-profit organizations.

To apply and for more information, visit www.calgary.ca/FIPP, email affordablehousing@calgary.ca, or call 3-1-1.

Other Incentives

Most of the funding available for Affordable Housing comes from the provincial and federal governments. The Government of Canada's Affordable Housing Initiative (AHI) program provides capital grant funding for the development of Affordable Housing. Provinces are required to provide matching commitments and typically administer the federal funds as part of a Provincial program. The Government of Alberta, since 2001, has provided more than matching funds for the creation of new Affordable Housing across Alberta. Further, the Province has developed unique capital funding programs that it fully funds.

For more information, visit the Government of Alberta's Housing and Urban Affairs Department at <http://www.housing.alberta.ca/>.

Implementation Tools

Each applicant should submit a Housing Plan that identifies how it will meet Section 7.1: Housing Diversity, including entry-level and Affordable Housing options.

APPENDIX L: THE CITY OF CALGARY SUSTAINABLE DESIGN CHECKLIST

Background

The City of Calgary, working with communities and the development and construction industry, aims to deliver sustainable communities within Calgary as outlined in the goals of the *Municipal Development Plan*:

- **Prosperous Economy:** Build a globally competitive city that supports a vibrant, diverse and adaptable local economy, maintains a sustainable municipal financial system and does not compromise the quality of life for current and future Calgarians.
- **Compact City:** Direct future growth of the city in a way that fosters a more compact, efficient use of land, creates complete communities, allows for greater mobility choices and enhances vitality and character in local neighbourhoods.
- **Great Communities:** Create great communities by maintaining quality living and working environments, improving housing diversity and choice, enhancing community character and distinctiveness and providing vibrant public places.
- **Good Urban Design:** Make Calgary a liveable, attractive, memorable and functional city by recognizing its unique setting and dynamic urban character and creating a legacy of quality public and private developments for future generations.
- **Connecting the City:** Develop an integrated, multi-modal transportation system that supports land use, provides increased mobility choices for citizens, promotes vibrant and connected communities, protects the natural environment and supports a prosperous and competitive economy.
- **Greening the City:** Conserve, protect and restore the natural environment.
- **Managing Growth and Change:** Provide leadership on growth and change within a strategic framework that achieves the best possible social, environmental and economic outcomes while operating within The City's financial capacity.

Purpose

The Sustainable Design Checklist provides a framework for identifying information for planning application submissions that support sustainable design policy and guidance within City of Calgary plans, policies and bylaws. Along with The City of Calgary Design Statement, the information will assist The City of Calgary Development and Buildings Approvals (DBA) and Corporate Planning Applications Group (CPAG) teams in evaluating the compliance of Outline Plan and major Development Permit applications with planning policy and guidance. It will

assist in streamlining the planning application and approval process by ensuring the applicant understands what type of information is required and that this information is provided at the outset of the application submission stage. In addition, it will enable The City of Calgary to monitor the type and quantity of sustainable development within Calgary.

The checklist sets out the detailed sustainable design considerations for Outline Plan and major Development Permit applications. The checklist should not be seen as a rigid set of requirements but rather as a guide to the range of sustainable development considerations that can be taken into account during the design of development and the type of information valuable to the planning case officer.

Completion

A Sustainability Design Checklist shall be submitted as part of any Outline Plan/Land Use Amendment application or major Development Permit application (10 or more residential units or 1,000 m² [10,764 ft²] or more of floor space or where the site area is 0.5 hectares [1.2 acres] or more) to demonstrate to the Approving Authority how sustainability considerations have been incorporated within the site and building design.

Sustainability should be an integral part of the design process in order to maximize the total life cycle value (environmental, social, economic and financial) of the development. Therefore, it is recommended that the Sustainable Design Checklist be considered from the outset of project formulation and design. Additional supporting information should be provided by the applicant alongside the checklist to verify the checklist content.

NOTE: The Sustainable Design Checklist is being updated by Administration and will be available in late 2012. Until that time, applicants may address Sustainability in detail in the required Design Statement, using the policies of this ASP as a guide for items that should be addressed.

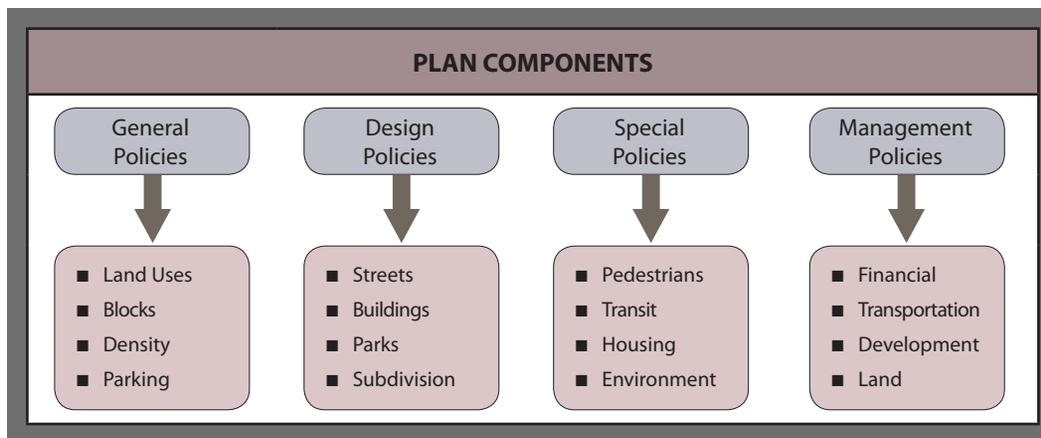
APPENDIX M: FORM BASED CONTROL PROCESS

M.1 Plan Components

As shown in the diagram below, the Statutory Plan containing Form Based Controls should contain four types of policies: General Policies, Design Policies, Special Policies and Management Policies.

- General Policies address the land uses, blocks, density and parking within the Plan Area.
- Design Policies address the streets, buildings, parks and subdivision of land within the Plan Area.
- Special Policies address the transit, pedestrian, housing and environmental elements within the Plan Area.
- Management Policies address the financial, transportation, land and project management matters affecting the Plan Area.
- Land Use and General Definitions used in the Statutory Plan
- Appendices identify the various studies and information that will need to be submitted at the Development Permit or subdivision approval stages.

Except for the Appendices, all sections form part of the adopted Statutory Plan.



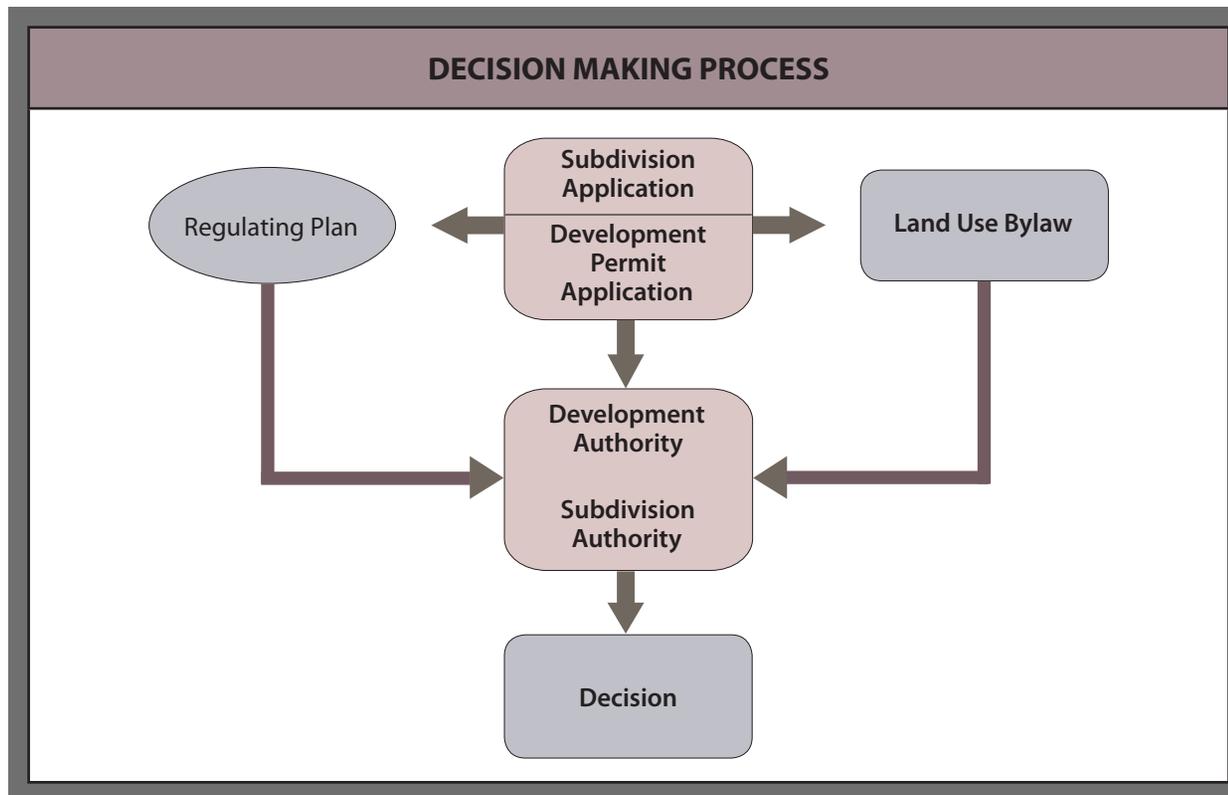
M.2 Decision-Making

A subdivision application or Development Permit application within the Plan Area shall be subject to the Land Use Bylaw. However, as shown in the following diagram, the Statutory Plan shall be referred to and applied as determined appropriate by the Approving Authority in recognition that it is an Area Structure Plan that provides the position of Council toward the subdivision and development of land within the Plan Area; and, in many cases, it contains more detailed and exacting design standards than the Land Use Bylaw.

M.3 Land Use Bylaw Compliance

- (1) It is recognized that in certain instances an inconsistency may arise between a policy in this Station Area Plan and a provision of the Land Use Bylaw; and, if this occurs,
 - (a) the Approving Authority shall consider granting a relaxation of the rules of the Land Use Bylaw in favour of the policy, in accordance with the powers contained in the Land Use Bylaw or the Municipal Government Act (as the case may be) where the Statutory Plan provides clear direction in support of the relaxation, and
 - (b) where the Approving Authority lacks the jurisdiction to grant the relaxation of the rules contained in the Land Use Bylaw, the Land Use Bylaw shall prevail over the Station Area Plan.

(2) The statutory plan does not have the authority, nor is its intent, to add uses to a site that are not otherwise included in the prevailing land use district.





THE CITY OF
CALGARY
