

South Shepard Area Structure Plan



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THE CITY OF
CALGARY
LAND USE PLANNING
& POLICY

May 2013

Office Consolidation

2019 September,
2023 July

South Shepard Area Structure Plan

NOTE: This office consolidation includes the following amending Bylaws.

Amendment	Bylaw	Date	Description
1	38P2017	2018 September 11 <i>Signed: 2018 September 20</i>	(a) Delete and replace Map 14 entitled "Growth Management Overlay."
2	45P2017	2019 September 9	(a) In Table of Contents, Part 2: Appendices to the South Shepard Area Structure Plan, delete and replace APPENDIX H. (b) In Executive Summary, in the third paragraph, in the first sentence, delete and replace text. (c) In the Executive Summary, in the third paragraph, in the first sentence, delete "Community" and replace with "Plan Area". (d) In Section 1.0 Introduction, in the first paragraph, in the first sentence, delete and replace text. (e) In Section 1.0 Introduction, in the first paragraph, in the second sentence, add the word "South" before the word "Shepard". (f) In Section 1.0 Introduction, in the first paragraph, in the fourth sentence, delete "a great Community" and replace with "great communities". (g) In Section 1.3.1 Vision, in the first paragraph, in the first sentence, delete "South Shepard Community" and replace with "Plan Area". (h) In Section 1.3.1 Vision, in the first paragraph, in the third sentence, delete "Complete Community with a distinct identity" and replace with new text. (i) In Section 1.3.1 Vision, in the first paragraph, in the fourth sentence, delete "ensure a culturally enriched, safe, inclusive, diverse, easily accessible and resource efficient Community" and replace with new text. (j) In Section 1.3.1 Vision, in the second paragraph, in the second sentence, delete and "Community" and replace with "Plan Area". (k) In Section 1.3.1 Vision, in the third paragraph, in the first sentence, delete "Community" and replace with "Plan Area". (l) In Section 1.3.2 Objectives, subsection 1, Complete Community, in the first paragraph, in the first sentence, delete and replace text. (m) Delete and replace Map 3 entitled "Plan Area Attributes". (n) In Section 2.2 Natural and Cultural Features, in the second paragraph, bullet point 1, in the second sentence, delete "Community" and replace with "Plan Area". (o) In Section 2.9 Non-Operating Landfill Site, in the first paragraph, after the second sentence, insert new sentence. (p) In Section 2.9 Non-Operating Landfill Site, in the first paragraph, in the last sentence, after "Map 3: Plan Area Attributes" insert new text. (q) In Section 2.13 Electric Substation Area, in the first paragraph, in the first sentence, delete bolding on bracket. (r) In Section 3.1 Complete Community Policies, in the first paragraph, delete and replace first sentence. (s) In Section 3.1 Complete Community Policies, in the second paragraph, in the first sentence, delete text. (t) In Section 3.1 Complete Community Policies, subsection 1, delete and replace text. (u) In Section 3.1 Complete Community Policies, subsection 2, delete the words "Community" and replace with "Plan Area". (v) Delete and replace Map 4 entitled "Community and Neighbourhood Concept". (w) Delete and replace Map 5 entitled "Land Use & Transportation Concept".

Amendment	Bylaw	Date	Description
(x)			In Section 3.2 Land Use & Transportation Concept, in the first paragraph, in the second sentence, delete the word "Community" and replace with "Plan Area".
(y)			In Section 3.2 Land Use & Transportation Concept, in the first paragraph, in the fourth sentence, delete the words "for two sites".
(z)			In Section 3.2 Land Use & Transportation Concept, in the second paragraph, in the first sentence, delete and replace text.
(aa)			In Section 3.3 Neighbourhood Areas, in the second paragraph, in the second sentence, delete and replace text.
(bb)			In Section 3.3 Neighbourhood Areas, in the second paragraph, in the third sentence, delete the word "Community" and replace with "Plan Area".
(cc)			In Section 3.3 Neighbourhood Areas, in the third paragraph, in the first sentence, delete and replace text.
(dd)			In Section 3.6 Neighbourhood Corridor, in the first paragraph, in the second sentence, delete and replace text.
(ee)			Delete Section 3.6 Neighbourhood Corridor, subsection 1.b.
(ff)			In Section 3.9 Policy Review Area, in the first paragraph, in the first sentence, delete the words "for two areas" and the words "Map 3: Plan Area Attributes and".
(gg)			Delete Section 3.9 Policy Review Area, subsections 1, 2, and 3 and replace with two new paragraphs.
(hh)			In Section 3.10 Redevelopment and Intensification, in the first paragraph, in the second sentence, delete the word "Community" and replace with "Plan Area".
(ii)			In Section 3.10 Redevelopment and Intensification, in subsection 1.d, delete the word "Community" and replace with "Plan Area".
(jj)			In Section 4.5 Reserve Policies, in the first paragraph, in the first sentence, delete the word "Community" and replace with "Plan Area".
(kk)			In Section 4.6 Open Space and Regional Pathway System, subsection 1b Social Function, delete the word "Community" and replace with "Plan Area".
(ll)			In Section 5.3 Pedestrian & Bicycle Circulation, in subsection 3.e, delete the word "Community" and replace with "Plan Area".
(mm)			In Section 5.4 Transit Service, in the first paragraph, in the second sentence, delete the word "Community" and replace with "communities".
(nn)			Delete and replace Map 9 entitled "Transportation".
(oo)			In Section 6.1 Green Infrastructure Policies, in subsection 1, delete the word "Community" and replace with "Plan Area".
(pp)			In Section 8.11 Intensity/Density, in subsection 2, delete the word "Community" and replace with "Plan Area".
(qq)			In Section 8.11 Intensity/Density, Table 5: Intensity/Density Requirements by Area, delete and replace text.
(rr)			In Part 2: Appendices to the South Shepard Area Structure Plan, table of content, delete and replace APPENDIX H.
(ss)			In Part 2, Appendix A, Table A.1: MOP Typologies and Intensity/Density Thresholds, delete and replace text.
(tt)			Delete "APPENDIX H: LANDFILL POLICY REVIEW AREA REMOVAL" and replace with revised "APPENDIX H: BACKGROUND INFORMATION FOR THE NON-OPERATING LANDFILL".

Amended portions of the text are printed noted with the specific amending Bylaw.

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 amendments thereto are available from City Clerk and should be consulted when interpreting and applying this Bylaw.

Amendment	Bylaw	Date	Description
3	58P2023	2023 July 25	(a) Delete the entire Section 8.4 entitled "Urban Growth Policies". (b) Delete the existing Map 14 entitled "Growth Management Overlay". (c) Remove Section 8.4 entitled "Urban Growth Policies" from the Table of Contents. (d) Remove Map 14 entitled "Growth Management Overlay" from the Table of Contents under "List of Maps".

Amended portions of the text are printed noted with the specific amending Bylaw.

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 amendments thereto are available from City Clerk and should be consulted when interpreting and applying this Bylaw.

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South Shepard Area Structure Plan

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EXECUTIVE SUMMARY

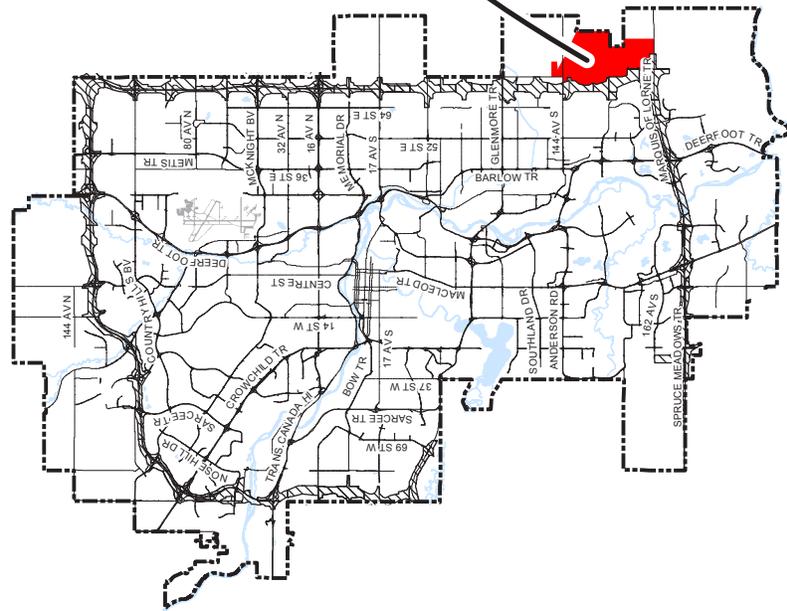
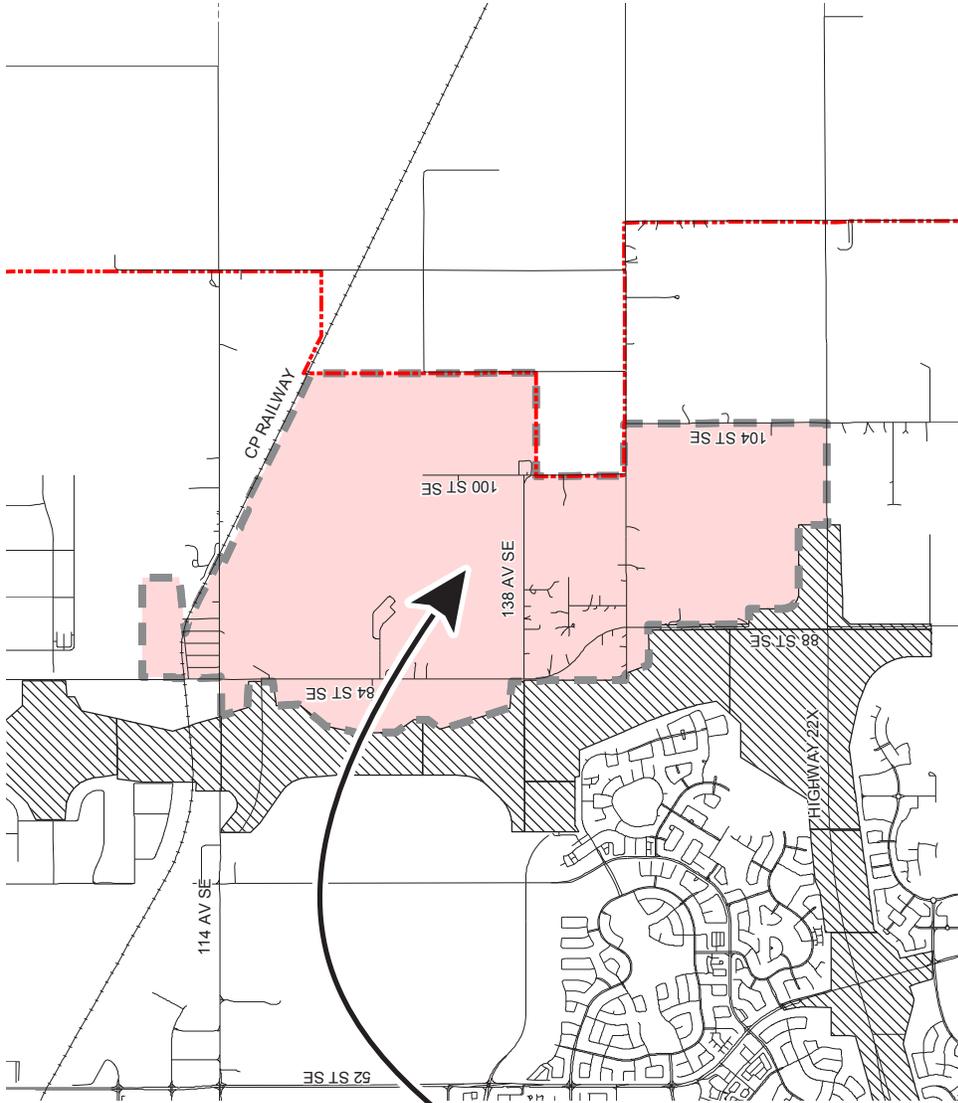
The South Shepard Area Structure Plan (the Plan) provides a policy framework for the development of approximately 1,038 hectares (2,565 acres) of land in the southeast quadrant of The City of Calgary (The City). It supersedes the *Shepard Area Structure Plan* (“*The Shepard Plan*” 2001), a statutory plan adopted jointly by The City and Rocky View County.

As shown on *Map 1: Plan Location*, the Plan is generally bounded by the Canadian Pacific Railway (CPR) to the north, Marquis of Lorne Trail SE to the south, the Transportation and Utility Corridor (TUC) containing Stoney Trail to the west, and 104 Street SE to the east (the Plan Area).

Neighbourhoods in South Shepard will be organized around focal points for local activity, and a Neighbourhood Corridor will provide the Plan Area as a whole with services. The Neighbourhood Corridor will be characterized by an attractive main street and be surrounded by business and institutional lands. The Neighbourhood Areas will offer a variety of housing types in the midst of schools, parks, natural areas and regionally significant public facilities, including

Ralph Klein Park, the Shepard Constructed Wetlands, a cemetery and a large recreation area. Neighbourhoods within the Plan Area will be designed to respect the area’s unique natural features (e.g. wetlands, native grasslands), to protect existing ecosystem function and wildlife habitat and to provide a natural environment that residents, workers and visitors enjoy. **45P2017**

The Plan refines and implements the strategic objectives and policies identified in the *Municipal Development Plan (MDP)*, the *Calgary Transportation Plan (CTP)*, and the *East Regional Context Study (ERCS)* and reflects The City’s broader planning and Sustainability objectives. It is informed by specific engineering, biophysical, transportation and land use studies and has evolved through an extensive consultation exercise involving landowners, developers, the existing communities, City Administration, school boards and other key stakeholders. Through this exercise, the Land Use & Transportation Concept, as well as detailed policies and guidelines have been developed. These policies and guidelines will direct future Outline Plan/Land Use Amendment, subdivision and Development Permit applications.



Map 1
Legend
Plan Area

Plan Location

This map is conceptual only. No measurements of distances or areas should be taken from this map.

Approved: 10P/2013
Amended:

OVERVIEW

Part 1: The Plan



1.0 Introduction

1.0 INTRODUCTION

This Plan is a guide to the future growth of South Shepard. It contains a Land Use and Transportation Concept that describes the right form of growth for South Shepard, based on the Plan Area's unique attributes. The Plan first describes the attributes of the local area and then establishes the Land Use & Transportation Concept and its individual components. Subsequent sections elaborate on the community infrastructure, the transportation system, the parks and natural areas and the utility servicing necessary to support the creation of great communities. This section situates the Plan Area within the context of the overall city, provides a rationale for growth and states the Plan's vision and objectives. **45P2017**

This Plan is a policy document and there is a proper way to interpret it (e.g. defined terms are capitalized) - see Section 8: Implementation Policies for further details.

1.1 Context of South Shepard

South Shepard is located in the Southeast Sector of The City, northeast of the TUC and Highway 22X intersection.

The Plan Area's surroundings are quite diverse.

- To the north is the Shepard Industrial Area.
- To the east is acreage and agricultural areas within Rocky View County and The City.
- To the west is the TUC, the Community of Copperfield, the Southeast Industrial Area, and City facilities.
- To the South is agricultural land within City limits.

The Plan Area is near to regionally-significant places.

- Downtown Calgary is 16 km away (straight line distance) or a 24 km distance via the road network.
- The Town of Chestermere is 9 km away (straight line distance) or a 21 km distance via the road network.
- Mackenzie Towne is 4 km away (straight line distance) or a 8 km distance via the road network.

- The South Health Campus (a hospital) is 8 km away via the road network.
- The Shepard Landfill is 1.6 km to the west (straight line distance).
- Fish Creek Provincial Park (and the Bow River) is 9 km to the west (straight line distance).

Attributes within the Plan Area are described in Section 2: Plan Area.

1.2 Growth Rationale

The decision to proceed with land use planning policy for the Plan Area was based on the following growth rationale:

- This Plan replaces the *Shepard Area Structure Plan* ("The Shepard Plan" 2001), a Statutory Plan adopted jointly by The City and Rocky View County, and enables The City to implement its broader planning objectives.
- The City generally maintains a 13 to 15 year land supply with approved policy plans in place. As of April 2011, City-wide planned land supply in Calgary could accommodate 12 to 14 years of residential growth. The Southeast Sector contained 7 to 9 years of land supply with approved policy plans (enough for approximately 65,500 people). With the approval of this Plan, the additional land supply will accommodate 27,800 people and 2,800 jobs. Over the next five years, the Southeast Sector is forecasted to capture 35 percent of Calgary's residential development market (Suburban Residential Growth 2012-2016).
- The capital costs for infrastructure must be addressed when proceeding with any Outline Plan/Land Use Amendment application. A portion of the costs for Leading Infrastructure are noted in the respective departments' 10-Year Capital Plan. Costs associated with Transit are not currently noted in the 10-Year Capital Plan. Funds for the Plan Area's required infrastructure are not allocated in the 3-Year Capital Budget as of 2012. Departmental capital budgets will need to align to support the public investment needed to service the Plan Area, following Council's approval of the Plan. The estimated capital and operating costs of the Plan Area's Core Infrastructure components are provided in *Appendix B: Cost of Development*.

- The Plan Area is located near the Shepard Industrial Area to the north and the Southeast Industrial Area to the west. Residential development within the Plan Area supports The City's Jobs to Housing Balance and provides an opportunity to develop residential communities near significant employment concentrations.

1.3 Vision & Objectives

The Plan's vision and objectives outline the aspirations of The City, its partners and its stakeholders. Through a public engagement process, a broad range of stakeholder groups have provided input on the social, environmental and economic aspects of the Plan. The policies contained within this Plan aim to guide development so that the Plan's objectives are achieved and the vision for South Shepard is realized.

1.3.1 Vision

In 2040, the Plan Area is established as a desirable place to live, work and enjoy life. It is a place that provides a connection to the area's history and natural beauty. It is a place that provides eight distinct neighbourhoods and a Neighbourhood Corridor serving as a focal point for local interaction. Each Neighbourhood demonstrates best practices in placemaking to ensure culturally enriched, safe, inclusive, diverse, easily accessible and resource efficient communities. Each Neighbourhood includes a wide range of housing choices, public spaces and parks. Vibrant walkable Neighbourhood Activity Centres are the focus of daily social and economic activity. These Activity Centres meet people's everyday needs through a range of shops, workplaces, restaurants, public spaces and Community and leisure facilities. Public amenities and services are within comfortable walking distance through excellent pedestrian connections, while public transit and cycling facilities provide access to wider employment, retail, leisure and cultural destinations. **45P2017**

The South Shepard Area will develop in harmony with its natural environment. Environmentally Significant wetlands are conserved and integrated into the Plan Area. Views and recreational opportunities help establish local identity and a strong sense of place. **45P2017**

The Plan Area offers a multitude of convenient commuting options and a strategically placed pathway system connects destination points within Neighbourhoods, adjacent Communities, downtown and beyond. **45P2017**

1.3.2 Objectives

Complete Community

Foster the development of vibrant, diverse and attractive communities with access to retail services, recreation, education and a range of housing types and employment opportunities. Complete Communities provide a physical and social environment where residents and visitors can live, work and play. **45P2017**

2. Safe and Healthy Neighbourhoods

Promote Neighbourhood designs that encourage safe and healthy behaviours, support effective emergency responses, and deliver a safe Public Realm through a pattern of pathways, Open Spaces and recreational facilities that complement a good quality of life.

3. Building Design & Urban Design

Promote superior quality building and urban design that helps create attractive, vibrant, and livable Neighbourhoods that foster a sense of place.

4. Transportation Options

Develop integrated, well-connected, compact Neighbourhoods with a comprehensive grid-like network of streets built around an extensive pedestrian and cycling connections. To increase accessibility to schools, retail, and other services, and places to work and play, efficient Transit will complement this system.

5. Conservation & Sustainability

Conserve and enhance the existing natural areas and unique land forms to respect the natural environment's functions and values and encourage sustainable design solutions where energy and resource use are reduced and green building methods and alternative energy solutions are employed.

2.0 PLAN AREA

Map 2

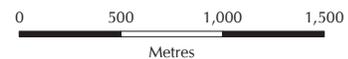
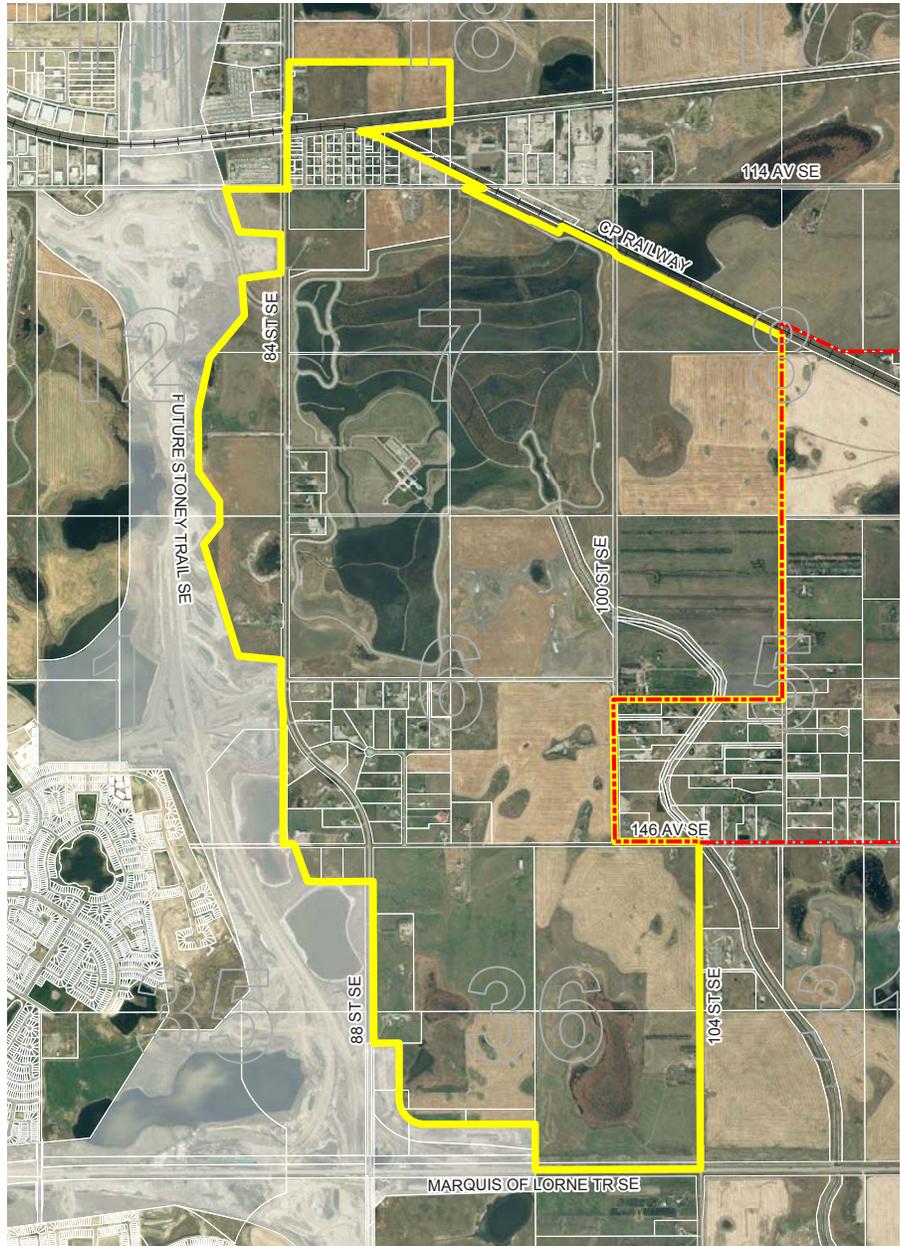
2.1 The Plan Area

Air Photo

The Plan Area is located within the Southeast Sector of the City and consists of approximately 1,038 ha (2,565 ac) of land. The Plan Area is generally bounded by the Canadian Pacific Railway (CPR) to the north, Rocky View County and 104th Street to the east, the TUC to the west and Marquis of Lorne Trail to the south. The Plan Area which is displayed on *Map 1: Plan Location* and *Map 2: Air Photo*.

This section summarizes the Plan Area's main physical features and the policies related to these features. The policies will provide opportunities to create community identity and will outline constraints that may require special consideration when planning for development. This is not an exhaustive list of opportunities and constraints.

The Plan Area's attributes have been identified on *Map 3: Plan Area Attributes* and include the following: Ralph Klein Park, a non-operating landfill and associated setbacks, two abandoned oil and gas wells, an existing firing range, 240 kV and 138 kV High Voltage Transmission Lines, an electric substation, the CPR line, and the Shepard Wetland Complex as well as other area wetlands and the Shepard Ditch. Some of these features are considered constraints to developing the land use and transportation pattern, while others provide various opportunities. For example, the wetlands will help maintain water quality and quantity and will also provide recreational opportunities.



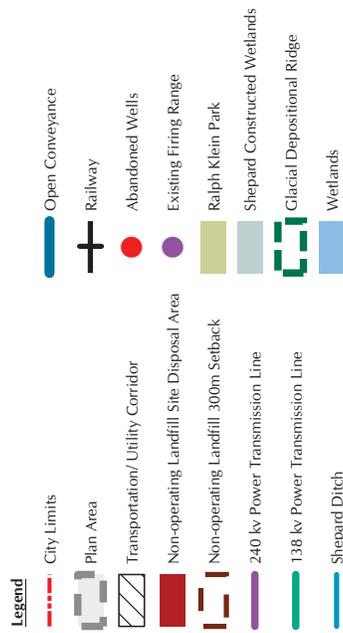
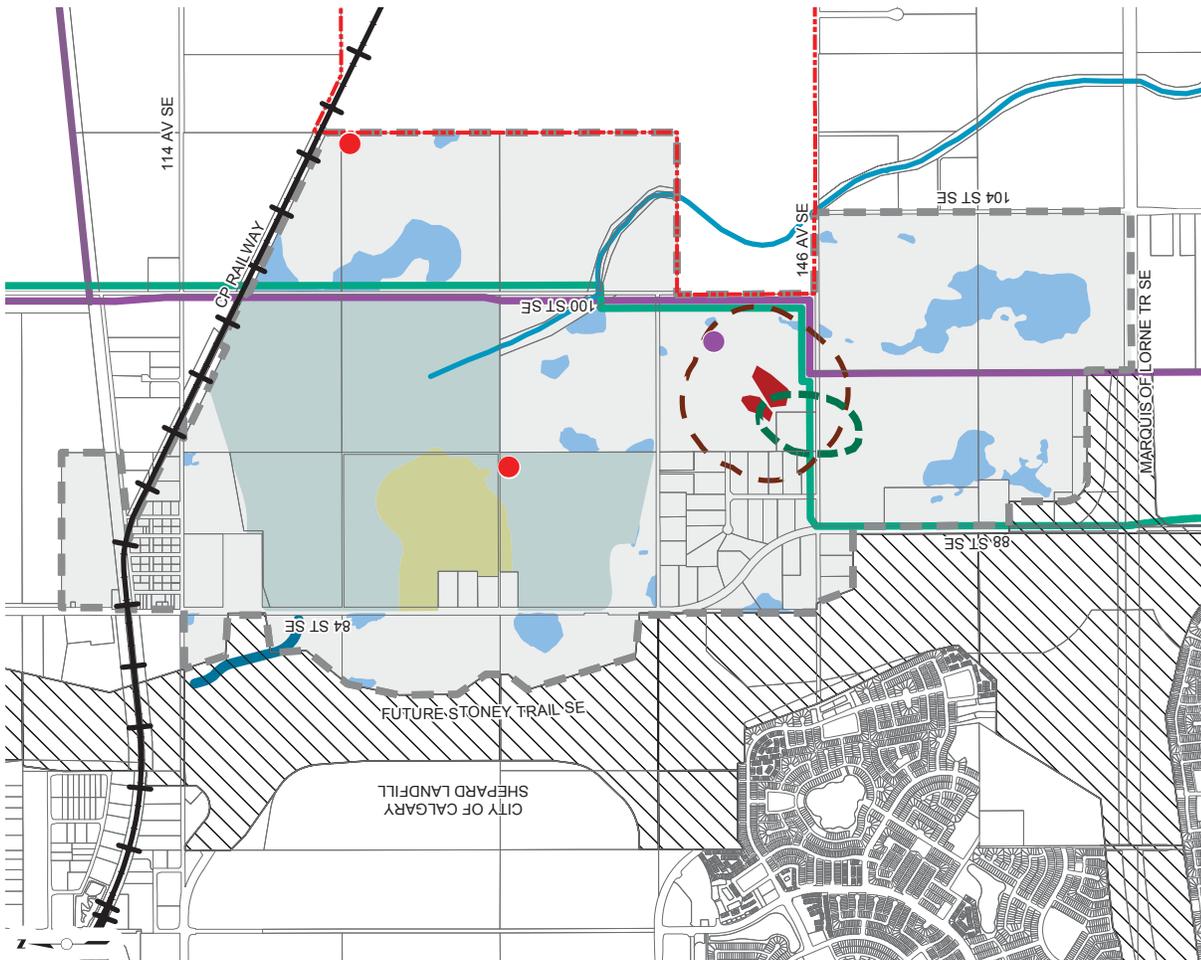
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- - - City Limits
- Plan Area Boundary
- Transportation/ Utility Corridor

Approved: 10P2013
Amended:

This map is conceptual only. No measurements of distances or areas should be taken from this map.

Map 3
Plan Area Attributes



This map is conceptual only. No measurements of distances or areas should be taken from this map.

Approved: 10P2013
Amended: 45P2017

2.0 Plan Area



2.2 Natural and Cultural Features

The Plan Area is relatively flat, with the exception of a distinct glacial depositional ridge in Section NW 36-22-29-W4M.

The following unique natural and cultural features provide opportunities to establish an interconnected Open Space and pathway network and to creatively establish local identity and a strong sense of place. They should be taken into consideration and integrated into the Community design where possible:

- Historical context. The history of the First Nations' presence in the area and the Hamlet of Shepard provide historical context for the Plan Area (see *Appendix I: Shepard Historical Context*); **45P2017**
- Natural wetlands. The wetlands provide opportunities for natural area conservation and recreation;
- Ralph Klein Park. The park provides significant regional public Open Space and opportunities for environmental education and local amenities;
- Open Space. The existing Open Space north of the Shepard Residential Area provides a Community Centre;
- The Shepard Constructed Wetland. This wetland provides aesthetic Open Space and wildlife habitat;
- A glacial depositional ridge. This landform provides picturesque views of the Rocky Mountains to the west. Other locations throughout the Plan Area also offer sweeping views of the Rocky Mountains.

2.3 Historical Resources

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



2.4 Existing Land Use and Development

Most of the Plan Area is currently used for crop production and stormwater management. Two residential communities exist within the Plan Area. One is a former hamlet (the Hamlet of Shepard) within Rocky View County, located to the north of 114 Avenue SE; the other, "Marquis Meadows," was subdivided by Rocky View County for country residential purposes during the 1990's, and is located south of 138 Avenue SE. These residential areas are serviced on-site by water wells and septic fields that will eventually require decommissioning when municipal services are available in the Shepard Residential Area or comprehensive Marquis Meadows redevelopment.



2.5 Ralph Klein Park

Ralph Klein Park, comprised of approximately 30 hectares (75 acres), is located in the northern portion of the Plan Area. It is part of the larger Shepard Stormwater Diversion Project. A major component of the park is the environmental education centre, which offers programs and services that emphasize teaching, learning and training for a sustainable future. As a regional park, Ralph Klein Park offers wetland study stations, wetland viewing areas, an outdoor amphitheatre, project areas, public art, interpretive trails and day-use and group-picnic shelters. It is an important amenity for the adjacent Community.

1. Development adjacent to Ralph Klein Park should be visually attractive at the interface.
2. Ralph Klein Park is intended for daytime use only. Any pathway or trail connection to the Park should take this factor into consideration and should consult with The City's Parks Business Unit.



2.6 Shepard Constructed Wetland

The Shepard Constructed Wetland comprises approximately 227 hectares (560 acres) of land. It is an important component of the Shepard Stormwater Diversion Project, which is intended to provide stormwater flow attenuation, improve water quality and convey stormwater to the Bow River. This area will intercept stormwater from areas of southeast and northeast Calgary and the Elliston Storm Pond and will convey water to the Bow River via the Shepard Ditch.

1. The Predominant use of land within the Shepard Constructed Wetland area shall be City infrastructure use for stormwater conveyance and treatment purposes as well as any related and supportive uses.
2. Open Space may be allowed in the Shepard Constructed Wetland Area, dependent on consultation with The City's Parks and Water Resources business units.
3. Recreational amenities, such as pathways, observation areas and nature trails may be allowed in the vicinity of the Shepard Constructed Wetland Area dependent on consultation with The City's Parks and Water Resources business units.

2.0 Plan Area



2.7 Shepard Ditch

The Shepard Ditch is part of the Shepard Stormwater Diversion Project and routes stormwater to the Bow River. It is solely a stormwater management facility and is not intended for Recreational Use. The purpose of these policies is to protect the water quality of the Shepard Ditch and Bow River.

1. Pathways adjacent to the Shepard Ditch may be appropriate, at the discretion of the Approving Authority.
2. Stormwater run-off from development must be contained and treated on-site before it enters the Shepard Ditch.
3. Vegetated areas should be provided within the Shepard Ditch right-of-way as a buffer between development and the Shepard ditch to protect the Bow River's water quality. The size of the buffer will be determined at the Outline Plan/Land Use Amendment application stage through consultation with The City's Parks and Water Resources business units.

2.8 Area Wetlands

The Plan Area contains numerous prairie wetlands and wetland complexes, that help maintain water quantity and quality within and outside of the Plan Area. These wetlands are illustrated on *Map 3: Plan Area Attributes*. Wetland policies are contained in *Section 6.4.2: Wetland Policies*.

2.9 Non-Operating Landfill Site

The Plan Area contains a non-operating landfill site in Section SE 06-23-28-W4M. In 2017, Alberta Environment and Parks confirmed that the site owner has met the landfill closure requirements set out in the Code of Practice for Landfills in Alberta. The landfill was leased from a private landowner and operated by Rocky View County from 1965 until 1978. Setbacks from the non-operating landfill for restricted uses are established by the *Subdivision and Development Regulation, Alberta Regulation 43/2002 (SDR)* under the *Municipal Government Act (MGA)*. The setback area is conceptually illustrated on *Map 3: Plan Area Attributes* (see *Appendix H* for additional background on the non-operating landfill site).

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1. Remediation of the Disposal Area of the non-operating landfill site is encouraged.
2. Unless the Disposal Area of the non-operating landfill site is remediated and deemed geotechnically stable by the Approving Authority, the disposal area and a 30 metre setback around it, unless an alternate setback area is provided to the satisfaction of the Approving Authority, shall remain as undevelopable Open Space.

2.10 Firing Range

An existing outdoor firing range is located within Section SE 06-23-28-W4M, as identified on *Map 3: Plan Area Attributes*. The site was previously used for surface gravel extraction. Prior to redevelopment, the firing range will require environmental investigation. The existing firing range should not be allowed to expand.





2.11 Heavy Railway

The Plan Area is bounded by the CPR line to the northeast. The following policies address appropriate land use and interface treatment between development and CPR properties.

1. Land uses which may be adversely affected by the safety and nuisance impacts of passing trains are discouraged in locations immediately adjacent to the railway. Such uses may include, but are not limited to, child-care services and schools.
2. Appropriate mitigating and safety measures for development proposals adjacent to the railway may include, but are not limited to setbacks, berms, landscaped screening and/or sound walls to the satisfaction of the Approving Authority.
3. Any Outline Plan/Land Use Amendment and Development Permit application adjacent to the railway must be circulated to CPR for review.
4. Development adjacent to the railway should meet the guidelines in *Appendix C.4: Railway Interface Guidelines*.

2.12 High Voltage Transmission Lines

The purpose of these policies is to ensure that high voltage transmission line infrastructure is considered at the Outline Plan/Land Use Amendment, or Development Permit application stage.

The Plan Area contains north/south 240kV and 138 kV transmission lines within approximately 38 to 45 metre wide rights-of-way. These

transmission lines are owned and operated by AltaLink and are illustrated on *Map 3: Plan Area Attributes*.

The Alberta Electric System Operator (AESO) has indicated that there is a potential future need to expand the existing rights-of-way. Expansion may be needed to meet growing electrical load demand and integrate nearby proposed power stations and increased power flow in and around the Calgary area. The number of lines required will depend on the amount of power generation and Calgary region demand. No exact locations or expansion scenarios have been determined at this time. All options for locating future transmission infrastructure are encouraged inside the TUC.

The responsibility of implementing the additional transmission lines lies with the transmission facility owners (TFO). The high voltage transmission provider must obtain a permit and license from the Alberta Utilities Commission (AUC) for any transmission development, and the TFO is required by provincial regulations to consult the public prior to finalizing their application to the AUC.

1. Where land abuts existing or proposed transmission line rights-of-way, land owners and developers are encouraged to discuss their proposals with the TFO and the AESO and must comply with any Provincial setback requirements.
2. Pathways may be constructed within the transmission line rights-of-way, in consultation with the transmission provider, except where adjacent to the Shepard Constructed Wetlands.
3. Where lands abut the existing transmission line rights-of-way, the developer should address the location of the required easements or rights-of-way at the Outline Plan/Land Use Amendment application stage in consultation with the transmission provider.
4. Those planning, designing and constructing the transmission lines should consider the potential impacts on birds, which should be addressed through an Environmental Assessment for a transmission facility application. Appropriate measures and technical solutions to minimize conflicts between birds and transmission facilities are encouraged. These may include, but are not limited to, visibility enhancement devices (marker balls, bird diverters, etc.) and safe bird perches or anti-perch devices.



2.13 Electric Substation Area

The purpose of these policies is to recognize the presence of the Enmax electric substation (the Electric Substation Area) located immediately north of Marquis of Lorne Trail and the TUC, as shown on *Map 5: Land Use & Transportation Concept*.

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1. Within the Electric Substation Area, the primary land use should be electric substation development and any related or supportive uses. Lands not required for this purpose should be developed according to the policies of the adjacent land use category, as shown on *Map 5: Land Use & Transportation Concept*.
2. Uses ancillary to the primary land use may be allowed within the Electric Substation Area.
3. Measures to screen or improve the aesthetics of the electric substation as viewed from adjacent residential development are encouraged. Such measures are encouraged on both the substation lands and adjacent Neighbourhood Area lands.

2.14 Abandoned Wells

Two abandoned oil and gas wells are located within the Plan Area (within NW 06-23-28-W4M and SW 08-23-28-W4M), as identified on *Map 3: Plan Area Attributes*. The Energy Resources Conservation Board (ERCB) requires specific setback surrounding abandoned wells. An access point to this setback area is also required. The setback is permanent and allows for well site maintenance, protects the well site and avoids damage to equipment used for constructing buildings or utilities on the site. These setbacks must be identified and complied with at the Outline Plan/Land Use Amendment and Development Permit stage.

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 should provide:
 - a. surveyed locations of abandoned wells and pipelines and ERCB confirmation of any setbacks;
 - b. a Phase I Environmental Site Assessment (ESA) specific to the abandoned well;
 - c. a Phase II ESA 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 should not provide credit for Municipal Reserve (MR) located within ERCB 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.

2.15 Environmental Site Assessment

The preceding sections have identified the main known features of the Plan Area. The purpose of these policies is to help ensure that any risks associated with past activities on specific sites are identified and addressed.

1. In conjunction with an Outline Plan/Land Use Amendment application, a developer shall:
 - a. submit a current Phase I ESA to the satisfaction of the Approving Authority to identify any actual or potential or off site human health impacts soil and groundwater contamination and human health impacts and determine if the site is suitable for the intended use;
 - b. if the Phase I ESA identifies any actual or potential or off-site contamination, submit a current Phase II ESA to the satisfaction of the Approving Authority to determine if there is a requirement for remediation or risk management on the site; and
 - c. if the Phase II ESA determines a need for site remediation, or risk management, submit a Remedial Action Plan or Risk Management Plan to address the manner and extent that the site will be remediated or managed to render it suitable for the intended use.
2. The ESA should refer to the more detailed guidelines contained in *Appendix A.3: Environmental Background Studies* and comply with City standards.

3.0 SHAPING A MORE COMPACT URBAN FORM

MDP goal: to 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.

The purpose of this section is to provide a future land use framework to develop compact, walkable and vibrant community, strategically direct growth, encourage walking, cycling and transit, and provide opportunities for the intensification and redevelopment of the existing residential areas. Intensity targets for people and jobs are provided to achieve an efficient land use pattern that supports transit and local services.

3.1 Complete Community Policies

The Plan Area will include two Complete Communities and seven distinct Neighbourhoods. Each Neighbourhood will be organized around a Neighbourhood Activity Centre (NAC) or Neighbourhood Corridor within walking distance for most residents. These Centres and Corridor should contain a central amenity space, transit stops, higher Density residential development, and local commercial opportunities. Each Neighbourhood should convey a sense of belonging or connection to the overall Community.

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The Plan Area will be developed with a full range of housing; commercial, recreational and institutional land uses; and public spaces to utilize land and infrastructure efficiently. The Plan Area will also provide housing choices, local services and employment at transit-supportive Densities and will promote mobility options.

45P2017

1. The Plan Area's Communities and Neighbourhoods are shown on *Map 4: Community and Neighbourhood Concept*.
45P2017
2. The minimum overall Intensity threshold for the Plan Area should be 60 people and jobs per gross developable hectare.
45P2017
 - a. To ensure the Plan meets the Density requirements of the MDP, a minimum residential Density of 20 units per gross developable residential hectare (8 units

per gross developable residential acre) is required in each Neighbourhood. Density calculations will include NACs and the Neighbourhood Corridor.

- b. The Density of specific developments can vary, but Outline Plan/Land Use Amendment applications shall be monitored to ensure that each Neighbourhood meets the minimum required Density.
- c. In conjunction with an Outline Plan/Land Use Amendment application, a Density Analysis should be provided. Density Analysis guidelines are contained in *Appendix A.4: Density & Intensity Analysis*.

3. Neighbourhood Definition

A Neighbourhood should be physically defined by:

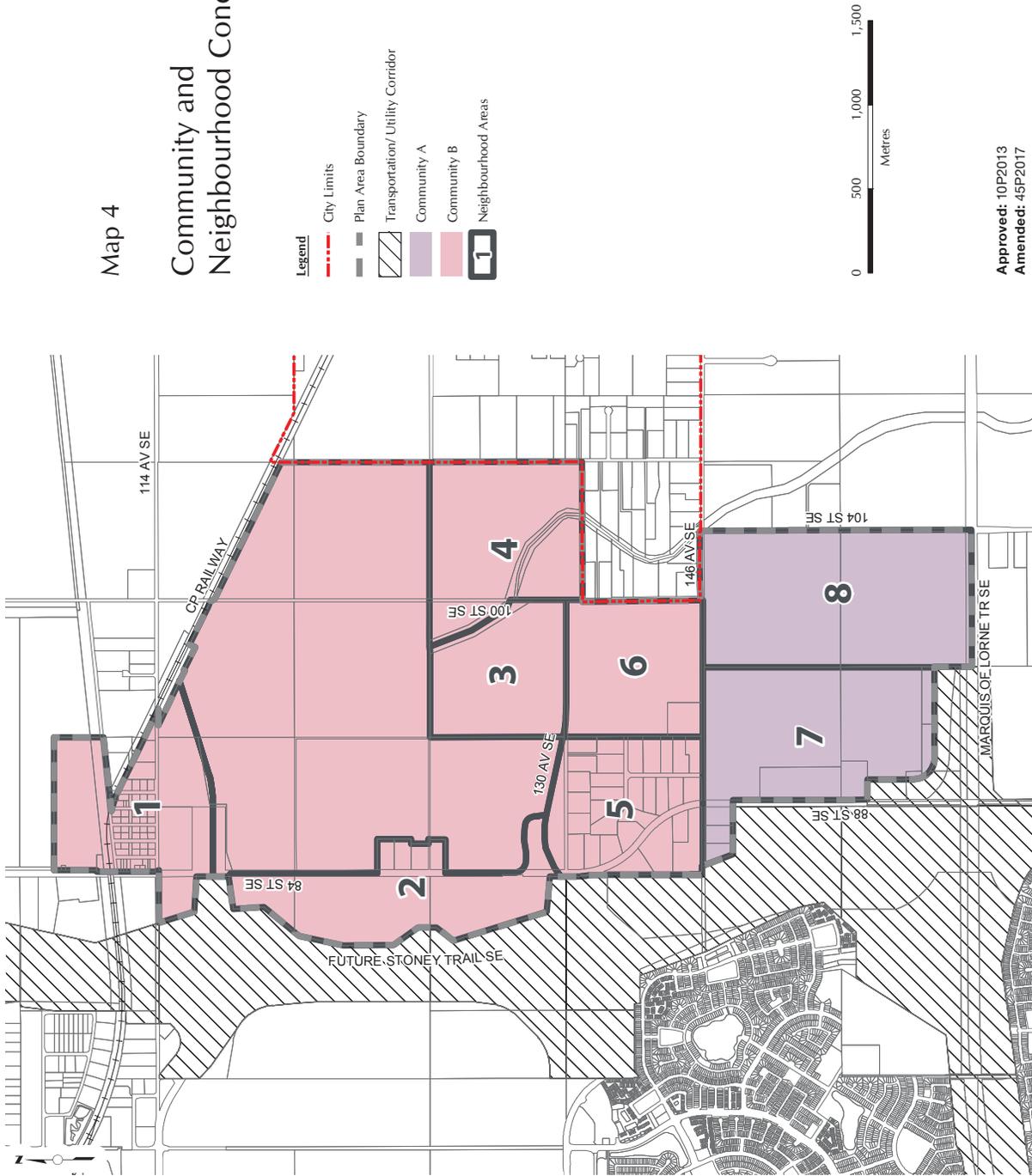
- a. a Neighbourhood Activity Centre within walkable distance for the majority of residents; and
- b. a distinct edge created by roads, schools, Open Space or other geographical factors.

4. Neighbourhood Composition

Each Neighbourhood should provide the following:

- a. a broad range of housing choices covering a mix of built forms at Densities that support transit viability and changing demographics within the Neighbourhood which serve to strengthen social sustainability;
- b. schools, Places of Worship, culture and leisure spaces, Child Care Facilities, Care Facilities and Community services;
- c. transit stops within a 400 metre walking distance for residents throughout the Neighbourhood;
- d. a connected pathway, bikeway, sidewalk and roadway network that allows convenient pedestrian and vehicle access to focal points within the Community and within each Neighbourhood, such as schools and facilities, Activity Centres and Corridors;

Map 4
Community and Neighbourhood Concept



This map is conceptual only. No measurements of distances or areas should be taken from this map.

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- e. Green Infrastructure and an energy-efficient design and site plan;
- f. public spaces, parks and recreation facilities;
- g. permeability to allow all modes of travel to move easily between Neighbourhoods; and
- h. a healthy natural environment.

5. Neighbourhood Identity

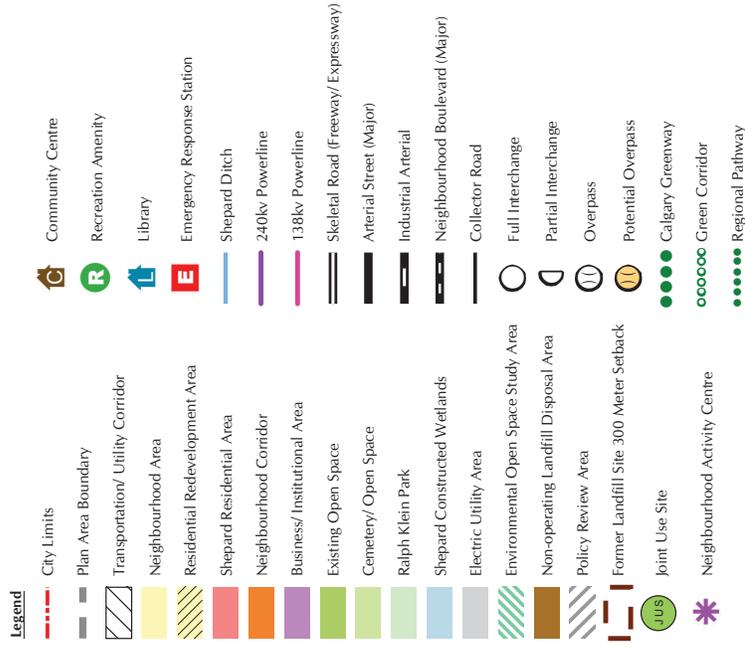
Neighbourhood identity should be enhanced through the provision of:

- 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 integrated with public places; and
- g. identification of historical resources and development of interpretive features about such sites.

6. Neighbourhood Design

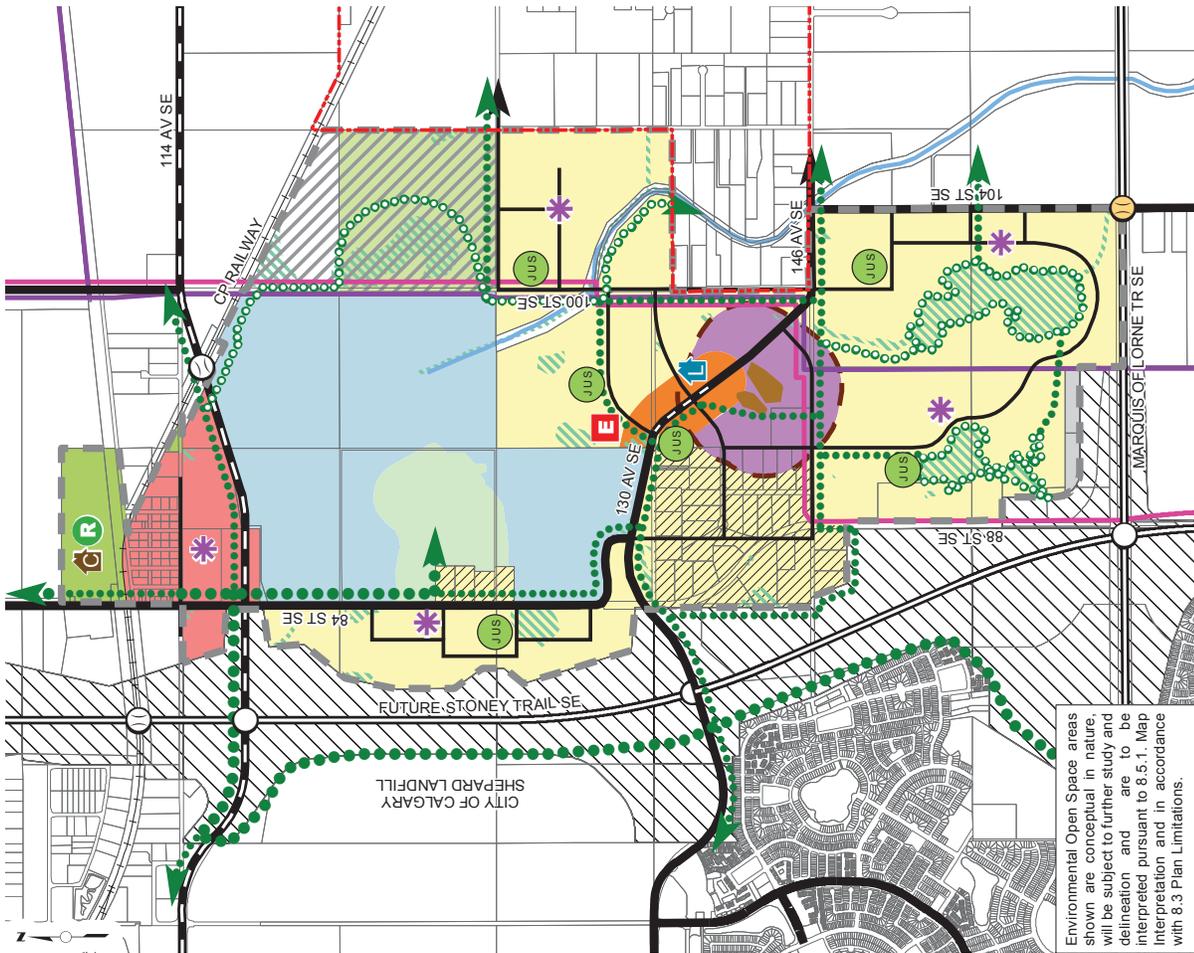
- a. A Neighbourhood should be distinct and designed to convey a sense of belonging for its residents through focal points, public parks, public gathering places, beautiful streetscapes, landmarks, civic buildings, public art, natural features, architecture, urban design themes, etc.
 - b. Street networks, pathways, sidewalks and bikeways should be designed to provide convenient, efficient and direct pedestrian access to the NACs and Corridor.
 - c. P-loops, culs-de-sac and other single-access street patterns should be avoided wherever practical. In cases where these are deemed impractical by the Approving Authority, the connectivity of the pedestrian and bicycle network should be maintained through safe and attractive linkages.
 - d. Multi-Residential Developments may be located outside an NAC or Corridor if such development does not compromise the viability of similar development within the NAC or Corridor, to the satisfaction of the Approving Authority.
7. In conjunction with an Outline Plan/Land Use Amendment application, a Neighbourhood Concept Plan that refers to *Appendix A.2: Concept Plans* should be submitted.

Map 5
Land Use & Transportation Concept



This map is conceptual only. No measurements of distances or areas should be taken from this map.

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Environmental Open Space areas shown are conceptual in nature, will be subject to further study and delineation and are to be interpreted pursuant to 8.5.1. Map interpretation and in accordance with 8.3 Plan Limitations.

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3.2 Land Use & Transportation Concept

The Land Use & Transportation Concept for the Plan Area is shown on *Map 5*. This concept consists of a series of areas and symbols that define anticipated land use pattern for the Plan Area. *Sections 3.3 to 3.8* of this Plan contain policies that apply to specific Land Use Areas and symbols shown on the *Land Use & Transportation Concept Map*. Section 3.9 identifies a Policy Review Area within the Plan Area where there is uncertainty about what the full development potential of the lands are. *Section 3.10* identifies opportunities for future redevelopment and intensification throughout the Plan Area. **45P2017**

The *Land Use & Transportation Concept* organizes the Plan Area around an NAC in the north, near the existing Hamlet of Shepard, and a Neighbourhood Corridor in the south. These two portions of the Plan Area are separated by the Shepard Wetland Complex, Ralph Klein Park and a cemetery but are joined by a residential area adjacent to the TUC. The Neighbourhood Corridor is surrounded by a Business/Institutional Area that effectively use the lands within the non-operating landfill site setback. Predominantly residential Neighbourhood Areas comprise much of the Plan Area and are centered on NACs and Joint Use Sites. Environmental Open Space (mostly wetlands) exists throughout the Plan Area and will provide a passive amenity for local residents and habitat for wildlife. Local parks throughout the Plan Area will provide active and passive recreation opportunities for local residents in addition to Ralph Klein Park and the park north of the Shepard Residential Area. The Transportation Concept is detailed in *Section 5: Connecting Communities*. **45P2017**



3.3 Neighbourhood Areas

These policies provide the framework for establishing sustainable Neighbourhoods within the Plan Area that are Pedestrian Oriented, provide diverse housing options for different income groups and ages, foster social interaction and create a sense of Community. Neighbourhood Areas consist Predominantly, though not exclusively, of residential uses.

These policies apply to the areas on *Map 5: Land Use & Transportation Concept* shown as Neighbourhood Areas - these are specific policy areas of the Plan. References to Neighbourhoods in *Section 3.1*, describe areas within the Plan Area comprised of a number of policy areas. See *Map 4* for the defined Neighbourhood boundaries within the Plan Area. **45P2017**

These policies should be reviewed with other sections to achieve Community identity and create Sustainable Communities. The Shepard Residential Area as identified on *Map 5: Land Use & Transportation Concept*, should also be guided by the policies contained in this section. **45P2017**

1. Policies contained in this section also apply to the Shepard Residential Area in cases where the policies for that area are silent.
2. Neighbourhood Area Composition
 - a. Subject to the policies of the Plan:
 - i. a wide range of housing types, forms, sizes, ownership and tenure are encouraged within the Neighbourhood Area to meet affordability, accessibility, lifecycle and lifestyle needs of all ages and income groups;
 - ii. detailed policies to achieve housing diversity are contained in *Section 4.2: Housing Diversity*;
 - iii. residential land use districts that allow secondary suites should be the standard land use district for single-detached housing within the Neighbourhood Area;
 - iv. Community-oriented Institutional Uses, Recreational Uses, Public Uses, Local Commercial Uses, and other similar and Accessory Uses to the above may be allowed within the Neighbourhood Area where compatible and appropriate;



- v. Child Care Facilities and Care Facilities are encouraged to be provided in the Neighbourhood Area and should comply with *Section 4.3: Community Services & Facilities*; and
 - vi. a variety of Open Spaces and other public focal points such as public gathering areas and landmarks should be provided throughout the Neighbourhood Area.
- b. The general categories of uses identified in the previous section should be refined through the land use districts applied within the Neighbourhood Area.

3.0 Shaping a More Compact Urban Form

3. Multi-Residential Development should refer to the Multi-Residential Guidelines in *Appendix C: Neighbourhood Design*.
4. Live-Work Units
 - a. Live-Work Units within the Neighbourhood Area are encouraged in accordance with the *Land Use Bylaw*. In particular, Live-Work Units are encouraged to be located, but not necessarily limited to:
 - i. within NACs and the Neighbourhood Corridor;
 - ii. adjacent to or close to Commercial Uses; and
 - iii. adjacent to or close to transit routes and Collector and Arterial streets.
5. *Neighbourhood Area Design*
 - a. The Neighbourhood Area design should optimize the pedestrian and bicycle environment by:
 - i. providing a highly connected street network such as a grid or modified grid style;
 - ii. limiting block lengths;
 - iii. providing continuous sidewalks, walkways and pathways;
 - iv. providing multiple route choices; and
 - v. establishing traffic-calming facilities.
 - b. The Neighbourhood Area should be designed to provide a transit-friendly environment and should refer to The City's *Transit Friendly Design Guide*.
 - c. Development in the Neighbourhood Area should be designed in accordance with *Section 4.1: Identity Policies, Appendix C: Neighbourhood Design and Appendix D: Environmental Design Guidelines*.
 - d. The Neighbourhood Area design will be reviewed in further detail at the Outline Plan/Land Use Amendment and Development Permit application stages.
6. Interface with development in Rocky View County
 - a. Development should be sensitive to the scale, form and character of the adjacent Low-Density country residential development. An appropriate transition should be provided and may include, but is not limited to, built form, building height, architectural features, Open Space or a vegetated buffer.
 - b. Development located within the boundary of the *Rocky View County/ City of Calgary Intermunicipal Development Plan (IDP)* should be consistent with the IDP and refer to *Section 8.10: Intermunicipal Co-ordination*.
7. Interface with the TUC
 - a. Where residential uses share a property line with the TUC, buffering methods such as vegetation screening, fence screening, berm treatment and/or setbacks in excess of the requirements of the *Land Use Bylaw* may be incorporated into the site design.
 - b. Residential development adjacent to the TUC may require noise attenuation to meet City or Provincial noise standards. Construction of such noise attenuation will be the developer's responsibility.
 - c. Where surplus TUC lands become available, they should be incorporated into the adjacent Neighbourhood design. Uses of the surplus TUC lands shall be compatible with the adjacent residential development. The following uses shall not be allowed:
 - i. general or heavy industrial;
 - ii. outdoor storage, including vehicle storage, equipment yards, freight yards and storage yards; and
 - iii. auto wreckers.
 - d. Lands used for TUC buffering will be counted as part of the Gross Developable Area of a site.
 - e. Ministerial consent for any development within the TUC and The City must conform to the rules and regulations in the *Highway Development and Protection Act* and the *Restricted Development Areas* legislation and should refer to the Transportation and Utility Corridor Secondary Use Policy.

3.4 Shepard Residential Area Policies

The existing residential settlement area of Shepard was originally established as a stop along the CPR. The area was a former hamlet within Rocky View County and was annexed to The City in 2007. The Existing Shepard Settlement Area has a small-town rural character and contains a number of successful Home-Based Businesses. More information on the Community of Shepard's history is provided in *Appendix I: Shepard Historical Context*.

The Shepard Residential Area consists of both the Existing Shepard Settlement Area and parcels to the south and the west - the Future Expansion Area, as shown on *Map 6: Shepard Residential Area*. It is envisioned that over time the Shepard Residential Area will become a Complete Residential Community with a range of dwelling types, parks, pathways, transit and commercial services. Residents will enjoy a commercial and service focal point - the NAC - and a recreational and social hub - the Community Centre and the Recreation Amenity to the north.

1. Shepard Residential Area Composition

- a. Residential uses shall be the Predominant land use (by area) within the Existing Shepard Settlement Area and any other uses should be compatible with and complementary to the residential character of the area..
- b. A variety of housing types within the Shepard Residential Area including, but not necessarily limited to single-detached on existing parcels, semi-detached, duplexes, and ground-oriented Multi-Residential Development are encouraged to meet Housing Affordability and lifestyle needs of all ages.
- c. The Shepard Residential Area as illustrated on *Map 6: Shepard Residential Area* should contain an NAC that becomes the area's commercial and social focal point.
- d. Local Commercial Uses, food establishments, Mixed-Use development, Multi-Residential Development, Institutional Uses, public gathering places and similar and Accessory Uses are encouraged within the NAC.

- e. Public Open Spaces and pathways are encouraged in order to provide amenity and recreational opportunities and non-vehicular connections to the Community Centre, the Recreation Amenity and the NAC.
- f. Community-oriented Institutional Uses, Recreational Uses, Public Uses, and other similar and Accessory Uses may be allowed for the benefit of the local area. Age-Friendly principles and The City's *Access Design Standards* (2010) should be included as development criteria.
- g. Local Commercial Uses within the Future Expansion Area should be located within the NAC.
- h. Home occupations that are compatible with adjacent uses are encouraged in compliance with the *Land Use Bylaw*.
- i. Live-Work Units should comply with policy in *Section 3.3.4* of this Plan and with the *Land Use Bylaw*.

2. Multi-Residential Development within the Shepard Residential Area should:

- a. be compatible with the adjacent Community while allowing for innovative and creative designs that meet the needs of all ages and changing family household composition;
- b. be guided by the Multi-Residential Guidelines in *Appendix C: Neighbourhood Design*;
- c. be located near the NAC, near amenities, Open Space, parks and a transit stop;
- d. generally be ground oriented and not exceed three storeys in height, unless otherwise stated in this Plan; more intensive Multi-Residential Development exceeding three storeys in height should be located west of 84 Street or within the NAC; and in a Mixed-Use form with Local Commercial Uses at the ground-level, when located within the NAC.

3. Land Use and Subdivision Applications prior to Urban Servicing:

- a. Prior to urban servicing, land use and subdivision of existing single-detached dwelling parcels in the Shepard Residential Area (identified on *Map 6: Shepard Residential Area*), for the purposes of

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single-detached dwellings may be allowed where:

- i. approvals for on-site private servicing solutions are secured through Alberta Health Services (AHS); and
 - ii. a Deferred Servicing Agreement with The City is secured.
- b. Notwithstanding the above, land use redesignation and subdivision within the Shepard Residential Area prior to urban servicing is discouraged.

4. Shepard Residential Area Density

When the Shepard Residential Area is serviced by municipal services:

- a. the Existing Shepard Settlement Area (as identified on *Map 6: Shepard Residential Area*) should achieve a minimum Residential Density of 12 units per gross developable residential hectare (5 units per gross developable residential acre) over the course of redevelopment, given its existing character and Low Density context; and
- b. the Future Expansion Area (identified on *Map 6: Shepard Residential Area*) should achieve a minimum Residential Density of 20 units per gross developable residential hectare (8 units per gross developable residential acre).

5. Shepard Neighbourhood Activity Centre Design

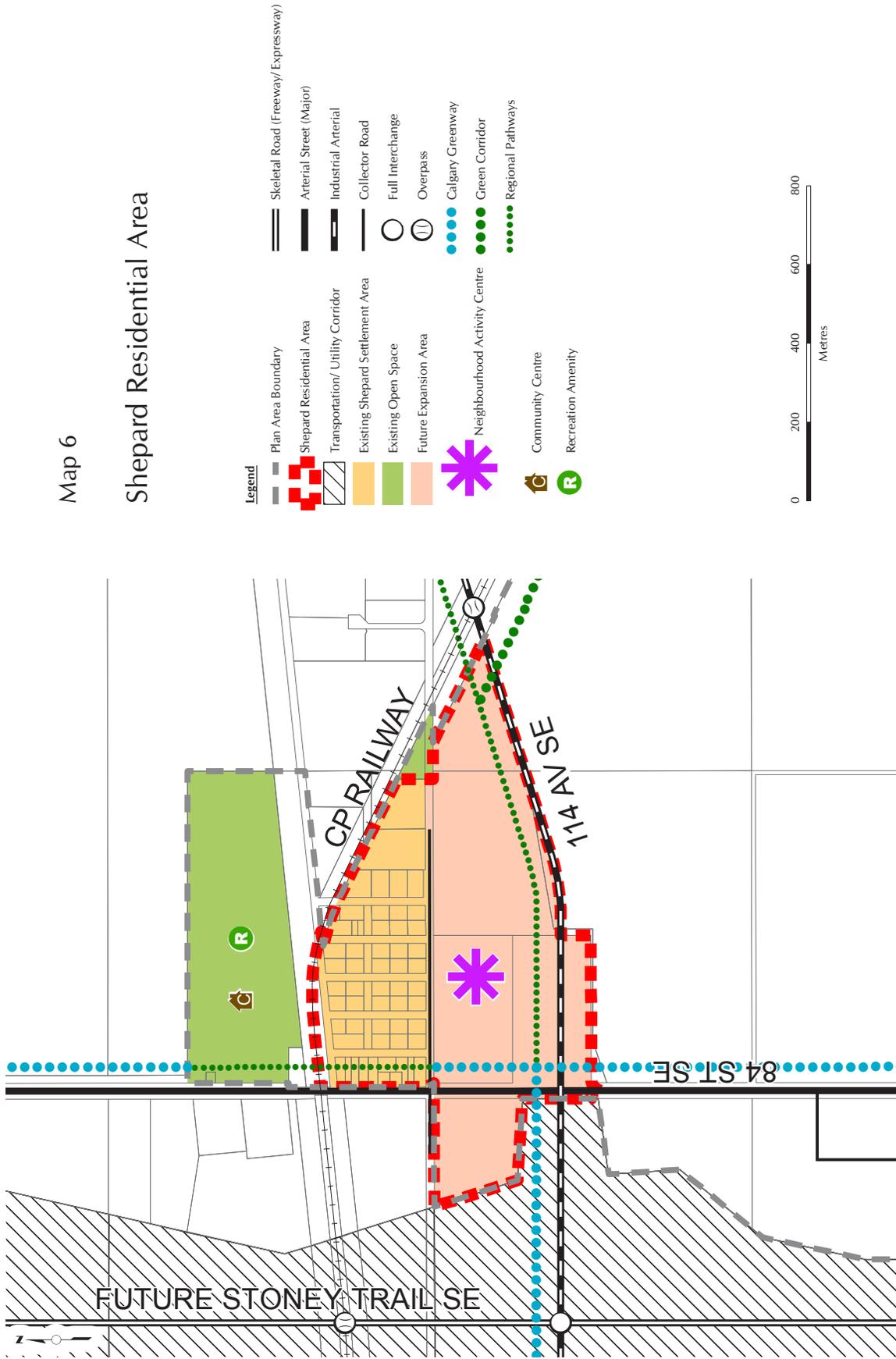
- a. The NAC within the Shepard Residential Area is also guided by *Section 3.5: Neighbourhood Activity Centre Policies* in cases where direction is not provided in this section.
- b. The design of the Shepard Residential Area's NAC is encouraged to be developed in a main street style to capitalize on the area's historic small-town character and to promote pedestrian orientation and walkability.
- c. Buildings should front onto the street to help create a pedestrian-friendly environment.

- d. Architectural features should reflect the history of Shepard where possible.
- e. Local Commercial Uses are encouraged in a Mixed-Use form at ground level, with offices or residential units on upper levels where possible and appropriate.
- f. Alternative and varying street standards may be considered appropriate to create the Main Street.
- g. The maximum building height should generally be three storeys with exception made for Mixed-Use developments and developments that demonstrate an appropriate interface with adjacent lower-Density residential development.

6. Shepard Residential Area Design

- a. Where residential uses share a property line with an existing industrial land use, buffering methods such as vegetation screening, fence screening or berm treatment should be incorporated into the site design.
- b. The small-town character of the area is established, in part, by the existing grid street network. Intensification and redevelopment of the existing settlement area should be coordinated with the existing grid street network. Continuation of the grid street system should be maintained within the Future Expansion Area.
- c. Future street names should reflect the history of the Shepard Area.
- d. Local history interpretive elements and public art are encouraged to be incorporated into the Open Space and Public Realm where possible.
- e. Low-Density infill development and redevelopment within the Existing Shepard Settlement Area should be designed in a manner that is sensitive to the local context and have regard to the area's existing rural character. Consideration should be given to:

Map 6
Shepard Residential Area



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Amended:

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3.0 Shaping a More Compact Urban Form

- i. design - the building's exterior appearance;
 - ii. siting - the building's location on a lot;
 - iii. massing - the combined effect of the arrangement, size and shape of the building on a site and its visual impact in relation to adjacent buildings; and
 - iv. landscaping - the enhancement of the site through vegetation (e.g., trees, shrubs, grass and groundcover) and decorative materials (e.g., brick, stone).
- f. Where both wide and narrow lots are adjacent to each other, buildings should be designed in a compatible and coherent manner.
 - g. Development in this area should be designed in accordance with *Section 41: Identity Policies, Appendix C: Neighbourhood Design and Appendix D: Environmental Design Guidelines*.
 - h. The Shepard Residential Area's detailed design will be established at the Outline Plan/Land Use Amendment and Development Permit application stages.
7. Development adjacent to the railway should refer to *Section 2.11: Heavy Railway and Appendix C.4: Railway Interface Guideline*.
 8. Open Space and pathways within the Shepard Residential Area
 - a. The existing Creditable Reserve site immediately southwest of the CPR and north of the current 114 Avenue SE alignment should be incorporated into future redevelopment of the Shepard Residential Area to provide public amenity space and/or act as a focal point.
 - b. Open Space and pathways should be guided by policies contained in *Section 4.6: Open Space & Regional Pathway System*, and *Section 5.3: Pedestrian & Bicycle Circulation*.



3.5 Neighbourhood Activity Centre Policies

NACs will serve as Neighbourhood focal points that contain a mix of transit-supportive residential and non-residential uses. Connected to their surrounding Neighbourhoods by a network of converging streets, walkways and pathways, NACs are designed to provide a positive pedestrian environment and establish activity in the Public Realm. A Neighbourhood Corridor may serve the same purpose as an NAC and will adhere to the same policies.

The approximate locations of the NACs are identified on *Map 5: Land Use & Transportation Concept*.

1. Neighbourhood Activity Centre Locations

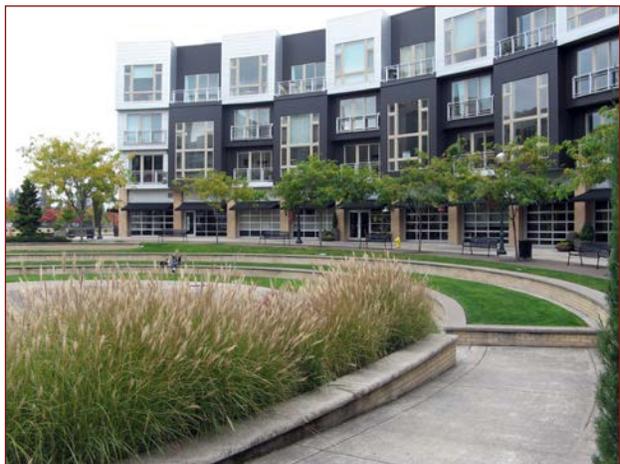
- a. An NAC should be located:
 - i. central to the surrounding Neighbourhood Area so that all Neighbourhood residents live within a 700 metre (0.4 mile) walking distance via the transportation network;
 - ii. along Collector streets to allow access for transit services;
 - iii. close to or connected by pathways to natural features or amenities where possible and appropriate; and
 - iv. as conceptually identified on *Map 5: Land Use & Transportation Concept*, to be refined at the Outline Plan/Land Use Amendment stage without requiring an amendment to the Plan.

2. Neighbourhood Activity Centre Size and Intensity

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

3. Neighbourhood Activity Centre Composition

- a. Each NAC shall be a comprehensively planned, Mixed-Use Area, consisting of a central amenity space, residential uses, and a non-residential use. Vertical



integration of land uses is strongly encouraged.

- b. The NAC central amenity space:
 - i. shall be designed as a multi-functional space, such as a Public Plaza or park;
 - ii. shall comprise a land area of 0.2 to 1.0 hectares (0.5 to 2.5 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 near one or more transit stops.
- c. In order to create an appropriate activity level and sense of spatial enclosure, no more than 25% of dwelling units adjacent to the central amenity space should be provided in the form of single-detached houses.

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- d. NAC Residential Uses:
 - 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 4.2: Housing Diversity*;
 - ii. should be developed on multiple small-scale sites (less than 1 hectare, or 2.5 acres, in size); and
 - iii. should include opportunities for residential-based uses such as Live-Work Units, Affordable Housing, Bed and Breakfasts and Home-Based Businesses, including child care.
 - e. 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.
 - f. NAC Non-Residential Development:
 - i. shall be Street Oriented and incorporate direct pedestrian connections to building entrances from the public sidewalk;
 - 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.
 - g. To facilitate adaptive change in the Community over time, the land use districts applied within an NAC should be flexible to allow for future Intensification and to provide for a wide range of uses.
4. NAC Transit Service
 - a. An NAC should be served by public transit and contain:
 - i. transit bus stop(s);
 - ii. bicycle racks; and
 - iii. related transit-service amenities such as an accessible and attractive shelter and seating for pedestrians and convenient passenger drop-offs, where feasible.
 5. Connections to a NAC
 - a. The road pattern and pedestrian and bicycle routes from the surrounding residential area should converge at the NAC to provide multiple and direct connections and emphasize the NAC's prominent location.
 - b. The use of culs-de-sac, p-loops and similar self-contained road patterns shall be avoided within and around the NAC to support pedestrian orientation and connectivity.
 - c. Visual connections to the NAC should be established through visual corridors or landmark features.
 6. An application for an Outline Plan/Land Use Amendment that contains an NAC should include all lands within the NAC. Alternately, a detailed Concept Plan shall be submitted for all lands within the NAC, following a process of consultation with adjacent land owners.
 - a. The Concept Plan should comply with
 - *Section 3.5: Neighbourhood Activity Centre Policies*,
 - *Section 4.8: Neighbourhood Activity Centre and Corridor Design Policies*,
 - *Appendix C: Neighbourhood Design* and
 - *Appendix D: Environmental Design Guidelines*.
 - b. Detailed Concept Plan guidelines are contained in *Appendix A.2: Concept Plans*.

3.6 Neighbourhood Corridor

This Plan identifies a Neighbourhood Corridor that starts at 130 Ave SE and runs south along a Neighbourhood Boulevard that connects to 146 Ave SE. The purpose of this Neighbourhood Corridor is to provide a focal point for the Plan Area. The Neighbourhood Corridor will contain Retail, residential and Office Uses and will be centered on a Neighbourhood Boulevard with associated streetscape amenities. The Corridor will create an integrated shopping, living and social focus for residents and provide a unique and multi-functional activity area for the Community. The Neighbourhood Corridor will be designed to ensure a strong pedestrian orientation and will emphasize the street as the focus of Neighbourhood activity. Roads and pathways will converge in the Corridor to connect it to the surrounding Neighbourhoods.

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1. Land Uses and the Landfill Setback Area

- a. All land uses within the Neighbourhood Corridor shall comply with the requirements of the Subdivision and Development Regulation, which prohibit certain uses (residences, food establishments, schools, hospitals) from locating within the setback from a non-operating landfill site. The setback is currently 300 meters from the disposal area of the non-operating landfill site and may be varied or eliminated by The Province.

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2. Neighbourhood Corridor Location, Size and Intensity

- a. The general location and size of the Neighbourhood Corridor is shown on *Map 5: Land Use & Transportation Concept*.
- b. The exact location and size of the Neighbourhood Corridor will be determined at the Concept Plan or Outline Plan stage.
- c. The Neighbourhood Corridor shall be located along a multi-modal Neighbourhood Boulevard that provides pedestrian, cycling and transit infrastructure in addition to vehicle access.
- d. The Neighbourhood Corridor shall have an area of no less than 4 hectares (10 acres) and should comprise two or more block lengths.

- e. If an Outline Plan does not encompass the entire Neighbourhood Corridor, then a Concept Plan should be required that shows how the remainder of the Neighbourhood Corridor is expected to develop.
- f. Lands within the Neighbourhood Corridor shall achieve a minimum Intensity of 100 jobs and people per gross developable hectare.
- g. There should be a transition of densities between the Neighbourhood Corridor and any adjacent Neighbourhood Areas, with the greatest height and density adjacent to the Neighbourhood Boulevard and the transit stops along it.

3. Neighbourhood Corridor Composition

The Neighbourhood Corridor will contain a broad range of Retail, Office and residential uses in a mix of housing tenure and affordability levels to accommodate a diverse population.

- a. To create a vibrant pedestrian environment that supports transit services, the Neighbourhood Corridor shall include a cohesive mix of residential and Retail uses and an appropriate amount of amenity space.

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- b. The Predominant use at-grade along the Neighbourhood Boulevard shall be Retail Uses with the remainder comprised of Office Uses and/or Residential uses.
 - c. Retail Uses, Office Uses and/or residential uses should be provided above-grade along the Neighbourhood Boulevard.
 - d. Retail Uses in the Neighbourhood Corridor:
 - i. shall fit a pedestrian scale;
 - ii. incorporate transparent glass frontages to allow activity within the building to be seen from the street and animate it;
 - iii. shall be integrated horizontally and/or vertically with other uses;
 - iv. feature narrow retail frontage and/or frequent street entrances to help create a strong visual rhythm;
 - v. shall not be comprised of Large Format Retail; and
 - vi. should accommodate Employment Uses.
 - e. Neighbourhood Corridor Residential Development:
 - i. shall provide a broad range of Medium- and High-Density Multi-Residential Development; and
 - ii. should be integrated horizontally and/or vertically with other uses.
 - f. Amenity space(s) in the Neighbourhood Corridor:
 - i. should be provided to create points of interest along the Neighbourhood Corridor and/or enhance the design of prominent intersections or buildings;
 - ii. should provide direct and convenient pedestrian and cyclist linkages to amenity spaces within the Neighbourhood; and
 - iii. should include a Public Plaza in a prominent location.
 - g. The Neighbourhood Corridor may also contain other compatible uses as deemed appropriate by the Approving Authority.
4. Neighbourhood Corridor Design
- a. Neighbourhood Corridor design and development should adhere to *Section 4.8: Neighbourhood Activity Centre and Corridor Design Policies* and *Appendix C: Neighbourhood Design*.
 - b. Building frontages, windows and primary entrances shall be oriented towards the Neighbourhood Boulevard, with direct access provided to public sidewalks or public areas.
 - c. Buildings should incorporate detailed and varied architectural features, colours and material to help animate the street and create a visually interesting street interface.
 - d. Development applications for areas adjacent to the Neighbourhood Corridor shall establish a development pattern that ensures the Neighbourhood Corridor properly functions as a highly-connected transit-oriented area.
 - e. Refer to Neighbourhood Activity Centre and Corridor Design Policies for more information.
5. Neighbourhood Corridor Mobility
- a. The primary street type along the Neighbourhood Corridor shall be the Neighbourhood Boulevard, which prioritizes the movement of pedestrians, cyclists and transit vehicles above private automobiles.
 - b. The design of the streetscape shall accommodate elements such as street trees, street furniture, bicycle parking and appropriate lighting to enhance the experience of cyclists and pedestrians.
 - c. On-site parking areas should be located behind buildings and not directly adjacent to the Neighbourhood Boulevard.
 - d. To provide a high degree of connectivity for pedestrians, cyclists, and drivers from surrounding areas to destinations along the Neighbourhood Corridor the Neighbourhood Corridor shall:
 - i. contain a block-based network of interconnected streets, walkway and pathways;
 - ii. contain a grid-based street network that restricts the development of culs-de-sac, p-loops and similar self-contained roads patterns in the Neighbourhood Corridor and adjacent areas;
 - iii. provide safe and convenient walkway and pathway access within the Neighbourhood Corridor and to and from other areas of the Community; and
 - iv. provide convenient transit access and facilities.

3.7 Business/Institutional Area

The purpose of this area is to provide for a wide range of business and institutional uses within a comprehensively planned business park or campus style area. The Business/Institutional Area will interface with two other development areas: the Neighbourhood Corridor which extends into it from the northwest; and the Neighbourhood Areas which surround it. The configuration of land uses and street network will ensure that it complements those adjacent areas. Institutional uses will be the Predominant use on the outer edge of the Business/Institutional Area and they will appropriately interface with the mainly residential Neighbourhood Areas beyond. The Business/Institutional Area's street and pathway network will be well connected with adjacent areas and the Neighbourhood Corridor.

1. Reversion to Neighbourhood Areas Policy

The Business/Institutional Area is governed by the requirements of the Subdivision and Development Regulation, which prohibit certain uses (i.e., residences, food establishments, schools, hospitals) from locating within the prescribed 300 meter setback from the non-operating landfill site.

- a. The Business/Institutional Area identifies the appropriate land uses for the area while the non-operating landfill setback exists.
- b. If the setback from the non-operating landfill site no longer applies to all or a portion of the current setback area, the policies of Section 3.3: Neighbourhood Areas shall apply to the area where the setback no longer applies, without requiring an amendment to this Plan.

2. Business/Institutional Area Composition

- a. The Predominant uses of land within the Business/Institutional Area shall be business and institutional.
 - i. Business uses will be Predominantly office and light industrial.
 - ii. Institutional uses shall be institutional and service uses (e.g., recreation, culture, worship, civic uses) that are sensitive to the interface with existing residential development.
- b. The Business/Institutional Area may also contain other compatible uses as deemed appropriate by the Approving Authority.



- c. Commercial uses within the Business/Institutional Area shall:
 - i. comply with the Subdivision and Development Regulation;
 - ii. be integrated horizontally and/or vertically with other uses; and
 - iii. be comprised of small or medium sized retail.
 - d. The extent of Commercial uses within the Business/Institutional Area shall:
 - i. be determined through a Market Demand Study prepared by the proponent to the satisfaction of the Approving Authority; and
 - ii. shall not compromise the viability of the commercial uses in the Neighbourhood Corridor.
 - e. Limited service industrial and outdoor storage uses will not be supported by the Approving Authority in the Business/Institutional Area. Outdoor storage areas that are ancillary to the primary use of a site may be allowed if they are well screened and limited in size.
- #### 3. Business/Institutional Area Compatibility
- a. The Business/Institutional Area's interface with adjacent development must be compatible in terms of appearance and impacts due to its visibility from public roads and its proximity to future residential areas.
 - b. Development within the Business/Institutional Area shall not have an adverse impact on adjacent residential development by way of noise, dust, odours, outdoor lighting or other emissions.

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- i. Noise, dust, odours or other emissions should be contained within the building where they are generated.
 - ii. Site illumination should be carefully designed and constructed to minimize the illumination of adjacent residential areas.
 - iii. Industrial activities should not be allowed outside of a building.
4. Business/Institutional Area Design
- a. Institutional uses shall be the Predominant use at the interface with adjacent Neighbourhood Areas and light industrial uses shall not be allowed directly adjacent to Neighbourhood Areas.
 - b. Compact, pedestrian-friendly uses should be located next to the Neighbourhood Corridor.
 - c. The Business/Institutional Area shall:
 - i. be comprehensively planned through a Concept Plan, pursuant to Appendix A, prior to land use approval;
 - ii. be fully-serviced with municipal utilities;
 - iii. comprise only those lands governed by the setback requirements of the Subdivision and Development Regulation, insofar as practical;
 - iv. establish a compatible interface with adjacent development and natural features;
 - v. orient buildings towards the street and place parking areas at the rear wherever possible; and
 - vi. present an attractive building, fencing, berming and landscaping treatment along public roads and reserve land, and where visible from residential areas.
5. Business/Institutional Area Mobility
- a. The transportation network should be designed to provide connectivity for pedestrians, cyclists, and drivers from surrounding areas to destinations within the Business/Institutional Area. This will be achieved by:
 - i. using a block-based street network, such as a grid or modified grid oriented to provide access to the Neighbourhood Boulevard (the 130 Ave to 146 Ave SE connection);
 - ii. providing safe and convenient walkway and pathway access from the adjacent Neighbourhood Areas to destinations within the Business/Institutional Area and Neighbourhood Corridor;
 - iii. providing direct routes from the Collector or Arterial network to destinations within the Business/Institutional Area to minimize shortcutting through residential areas; and
 - iv. ensuring convenient transit access and facilities are provided.

3.8 Residential Redevelopment Area

Fragmented land ownership typically creates complex land development issues. The policies in this section provide a framework for comprehensive planning, subdivision and development of the Residential Redevelopment Area.

The Plan Area contains two Residential Redevelopment Areas which are identified on *Map 5: Land Use & Transportation Concept*. The first is Marquis Meadows, which is located south of 138 Avenue SE and was subdivided by Rocky View County for country residential purposes during the 1990's. Marquis Meadows is permitted to contain 1.6 hectare (4 acre) parcels in accordance with the *Land Use Bylaw*. The second country residential area is located on the east side of 84 Street SE, immediately adjacent to Ralph Klein Park.

These areas provide opportunities for future redevelopment and Intensification of the existing country residential development. The redevelopment pattern for these areas will be determined through future Outline Plan/Land Use Amendment applications.

- 1. Composition of the Residential Redevelopment Area prior to municipal services:
 - a. In accordance with the *Land Use Bylaw*, the Marquis Meadows Residential Redevelopment Area is permitted to

- further subdivide to a minimum 1.6 hectare (4 acre) parcel size without the need for urban services or a Concept Plan. Further subdivision below this minimum parcel size is not permitted without a Concept Plan for comprehensive development.
- b. Single detached dwellings on existing parcels in the Residential Redevelopment Area are considered appropriate in accordance with the requirements of the *Land Use Bylaw*.
2. Composition of the Residential Redevelopment Area with municipal services in place:
 - a. The Residential Redevelopment Areas should be comprised of a range of lower density housing types including single-detached houses, semi-detached and duplexes, and ground-oriented Multi-Residential Development.
 - b. Community-oriented Institutional Uses, higher-density residential uses, Special Care Facilities, parks, recreation, Local Commercial Uses or other Similar Uses that are compatible with the residential character of the Residential Redevelopment Area may be appropriate.
 - c. As the Residential Redevelopment Area redevelops and intensifies over time, an NAC may be appropriate within the area. Local Retail Uses, higher density residential uses, Institutional Uses, Open Space and other Similar Uses proposed for the Residential Redevelopment Area are encouraged to concentrate in a central location to create an NAC. An amendment of this Plan to identify the NAC will be required.
 3. Comprehensive Planning
 - a. Resubdivision of existing parcels within the Residential Redevelopment Area should only occur in accordance with a Concept Plan prepared by landowners to the satisfaction of the Approving Authority.
 - b. A Concept Plan should be prepared and apply to logical and well-defined planning cells, bounded by the Collector or Arterial Streets shown on *Map 5: Land Use & Transportation Concept*.
 - c. The Concept Plan should also be guided by the policies contained within *Section 3.3: Neighbourhood Areas of this Plan*, and *Appendix A.2: Concept Plans*.
 - d. Where necessary to retain particular control over the future development pattern, a Concept Plan may be incorporated into this Plan through the plan amendment process.
 - e. The Concept Plan should be circulated to each landowner within the planning cell.
4. Residential Redevelopment Area Design
 - a. Redevelopment should be sensitive to existing country residential developments, and an appropriate transition should be provided, including building height, architectural style, etc.
 - b. Road patterns for the Residential Redevelopment Area should be coordinated with the existing road pattern and should provide flexible opportunities for future road connections on the adjacent sites.
 5. Residential Redevelopment Area Parks and Pathways

To meet residents' recreational needs and recognize that Creditable Reserve owing within the Residential Redevelopment Area has been previously dedicated:

 - a. Private parks are encouraged to be provided through the subdivision and development process as land use districts applied to the site as part of the Landscape Area.
 - b. Public parks are encouraged to be provided on an opportunity and voluntary basis as an alternative to private parks under (a) above.
 - c. Park location and development should be guided by the policies contained in *Section 6.0: Greening Communities* and guidelines in *Appendix A on Park Concept Plans*.
 - d. Regional and local pathways and the Green Corridor should be guided by the policies contained in *Section 6.0: Greening Communities* and *Section 5.3: Pedestrian and Bicycle Circulation*.

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3.9 Policy Review Area

A Policy Review Area (PRA) has been identified on *Map 5: Land Use & Transportation Concept* where there is uncertainty about what the full development potential of the lands are. **45P2017**

The PRA shown on *Map 5: Land Use & Transportation Concept* includes the triangular shaped piece of land in the northeast of the Plan Area, which is bounded by the CPR tracks, the Shepard Wetland Complex and a proposed cemetery site, as well as the quarter section to the south of it. **45P2017**

Any application for land use redesignation and/or development permit should not be supported by The City for these lands until the PRA has been removed. Removal of the PRA may occur at such time as negotiations between The City and the owners of the triangular shaped piece of land have concluded and there is an integrated land use and servicing strategy for the PRA which is capable of being developed in the near term (the near term being less than 5 years), to the satisfaction of The City. **45P2017**

3.10 Redevelopment and Intensification

The purpose of these policies is to encourage and facilitate the ongoing vitality of the entire Plan Area. As the Plan Area matures, opportunities for redevelopment and Intensification will arise.

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1. As the Plan Area is built out and opportunities for redevelopment occur, a minimum Intensity threshold of 70 people and jobs per gross developable hectare is encouraged through the following opportunities, but not limited to:
 - a. employment opportunities created within or near the NACs as they mature;
 - b. enhanced transit services to help intensify NACs and encourage higher-Density transit nodes;
 - c. the achievement of the Shepard Residential Area's minimum Intensity threshold of 60 people and jobs per gross developable hectare;
 - d. redevelopment and Intensification of existing sites are strongly encouraged as the Plan Area matures, particularly in NACs and the Neighbourhood Corridor; and

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- e. a grid-based street-network pattern provides opportunities for redevelopment, Intensification and adaptation of different uses.

4.0 CREATING GREAT COMMUNITIES

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.”

The purpose of these policies is to create great Communities that promote a good quality of life for residents by enhancing Community character and distinctiveness, improving housing diversity, and encouraging Community services and amenities.

4.1 Identity Policies

1. Each Neighbourhood should be developed with a distinct identity and unique local character. This will be achieved through such measures as:
 - a. the development of NACs as focal points where the Neighbourhood’s local services can be located;
 - b. street names and identification signage that reflects the area’s historical context placemaking themes and/or natural features;
 - c. a high quality of architecture and urban design to create attractive streetscapes convenient for all modes of travel and all levels of personal mobility, particularly in NACs and the Neighbourhood Corridor;
 - d. preservation and integration of unique natural features and cultural heritage;
 - e. branding of significant local parks;
 - f. landmark buildings or structures;
 - g. public art integrated with public places and incorporated into private development; and
 - h. social and recreational facilities and amenities that provide a sense of Community or meet the spiritual and family needs of residents and enhance their quality of life. These may include, but are not limited to:
 - i. child care services;
 - ii. special care services;
 - iii. arts and cultural spaces;
 - iv. sport and recreation amenities; and
 - v. Public Uses and quasi-Public Uses (e.g., Places of Worship).
2. At the Outline Plan/Land Use Amendment stage, information should be submitted to the Approving Authority to demonstrate compliance with these policies.



4.2 Housing Diversity

Housing diversity ensures that the housing needs of all ages, abilities, incomes, and sectors of society are met. It allows residents to remain in their Community through all stages of life.

These policies encourage a diverse housing options, including Affordable Housing (a key component of Complete Communities), to meet the needs of different income groups and lifestyles within the Plan Area.

1. Housing Forms

- a. The housing mixture needs to be attractive to, and meet the needs of, all ages, abilities, incomes, and sectors of society.
- b. A minimum of 30% of the housing units within each Outline Plan/Land Use Amendment application, excluding those within the Shepard Residential Area, should be non-single-detached housing units to meet the needs of different income groups and lifestyles.
- c. Non-single-detached housing units may include, but are not restricted to the following:
 - i. attached housing (duplexes, semi-detached dwellings, townhouses and row houses);
 - ii. Multi-Residential Developments (triplexes, fourplexes, stacked townhouses, apartments, and other housing types with 3 or more units in one building);
 - iii. Live-Work Units;
 - iv. housing that is designed to enable conversion over time;
 - v. co-operative housing (shared ownership) and co-housing (private ownership with shared amenities);
 - vi. cottage housing developments; and
 - vii. other innovative housing forms.
- d. Multi-Residential Development units with three or more bedrooms are strongly encouraged.

2. Accessible Housing

- a. Development of housing units that are accessible to persons with limited mobility are strongly encouraged in each Neighbourhood as an important component of inclusivity and aging in place.
- b. Accessible Housing units are encouraged 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's *Access Design Standards* (2010).

3. Visitability

Bringing visitability into the Public Realm enhances accessible communities. Visitability is a movement to change home construction practices so that most new homes, not merely those custom-built for occupants who currently have disabilities, offer a few specific features that make the home easier for people with mobility challenges to live in and visit. Visitability is even more important as our demographics age (for aging-in-place). Homes that don't have barriers allow people to be included in their Communities of choice and visit their friends, regardless of mobility challenges.

- a. Visitability design techniques are encouraged to be incorporated into housing, including:
 - i. at least one zero-step entrance approached by an accessible route on a firm surface;
 - ii. wide passage doors and hallways; and
 - iii. at least a half bath/powder room on the main floor.
- b. Development in all parts of the Neighbourhood is encouraged to incorporate the principles of Universal Design in The City's 2010 *Access Design Standards*. Development of the urban environment should also follow Age Friendly principles and considerations, given Calgary's aging population.

4.0 Creating a Great Community

4. Affordable Housing Policies

Affordable Housing is housing for which affordability 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. Guidelines for Housing Affordability and Affordable Housing are intended to support and provide a framework for implementing the housing Policies which recommend the inclusion of 10% of new residential developments greater than 10 units as entry-level housing and 5% of new residential developments greater than 20 units as affordable housing. Although The City cannot currently legally require the provision of Affordable Housing, The City will work on its own or in collaboration with private developers to meet this objective.
- b. A 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 off-sets and incentives. The City will work with applicants to determine the location, size and type of Affordable Housing.
- c. Affordable Housing should include at least two (2) of the following:
 - i. subsidized housing;
 - ii. apartment units less than 70 square metres;
 - iii. secondary suites;
 - iv. co-operative housing or other innovative ownership and management approaches;
 - v. housing in conjunction with places of worship; and
 - vi. Three (3) or more bedroom dwelling units within Multi-Residential Developments to provide for families.
- d. Wherever possible Affordable Housing should:
 - i. be dispersed at suitable locations throughout a Community, without concentrating in any one area;
 - ii. be provided and designed in accordance with The City's Affordable Housing Development and Design Guidelines;
 - iii. be located in close proximity to transit stops, Neighbourhood Activity Centres and the Neighbourhood Corridor, Community amenities, parks and natural areas, commercial uses and Recreational Uses;
 - iv. prevent segregation and social isolation by integrating units into the Neighbourhood design;
 - v. be designed to be visually indistinguishable in quality from market housing; and
 - vi. consider parking relaxations for developments that include Affordable Housing.

4. Mix of Housing Types and Forms

- a. A variety of housing types and forms should be integrated within each Neighbourhood.
- b. The mix of housing types and forms should be provided along streets or within smaller blocks; over-concentration of homogeneous housing types or forms is discouraged.
- c. Large blocks of Multi-Residential Development that are segregated from the surrounding Neighbourhood are discouraged.
- d. Different housing forms and building designs should be compatible with the adjacent development to present a diverse but coherent streetscape.

4.3 Community Services & Facilities

Child Care Facilities, Care Facilities and public facilities are all critical in meeting the needs of residents, providing a good quality of life and establishing Complete Communities.

1. Child Care Facilities

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

a. Child care needs should be provided for by:

- i. accommodating Child Care Facilities in locations within Neighbourhoods easily accessible to all modes;
- ii. dispersing Child Care Facilities throughout the Community 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, including child-care service and home-based child care.

b. Child Care Facilities should be located:

- i. within or near NACs; and
- ii. close to Open Space, parks, and other amenity areas; and
- iii. along Collector streets, where possible.

2. Care Facilities

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

- a. Care Facilities are encouraged within the Plan Area and should:
 - i. refer to The City's *Principles to Guide the Location of Care Facilities and Shelters*;
 - ii. be designed to fit with the Neighbourhood character;
 - iii. be designed according to Age-Friendly principles and The City's *2010 Access Design Standards*;
 - iv. be of a size and scale that is consistent and reflects the context of surrounding developments;
 - v. avoid over-concentrating facilities in any one area;
 - vi. be located within walking distance of transit routes and stops;
 - vii. not generate high volumes of automobile traffic; and
 - viii. be located along Collector or Arterial streets if they are larger scale facilities.



4.0 Creating a Great Community

4.3.1 Community and Public Facilities Policies

1. The following Community and public facilities are identified on *Map 5: Land Use & Transportation Concept*:
 - a. Community Centre
 - b. Recreation Amenity
 - c. Cemetery
2. The Community Centre and Recreation Amenity should:
 - a. be integrated with the Open Space and pathway system where practical;
 - b. provide good pedestrian connections to residential areas through sidewalks, pathways and bikeways; and
 - c. be flexible in design with opportunities to accommodate a wide range of uses.
3. Community and public facilities design should:
 - a. signify their importance as a landmark through building and site design;
 - b. be oriented towards the street and provide direct pedestrian access to the sidewalk where possible and appropriate; and
 - c. consider relaxing parking requirements.
4. Community and public facility size, location and configuration shall:
 - a. be determined at the Outline Plan/Land Use Amendment stage without requiring an amendment to this Plan; and
 - b. refer to *Appendix G: Community & Public Facilities Guidelines*.



4.3.2 Places of Worship & Cultural Facilities

Places of Worship and cultural facilities provide a sense of place and help strengthen Community identity. They should be:

- a. accommodated in locations with good all-mode transportation access within residential Neighbourhoods;
- b. encouraged in NACs where they can serve as Community focal points;
- c. dispersed at suitable locations throughout the Plan Area to avoid over-concentration in any one area; and
- d. compatible in height and scale with other buildings in the immediate vicinity.

4.3.3 Emergency Service

Emergency services are a critical component of safe Communities. In 2012, the entire Plan Area is outside the 10 minute fire response zone (required by the *Alberta Building Code*). A new Emergency Response Station will be constructed in the vicinity of 42 Street SE and 114 Avenue SE to expand the 10 minute fire response zone to include the existing Shepard Residential Area and the area between the TUC and 84 Street SE.

The north portion of the Plan Area is not currently within The City's fire response standards. As development begins to occur in the north portion of the Plan Area, further analysis will be required at the Outline/Land Use Amendment stage to ensure appropriate emergency response service is available. An Emergency Response Station has been identified within the Plan Area along 130 Avenue SE.

1. Development in the Plan Area shall consider the emergency response constraint until the entire Plan Area is covered by the Emergency Response Station(s) located within and outside of the Plan Area to City standards.
2. The Emergency Response Station should be located reasonably close to or have direct access to major roadways and be located in such a manner as to provide optimal response to emergency incidents.
3. Any Outline Plan/Land Use Amendment applications in the Plan Area shall be reviewed by the Fire Department and the Approving Authority to ensure appropriate fire protection measures are incorporated.

4.4 Joint Use Sites

The purpose of a Joint Use Site (JUS) is to provide for public and separate schools together with sports fields and recreation areas on sites dedicated as Municipal and School Reserve (MSR) land as per the *MGA*. A JUS is jointly owned by The City and the respective school boards in accordance with the principles of the *Joint Use Agreement*.

1. Joint Use Site Composition
 - a. Subject to the policies of the Plan and requirements of the *MGA*, the Predominant use of land within a JUS should be for public education and Recreational Uses including, but not limited to, public and separate schools, sports fields, parks and playgrounds.
 - b. School buildings should be designed to integrate a variety of uses and services for different users that benefit the Community and reinforce the role of the school as a social and activity hub for residents.
2. Joint Use Site Size
 - a. The size of a JUS should be determined through the Outline Plan/Land Use Amendment process in accordance with the requirements of the Approving Authority, the Joint Use Coordinating Committee (JUCC) and the *Joint Use Agreement*.
 - b. In conjunction with the school building envelope within a JUS, suitable land should be provided for active playfields or park space to meet the students' recreational needs.
 - c. The size of the JUS may be reduced if required facilities and Open Space are suitably shared with an adjacent use, to the satisfaction of the Approving Authority.

4.0 Creating a Great Community

3. Joint Use Site Location

- a. Future JUS locations are shown generally on *Map 7: Joint Use Sites*.
- b. A JUS should be suitably located in relation to its student catchment area and optimal walking distance radii.
- c. A JUS shown on *Map 5: Land Use & Transportation Concept* or *Map 7: Joint Use Sites* may be relocated to the opposite side of an adjacent Collector or local street within an Outline Plan/Land Use Amendment application without requiring an amendment to *this Plan*.
- d. JUSs must have dual frontages to separately accommodate on-street parent and bus drop-off and pickup areas.
- e. The school building envelope within a JUS 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.
- f. Where a JUS is located within or adjacent a NAC, the school building envelope should be located closest to and integrated with the NAC.

4. JUS Design

- a. Prior to Outline Plan/Land Use Amendment approval, a Concept Plan showing the proposed layout of a JUS within the application area and a preliminary grading plan should be prepared to the satisfaction of the Approving Authority, having regard to the requirements of the JUCC and the *Joint Use Agreement*.
- b. The school building envelope within a JUS should be located along the Collector streets immediately adjacent to the site.
- c. Buildings should be oriented to offer direct pedestrian access to the primary building entrance from the sidewalk.
- d. A Pedestrian and Bicycle Circulation Plan should be provided for a JUS.
- e. School yards are encouraged to incorporate natural features and vegetation.

4.5 Reserve Policies

The purpose of these policies is to provide for the dedication of Municipal School Reserve and Municipal Reserve (Reserve) land in order to meet the educational and recreational needs of the Plan Area.

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1. Reserve Dedication

- a. Reserve shall be dedicated through the subdivision process as Reserve land (as opposed to the payment of cash-in-lieu of Reserve land) in the full amount owing, in accordance with the Subdivision Authority, JUCC, and MDP requirements.
- b. Reserve allocation between a JUS and other forms of Open Space shall be determined at the Outline Plan/Land Use Amendment stage with regard to the Priority of Reserve Lands set out by the *Joint Use Agreement*, at the discretion of the Approving Authority.
- c. Dedicated Reserve land should be useable. Reserve dedication may be accepted within energy right-of-way or setback areas, subject to JUCC review and approval.

2. Additional Reserve Dedication

- a. Additional Reserve may be necessary in areas with a Density of 30 dwelling units or more per hectare of developable land, in accordance with the *MGA* and the *Subdivision and Development Regulation*.

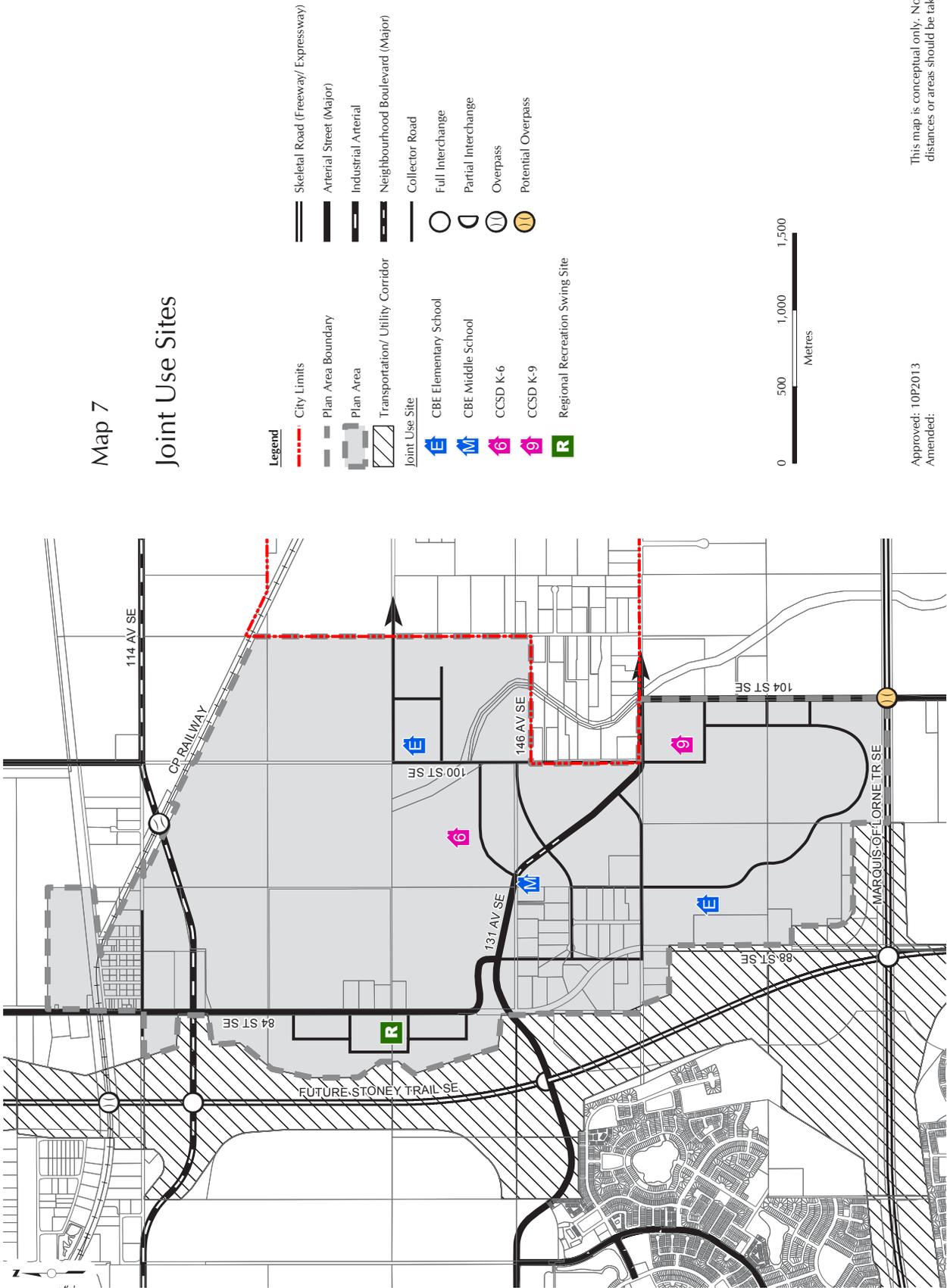
3. Voluntary Reserve Dedication

A developer may be allowed to dedicate Reserve land in excess of MGA requirements on a voluntary basis through the subdivision process subject to a site-specific evaluation and acceptance from the Approving Authority.

4. Where Reserve owing has been previously dedicated:

- a. Private parks are encouraged to be provided through the subdivision and development process as land use districts applied to the site as part of the required landscape area, or
- b. Reserve may be dedicated on a voluntary basis.

Map 7
Joint Use Sites



This map is conceptual only. No measurements of distances or areas should be taken from this map.

Approved: 10P2013
Amended:

4.0 Creating a Great Community

5. Reserve Lands Utilized for Joint Use Sites

A JUS serving the Plan Area should be comprised of Reserve land and located as shown on *Map 7: Joint Use Sites*.

6. Reserve Analysis requirements are contained in *Appendix A*.

4.6 Open Space & Regional Pathway System

The Open Space and regional pathway system is important for a Community's health and identity. It will promote and conserve an interconnected ecological and recreational system within the Plan Area. This system will help sustain air and water quality and provide passive and active recreation areas, as well as a contiguous habitat for wildlife.

The Open Space and pathway system will also facilitate the southeast section of the Calgary Greenway as identified in the *ERCS*, which will extend from north of the *ERCS* area to the Bow River. The Open Space and pathway system will link major natural features, recreation areas, ecological corridors and will form part of the city-wide regional pathway and bikeway network and a component of the Calgary Greenway System.

The regional pathway system is conceptually identified on *Map 5: Land Use & Transportation Concept* and *Map 9: Transportation*. Regional pathway policies are contained in *Section 5.3: Pedestrian & Bicycle Circulation Policies*.

The Open Space system should be an interconnected system of parks, Public Plazas, natural areas, utility corridors, rights-of-way and other Open Spaces, that will provide the following 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. create spaces that are functional, safe, flexible and provide for a variety of sporting and recreational opportunities for people of various ages and abilities;
- b. integrate the Open Space into the wider Plan Area through pedestrian and bicycle routes; **45P2017**
- c. ensure seasonal adaptability for year-long usability through appropriate landscaping, site design, provision of park furniture and recreational facilities;
- d. provide public visibility to the Open Space through visual corridors and/or single-loaded streets;
- e. design and locate amenities (playfield, seating areas, etc.) within the Open Space system appropriately to limit negative impact from surrounding noise (major roads, etc);
- f. encourage diverse user activities and opportunities through recreational equipment or interpretive trails and signage;
- g. encourage residential and commercial development to incorporate vistas into the Open Space;
- h. promote "eyes on the street" by using building frontages to frame and define Neighbourhood parks, plazas, and playgrounds where possible;
- i. support linear parks and linkages where appropriate to promote connectivity and facilitate walking and cycling;
- j. design parks and Open Spaces to provide opportunities for cultural enjoyment and artistic pursuits;
- k. ensure Open Spaces and amenities are located and designed in accordance with the principles of universal access and barrier-free design;

- l. provide opportunities for local food production such as community gardens;
 - m. provide both shading and sunlight access for users; and
 - n. provide opportunities to connect people with nature and provide environmental education, where appropriate and feasible.
2. Biophysical Function

The biophysical function promotes biodiversity and contributes to a positive impact on air/water quality and 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. enhance and/or restore the overall biodiversity of the area by protecting native plant species;
 - b. lower irrigation demands with drought tolerant vegetation and xeriscaping strategies;
 - c. connect to Green Infrastructure such as bioswales and vegetated street corridors; and
 - d. link to larger ecological areas such as watersheds, drainage systems and other habitat blocks through corridors and/or stepping stones.
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 Community;
- b. encourage sunlight penetration into Open Spaces by avoiding extensive building overshadowing;
- c. encourage tree clusters for seasonal shading;
- d. protect and restore natural features including but not limited to wetlands, natural vistas and slopes, mature vegetation, native prairie grasslands and biologically diverse areas; and

- e. design Open Spaces for passive and active recreational functions and locate them within an approximate 450 m walking radius for the majority of residents in the Community.

- 4. Land acquisition for the Open Space and pathway system may occur through dedication of MR, MSR, ER, utility rights-of-way, land purchase where necessary or other means such as conservation easements or voluntary reserve dedication.
- 5. The location, size and configuration of the Open Space system will be determined through the Outline Plan/Land Use Amendment process.
- 6. Private Open Space
Private Open Spaces of various sizes and forms and Recreational Amenities are encouraged to be provided within: Multi-Residential Development; redevelopment sites where MR was previously allocated; Mixed-Use developments; and commercial developments. Public access to these amenities is encouraged, where appropriate.

4.7 Design for Safety

The planning of sustainable, smart Communities should incorporate Crime Prevention Through Environmental Design (CPTED) 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. 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. transportation, land use, Community, building and housing designs that are safe and effective 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 response planning for a variety of emergencies should limit the extent of damage in those that do occur; and

4.0 Creating a Great Community

5. enhancing Community safety through Community and building design that reduces opportunities for crime, encourages vibrancy at all times of the day and controls fire spread.

4.8 Neighbourhood Activity Centre and Corridor Design Policies

NACs and the Neighbourhood Corridor are intended to be the focal points of local Community interaction.

4.8.1 Policies Applicable to all Neighbourhood Activity Centres and Corridors

1. NACs and the Neighbourhood Corridor should be Pedestrian Oriented and should include, but not be limited to, the following urban design and architectural measures:
 - a. Pedestrian and bicycle routes to and from the surrounding areas that are clearly identifiable, inter-connected, safe and convenient; and
 - b. An enhanced Public Realm, including high-quality sidewalks, landscaping and public art.
2. A gathering area should be provided on public land (such as MR land) or publically accessible within each NAC as a central amenity space.
3. Development adjacent to Environmentally Significant Areas should be sensitively treated to maintain the environmental integrity and amenity value of these areas.
4. An appropriate building scale transition between NACs or the Neighbourhood Corridor and adjacent areas should be provided. These transitions should be sensitive to the scale, form and character of surrounding areas.
5. NACs and the Neighbourhood Corridors should be designed in accordance with *Section 4.1: Identity Policies, Appendix C: Neighbourhood Design and Appendix D: Environmental Design Guidelines*.

4.8.2 Streetscape Design Policies

1. Streetscape design in NACs and the Neighbourhood Corridor shall accommodate elements such as street trees, street furniture, bicycle parking and appropriate lighting to enhance the experience of cyclists and pedestrians.
2. Parcels facing amenity spaces or other open space in NACs and the Neighbourhood Corridor should utilize lane access to provide pedestrians with sidewalks free from conflict with automobiles.
3. Lane access should be utilized where feasible for all lots facing a Neighbourhood park, a Public Plaza or public street to create an attractive streetscape.
4. Street-front retail should be supported by locating parking on-street, in the vicinity of the retail frontage, or locating parking at the rear of buildings.

4.8.3 Building Design Policies

1. To provide a high-quality pedestrian environment, buildings in NACs and the Neighbourhood Corridor should provide:
 - a. a consistent setback from the sidewalk; and
 - b. active frontages with primary entryways facing the sidewalk.
2. Multi-unit residential developments in NACs and the Neighbourhood Corridor should have ground-floor units to provide individual entryways to the sidewalk.
3. Buildings over 1,000 square meters gross floor area should have architectural treatments to reduce the building's massing.
4. Affordable Housing should be designed according to the Affordable Housing Development and Design Guidelines.

4.8.4 Central Amenity Space Design Policies

1. To serve as a focal point and destination for local residents, the central amenity space in NACs should:
 - a. provide residents with a multi-functional area that can accommodate both passive and active recreation as well as local gatherings and events;
 - b. act as a destination where people can spend time, socialize and access services and amenities;
 - c. contain one or more transit stops and related transit service amenities such as accessible, heated, well-lit and attractive shelters, seating for pedestrians, and convenient passenger drop-offs, where feasible;
 - d. incorporate public art into amenity spaces to create a unique sense of place and serve as a distinctive land mark in the Neighbourhood; and
 - e. provide bicycle parking.
2. The length to width ratio of the central amenity space should not exceed 3:1 to create an appropriate focal point for the Neighbourhood.



5.0 CONNECTING COMMUNITIES

5.1 Calgary Transportation Plan

All policies within this section follow the principles, guidelines, policies and goals contained within the CTP. Transportation choice is an important CTP policy that directs transportation input to the Plan and provides Calgarians with travel options.

5.2 Transportation Choice

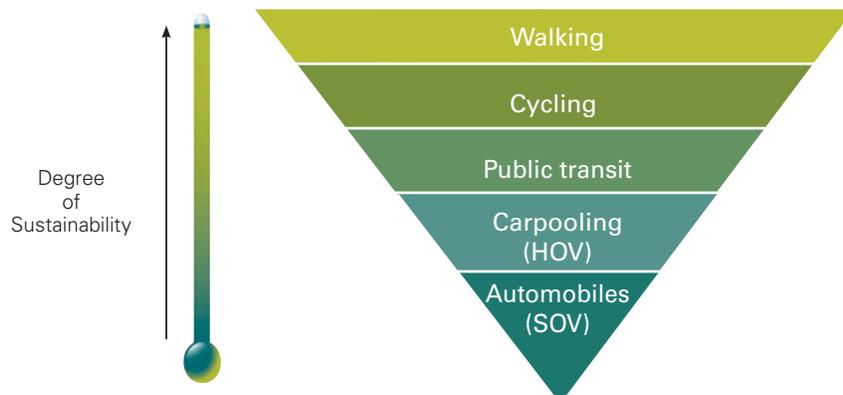
Providing transportation choice helps maintain automobile, commercial goods and emergency vehicle mobility in Calgary while increasing emphasis on sustainable modes of transportation (walking, cycling and transit). More compact forms of development will bring homes, jobs, services and amenities closer together, giving Calgarians more modal choices. With more travel choices available, 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.

As such, transportation focus is shifting to making sustainable modes of transportation more available and prioritizing them. This recognizes that the

automobile may still be a common choice for many Calgarians but emphasizes, encourages and supports other modes of travel that provide many of the benefits listed above through the following transportation network and policies.

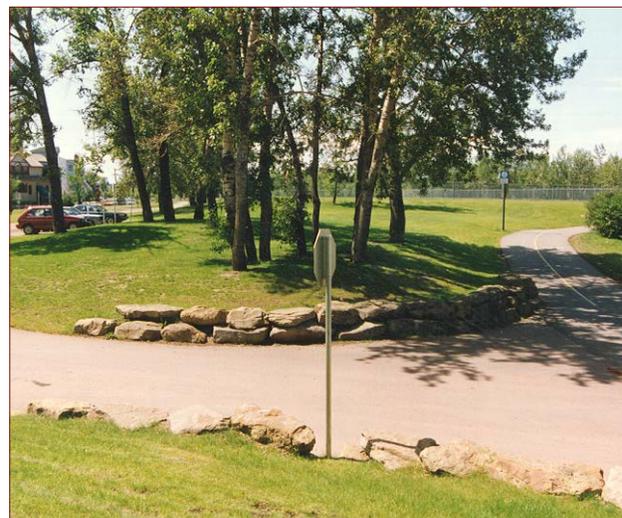
1. Place increased emphasis and priority on walking, cycling and transit while maintaining automobile, commercial goods and emergency vehicle mobility.
2. Sustainable transportation modes (walking, cycling and transit use) are strongly encouraged through a variety of measures.
3. The needs of pedestrians and cyclists should be given the highest priority in NAC planning and design.
4. Connectivity of the road network, pedestrian and cycling routes and emergency vehicles should be maximized. Any Outline Plan/Land Use Amendment application should provide quantitative measures demonstrating the degree of connectivity that is achieved for pedestrians, cyclists, emergency vehicles and private vehicles.
5. Residential street block lengths should be minimized to improve connectivity and permeability for pedestrians, cyclists, transit and emergency vehicles.
6. Universal Design principles should be applied in the planning, design, operation and maintenance of all transportation infrastructure and services within the Plan Area to ensure all residents have equal accessibility to the transportation system and destinations.



5.3 Pedestrian & Bicycle Circulation

The purpose of these policies is to provide for direct and convenient pedestrian and bicycle circulation within the Plan Area to promote non-automobile modes of travel. The regional pathway provides convenient pedestrian and bicycle connections throughout the Plan Area for both commuting and Recreational Use and forms part of the Calgary Greenway System. Pedestrian travel will be advanced by regional and local pathways, pedestrian crossings, sidewalks and walkways. Bicycle travel will be comfortable and efficient on an integrated network of regional and local pathways and on-street bicycle routes. Pedestrian and bicycle circulation system alignment will be determined at the Outline Plan/Land Use Amendment stage.

1. Regional Pathways should:
 - a. be generally aligned as conceptually identified on *Map 5: Land Use & Transportation Concept* and *Map 9: Transportation*;
 - b. connect parks, natural features, historic/scenic resources and ecological corridors wherever possible;
 - c. where the regional pathway cannot be located within or integrated with a park or natural feature, it may be located within a:
 - i. road right-of-way in the form of a pathway constructed in place of a sidewalk;
 - ii. utility right-of-way; or
 - iii. a designated bikeway separated from vehicle traffic
 - d. not conflict with front driveways or building entrances;
 - e. not conflict with commercial driveways/alleys;
 - f. be designed in accordance with *The City's Access Design Standards*;
 - g. be encouraged to locate along frontages of rather than at rear of developments where possible; and
 - h. extend to the west across the TUC to connect to the pedestrian and bicycle routes located west of the TUC.



5.0 Connecting Communities

2. Local pathways, sidewalks and walkway should be determined at the time of Outline Plan/Land Use Amendment application.
3. The local pathway, sidewalk and walkway system should be designed to:
 - a. provide short, convenient, and direct non-motorized connections to NACs, the Neighbourhood Corridor and transit stops;
 - b. promote walking and cycling throughout Residential, Employment, and Institutional Areas;
 - c. provide convenient and practical access to transit stops;
 - d. be designed in accordance with The City's *Access Design Standards*;
 - e. link origin/destination points within the Plan Area; and **45P2017**
 - f. connect to the regional pathway and on-street bicycle route system.
4. On-street bicycle routes should be designed:
 - a. in accordance with The City's *Bicycle Policy (2008)* and The City's *Pathway and Bikeway Plan (2000)*;
 - b. coincide with the Proposed Pathway Connection within the *ERCS*;
 - c. provide convenient and direct bicycle connections to NACs; and
 - d. to connect to the City-wide regional pathway and on-street bicycle route system.
5. On-street bicycle route design treatment options should include combinations of the following:
 - a. on-street bicycle route signage;
 - b. way-finding signage;
 - c. pavement markings (e.g., shared-use bicycle stencils and bicycle lanes);
 - d. bicycle-compatible traffic signals;
 - e. intersection treatments (e.g., traffic circles);
 - f. bicycle design elements as included within The City's road standard; and
 - g. any other appropriate design treatments.

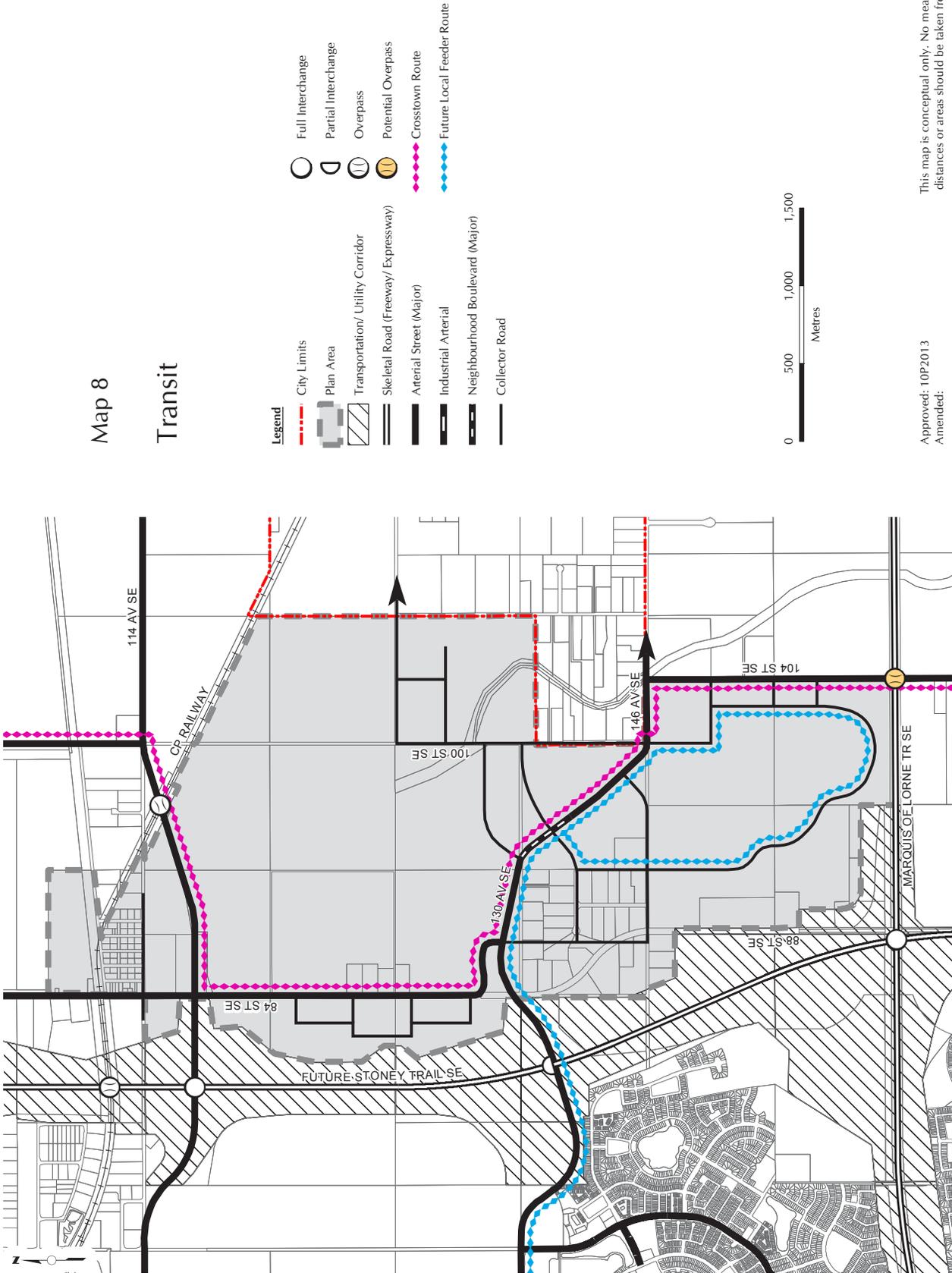
6. Bicycle parking should be provided at major destinations (such as the NACs and the Neighbourhood Corridor, the Community Centre, the Recreation Amenity, Local Commercial Uses, transit stops, parks and Open Spaces).

5.4 Transit Service

The purpose of these policies is to provide for direct, convenient and efficient transit service within the Plan Area to encourage sustainable modes of travel. Feeder bus transit routes and cross-town bus routes extending throughout the Plan Area will serve the communities. Transit routes are conceptually identified on *Map 8: Transit*. Transit service areas, stops and routes will be identified at the Outline Plan/Land Use Amendment stage. **45P2017**

1. Transit Service
 - a. Transit service requirements should be achieved through the provision of:
 - i. direct and convenient roadway connections that facilitate the efficient operation of transit bus service;
 - ii. sidewalks along both sides of roads that are identified for transit bus service;
 - iii. sidewalks along at least one side of roads that provide connections to roads with transit bus service;
 - iv. transit facility location and design that adheres to the principles of Universal Design contained in The City's *Access Design Standards*; and
 - v. walkways that facilitate direct pedestrian access to transit stops.
2. Bus Transit Stops
 - a. Bus Transit stops should be located to:
 - i. serve Higher-Density residential development and activity nodes (such as NACs, schools, the Community Centre, and public facilities); and
 - ii. provide direct, convenient transit service.
 - b. Bus transit stops should be equipped with suitable amenities such as benches,

Map 8
Transit



Approved: 10P2013
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This map is conceptual only. No measurements of distances or areas should be taken from this map.

5.0 Connecting Communities

shelters and other amenities where appropriate.

3. Transit Routes

- a. The road network design should provide for efficient transit routes within the Community.
- b. Transit route design should be incorporated with land use, pedestrian and bicycle circulation.
- c. Transit routes are conceptually identified on *Map 8: Transit* and will be further refined at the Outline Plan/Land Use Amendment stage.

4. Transit Coverage Plan

A Transit Coverage Plan should be provided at the Outline Plan/Land Use Amendment stage in accordance with the guidelines provided in *Appendix A.8: Transit Coverage Plan*.

5.5 Road Network

The purpose of these policies is to provide for a transportation network that is functional, safe and efficient. The road network will minimize impacts on major natural features, integrate development within the Plan Area and accommodate walking, cycling and public transit. The road network in the Plan Area should also accommodate emergency services.

The road network serving the Plan Area consists of Skeletal Roads (Stoney Trail) which provide critical traffic links to and through the area, and internal roads (Arterial and Collector) which accommodate local traffic. The general alignment of the Skeletal and internal roads is shown on *Map 5: Land Use & Transportation Concept* and *Map 9: Transportation*.

5.5.1 Skeletal Road Network Policies

1. Skeletal Road Network Design

- a. Stoney Trail and Marquis of Lorne Trail are the Skeletal Roads near the Plan Area.
- b. Prior to Tentative Plan approval, sound attenuation requirements adjacent to certain street and road standards should be addressed to the satisfaction of the Approving Authority.
- c. As required, emergency access to the developing portion of the Community shall

be identified at the Outline Plan/Land Use Amendment stage and maintained in a manner satisfactory to The City.

2. Transportation and Utility Corridor

- a. Stoney Trail is located within the TUC classified as an expressway and is under the jurisdiction of The Province of Alberta. Interchanges are planned at 114 Avenue SE, 130 Avenue SE and Marquis of Lorne Trail/Highway 22X.
- b. The TUC (Stoney Trail) alignment, as shown on both *Map 5: Land Use & Transportation Concept* and *Map 9: Transportation*, may be subject to refinement by The Province of Alberta.
- c. Any surplus TUC lands should, where possible, be incorporated with adjacent development.
- d. Development on lands within the TUC is under the jurisdiction of The Province of Alberta.

5.5.2 Internal Road Network Policies

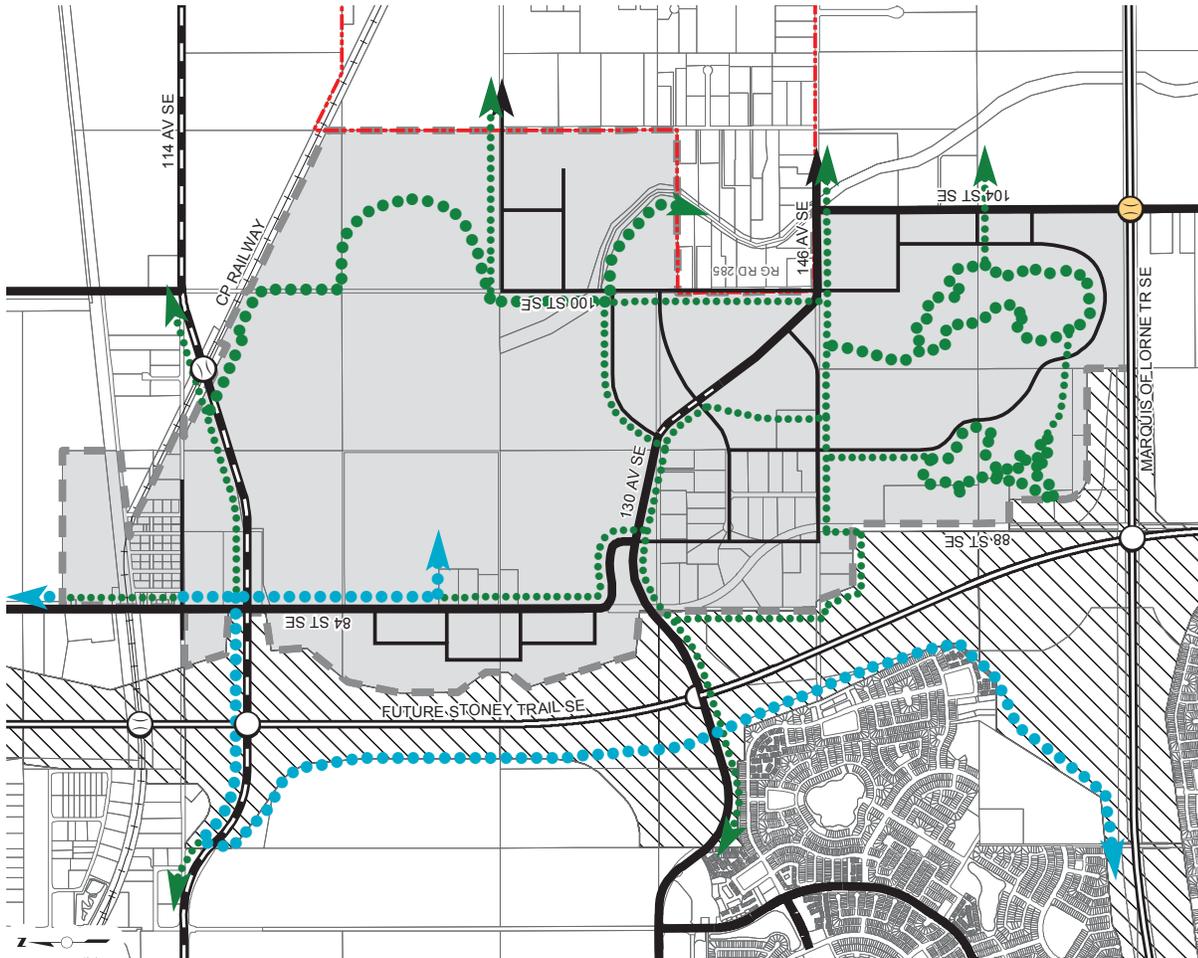
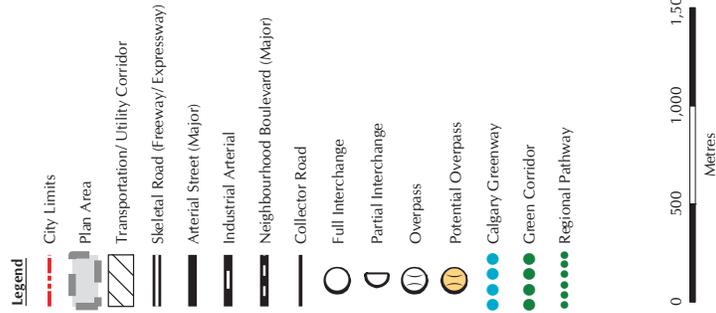
The purpose of these policies is to provide for an Internal Street network within the Plan Area that accommodates transit, non-motorized, and vehicular traffic through direct connections. These connections will be provided in a safe, efficient and balanced manner through a grid or modified grid pattern where possible. The policies and design guidelines aim to balance the need for motor vehicle movement and parking with the need to use streets to create a sense of Community and provide for Active Modes of transportation.

1. Internal Road Network Design

- a. Arterial and Collector streets comprising the Internal Street network within the Plan Area shall be generally located as identified on *Map 9: Transportation*.
- b. The Internal Street network classifications shown on *Map 9: Transportation* are preliminary only. Classifications should follow the principles, guidelines and typologies of Complete Streets within the CTP. Classifications and alignments may be refined at the Outline Plan/Land Use approval process, to the satisfaction of the Approving Authority.

Map 9

Transportation



This map is conceptual only. No measurements of distances or areas should be taken from this map.

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Amended: 45P2017

5.0 Connecting Communities

- c. Road and street typologies should allow Neighbourhoods to be linked together with multiple routing options for all modes of transportation.
 - d. Minor Internal roads may be approved through the Outline Plan/Land Use Amendment application process without being identified in this Plan. A Mobility Assessment & Plan may also be required at various development stages. *Mobility Assessment & Plan* guidelines are contained in *Appendix A*.
 - e. An internal road network comprised of interconnected streets that have multiple route options for pedestrians, cyclists and motorists should be provided within and around NACs.
 - f. The internal road network should provide for:
 - i. direct connections to origin and destination points;
 - ii. safe and efficient traffic flows;
 - iii. efficient bus transit routing;
 - iv. convenient pedestrian and bicycle routing; and
 - v. minimized impacts to wetlands and natural features.
 - g. Long stretches of Collector roads should be aligned to include traffic calming mechanisms including intersection spacing under 200 meters.
 - h. Tree planting should be undertaken in the boulevards and medians of public streets in accordance with City policy.
 - i. The incorporation of Green Infrastructure (such as bio-swales and vegetated street corridors) to the road design is encouraged.
 - j. Internal roads, where classified as Arterial, should be characterized by:
 - i. sidewalks on both sides of the road (a regional pathway may be implemented in place of a sidewalk on one side); and
 - ii. appropriate cycle tracks for off-street cycling or bike lanes or wide curb-lanes for on-street cycling. Off-street cycling through regional pathways or cycle tracks is preferred along Arterials in the Plan Area.
 - k. All Outline Plan or subdivision plans must provide quantitative measures demonstrating the vehicular connectivity that is achieved for that specific Outline Plan and/or subdivision.
2. Street Network Concept Plan

In conjunction with an Outline Plan/Land Use Amendment application for lands within the Neighbourhood Area and Neighbourhood Corridor, a Concept Plan may be required that shows how the proposed street network facilitates the development of an efficient and connective street network on adjacent lands.
 3. 114 Avenue SE
 - a. 114 Avenue SE is classified as an Industrial Arterial.
 - b. Realignment of 114 Avenue SE east of 84 Street SE is proposed to improve the connection to Stoney Trail. In the interim, the existing 114 Avenue SE alignment should be used.
 - c. The design of the realigned 114 Avenue SE CPR tracks crossing shall be coordinated with, and is subject to approval by, the CPR. The ultimate crossing is proposed as a grade-separated overpass of the tracks.
 4. Truck Routes
 - a. All Arterial streets within the Plan Area should be designated as Truck Routes. All other streets will be evaluated according to The City's *Truck Route Network Development Policy*.
 - b. Truck routes through the Plan Area will be re-evaluated as part of future updates to the *Truck Route Bylaw* to review the impacts of truck traffic through residential areas.
 5. Emergency Access

Emergency access/egress and evacuation routes in the Plan Area's developing portion must be identified at the Outline Plan/Land Use Amendment stage as per the CTP and the Connectivity Handbook and should be maintained in a manner satisfactory to the Approving Authority.

5.6 Parking

The purpose of these policies is to provide direction on parking requirements within the Plan Area. Parking for all development must be provided as per the parking rates for the specific use as set out in the current *Land Use Bylaw*.

1. NACs and the Neighbourhood Corridor

The NACs and the Neighbourhood Corridor are to be designed to encourage walking, cycling and transit usage. As such, the parking strategy for these areas reflects the reduced demand for parking. Within the NACs and the Neighbourhood Corridor:

- a. the minimum *Land Use Bylaw* parking requirements for all uses in these areas shall be considered the maximum parking requirements;
- b. surface parking facilities shall be located away from transit and pedestrian areas or behind buildings to enhance the pedestrian appeal of the streetscape and reduce conflict between Active Modes of travel and automobile traffic;
- c. surface parking facilities should provide safe, convenient sidewalk and pathway connections for pedestrians and cyclists to access building entrances;
- d. alternatives to surface parking are encouraged;
- e. parking relaxation is encouraged to the satisfaction of the Approving Authority. Supporting Transportation Demand Management (TDM) programs and/or supporting technical parking analysis may be required at the discretion of the Approving Authority; and
- f. parking should include a mix of short-stay and long-stay parking for different users, bicycle parking and on-street parking to mitigate any potential parking impacts on adjacent residential areas.

2. Parking in other areas

- a. Parking for all development outside of the NACs and the Neighbourhood Corridor shall generally be provided as per the parking rates for the specific use as set out in the *Land Use Bylaw*. Provision of parking in

excess of *Land Use Bylaw* requirements is discouraged.

- b. In support of providing more Affordable Housing, the Approving Authority may consider reduced parking requirements where the proposed development would have a reduced automobile ownership rate.

3. Bicycle Parking

Bicycle parking should be provided in the Plan Area as required by the *Land Use Bylaw*.

5.7 Transportation Demand Management

The purpose of these policies is to influence people's travel choices to improve transportation system efficiency.

1. Developers are strongly encouraged to develop 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 personal motor vehicle use for commuting;
 - c. reduce peak-period demands on the transportation system; and
 - d. reduce the need for existing on-site employee parking rates.

6.0 GREENING COMMUNITIES

MDP goal: “Conserve, protect and restore the natural environment.”

The purpose of these policies is to conserve, protect and restore the natural environment in alignment with *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 D: Environmental Design Guidelines*.

6.1 Green Infrastructure Policies

1. An interconnected Green Infrastructure network should be incorporated into the Plan Area, road and street design. The network may include, but is not limited to: **45P2017**
 - 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 interconnected Green Infrastructure network design should incorporate Green Infrastructure principles 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;
 - 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, infrastructure and Green Roofs.
3. Environmental Open Space protection should be provided in accordance with The City's Open Space Plan and the MDP.
4. To support Urban Forestry, 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*. Opportunities may include planting trees, bushes and shrubs on public and private land, in front and back yards, courtyards, Public Plazas and on rooftops.
5. The City should work with applicants to facilitate the implementation of Green Infrastructure initiatives through its approval, construction and acceptance process.



6.2 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 the 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*.

6.3 Water Policies

1. Watershed protection, water conservation and water quality and quantity enhancement 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 runoff and maximizing stormwater infiltration 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 including pervious surfaces in the design;
 - c. implementing Low-Impact Development (LID)solutions for Outline Plan and Development Permit applications in accordance with the *Shepard Regional Drainage Plan* (approval pending) 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, 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 the following:
 - i. water efficient Open Space, parks and other landscaped areas, including the use of drought-tolerant vegetation for landscaping and xeriscaping strategies; and



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

- 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 *Bow Basin Watershed Management Plan*, *Shepard Regional Drainage Plan* and the *MDP*.

6.4 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 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 streets 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 Public Plazas.

6.4.1 Environmental Open Space Policies

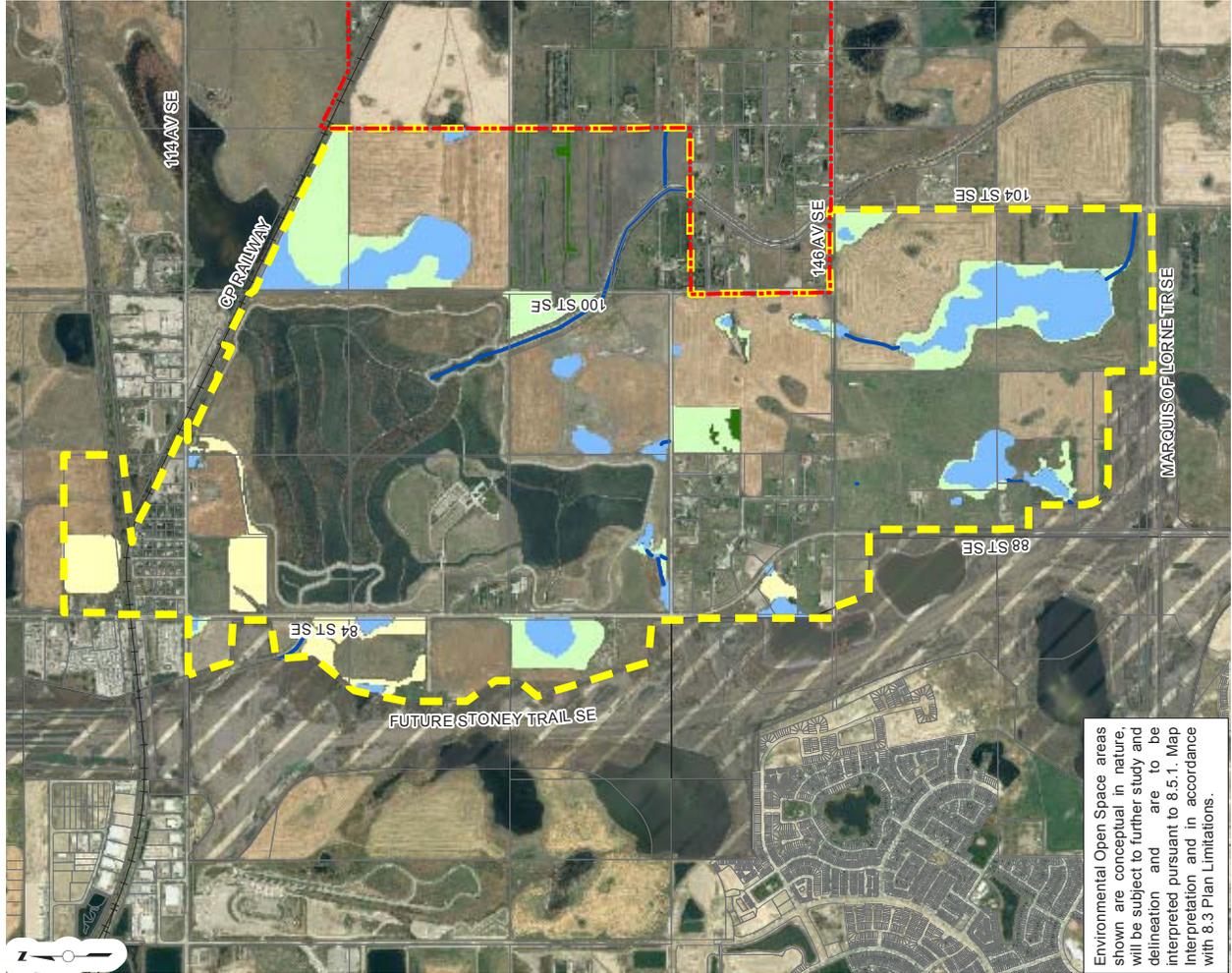
Environmental Open Space (shown on *Map 10: Environmental Open Space Study Area*) is composed of the natural drainage systems, Environmentally Significant Areas and Natural Environment Parks including wetlands, natural Water Bodies, natural grasslands, woodlots and native pasture that are protected through 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:

- 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 *Shepard Regional Drainage 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;
- 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

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Environmental Open Space Study Areas will be updated.

Map 10
Environmental Open Space
Study Area



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This map is conceptual only. No measurements of distances or areas should be taken from this map.

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.

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 & Transportation Concept* identifies those areas of regional significance only, as per the *Bow Basin Watershed Management Plan*, *Shepard Regional Drainage Plan* and the *MDP* in association with the *Open Space Plan*. See *Map 10: Environmental Open Space Study Area* for the composition of Environmental Open Space including possible wetlands, Water Bodies (stream orders), native prairie and pasture and other Environmentally Significant Areas.

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. Only Environmental Open Space dedicated, acquired or otherwise protected by the City are subject to the use and preservation oriented Environmental Open Space policies in this ASP (see below for details).

Environmental Open Space policies apply to those areas as identified on *Map 5: Land Use Concept* and *Map 10: Environmental Open Space Study Area*.

1. Applicable Legislation and City Policy

- a. 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*, *Shepard Regional Drainage Plan* and other existing legislation and policy at time of development.

- b. A base 30 meter setback from Stewart-Kantrud Class 3 or higher wetlands, considered to be ER, shall be applied in accordance with The City's Environmental Reserve Setback Guidelines. Additional setbacks may be required based on the setback modifiers stated in the Development Guidelines and Standard Specifications Landscape Construction, as amended.

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 *Shepard Regional Drainage 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 Neighbourhoods.
- 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

6.0 Greening Communities

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’s *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, and the policies of the adjacent Land Use Area shall apply to these lands without requiring an amendment to *Map 5: Land Use & Transportation 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 subsection (3)(b) above, or by applying the Special Purpose – Urban Nature (S-UN) District or another applicable district under the *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 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 C: Neighbourhood Design* and *Appendix D: 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 Neighbourhoods 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 a tentative plan or stripping and grading 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. Tree belts located in NW-5-23-28 W4M, which are remnants of a tree farm operation, are encouraged to be integrated in future neighborhood design where

practical and possible. Potential future tree farm operations, including replanting of trees, shall be allowed to continue on these lands.

- d. 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.
- e. 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*.

6.4.2 Wetland Policies

The purpose of these policies is to protect and enhance 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 stages.

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

Applicants must comply with the terms of the following 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, that dedication is not required.
- b. Where wetlands qualifying as ER are not dedicated to The City, the landowner shall provide compensation, as per the

6.0 Greening Communities

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 required criteria 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 below, or by applying the Special Purpose – Urban Nature (S-UN) District or another applicable district under the *Land Use Bylaw* to the area of the wetland, or as per policies identified in the Open Space Plan (e.g., conservation easement).
- d. When a Development Permit application is submitted without subdivision, and when the wetlands meet the required criteria pursuant to 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 that 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 to *Section 8.3: 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 Transportation 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 those listed under Section 6.4.1.3.b above. Wetlands that are not protected may be 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 to its native habitat through the use of native plant species, pursuant to *The City's Environmental Reserve Setback Guidelines*.
- 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.

5. Water Act Approval

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

6. Existing Water Bodies that are not designated ER may be designed, amended or realigned with restorative principles to be receiving bodies for treated stormwater where it can be demonstrated that the water quality and quantity contributes positively to the function and habitat of these Water Bodies.

6.4.3 Green Corridor Policies

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 space for the Green Corridor should be provided within the Environmental Open Space.

1. Recreational Amenities

The Green Corridor will:

- a. provide opportunities for diverse user access and activity;
- b. be seasonal adaptable to provide year-long usability;
- c. connect to or integrate with parks, recreation spaces and JUSs where appropriate; and
- d. be 3.5 m (11 ft) in width, where feasible and appropriate.



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

2. Accessibility

The Green Corridor will:

- a. connect 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.

6.5 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;
 - c. creating tree corridors to serve as windscreens that protect buildings and activity areas from extreme temperature fluctuations;
 - d. Mixed-Use buildings to balance heat and power demand;
 - e. 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 Alberta Built Green standards); and
 - f. 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 streetlight 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/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 Neighbourhood Corridor to determine feasibility and plan for future infrastructure, where appropriate.



6.6 Waste Management Policies

1. The City's current goals and targets for waste diversion should be met by:
 - a. minimizing waste production in construction and operation by:
 - i. developing a construction waste management plan and materials strategy, targets and associated monitoring/reporting;
 - ii. managing and recycling waste on-site; and
 - iii. employing design techniques that reduce waste generated from construction, as well as design techniques that enhance deconstruction opportunities at the end of a building's life.
 - b. maximizing the re-use of materials and the recycled content in products selected for construction;
 - c. maximizing waste diversion and recycling in operation through the provision of sufficient and practical space, facilities and access for waste segregation, diversion, and pick-up in all developments; and
 - d. employing design solutions that create an adaptable and flexible space for change of use over time to accommodate lifestyle changes and new technologies.
2. One Community Recycling Depot should be provided in the Plan Area, and be located in conjunction with a non-residential use (e.g., in an Activity Centre).

6.7 Agricultural Operations Policies

Since much of the land within the Plan Area is currently being used for extensive agricultural production, the purpose of the following policies is to ensure agricultural resources are protected.

1. Existing agricultural operations should be protected until the land is serviced for urban development in accordance with MDP policy 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;
 - 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 to provide for local food production.

7.0 UTILITY SERVICING POLICIES

7.1 Utility Infrastructure

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

1. Municipal and Shallow Utilities

- a. Urban development within the Plan Area will be serviced with municipal water, sanitary sewer and a stormwater system and shallow utilities (i.e., gas, cable, electricity, telephone).
- b. The provision, alignment and capacity of water distribution mains and feeder mains, sanitary sewer lift stations, forcemains and trunks and stormwater channels 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 (ROW) and easements and related line assignments should be addressed to the mutual satisfaction of The City, the landowner and the utility companies.
- d. Utility ROW 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 ROW and easements, Public Utility Lots (PUL) and road ROW may be required across undeveloped land to facilitate orderly and sequential urban development.
- f. Utility ROW should be designed to reduce building setbacks from the street wherever possible, with particular attention on the NACs and Neighbourhood Corridor and areas where the pedestrian environment is paramount.
- g. Utility ROW and easements should be located where they will ensure the long-term viability of street trees in the Plan Area.

2. Interim Servicing

- a. Interim servicing in advance of ultimate utility infrastructure is normally discouraged, but The City may consider it on an individual and limited basis where deemed viable within the Plan Area, at the sole discretion of The City.
- b. Interim servicing shall be aligned with priorities and infrastructure timing set through the Corporate Framework for Growth and Change and shall adhere to applicable City policies, principles, and City specified technical performance requirements. Developers may be required to enter into an agreement with The City, to the satisfaction of The City.

3. Shallow Utilities

- a. Urban development within the Plan Area will be serviced with shallow utilities (i.e. gas, cable, electricity and telephone).
- b. The location of all shallow utilities and the provision of ROW and easements and related line assignments should be addressed to the mutual satisfaction of The City, the landowner and the utility companies.
- c. Utility ROW and easements should be provided to accommodate shallow utilities as determined necessary.

4. Utility Alignments

- a. Utility alignments may be refined at the Outline Plan/ Land Use Amendment approval stage.
- b. Utility ROW and easements and PUL should be provided as required to accommodate the development or the extension of City utilities necessary for development.
- c. Utilities should be aligned to avoid Environmental Open Space, including ER 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.
- d. Alternative and more cost-effective alignments and locations can be considered at the Outline Plan/Land Use Amendment stage at the Approving Authority's discretion.
- e. Prior to Outline Plan/Land Use Amendment approval, a developer shall submit studies and information determined necessary to identify the location and alignment requirements for utilities within the development.
- f. A developer may be required to provide, or enter into an agreement to provide when required, the utility ROW or easements necessary to accommodate municipal utility extension through or adjacent to a site in order to allow for site servicing.

7.2 Water Servicing

The purpose of these policies is to provide for a suitably designed water supply system to serve development within the Plan Area. The majority of the Plan Area is located within the Ogden Pressure Zone. A small portion in the north of the Plan Area is located within the Foothills Zone. The general alignment of feeder mains required to service the Plan Area is shown on *Map 11: Water Servicing*.

The planned Shepard Feedermain as well as the East McKenzie Feedermain (under construction, as of 2012) will service future development in the area. Developers will need to construct distribution mains that connect to these feeder mains. Upgrades to pump stations may also be required.

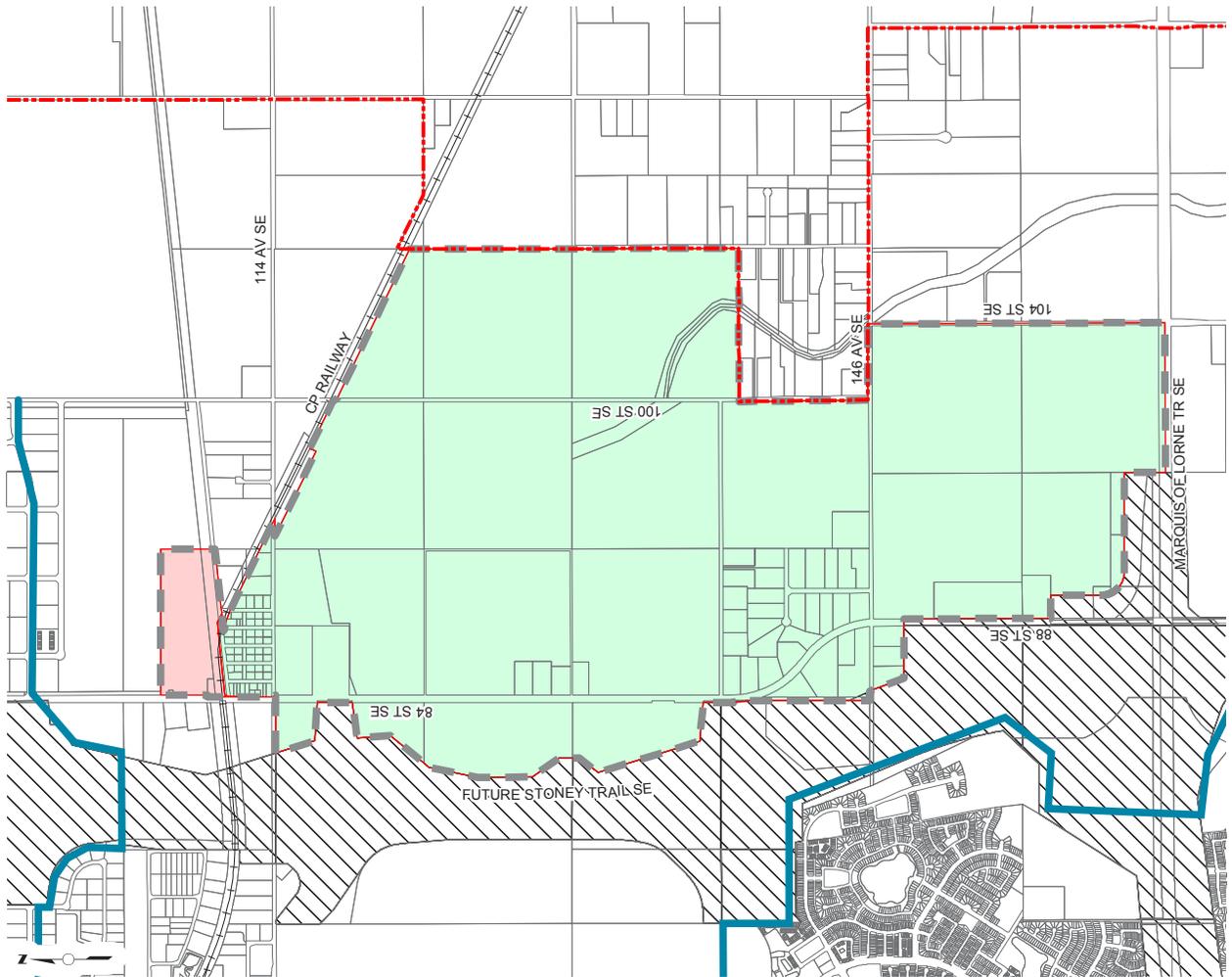
1. Water Distribution System Design

The Plan Area's water distribution system shall be designed to adequately, safely and efficiently serve the ultimate Plan Area development.

2. Water Distribution System Review

- a. The proposed distribution system 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. At the time of this Plan's approval, the water distribution system that services the Plan Area is limited. Therefore, Water Resources shall identify any offsite distribution mains and/or transmission feeder mains that may be required to be installed to service an Outline Plan/Land Use Amendment application area.

Map 11
Water Servicing



- Legend**
- - - City Limits
 - Plan Area Boundary
 - Planned Feedmain
 - Water Pressure Zones
 - Foothills
 - Ogdan
 - Transportation/ Utility Corridor



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This map is conceptual only. No measurements of distances or areas should be taken from this map.

7.3 Sanitary Servicing

The purpose of these policies is to provide a suitably designed sanitary sewer system to service the Plan Area. The Plan Area includes three sanitary catchment areas – Shepard Industrial, Southeast and Fish Creek (see *Map 12: Sanitary Servicing*). Future development in the Plan Area should be serviced by extensions to the existing and/or proposed sanitary sewer trunks as required and as identified on *Map 12: Sanitary Servicing*.

The Shepard Residential Area, as well as the residual cell located east of the TUC and west of 84 Street SE, can be serviced by a proposed 600 mm sanitary trunk connecting to the future Shepard Industrial lift station, located conceptually at Garden Road and 114 Avenue SE.

The smaller area north of Marquis of Lorne Trail SE (Fish Creek sanitary subcatchment) will be serviced by the Mahogany lift station.

The remaining lands in the Plan Area will be serviced by the future Southeast Regional Sanitary System. Construction of this sanitary system will proceed from the downstream end of the system in the south and extend east and north in line with development. The anticipated timing of development in this area is not within the 10-year horizon.

1. Sanitary Sewer System Design

The sanitary sewage system for the Plan Area shall be designed to adequately and efficiently serve the ultimate development of the area.

2. Sanitary Sewer System Analysis

As part of an Outline Plan/Land Use Amendment application, a developer shall submit a Sanitary Sewer Servicing Study to demonstrate that the subject land can be ultimately serviced in accordance with the overall design of the sanitary sewer system for the Plan Area.

7.4 Stormwater Management

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 local stream network within the Plan Area.

The Plan Area is located in the Bow River Watershed Basin and Shepard Regional Drainage Corridor. Stormwater from the development will drain into required stormwater facilities located within the Plan Area, discharging into the existing Shepard Wetland Complex and/or Shepard Ditch at controlled release rates and volumes. It will ultimately discharge into the Bow River as per the *Shepard Regional Drainage Plan, (2011)* (approval pending). A Master Drainage Plan will be prepared for the Plan Area prior to an Outline Plan / Land Use Amendment application.

1. Stormwater Release Rate and Targets

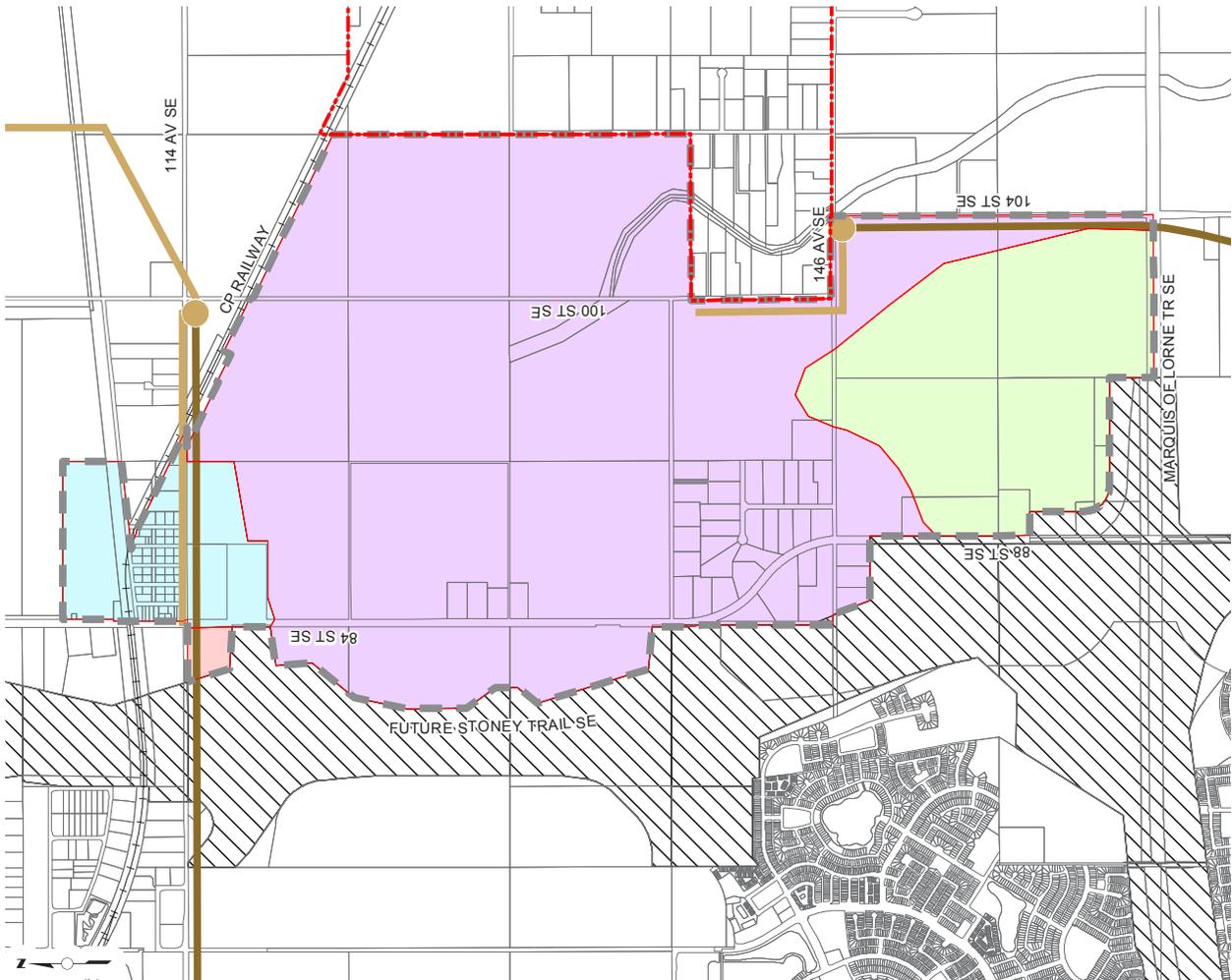
The Plan Area’s stormwater management system shall align with the discharge rates set in the Shepard Regional Drainage Plan, (approval pending), Master Drainage Plan (to be prepared), *The City’s Stormwater Management Strategy (2005)*, the *Bow River Basin Watershed Management Plan (2008)*, the *MDP*, and other relevant and applicable City policies.

- a. Recommendations for maximum allowable discharge rates and runoff volume control targets identified within the *Shepard Regional Drainage Plan* shall be adhered to for the Plan Area.
- b. Notwithstanding the above, the existing Shepard Regional conveyance system (Shepard Wetland, Shepard Ditch) is designed to accommodate storm discharges from the Plan Area at controlled rates.

2. Stormwater Ponds

- a. Stormwater ponds should be located on a public utility lot wherever possible and should not be located in Environmentally Significant Areas as documented by a BIA accepted by the Director of Parks.
- b. Engineered natural stormwater wetlands may be integrated within Environmentally Significant Areas to ensure long-term Sustainability, in a manner that continues to provide viable habitat.

Map 12 Sanitary Servicing



- Legend**
- City Limits
 - Plan Area Boundary
 - Transportation/ Utility Corridor
 - Proposed Sanitary Forcemain
 - Proposed Sanitary Trunk
 - Proposed Sanitary Lift Station
- Sanitary Catchment Areas**
- Dufferin
 - Fish Creek
 - Shepard Industrial
 - Southeast



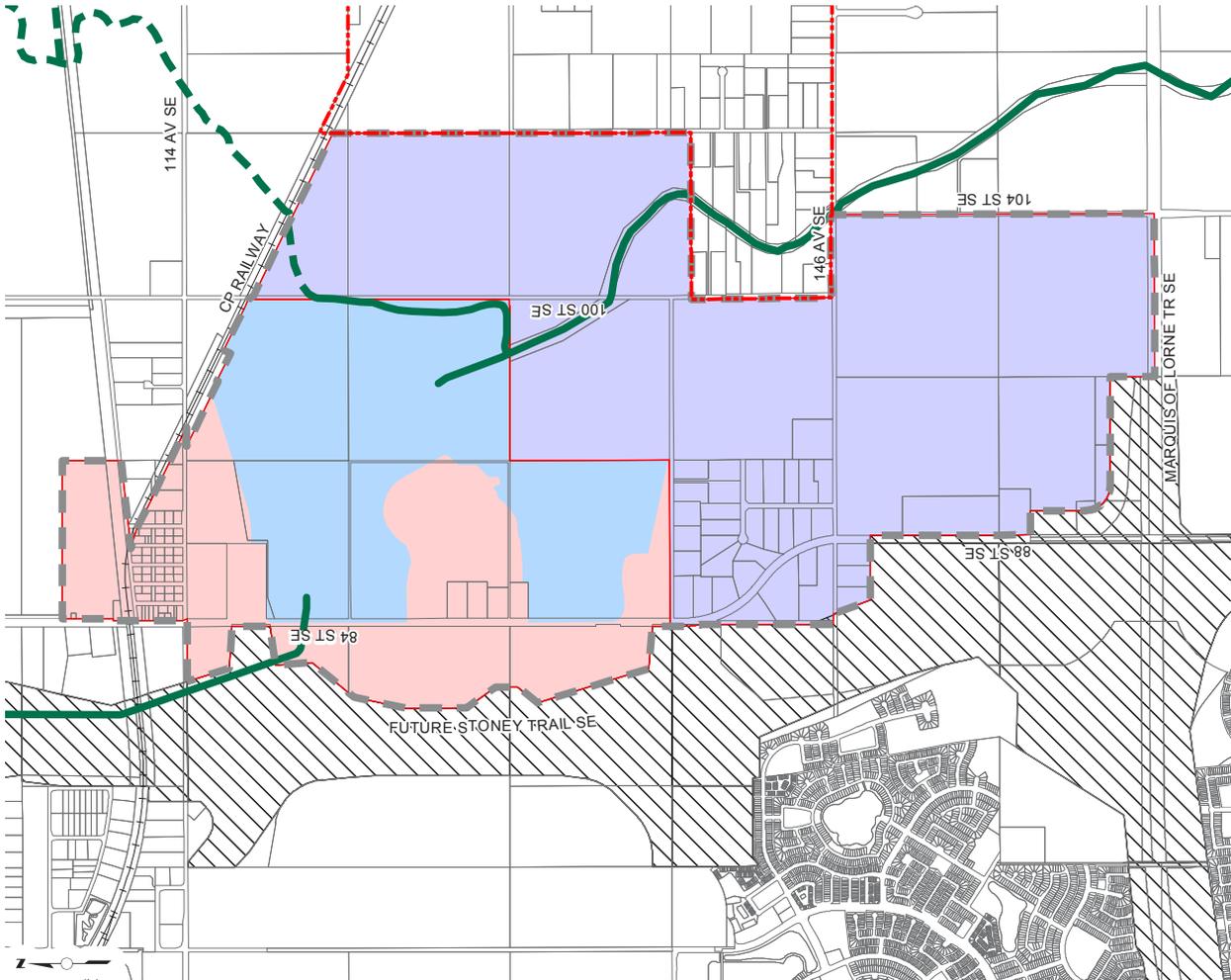
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This map is conceptual only. No measurements of distances or areas should be taken from this map.

7.0 Utility Servicing Policies

- c. 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 an approved Master Drainage Plan (see Section 6.4.2: Wetland Policies for further information).
3. Stormwater Management System Design
- a. The Plan Area's stormwater management system shall be designed to adequately and efficiently serve the full build out of the Plan Area, while preserving the local water bodies and adhering to the Master Drainage Plan (to be prepared) and the *Shepard Regional Drainage Plan* (approval pending).
 - b. Prior to an Outline Plan/Land Use Amendment application review the Master Drainage Plan shall be prepared, with review and approval from 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 Master Drainage Plan.
 - d. The Staged Master Drainage Plan will also be required to comply with any new stormwater management policies that have been approved.
 - e. Stormwater facilities are shown conceptually on *Map 13: Storm Servicing*. Alternate and more cost effective alignments may be considered at the Outline Plan / Land Use Amendment stage that may require amendments to the Master Drainage Plan. Impact to Environmental Open Space shall be minimized.
4. Best Management Practices for Staged Master Drainage Plans
- a. When preparing 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;
 - ii. LID methods, such as constructed wetlands and bio-swales, to mitigate the effects of stormwater runoff into local watercourses 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 10-20 percent 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's *Wetland Conservation Plan*; and
 - ii. introduce mitigation measures to address the potential impact of water quality on existing wetlands as identified in the *Shepard Regional Drainage Plan* and pursuant to the *Calgary Wetland Conservation Plan*.
5. 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(s) or equivalent legal instruments, 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.

Map 13
Storm Servicing



- Legend**
- City Limits
 - Plan Area Boundary
 - Transportation/Utility Corridor
 - Conveyance
 - Future Conveyance (not required for South Shepard ASP servicing)
 - Shepard Constructed Wetland Catchment Area
 - Shepard Ditch Catchment Area
 - Shepard Constructed Wetlands Facility



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This map is conceptual only. No measurements of distances or areas should be taken from this map.

8.0 IMPLEMENTATION POLICIES

8.1 Plan Context

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

The purpose of an area structure plan (ASP) is twofold. Firstly, it refines and implements The City's broad planning objectives and policies by promoting logical, compatible and sustainable Community development. Secondly, it guides the specific land use, subdivision and development decisions that collectively determine the form that the Plan Area will take.

The vision and policies of this Plan are influenced by a wide range of existing plans, policies and guidelines. Please see *Appendix J: Policy Framework & References* for a list of referenced plans and policies. The Plan should not be considered a stand-alone document. Other Council-approved policies and guidelines should also be considered as applicable. The following plans provide high-level guidance and context for the Plan Area:

- The Municipal Development Plan and the Calgary Transportation Plan

The MDP and the CTP are the overarching City-wide policy documents. They set out a 60-year strategy for a more sustainable city form and transportation network for The City. Policies within the *Plan* have been developed to implement the goals and objectives set out by the MDP and CTP. Any development within the Plan Area should be considered and evaluated in the context of the MDP and CTP. The MDP outlines seven strategic goals.

1. 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.

2. 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.
3. 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.
4. 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.
5. Develop an integrated, multi-modal transportation system that supports land use, provides increased mobility choices for citizens, promotes vibrant, connected communities, protects the natural environment and supports a prosperous and competitive economy.
6. Conserve, protect and restore the natural environment.
7. As stewards of the land within its jurisdiction, the relevant to this Plan and should be consulted as required.

- The East Regional Context Study

The Plan Area has been identified as Cell B within the ERCS. The ERCS provides the planning context for the Plan as well as the growth rationale for future planning areas. The ERCS also contains background information relevant to this Plan and should be consulted as required.

- The City of Calgary/ Rocky View County Intermunicipal Development Plan (IDP)

The majority of the Plan Area is located within IDP area. A portion of the Plan Area borders Rocky View County to the east.

8.2 Plan Authority

An ASP is adopted through a bylaw passed by Council in accordance with the MGA and Section 633 of it 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 part 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.

1995 c24 s95

An ASP must conform to the MGA and be consistent with all other Statutory Plans, including the MDP. Subdivision approvals (except those allowed in the Special Purpose Future Urban Development District in the Land Use Bylaw) may only be made where they comply with an ASP. Direct Control Districts must comply with ASPs

8.3 Plan Limitations

ASPs are long-term planning documents. As such, they promote a vision for a Community and establish policies and guidelines geared towards achieving that vision over time. However, policies and guidelines in an ASP are not to be interpreted as an approval for a use on a specific site, as the policies do not address the specific situation or condition of each site within the Plan Area.

In that regard, no representation is made herein that any particular site is suitable for a particular purpose as detailed site conditions or constraints, including environmental contamination, must be assessed on a case-by-case basis as part of an application for Outline Plan/Land Use Amendment, subdivision or Development Permit approval.

8.4 Urban Growth Policies

Deleted

Bylaw 58P2023

Map 14 Growth Management Overlay

Deleted

Bylaw 58P2023

8.0 Implementation Policies

8.5 Interpretation of the Plan

Any reference in this Plan to a statutory enactment, including policies and guidelines, of any government authority, including The Province of Alberta and The City, shall include all amendments from time to time.

8.5.1 Map Interpretation

Unless otherwise specified within the Plan, the boundaries or locations of any symbols or areas shown on a map are approximate only and shall 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 street and utility ROW. Precise boundary locations 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 will apply without requiring an amendment to this Plan.

8.5.2 Policy Interpretation

Where a purpose statement accompanies a policy, it is provided for information only to enhance the understanding of the policy. Should an inconsistency arise between the purpose statement and a policy, the policy will take precedence. Where, give a particular circumstance, a policy is unclear, the purpose statement should be used to interpret it.

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 further clarify the directional nature of the statement (e.g., policies regarding threshold densities of people and/or jobs). 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 Plan’s objectives but may not be applicable in all cases and should therefore be interpreted on a contextual basis. In such cases, incentives may be appropriate to support policy implementation.

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

Where a policy requires compliance at the Outline Plan/Land Use Amendment stage, that requirement may, at the discretion of City Administration, be deferred to the subdivision or Development Permit application stages without requiring an amendment to the Plan.

8.5.3 Guideline Interpretation

The appendices contain guidelines that are not mandatory but are encouraged to be applied at the Outline Plan/Land Use Amendment and Development Permit application stages.

Where the guidelines identify information or analysis to be submitted as part of an Outline Plan/Land Use Amendment application, such requirements may not be mandatory 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 Plan where the variance is considered necessary to respond to unique circumstances that would render compliance impractical or impossible.

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

8.6 Approval Process

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

1. Land Use Approval

- a. Each submitted Outline Plan/Land Use Amendment application should not have a build out timeline in excess of 10 years or a size of more than 150 ha (370 ac) of developable area. The sequence of development within the Plan Area should be reviewed in conjunction with the submittal of an Outline Plan/Land Use Amendment application in accordance with the following:
 - i. the proximity of the application area to municipal servicing;
 - ii. the alignment of the application with The City's ability to provide efficient and cost-effective municipal utility servicing and transportation infrastructure;
 - iii. the required municipal water, sanitary, stormwater and transportation infrastructure to service the application area is identified within The City's 3-year Capital Budget and/or 10-year Capital Plan;
 - iv. The City's ability to provide emergency services to City standards; and
 - v. opportunities to address sustainable Community design.

An analysis should be submitted in conjunction with an Outline Plan/Land Use Amendment application to address the above criteria to the satisfaction of the Approving Authority.

- b. An Outline Plan/Land Use Amendment application should not be approved until all associated infrastructure and servicing costs have been addressed.
- c. The land use designations in effect at the time of Plan approval will:
 - i. continue to apply in accordance with the provisions of the *MGA* and the *Land Use Bylaw*; and

- ii. remain in effect until it is determined appropriate to redesignate the lands to appropriate land use districts in accordance with Plan policies.

2. Outline Plan Approval

Land Use approval should not be granted unless an Outline Plan for the site has been approved, where the Approving Authority deems an Outline Plan necessary.

3. Transitional Uses Prior to Municipal Servicing

- a. Given that municipal servicing may be available only in the long term for some areas, transitional uses may be considered appropriate. Transitional uses:
 - i. should not compromise the ultimate urban development of the site;
 - ii. should not compromise the ability of adjacent lands to develop with an efficient layout in accordance with this Plan; and
 - iii. should be consistent with the vision and character of the surrounding area.
- b. Transitional uses as allowed under the *Land Use Bylaw* may include, but are not necessarily limited to, the following:
 - extensive agriculture;
 - single-detached dwellings in accordance with the *Land Use Bylaw*;
 - home based childcare and home occupation;
 - tree farms;
 - parks; and
 - outdoor recreation area.

- c. Outdoor storage and vehicle storage should not be allowed as transitional uses.

4. Implementing Urban Services in the Existing Shepard Settlement Area

When municipal water and sewer services are extended nearby, Administration may consider appropriate approaches, such as, but not necessarily limited to, Local Improvement Bylaw to implement municipal servicing in this area.

8.0 Implementation Policies

5. Comprehensive Studies

- a. Prior to Outline Plan/Land Use approval, a developer may be required to submit further supporting information to assist Council and the Calgary Planning Commission in evaluating a proposal in terms of its conformity with the Plan.
- b. When a developer does not provide the required supporting information in a satisfactory manner, the Outline Plan/Land Use Amendment application may not be circulated or approved.



8.7 Plan Amendments

Unless otherwise specified in the Plan, any change to the text or maps within the Plan will require an amendment to the Plan in accordance with the MGA. Where an amendment to the Plan is requested, the supporting information necessary to evaluate the potential amendment must be submitted. The Plan may be amended from time to time either in relation to a City initiative or a Land Use Amendment application.

8.8 Plan Timeframe

This Plan 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. No specific timeframe is applied to the Plan. The timeframe of this Plan will be determined by the criteria for prioritization and sequencing of growth areas determined as part of the Corporate Framework for Growth and Change or approved growth management policies in place at the time.

8.9 Monitoring and Review

The policies within the Plan will be monitored over time in relation to 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 Plan 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 built-out.

8.10 Intermunicipal Co-ordination

The purpose of these policies is to provide for the circulation and evaluation of Outline Plan/Land Use Amendment/Development Permit applications to adjacent municipalities in relation to the provisions of *Rocky View County/City of Calgary Intermunicipal Development Plan (IDP)*. The IDP identifies an area of mutual interest between The City and Rocky View County and establishes policies and processes for dealing with issues that may arise within the area. Most of the Plan Area is located within the IDP boundaries.

1. Intermunicipal Circulation and Referral

- a. An Outline Plan/Land Use Amendment/Development Permit application comprising any lands within the IDP area, shall be referred to Rocky View County for review and evaluation in relation to the policies of the IDP.
- b. The circulation and referral of an Outline Plan/Land Use Amendment/Development Permit application to Rocky View County shall be subject to the provisions and requirements of the Circulation and Referral Processes of the IDP.

2. Intermunicipal Consultation

- a. The City shall endeavor to consult and co-operate with Rocky View County on planning, transportation and servicing matters that may arise within areas of mutual interest that are intermunicipal in nature in order to achieve a co-operative and co-ordinated outcome.

- b. Intermunicipal infrastructure issues should be referred to the Joint Intermunicipal Infrastructure Committee for discussion.
3. Interface Planning
- a. The use of transition tools should be coordinated with Rocky View County to achieve the desired interface, pursuant to the Intermunicipal Development Plan. Transition tools that may be used to mitigate impacts and provide an appropriate transition are listed below. This list is not exhaustive and other methods may be appropriate. These transition tools are intended to be used in combination. Transition tools used should depend on the level of impact on the adjacent use and should be evaluated on a site-specific basis. Transition tools include:
 - i. Density
 - ii. Intensity
 - iii. land use
 - iv. phasing
 - v. Open Space
 - vi. landscaping
 - vii. berming
 - viii. topography
 - ix. fencing
 - x. screening
 - xi. stormwater management facilities
 - xii. road alignment/access
 - xiii. site/building design
 - b. Environmental and nuisance impacts of developments or uses such as noise, air contaminants, and odorous matter should be mitigated across municipal boundaries where appropriate. All development shall recognize existing provincial legislation requiring management of agricultural related invasive plants, pests, and diseases.

8.11 Intensity / Density

The purpose of these policies is to establish how Intensity thresholds and Density targets will be implemented. This Plan will primarily be implemented through Outline Plan/Land Use Amendment applications in addition to Development Permit and subdivision applications.

1. Each subsequent Outline Plan/Land Use Amendment application shall demonstrate, to the satisfaction of the Approving Authority, that the Intensity/ Density requirements for the overall Plan Area applicable areas are being achieved as per *Table 5: Intensity/Density Requirements by Area*.
2. Each Outline Plan/Land Use Amendment application shall demonstrate how the Plan Area can accommodate additional housing and / or jobs to achieve an Intensity of 70 people and jobs per gross developable hectare. **45P2017**
3. A shadow plan should be provided with each Outline Plan/Land Use Amendment application to demonstrate how Intensification may occur.
4. Land Use Amendment approvals should allow for additional Density or Intensity to be achieved.
5. A block-based road network pattern should be provided in Activity Centres and Urban Corridors to facilitate Intensification in these areas.
6. Intensification should be strategically directed to occur primarily in Activity Centres and Urban Corridors.
7. Intensification can occur through various means, including, but not limited to:
 - a. flexible land use districts that allow for Mixed-Use development;
 - b. initial development that generates activity by being Pedestrian Oriented and facilitating direct and efficient transit connections;
 - c. site design that enables and facilitates infilling to occur; and
 - d. development of an initial built form that facilitates Intensification, such as buildings and uses that front onto public streets.

8.0 Implementation Policies

Table 5: Intensity / Density Requirements by Area

Area	Description	Intensity (people and jobs per GDHa)	Density (units per GDRHa)
Overall Community	This is Community A and Community B as identified within the Plan Area. Community B with a smaller developable area is not required to achieve the intensity/density target independently but is required to demonstrate how it can contribute to the overall intensity/density target of the Plan Area when integrated with Community A. 45P2017	Minimum 60 Ultimate 70	N/A
Neighbourhood	This includes an entire Neighbourhood, including the NAC and Neighbourhood Corridor	N/A	8 upa
Neighbourhood Activity Centre	All land considered to be within the NAC	100	N/A
Neighbourhood Corridor	All land considered to be within the Neighbourhood Corridor	100	N/A
Business/ Institutional Area	All land within the Business/ Institutional Area	N/A	N/A

8.12 Evaluation of Neighbourhood Composition and Design

1. Application Requirements

- a. All applications shall provide a design statement in accordance with *Appendix E: Design Statement* indicating how the proposed development conforms to the policies of this Plan 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, Urban Corridor and Community Retail 2 Centre 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 Plan.
- c. Where a Neighbourhood encompasses the land of more than one owner, an Outline Plan may comprise less than the complete Neighbourhood but shall be accompanied by a Shadow Plan that demonstrates how the entire Neighbourhood could be planned in accordance with policy.
- d. Where an Activity Centre encompasses the land of more than one owner, an Outline Plan may comprise less than the complete Activity Centre, but shall be accompanied by a Shadow Plan that demonstrates how the subject site could be planned to connect and integrate with adjacent lands in accordance with policies of this Plan.
- e. Sites of First Nations heritage and significance should involve First Nations in any discussions and planning.

8.13 Form-Based Control Opportunities

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 not found in conventional land use controls, including:

- a strong focus on site context and the public realm quality;
- an emphasis on built form and streetscape appearance with considerable flexibility regarding land use;
- subdivision and development processes coordination through a common set of rules;
- the “right-sizing” of road, park and servicing standards; and
- 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 Land Use Bylaw as well as approved Outline Plan/Land Use Amendment conditions.

Form-Based Controls should be applied to the entire area of an NAC or Neighbourhood Corridor.

1. Any Outline Plan/Land Use Amendment application that includes a NAC or the Neighbourhood Corridor, and utilizes Form-Based Controls, should include a proposed ASP amendment or separate Local Area Plan to be adopted as a Statutory Plan, and may be accompanied by Direct Control Bylaws. The proposed ASP amendment or Local Area Plan should include:

- a. An outline of the extent of each NAC or the Neighbourhood Corridor within the Outline Plan area where Form-Based Controls shall 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, and building features/functions;
 - vii. physical form of public spaces vegetation and furniture placement within parks; and
 - viii. any other content the Approving Authority deemed necessary to define the area.
 - b. A demonstration of the above using maps, tables and diagrams that work together in a coordinated manner.
2. All Form-Based Controls proposed within the Plan Area shall reflect the policies contained in this Plan and any other relevant policies.

8.14 Sustainable Design Innovation Policy Area

The purpose of these policies is to promote design innovation regarding environmental, social and economic Sustainability or innovations that provide other public benefits. Implementation of this policy is on a voluntary basis by the development industry and will involve:

8.0 Implementation Policies

- Identifying the subject area of the innovation as a Design Innovation Policy Area where new standards can be applied on a test basis without setting a precedent for other developers in The City;
- Introducing a special review process for evaluating the innovations to be introduced within the Design Innovation Area and administered by the Approving Authority; and
- Introducing a monitoring process to assess the success and benefits of the innovation introduced.

1. Promoting Design Innovation

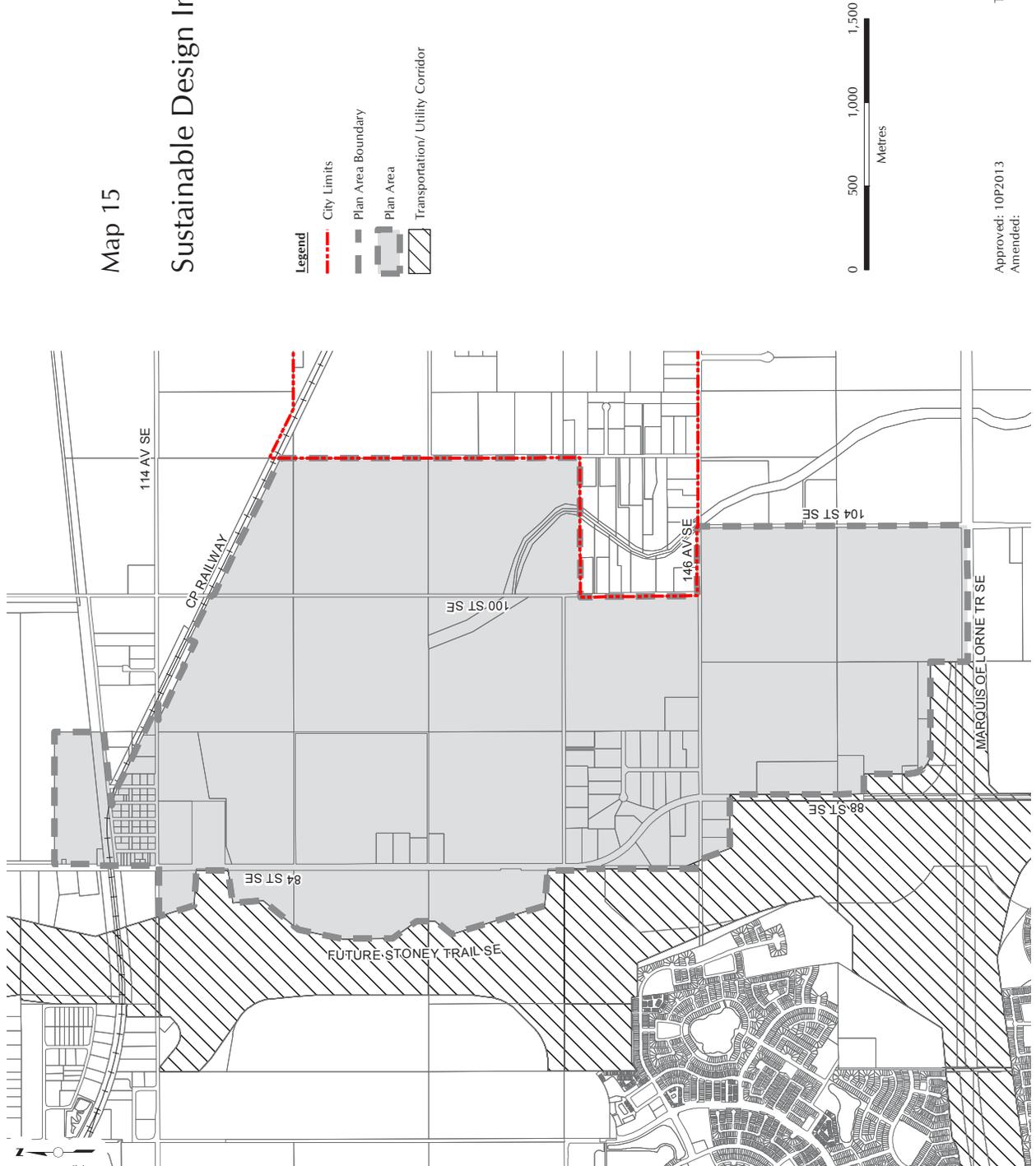
Design innovations are strongly encouraged within the Plan Area. These may include, but are not limited to:

- a. revised street standards to provide tree-lined streets;
- b. revised street standards to facilitate a pedestrian-friendly walking environment;
- c. revised street standards for providing marked, on-street bicycle routes (e.g. bike lanes on Collector streets);
- d. best management practices for stormwater control;
- e. innovative approach to Open Space dedication on public or private land;
- f. addressing Local Commercial development in Neighbourhoods;
- g. Green Infrastructure and building techniques not required through existing City policies;
- h. conservation designs near natural features;
- i. energy efficiency measures including district heating, solar energy, etc; and
- j. other approaches to the satisfaction of the Approving Authority.

2. Designating a Sustainable Design Innovation Policy Area

- a. Where innovations that involve introducing new standards for public improvements (i.e., utilities, parks, streets etc.) or private development are proposed that Administration deems to provide sustainable development benefits, the developer may request that Council identify, through an amendment to this Plan, the subject area of the Design Innovation Policy Area and have it identified on *Map 15: Sustainable Design Innovation Area*.
- b. Where a Sustainable Design Innovation Policy Area is identified:
 - i. new standards for public improvements or private development may be applied 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 methods for dealing with the maintenance or operational costs of the innovations may be introduced;
 - iii. a process for evaluating innovations proposed by a developer in an efficient and timely manner, that include a review of the risks and benefits may be established at the discretion of the Approving Authority; and
 - iv. timelines for evaluating applications for this policy area should not exceed timelines for conventional applications.

Map 15
Sustainable Design Innovation Area



This map is conceptual only. No measurements of distances or areas should be taken from this map.

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Amended:

9.0 GLOSSARY

9.1 Abbreviations

AESO:	Alberta Electric System Operator
ASP:	Area Structure Plan
BIA:	Biophysical Impact Assessment
CPR:	Canada Pacific Railway
CPTED:	Crime Prevention through Environmental Design
CTP:	Calgary Transportation Plan
DP:	Development Permit
ER:	Environmental Reserve
ERCB:	Energy Resources Conservation Board
ESA:	Environmental Site Assessment
HRIA:	Historical Resources Impact Assessment
JUS:	Joint Use Site
JUCC:	Joint Use Coordinating Committee
LEED:	Leadership in Energy and Environmental Design
LID:	Low Impact Development
MDP:	Municipal Development Plan
MGA:	Municipal Government Act
MR:	Municipal Reserve
PUL:	Public Utility Lot
ROW:	Right-of-Way
TIA:	Transportation Impact Assessment
TUC:	Transportation and Utility Corridor

9.2 General Definitions

The following general definitions apply for the purpose of this Plan only.

3-Year Capital Budget: A document that establishes funding for City projects and programs, including infrastructure investments. It is 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 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.

A

Accessible Housing: Dwellings with barrier-free, adaptable designs in both common areas and individual units to meet the needs of those with disabilities.

Accessory Use: A use of land, buildings or structures that is incidental or subordinate to the principal use of the site.

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

Affordable Housing: Housing that addresses the 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: An assessment that 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, barrier-free design and income levels. The Affordable Housing Needs Assessment should be completed to the satisfaction of The City's Affordable Housing Division.

Age Friendly: Age Friendly principles are those in accordance with the World Health Organization's Global Age-Friendly Cities guidebook which acknowledges the need for greater considerations in the built and Community environment regarding accommodating an aging population.

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 miles) apart and may include Green Infrastructure strategies such as vegetated swales, rain gardens, filter strips and native vegetation.

B

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.

C

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.

Capital Cost Analysis: A summary of the infrastructure and services necessary to support development in the Plan Area relative to the status of said infrastructure in The City's Capital Planning and Capital Budgeting processes.

Care Facilities: Facilities that 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.

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.

City Administration: Employees of The City.

Civic Use: Civic Uses may include Neighbourhood-scale Cultural, Recreational and educational uses as well as Child Care and other Care Facilities.

Collector: A low- to moderate-capacity street 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 human-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 subject site design 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.

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.

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 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.

9.0 Glossary

Cultural Uses: A 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.

D

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

Development Permit (DP): A Development Permit indicates Approving Authority approval for development in accordance with the *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.

Disposal Area: The area of a parcel of land that has been used for waste material placement, or where waste processing or a burning activity is conducted in conjunction with a hazardous waste management facility or landfill (the Subdivision and Development Regulation).

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.

E

Employment Uses: A use of land that is employment intensive and 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. Retail Uses are not included.

Enclosure Ratio: 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.

Engineered Stormwater Wetland: A constructed and/or modified Water Body that fluctuates with water drainage peaks but holds water at all times. The wetland is used to improve stormwater runoff quality through nutrient and sediment removal using vegetation, detention, settlement and other best management practices. The wetland is also used to manage the volume of runoff through storage and restricted pipe outlets. Engineered Stormwater Wetlands have a habitat function with existing or constructed riparian and upland vegetation communities. The wetland boundary may be dedicated as Environmental Reserve in accordance with the Municipal Government Act, and the adjacent buffer or riparian and upland vegetation may be dedicated as MR, and all forebays should be dedicated as Public Utility Lots (Calgary *Wetland Conservation Plan*).

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 an 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 Plan, subject always to *Section 8.3 Plan Limitations*.

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

F

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

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 strongly emphasize built form and the quality of the Public Realm and contain maps, tables and diagrams that work together in a co-ordinated manner.

G

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 pedestrian and bicycle access.

Gross Developable Area: The total area of a site, subtracting all non-developable land. Non-developable areas include ER and Provincial, regional and City-wide conservation areas that will remain in a natural state: provincial highways; freeway and expressways; heavy rail ROW; and other non-developable areas (lands that will remain as permanent, non-developed areas over the life of a plan. e.g. cemeteries, landfills, utility ROW, exclusive ROW for the Primary Transit Network and regional stormwater management complexes that benefit multiple communities).

H

Home-Based Business: The operation of a business or occupation within a dwelling and/or its accessory building(s) or 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.

I

Institutional Use: A 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.

J

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 accessible to both school and non-school users.

L

Land Use Area: One of the categories of land uses delineated on the *Land Use & Transportation Concept map* and described in one of the Plan policy sections.

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.

9.0 Glossary

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 the resident of a dwelling unit operates a business from 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. Local Commercial Uses may include, but are not limited to, restaurants, convenience stores, service stations, gas bars and financial institutions.

Low-Impact Development (LID): 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, and reduce infrastructure costs.

M

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

Mixed Use: Land, buildings or structures with two or more types of uses, such as residential, office and retail.

Multi-Residential Development: A residential development of one or more buildings that each contain 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, as may be amended from time to time. 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 improve quality of life for all Calgarians, present and future.

N

Natural Environment Park: A city-owned park whose primary role is protecting an undisturbed or relatively undisturbed area of land or water, or both, and that 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.

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.

O

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 have limited contact with the public at large.

Open Space: In its broadest sense, Open Space includes all land and water areas, either publicly owned or offering public access, that are not covered by structures. For the purposes of *The City's Open Space Plan*, Open Space includes current and potential future parks, pathways, roadway greens, land for parks and recreation facilities, golf courses, cemeteries and other types of alternative use Open Space.

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 ER and MR dedication, development patterns, land use mixes and local street networks.

P

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 Plan as shown on Map 1: Plan Location.

Predominant: The main component of an item, thing or area in question, comprising no less than 80% of the total quantity.

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, 7 days a week.

Public Plaza: A Community amenity that serves a variety of users, including building tenants and visitors and members of the public. This space type may function as a pedestrian site arrival point, home for public art, setting for recreation and relaxation and an inconspicuous security feature for high-profile buildings. Plazas are a beneficial feature of any lively streetscape.

Public Realm: The space around, between and within publicly accessible buildings, including streets, squares, parks and Open Spaces. These areas and settings support or facilitate public life and social interaction.

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.

R

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 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, Residential Densities 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 Development 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 Development 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 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 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, 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.

9.0 Glossary

S

Similar Use: The use of land, buildings or structures for a purpose that is similar in form or function to a use identified within a Land Use Area shown on the Land Use & Transportation Concept within the Plan but does not meet the definition of that use in all respects.

Skeletal Road: A high-volume road that promotes vehicular traffic movement over longer distances. Skeletal Roads typically allow high speeds and have little direct access and interaction with adjacent land uses. They may present opportunities to implement Green Infrastructure 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.

T

The City: The Corporation of The City of Calgary.

The Province: The Province of Alberta.

U

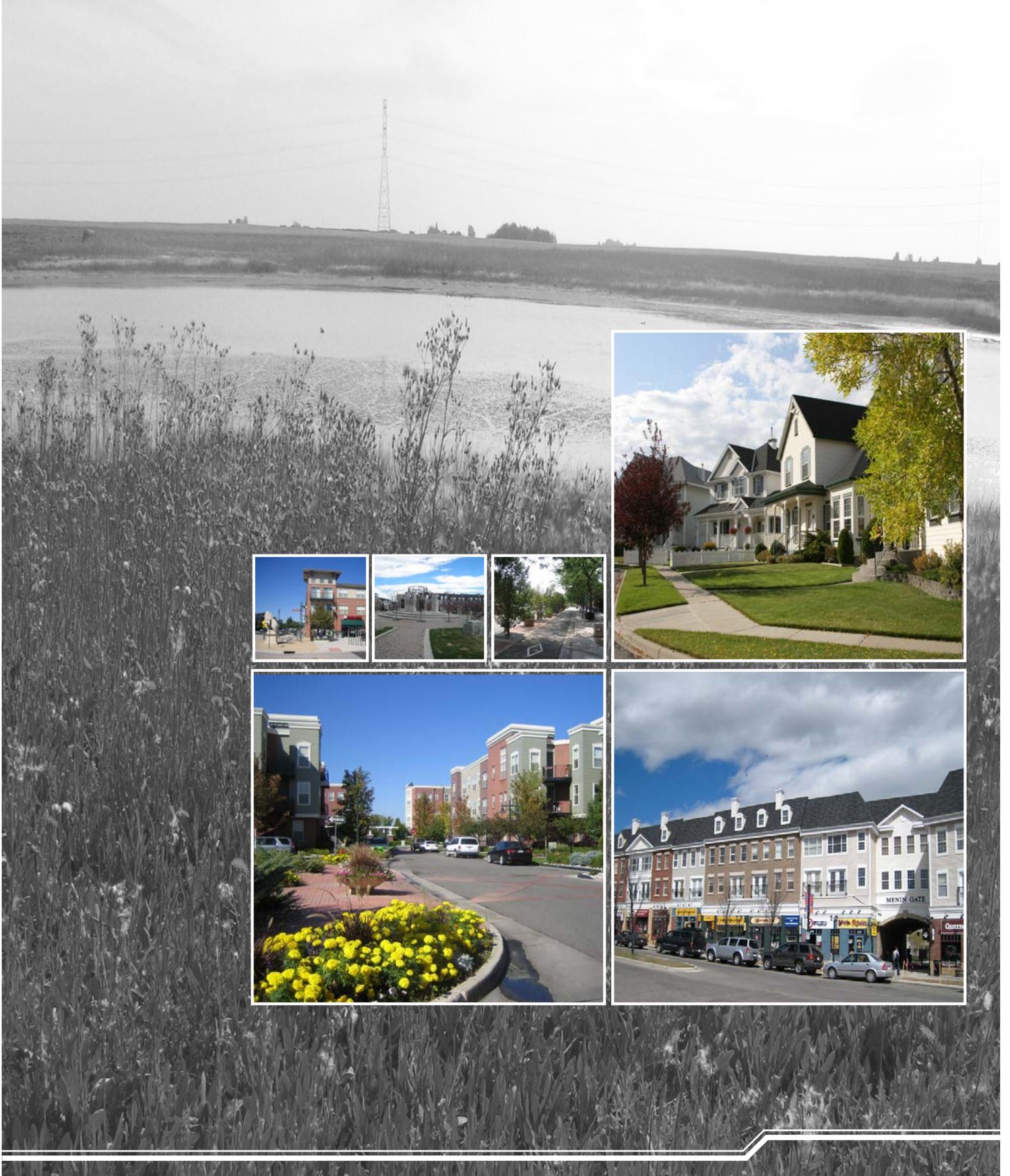
Universal Design: Design of products and environments that all people can use, to the greatest extent possible, without the need for adaptation or modification.

Urban Forest: The sum of all woody and associated vegetation in and around dense human settlement. It is the sum of street trees, residential trees, parks trees and green-belt vegetation. It includes trees on unused public and private lands, trees in transportation and utility corridors and forests on watershed lands.

W

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 the Provincial *Water Act* for a complete definition.

Part 2: Appendices



Part 2: Appendices to the South Shepard Area Structure Plan

Appendices

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Appendices

The appendices that follow provide supporting information, guidelines and checklists to aid in the implementation of the ASP. They are not adopted as Bylaw.

APPENDIX A: REQUIRED STUDIES, ANALYSIS & CONCEPT PLANS

A.1 Introduction

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.2 Concept Plans

The purpose of these guidelines is to provide for the submission of Concept Plans with an Outline Plan / Land Use Amendment application. Concept Plans shall be required to demonstrate that a site shall be suitable in terms of its size and configuration to accommodate the intended future development or to ensure that a subdivision design shall 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, an Applicant may be required to submit a Concept Plan to assist the Approving Authority in evaluating a proposal in terms of its conformity with the Plan.
- b. Where a Concept Plan is required, either through a policy in the Plan, or as part of the Outline Plan / Land Use Amendment review process, the Concept Plan:
 - may be shown on the Outline Plan; and
 - should show the proposed:

- land use areas;
- building locations;
- vehicular access / egress routes;
- parking areas;
- public roads;
- transit stops;
- pedestrian connections;
- regional pathways;
- bikeways;
- utility alignments;
- public parks;
- stormwater connections;
- green infrastructure;
- slope adaptive areas of interest; and
- 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 with the required information necessary for the Approving Authority to render a decision, the Outline Plan / Land Use Amendment may not be approved.

A.2.1 Specific Concept Plans

The MDP identifies a number of unique elements based upon New Urbanism planning principles that need to be addressed in the Plan's design. 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. Urban Corridor Concept Plan
- d. Pedestrian and Bicycle Circulation Concept Plan
- e. Joint Use Site Concept Plan
- f. Park Concept Plan
- g. Community Street Network 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.

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

A.2.2 Neighbourhood Concept Plan

The purpose of a Neighbourhood Concept Plan is to provide an overall concept that addresses the Neighbourhood's overall design and Intensity and specifically addresses the Neighbourhood and the NAC edge conditions.

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. The Neighbourhood Concept Plan should:
 - i. demonstrate compliance with all relevant Plan policy requirements;
 - ii. provide information addressing NAC design and Intensity;
 - iii. show the 400m pedestrian shed from focal points, including Neighbourhood stores, services, Open Space and transit stops.
 - iv. include a Neighbourhood Name and Street Name application for the Neighbourhood; and
 - v. contain such other information as determined necessary by the Approving Authority to evaluate the proposal's compliance with Plan policies.

A.2.3 Pedestrian and Bicycle Circulation Concept Plan

The purpose of the Pedestrian and Bicycle Circulation 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, Neighbourhood and Community Activity Centres, Urban Corridors, Community Retail Centres, Community Centres and other key destinations for residents.

Guidelines

1. Pedestrian and Bicycle Circulation 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
 - a. The Pedestrian and Bicycle Circulation Plan should:
 - i. contain the elements listed in A.2: Concept Plans.
 - ii. demonstrate compliance with the Pedestrian and Bicycle Circulation Policies, of this Plan;

Appendix A: Required Studies, Analysis & Concept Plans

- iii. identify pedestrian and bicycle destinations, such as schools, shopping, parks, pathways, etc. as well as:
 - pedestrian destinations (e.g., parks, recreational facilities, public amenities, etc.) within a 1 km radius of the Community;
 - bicycle destinations (e.g., parks, recreational facilities, public amenities, etc.) within a 3 km radius of the Community; and
 - other notable pedestrian and bicycle destinations outside the 3 km radius of the Community.
 - iv. 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;
 - v. provide for efficient connections to educational, recreational, commercial, and other key destinations within the Community;
 - vi. identify the pedestrian and bicycle circulation barriers (e.g., high volume roads, natural areas, etc.);
 - vii. address how pedestrian and bicycle connectivity barriers can be mitigated or overcome; and
 - viii. contain such other information as determined necessary by the Approving Authority to evaluate the proposal's compliance with Plan policies.
- a. In conjunction with an Outline Plan/Land Use Amendment application, a Road Network Plan should be submitted.
2. Road Network Plan Requirements
 - a. The Road Network Plan should:
 - i. demonstrate compliance with the relevant Plan policies;
 - ii. show the internal road network for the application area and adjacent areas;
 - iii. identify road classification within the network;
 - iv. include cross-sections showing the standard of improvements within the roadways;
 - v. identify road sections that will incorporate Green Infrastructure and serve as Green Streets that connect parks, Open Space and natural areas; and
 - vi. contain any other information determined necessary to evaluate the proposal's compliance with Plan policies.

A.2.7 Park Concept Plan

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 Parks' Development Guidelines and Standard Specifications for 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 Creditable Reserve policies and any other relevant Plan policies;

A.2.5 Road Network Plan

The purpose of a Road Network Plan is to describe an Internal Street pattern for the Community that balances the needs of motorists, transit service, pedestrians and cyclists and treats the street as an important component of the Public Realm.

Guidelines

1. Road Network Plan Submission

- b. show all planned parks for the application area;
- c. contain the elements listed in A.2: Concept Plans;
- 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 determined necessary to evaluate the proposal's compliance with Plan policies.

A.3 Environmental Background Studies

The purpose of these guidelines is to provide for an evaluation of an Outline Plan/Land Use Amendment application's environmental impacts. This evaluation will involve circulating a proposal to the appropriate external agencies for review and comment and submitting 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 (ESA)
 - a. Prior to Outline Plan/Land Use approval, an applicant:
 - i. shall submit a current Phase 1 ESA report for the subject site. The report shall:
 - identify actual and potential soil and groundwater contamination; and
 - be used to determine if the site is suitable for the intended use, as related to environmental issues.
 - ii. should be required by the Approving Authority to submit a current Phase 2 ESA 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 will be suitable for the intended land use.
- c. An ESA report shall be:
 - i. prepared by a qualified professional;
 - ii. reviewed to the satisfaction of Environmental Development Review; and
 - iii. circulated to the appropriate regulatory agencies for review, as required.
- d. Where required, an applicant shall undertake the mitigative measures identified in the ESA report for the subject site.
- e. Additional environmental information or monitoring at later stages of site development or as outlined in the ESA report should be required.

2. Biophysical Impact Assessment (BIA)

- a. Prior to Outline Plan/Land Use approval, where the proposal may impact an Environmentally Significant Area, the applicant shall submit a BIA prepared by a qualified professional that evaluates the impact on biophysical resources and ecosystems and identifies any mitigative measures to be introduced. The BIA shall be prepared according to the guidelines included in the current version of Parks' BIA Framework.
- b. Where required, the applicant shall undertake the mitigative measures identified in the BIA for the subject site.

3. Historical Resources Impact Assessment (HRIA)

- a. Prior to Outline Plan/Land Use approval, an HRIA should be required for the subject site, as determined by Alberta Culture and Community Spirit.
- b. Where required, the Applicant shall, to the satisfaction of Alberta Culture and Community Spirit, undertake the protective or mitigative measures identified in the HRIA for the subject site.

A.4 Density & Intensity Analysis

The purpose of these guidelines is to provide for the submission of appropriate information to allow for the evaluation of a proposal in terms of its compliance with the Plan's Intensity and Density requirements. This information will take the form of a Density and Intensity 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 and Intensity Analysis

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

- i. the minimum, maximum and anticipated Residential Density of the subject site and adjacent area if applicable, measured in units per gross developable residential hectare;
- ii. the minimum, maximum and anticipated Intensity of the application area, measured as people and jobs per gross developable hectare; and
- iii. the minimum, maximum and anticipated Intensity measured as people and jobs per gross developable hectare within a NAC, a Neighbourhood Corridor and Industrial - Employee Intensive Areas within the Plan Area.

Backgrounder on Density and Intensity for Applicants

What is Density?

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

How is Density Calculated?

Residential Density is calculated based on gross developable residential hectare (GDRHa). This is calculated by starting with the gross area of land and deducting non-developable land and land required for regional land uses.

What is Intensity?

A measure of the concentration of people and jobs within a given area.

How is Intensity Calculated?

Intensity is calculated by totaling the number of people living and working within a gross developable hectare (GDHa). GDHa is calculated by starting with the gross area of land and deducting non-developable land.

**An example of calculating Density and Intensity
Dalhousie**



Total Area	333 hectares
Environmental Reserve	1
Expressways/large interchanges	44
Railways	0
Other non-developable	0
Less "Non-Developable" Area	44
Gross Developable Area	289 hectares
Regional Open Space	0
Major Commercial Centres > 4.0 ha	14
Major Institutional Sites	0
Senior High Schools	0
Industrial Areas	0
Public Lakes/Water Bodies	0
Other "Regional uses"	5
Less "Regional" Uses	19
Gross Developable Residential Area	270 hectares

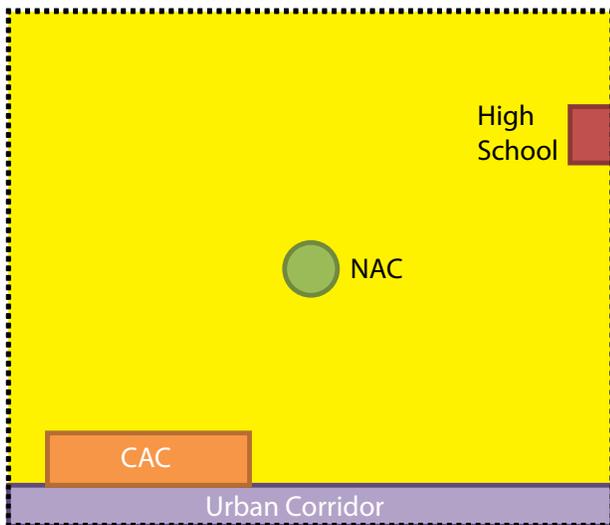
If we have 3,706 units, 9,098 people and 2,220 jobs in Dalhousie (City of Calgary civic census and Place of Work Survey, 2006) the Intensity would be 39 people plus jobs per gross developable hectare and the Density would be 13.7 units per hectare.

Table A.1: MDP Typologies and Intensity / Density Thresholds

MDP Typologies and Intensity/Density Thresholds				
MDP Typology	Description	Density or Intensity	Target	Measure of Area (GDHA vs GDRHa)
Community	This is Community A and Community B as identified within the Plan Area. Community B with a smaller developable area is not required to achieve the intensity/density target independently but is required to demonstrate how it can contribute to the overall intensity/ density target of the Plan Area when integrated with Community A. Intensity includes the Neighbourhood Activity Centres, Community Activity Centres, Neighbourhood Corridor and Urban Corridors, if applicable. The intensity threshold for a community does not include a Major Activity Centre (MAC) in its calculation. 45P2017	Intensity	60 p+j/ha minimum 70 p+j/ha ultimate	GDHa
Neighbourhood	This includes an entire Neighbourhood, including the NACs and the Neighbourhood Corridor.	Density	20 uph (8upa)	GDRHa
Neighbourhood Activity Centres (NAC)	This includes the mixed use area identified in the ASP and conceptually shown on <i>the Land Use & Transportation Concept</i> . Must include medium density multi-residential development, central amenity space and a non-residential use.	Intensity	100 p+j/ha	GDAHa
Community Activity Centre (CAC)	Identified as such on <i>the Land Use & Transportation Concept</i> .	Intensity	150 p+j/ha	GDHa
Major Activity Centre (MAC)	Identified as such on <i>the Land Use & Transportation Concept</i> .	Intensity	200 p+j/ha	GDHa
Neighbourhood Corridor (NC)	Identified as such on <i>the Land Use & Transportation Concept</i> .	Intensity	100 p+j/ha	GDHa
Urban Corridor	Identified as such on <i>the Land Use & Transportation Concept</i> .	Intensity	200 p+j/ha	GDHa
Business/Institutional Area	Identified as such on <i>the Land Use & Transportation Concept</i> .	N/A	N/A	N/A

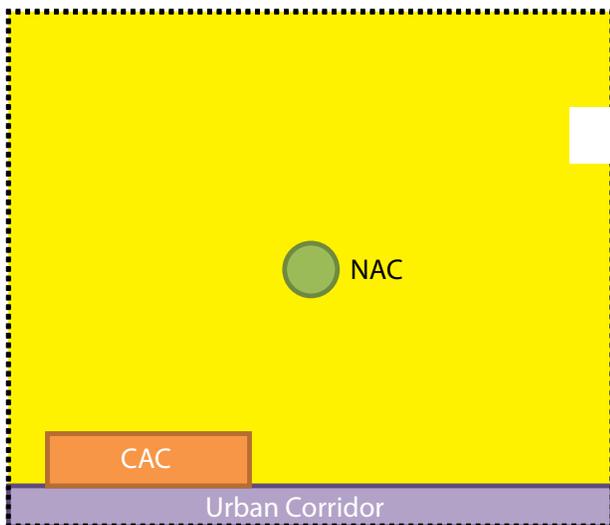
Example of How to Calculate Intensity/Density for MDP Typologies

This community is 150 hectares in size with zero non-developable land. Figure 1 shows the Land Use Concept and Table 1 outlines the size and composition based on the MDP Typologies



Total Area	150 hectares
NAC	5
High School	5
CAC	20
UC	30
Remaining Neighbourhood Areas	90

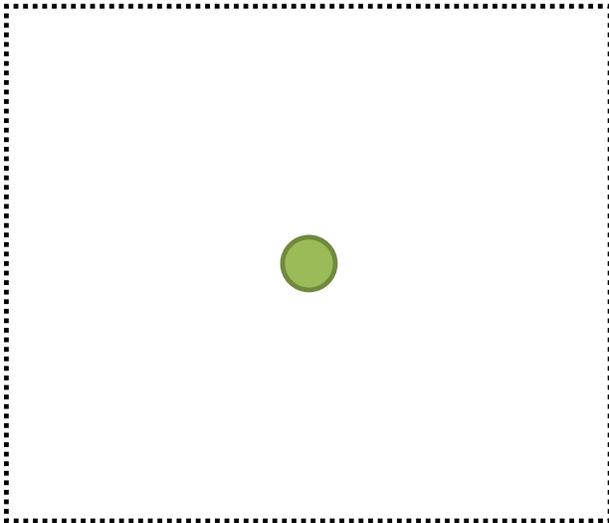
1. Density of Neighbourhood Areas



In this example, the **density** of the Neighbourhood Areas would be calculated based upon an area of 145 hectares as only the High School site excluded from that calculation.

If you were to propose 2900 dwelling units within that area you would then have a **density** of 20 uph.

2. Intensity of Neighbourhood Activity Centre



In this example, the **intensity** of the Neighbourhood Activity Centre would be calculated based upon an area of 5 hectares.

If you were to propose 350 people and 150 jobs you would have an **intensity** of 100 p+j/GDHa

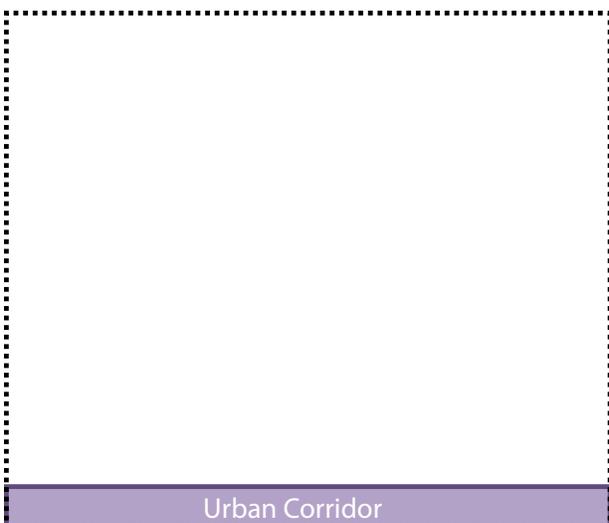
3. Intensity of Community Activity Centre



In this example, the **intensity** of the Community Activity Centre would be calculated based upon an area of 20 hectares.

If you were to propose 2,500 people and 500 jobs you would have an **intensity** of 150 p+j/GDHa

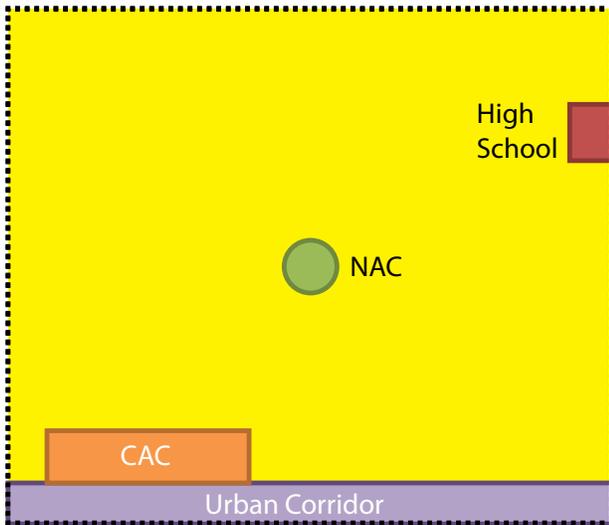
4. Intensity of Urban Corridor



In this example, the **intensity** of the Urban Corridor would be calculated based upon an area of 30 hectares.

If you were to proposed 5,000 people and 1,000 jobs you would have an **intensity** of 200 p+j/GDHa

5. Intensity of the entire Community



In this example, the **intensity** of the entire community would be calculated based upon an area of 150 hectares.

Based on this proposed example, you would need 9,000 people and jobs to achieve the **intensity** minimum threshold of 60 p+j/GDHa and 10,500 people and jobs to achieve the ultimate **intensity** threshold of 70 p+j/GDHa

6. Density/Intensity Monitoring

Recognizing that residential density is calculated using Gross Developable Residential Hectares, the Density

Analysis 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.

Using this same example, if the land use concept was slightly different with some non-developable land (River) and regional uses (TUC) then the intensity and density would be calculated based on the following areas:

Total Area	333 hectares
NAC	5
High School	5
CAC	20
UC	30
River	10
TUC	10
Remaining	70

Total Area	Density or Intensity	333 hectares
Neighbourhood	Density	125
Neighbourhood Activity Centres (NCA)	Intensity	5
Community Activity Centre (CAC)	Intensity	20
Urban Corridor	Intensity	30
Industrial - Employee Intensive	Intensity	N/A
Community - Minimum	Intensity	130

A.4.1 Density/Intensity Analysis Checklist

Fill out the following Checklist as applicable

Section I: Application Details	
Does your application include a complete community?	<input type="checkbox"/> YES <input type="checkbox"/> NO
If not, what portion of a complete community does it contain (% of total area)	

Does your application include an entire Neighbourhood?	<input type="checkbox"/> YES <input type="checkbox"/> NO
If not, what portion of a complete Neighbourhood does it contain (% of total area)	

Provide a brief description of your application:

What is the total area of your application?	A	ha	ac
Are there any non-developable lands within your application area? For example: Environmental Reserve, R.O.W., cemeteries, landfills, etc.		<input type="checkbox"/> YES <input type="checkbox"/> NO	
If yes, what is the total area of the non-developable lands?	B	ha	ac
Are there any regional uses in your application area? For example: Regional Open Space, Senior High Schools, Industrial Areas, Major Commercial Sites	B	<input type="checkbox"/> YES <input type="checkbox"/> NO	
	C	ha	ac
	D	ha	ac
	E	ha	ac

Section II: Community Details

<input type="checkbox"/> Area of Complete Community (or Total application area)	ha	ac
<input type="checkbox"/> Estimated population		
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M

Section III: Neighbourhood Details

<input type="checkbox"/> Area of Neighbourhood (or total application area if smaller than a complete Neighbourhood)	ha	ac
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF

Section IV: Application Typologies (MDP Typologies)

Does your application contain the following?		
Neighbourhood Activity Centre	<i>If yes, fill out Section V</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO
Community Activity Centre?	<i>If yes, fill out Section VI</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO
Major Activity Centre?	<i>If yes, fill out Section VII</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO
Neighbourhood Corridor?	<i>If yes, fill out Section VIII</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO
Urban Corridor?	<i>If yes, fill out Section IX</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO
Industrial Employee Intensive?	<i>If yes, fill out Section X</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO

Section V: Neighbourhood Activity Centre

<input type="checkbox"/> Area of Neighbourhood Activity Centre	ha	ac
<input type="checkbox"/> Estimated population		
<i>or</i>		
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M
<input type="checkbox"/> Area of community amenity space	ha	ac

Section VI: Community Activity Centre

<input type="checkbox"/> Area of Community Activity Centre	ha	ac
<input type="checkbox"/> Estimated population		
<i>or</i>		
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M
<input type="checkbox"/> Area of community amenity space	ha	ac

Section VII: Major Activity Centre

<input type="checkbox"/> Area of Major Activity Centre	ha	ac
<input type="checkbox"/> Estimated population		
<i>or</i>		
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M
<input type="checkbox"/> Area of community amenity space	ha	ac

Section VIII: Neighbourhood Corridor

<input type="checkbox"/> Area of Neighbourhood Corridor	ha	ac
<input type="checkbox"/> Estimated population		
<i>or</i>		
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M
<input type="checkbox"/> Area of community amenity space		

Section XI: Urban Corridor

<input type="checkbox"/> Area of Urban Corridor	ha	ac
<input type="checkbox"/> Estimated population		
<i>or</i>		
<input type="checkbox"/> Minimum dwelling units	SF	MF
<input type="checkbox"/> Maximum dwelling units	SF	MF
<input type="checkbox"/> Anticipated dwelling units	SF	MF
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M
<input type="checkbox"/> Area of community amenity space	ha	ac

Section X: Industrial Employee Intensive

<input type="checkbox"/> Area of Industrial Employee Intensive	ha	ac
<input type="checkbox"/> Estimated jobs		
<input type="checkbox"/> Anticipated retail floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated office floor area	sq. Ft	sq. M
<input type="checkbox"/> Anticipated other non-residential floor area	sq. Ft	sq. M
<input type="checkbox"/> Area of community amenity space		

Section XI: Density and Intensity Verification

For Internal Use Only

Calculate the Density and intensity as applicable and fill out table. If the checklist is incomplete you will not be able to complete this step. Work with applicant to gather all necessary information.

Does the application meet the following density/intensity targets as applicable?				
Area	Density Target	Intensity Target	Application Density/Intensity	Meets Target
Community	n/a	60-70		<input type="checkbox"/>
Neighbourhood	8	n/a		<input type="checkbox"/>
Neighbourhood Activity Centre	n/a	100		<input type="checkbox"/>
Community Activity Centre	n/a	150		<input type="checkbox"/>
Major Activity Centre	n/a	200		<input type="checkbox"/>
Neighbourhood Corridor	n/a	100		<input type="checkbox"/>
Urban Corridor	n/a	200		<input type="checkbox"/>
Industrial Employee Intensive	n/a	100		<input type="checkbox"/>

A.5 Reserve Analysis

The purpose of these guidelines is to provide for the review of the Creditable and Environmental Reserve allocation within a Community.

Guidelines

1. Creditable Reserve Analysis

Prior to approval of an Outline Plan/Land Use Amendment application, an applicant shall submit a Reserve Analysis 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 Analysis

a. 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 BIA 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 connections;
- 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 stormwater connections 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.6 Mobility Assessment & Plan (MAP)

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

2. MAP Update

The MAP 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.7 Transportation Impact Assessment

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

Guidelines

1. Transportation Impact Assessment
 - a. Unless determined otherwise, a TIA shall be submitted in conjunction with an Outline Plan/Land Use Amendment application.
 - b. The TIA shall address the following:
 - i. the internal road network, including the design, capacity and timing of 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 subject site development with timing of construction and capacity of any transportation improvements.

- any enhanced transit facilities to be included into development.
- ii. demonstrate that the internal road network will accommodate:
 - convenient and efficient pedestrian connections to transit service; and
 - suitable transit coverage.
- b. In addition, the Transit Coverage Plan should contain any other information determined necessary to evaluate transit service coverage within the Community.

2. Transportation Impact Assessment Update

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

A.8 Transit Coverage Plan

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 should be submitted in conjunction with an Outline Plan/Land Use Amendment application.
2. Transit Coverage Plan Requirements
 - a. The Transit Coverage Plan should:
 - i. Show the proposed:
 - routing of public transit buses;
 - location of transit bus stops;
 - residential dwellings within and beyond the prescribed transit coverage areas; and

A.9 Retail Market Analysis

The purpose of these guidelines is to establish criteria and a review process for evaluating a Retail Centre from a market perspective. This shall 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. Market Demand and Impact Analysis Submission

Where determined appropriate and necessary due to its scale or composition, a Retail Centre should be analyzed in terms of its market demand and market impact on the existing and planned retail hierarchy in the area. For further information, see the general guidelines in Part 4 of the MDP which provides a distribution of retail types within nine retail sectors identified in Calgary.
2. Market Demand and Impact Analysis Review

Where a Market Demand Analysis or a Market Impact Analysis is submitted, it should 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 Applicant.
3. Local Commercial Policy: New Communities in Calgary

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

A.10 Risk Assessment

While the ERCB outlines basic setbacks and guidelines for oil and gas facilities, further investigation, such as a Risk Assessment, may be 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 shall identify and document actual and perceived risks to human health or the environment, their likelihood, their consequences and any required mitigation. The Approving Authority shall 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 (EPZ) area and specific response provisions;
 - vii. Proposed risk mitigation measures;
 - viii. A risk communication plan;
 - ix. Potential nuisance effects, such as odour, lighting, noise, flaring, etc.; and

Analysis regarding how the facility will integrate with existing and future developments.

A.11 Utility Servicing Background Studies

The purpose of these guidelines is to provide for the submission of municipal servicing studies and analyses 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 applicable master drainage plans 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 ultimate stormwater management system for the area.

A.12 Infrastructure Improvements Budgeting Analysis

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

Guidelines

1. Infrastructure Improvement Analysis
 - a. As part of an Outline Plan / Land Use Amendment application, an Applicant shall identify:
 - i. the major on-site and off-site transportation and utility infrastructure improvements and facilities necessary to serve the subject site;
 - ii. the financial obligations for these improvements and facilities;
 - iii. the anticipated timing of construction of the transportation and utility infrastructure improvements and facilities relative to projected land absorption rates;
 - iv. the timing or development thresholds required for any provincially, municipally or privately financed transportation and utility infrastructure improvements and facilities; and
 - v. 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 (above).

3. Report to Council

The report to Council accompanying a Land Use Amendment application should address the proposal in the context of subsections 1 and 2 (above).

APPENDIX B: COST OF DEVELOPMENT

B.1 Overview

The purpose of this section is to provide an approximate magnitude of the investments required to support the development of the Plan Area, including capital costs as well as operating and maintenance costs. It is recognized that the costs incurred by developing lands within the Plan Area and future services for the Community 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 may need infrastructures and services outside of the Plan Area and may not be included in the tables.

It is important to note that some of these costs will not apply for several years after development begins. For example, the Recreation Amenity will

not be provided until a certain population threshold is reached in the area. Transit service operating costs will increase as the population and demand for service grows over time. Conversely, it is likely that the majority of water servicing infrastructure (and associated costs) will be required for initial development to occur. The costs provided within the tables are the costs at full build out.

B.2 Capital Costs

Table 3: Overall Infrastructure Costs:

Required Infrastructure	Included in 3-Year Capital Budget	Included in 10-year Capital Plan	Estimated Capital Cost ¹ (2011)	Revenue Source
Facilities				
Operational Workplace Centre ⁴ (from existing OWC)	No	Yes	\$25 M	Unfunded
Recreation Amenity	No	No	\$48.4 M ²	Unfunded
Transportation				
114 Ave CPR Overpass	No	No	\$20 M	Acreage Assessment
Transit				
	No	No	\$ 0.60 M	Combination of transit levy; mill rate and user fee
Utility Servicing				
Water	No	Yes	\$16 M ⁵	Utility Rates & Acreage Assessment
Sanitary	No	Yes	\$ 30 M ⁶	Utility Rates & Acreage Assessment
Storm	No	No	\$ 5 M	Acreage Assessment
Total			\$ 145.0 M³	

Notes:

- ¹ All dollar amounts in millions.
- ² \$48.4 M is the cost for an average small regional Recreation Amenity. It includes land and servicing costs. This cost is currently unfunded and may be funded through various sources that may include provincial or federal funding, mill-rate or funded by partners. The exact components of South Shepard's Recreation Amenity have not been determined at the time of approval of this Plan, and will be decided on based on Community needs as the Community is built out.
- ³ The development in the north part of the Plan Area may need the emergency coverage to be provided by an Emergency Response Station. The estimated capital cost for the Emergency Response Station is \$14 M, and is included in the 10-year Capital Plan (unfunded).
- ⁴ The development of the Plan Area will require services from the existing Shepard Operational Workplace Centre (OWC). The additional costs triggered to support South Shepard are:
 - Capital infrastructure costs \$25m (city-unfunded, tracking in 10 year capital plan with Shepard OWC as the responding OWC)
 - Annual operating costs \$4m including operating, maintenance and site operating staff (city-unfunded).
- ⁵ Ultimate build-out of the Plan Area, as well as other benefiting areas, will require ultimate water infrastructure (water reservoirs, pump station, feedermain, etc), estimated at \$85M.
- ⁶ Ultimate build-out of the Plan Area, as well as other contributing areas, will require ultimate sanitary infrastructure (deep tunnel, lift station, trunk, etc), estimated at \$92M.

B.3 Operating and Maintenance Costs

Table 4: Operating and Maintenance Costs

Infrastructure Service	Annual Cost ¹ (2011 dollars)	Revenue Source
Transportation	\$ 1.00 M	unknown
Transit	\$ 0.18 M	
Water	\$ 0.13 M	Utility rate
Sanitary	\$ 0.08 M	Utility rate
Stormwater	\$ 0.08 M	Utility rate
Operational Workplace Centre ⁴ (from existing OWC)	\$ 4 M	unknown
Recreation Amenity	\$Nil ²	unknown
Park & Pathways	\$ 0.25 M	unknown
Total	\$ 5.72 M³	

Notes:

¹ All dollar amounts in millions.

² As per PFC2012-0248, the projected financial performance of new recreation facilities programmed and operated by a partner are expected to generate sufficient net revenues to fund operating and lifecycle maintenance costs over 25 years of operation. However, based on the operating and lifecycle costs at the time and the potential for developing partnerships, a recreation facility within the South Shepard ASP may require annual mill rate support. Therefore, the actual net operating budget for a recreation amenity in South Shepard ASP will be reviewed and determined prior to construction.

³ The development in the north part of the Plan Area may need the emergency coverage to be provided by an Emergency Response Station. The estimated annual operating cost for the Emergency Response Station is \$3.9 M (in 2011 dollars).

⁴ The development of South Shepard ASP area will require services from the existing Shepard Operational Workplace Centre (OWC). The additional costs triggered to support South Shepard are:

- Capital infrastructure costs \$25m (city-unfunded, tracking in 10 year capital plan with Shepard OWC as the responding OWC)
- Annual operating costs \$4m including operating, maintenance and site operating staff (City-unfunded)

APPENDIX C: NEIGHBOURHOOD DESIGN

This section is intended to illustrate the policies of *Section 3: Shaping a More Compact Urban Form* and *Section 4: Creating Great Communities*, 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 helps illustrate the intent of Neighbourhood design policies. Creative approaches that extend beyond these guidelines while meeting the intent of the policies are encouraged.

Figure C1 shows some of the desired design principles in Calgary’s new Neighbourhoods. Some of these principles are required by policy while others are recommended. Figure C1 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.

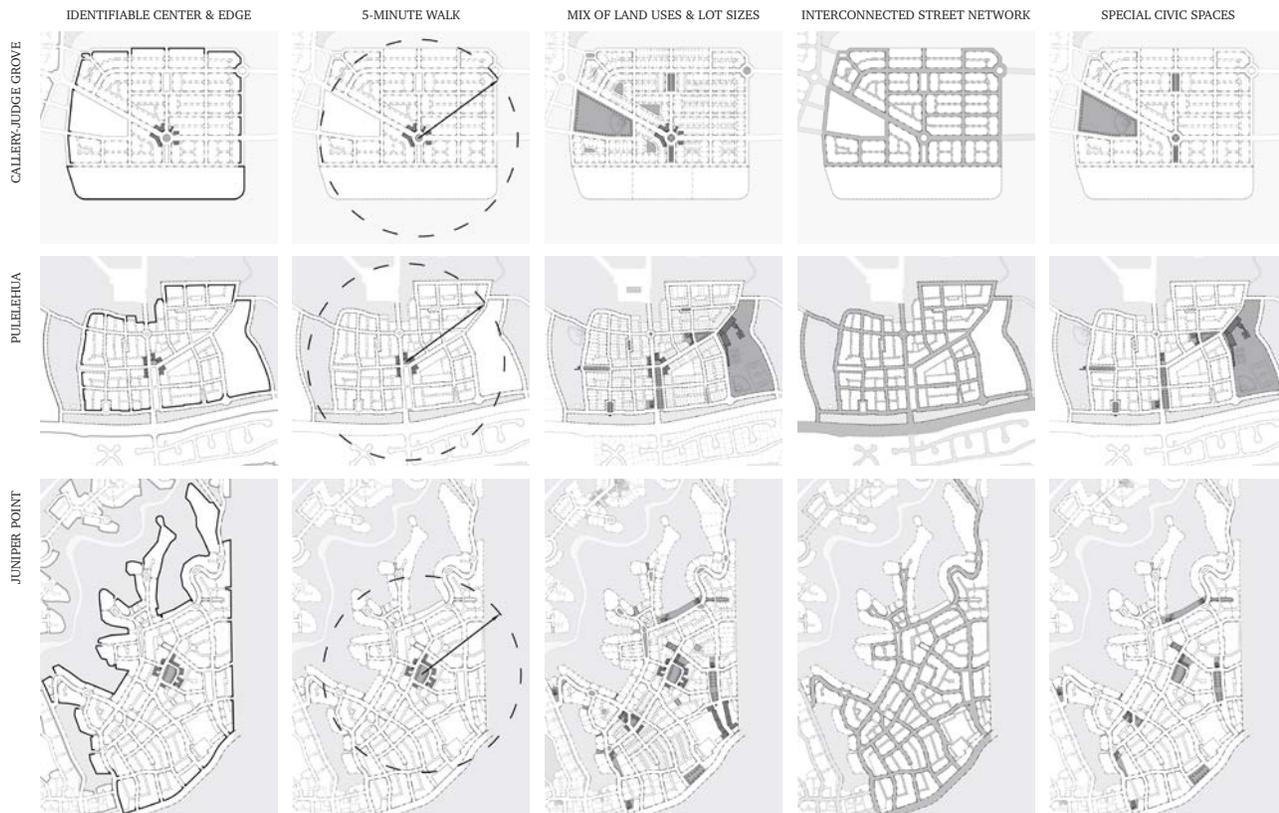


Figure C1: Illustration of three development projects highlighting several factors important to sound neighbourhood design. (Source: Farr, D. *Sustainable Urbanism*)

NEIGHBOURHOOD DESIGN GUIDELINES

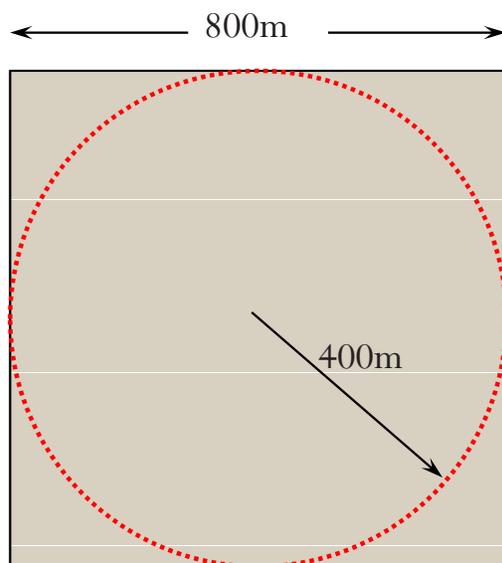
C.1 Size and Shape of Neighbourhoods

A Neighbourhood is meant to be a walkable component of the urban landscape that provides residents with access to a number of daily services and amenities, including transit services, within a reasonable walking distance of their homes. 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 C2).

Where an Environmental Open Space forms part of the boundary or edge of a Neighbourhood,

it will be excluded from the Neighbourhood's size calculation. If EOS is contained within a Neighbourhood, it shall be counted as part of the Neighbourhood area.

The Neighbourhood's shape may vary, but whatever configuration proposed, the design must comply with the size and walking-distance metrics. Only in unique circumstances may either of these metrics be exceeded (see Figure C3).



Neighbourhood Size

Minimum: 40 hectares (99 acres)

Maximum: 75 hectares (185 acres)

Ideal: 55–65 hectares (136–161 acres)

Figure C2: 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.

C.2 Defining the Neighbourhood Edge

Creating a well-defined Neighbourhood edge helps provide residents with a sense of identity and gives them visual cues that help them navigate around the city. A well defined Neighbourhood encourages individuals to take pride in where they live and to play a greater role in the Neighbourhood's welfare (see Figures C4 and C5).

Features such as natural areas, topographical



Network Walking Distance

Maximum: 700 m (0.43 miles)

Ideal: < 600 m (0.37 miles)

Figure C3: 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.

Appendix C: Neighbourhood Design

elements or large streets and expressways create clear and distinctive Neighbourhood edges. 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 C4 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 C5: 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.

C.3 Open Space

1. High-quality public Open Space that facilitates both passive and active recreation should be incorporated within the development.
2. A community's Open Space system should be designed and/or branded to convey unique themes through appropriate park naming, signage, way-finding, planting, landscaping and other measures.
3. Open Space access should be maximized by locating it on local or Collector streets and/or adjacent to active-building edges. Entranceway designs should be emphasized. Where applicable, the access points should be located close to transit, incorporating appropriate street furniture at the transit waiting areas.
4. Seating areas should be provided within Open Space in high-pedestrian traffic areas and away from heavy vehicular traffic to act as landmark features and encourage gathering.
5. Open Spaces and Public Plazas should be designed to allow for alternative uses (e.g., markets, festivals, etc.) through such methods as electric plug-in power points, public washrooms, etc.
6. Public parks should be fronted by building frontages where possible.
7. Sites should be designed with safety and the principles of CPTED in mind.
 - a. Will there be clear sight lines along and views across public pathways, streets and public Open Spaces?
 - b. Will there be opportunities for natural surveillance of lanes, sidewalks, streets and other public spaces?
 - c. Will pedestrian and cycling routes, car parking areas and other public spaces be adequately lit?
8. Weather protection should be incorporated into Open Space design at places where people congregate or wait. This can be achieved through the following:
 - a. street layout design considering solar orientation for buildings and amenity space;
 - b. providing shade and/or protection from wind, rain and snow through the use of plant screens, canopies, recessed doorways, shelters and street trees;



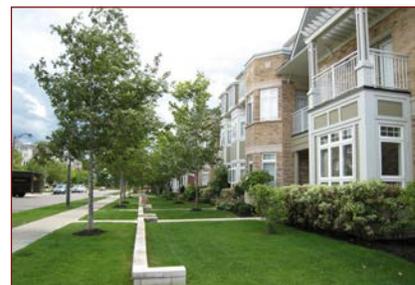
Appendix C: Neighbourhood Design



- c. maximizing sun exposure for waiting areas by careful location of seating, planting, building elements and limiting the height of adjacent buildings; and
- d. avoiding wind tunnels in development design.

C.3.1 Landscaping

1. Development should integrate existing natural features (e.g. habitat and topography) and required Open Space into the overall design. Landscaping can create Community amenities and physically separate the Community from adjacent development. For example mounds or berms can be incorporated into Open Space design to accommodate year-round use and a wide range of structured and unstructured activities.
2. Integration of hard landscaping with soft landscaping is encouraged within development. Hard landscaping features may include, but are not limited to, raised planters, sculptures and public art, outdoor seating area, street furniture, defined walkways, high quality and pervious pavement and vertical landscaping features.
3. Additional soft landscaping and setback should be provided to buffer pedestrians from vehicular traffic and improve the street's appearance.
4. Where a boundary definition is required or desirable, it should be provided in the form of natural screening, such as hedging or fencing with quality finishing.
5. Street trees should be required on both sides of the street throughout the Plan Area.
6. Permeable paving systems, permeable landscaping and other alternatives to hard surface landscaping should be utilized (e.g., integrated into driveways and parking surfaces, to reduce stormwater runoff).
7. Where lighting is required, it should be designed to be pedestrian scale, low maintenance and low-energy.
8. Native plant species, low water use plants and xeriscaping are encouraged in landscaping treatment where possible.
9. Connectivity
 - a. Consideration should be given to reducing block lengths, minimizing single access cells, providing sidewalks, walkways and pathways and encouraging street continuity amongst Neighbourhoods to facilitate access, increase connectivity and support safe pedestrian, bicycle and vehicular movement in all Neighbourhoods.



Appendix C: Neighbourhood Design



- b. Cul-de-sacs should be avoided. Where they are deemed necessary, an attractive, visible and safe pedestrian and bicycle connection should be provided through to an adjoining street.
- c. Accessible and visible pedestrian and bicycle connections and multiple routing options should be provided throughout the Plan Area to ensure connectivity within the Plan and integration with the neighbouring communities and regional pathways.
- d. Development should adhere to The City's *Access Design Guidelines* by incorporating such features as curb cuts at crosswalks and intersections to accommodate movement for the physically impaired, audible aids at signalized intersections for the visually impaired and an urban Braille system along sidewalks and pathways for the visually impaired, etc.
- e. Innovative residential streets that provide shared space for automobiles and other street users (pedestrians, cyclists, etc.) to increase connectivity and facilitate social interaction are encouraged. Examples of such streets are the concept of "home zones" in UK and "shared space" in Holland.

10. Emergency Response and Social Safety

Site and building design should:

- a. support protection of people and their property;
- b. accommodate provision of effective emergency response; and
- c. consider a broad spectrum of emergency protection and response including, but not limited to, criminal acts, fires, medical incidents, mass casualty events, rescues, and hazardous material handling.

C.4 Railway Interface Guidelines

1. Where a development site is located adjacent to the railway, the distance from the railway right-of-way to the closest part of any habitable building should be a minimum of 27.5 metres as a safety measure in case of a derailment and to attenuate noise and vibrations. A lesser separation may be considered at the discretion of the Approving Authority if:
 - a. in the opinion of Calgary Planning Commission, a greater distance is warranted; or
 - b. a berm, grade separation or structure creates an appropriate safety measure and/or sound attenuation to the satisfaction of the Approving Authority.
2. Where an Outline Plan/Land Use Amendment and Development Permit application is proposed on a site adjacent to the railway, a noise analysis may be required at the discretion of the Approving Authority to ensure the proposed development complies with City policy.
3. Where noise from the railway may adversely impact outdoor amenity areas, gathering places or playfields, the site design and building orientation should be configured to reduce the impact of the noise to acceptable levels, consistent with City standards.

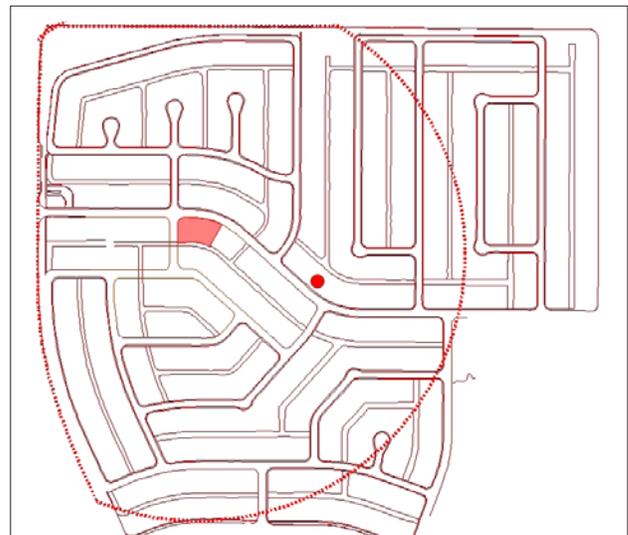
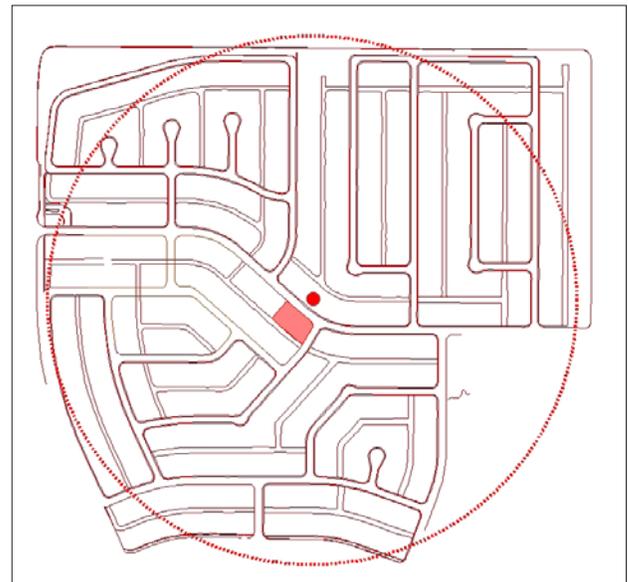
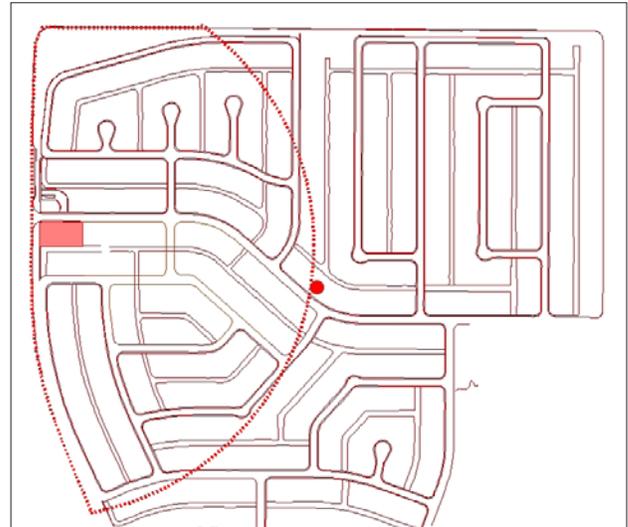
C.5 Location of Local Commercial Development

Local Retail Centres that are less than 2,800 m² (30,139 ft²) provide a range of retail goods and services to Neighbourhood residents. In the proper location, these Centres can be a destination that Neighbourhood residents can reach on foot or by bicycle. However, many of these Centres are located along Arterial streets that favour convenient access by automobiles over that of pedestrians or cyclists.

Local commercial sites should

- be located in, adjacent to or near the NAC;
- 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 C5.

Figure C5: 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.



C.6 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 to be an engaging space for all seasons.

Characteristics of a central amenity space, as shown in Figures C6 and C7:

- 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 C6: 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 C7: 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.

C.7 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 achieving this. Although a grid-iron network can 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 C8, C9 and C10.

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.

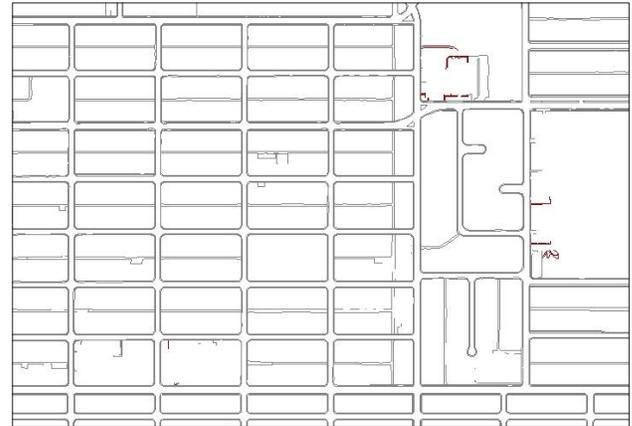


Figure C8: A traditional gridiron pattern in West Hillhurst. This is an example of an acceptable street network design.



Figure C9: A modified-grid pattern in Inverness. This is another example of an acceptable street network design.



Figure C10: A curvilinear street network in the community of Hawkwood. This is not an acceptable standard of design.

C.8 Neighbourhood Focal Point

Typically, the focal point of a Neighbourhood will be an NAC. This may not be the case, however, if a higher-order activity centre such as a Neighbourhood Corridor or Community-Scale Commercial Centre (more than 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 an NAC may be located in the higher-order activity centre. A central amenity space is still required in the NAC. See Figures C11, C12, and C13.

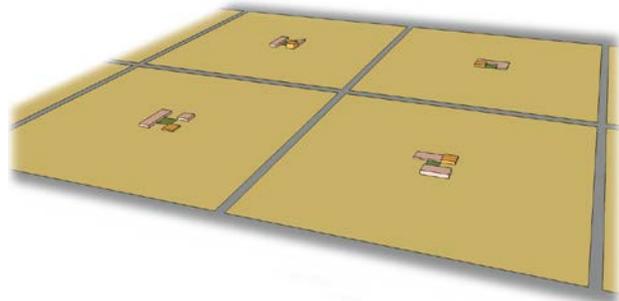


Figure C11: This illustration shows a set of four neighbourhoods, each with its own Neighbourhood Activity Centre (NAC). Each NAC consists of a Central Amenity Space, a concentration of housing and a non-residential use. There are no higher-order Activity Centres or Corridors in these neighbourhoods.

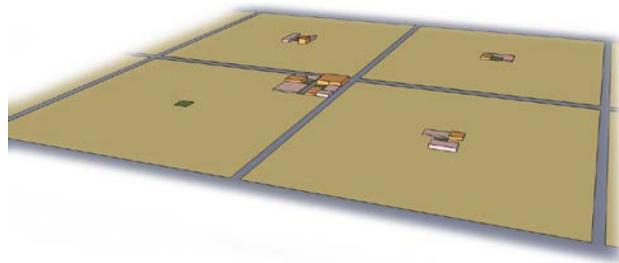


Figure C12: In this illustration, one of the neighbourhoods contains a Community Retail Centre. As a result, the concentration of housing and the non-residential use are clustered as part of the Retail Centre instead of the NAC. The Central Amenity Space remains in the NAC as a central feature of the neighbourhood.

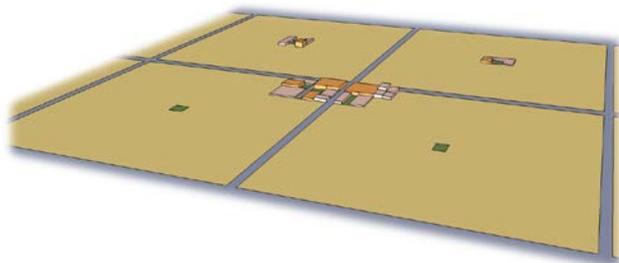


Figure C13: Where a higher-order centre spans a Collector or Arterial Street, the NAC may be modified in the neighbourhoods affected. In this case, two neighbourhoods contain portions of a Community Activity Centre (CAC). As a result, the corresponding NACs each consist of a Central Amenity Space, with the concentration of housing and non-residential use located in the CAC.

C.9 Mix of Uses

A fundamental characteristic of an Activity Centre is its 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 C14), or a horizontal mixing, such as a row of townhouses located beside a row of office and retail frontages along a corridor (see Figure C15). Whatever form the Mixed-Use development takes, it must 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 C16).

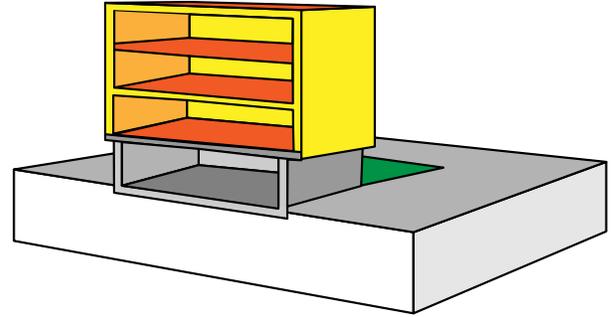


Figure C14: This illustration shows a vertically mixed-use building with residential uses occupying the top two floors and commercial uses occupying the bottom floors.

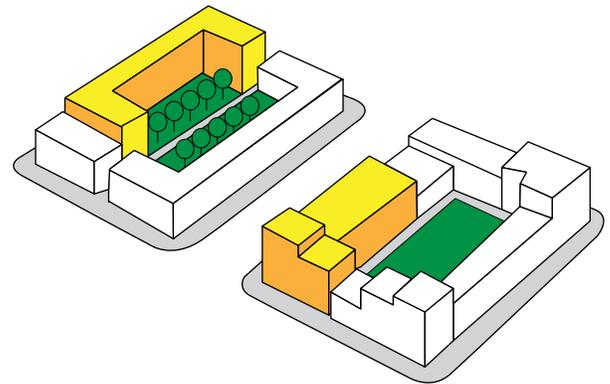


Figure C15: This illustration shows a horizontally mixed-use development. In this case, residential uses occupy one building on each block with commercial uses occupying the others.

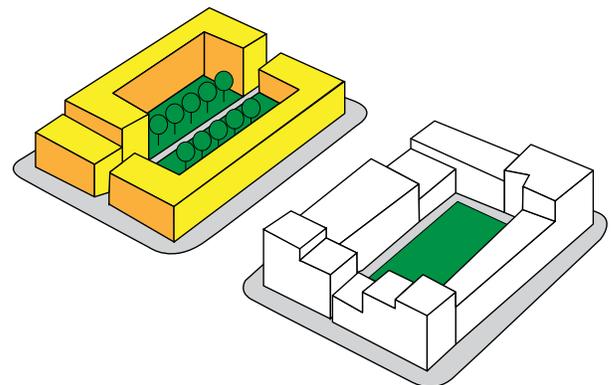


Figure C16: This illustration shows two blocks, one occupied by residential uses and the other occupied by commercial uses. This is not considered an ideal mixed-use development as uses are separated by a street. This configuration would require a street designed to prioritize pedestrian crossings.

C.10 Pedestrian-Oriented Street Design

Well-designed streets play an important role in encouraging residents to walk and cycle to destinations in their Neighbourhood. Pedestrian-Oriented design can also facilitate more social interaction between neighbours by providing them with a public environment where they can spend time lingering, such as a central amenity space, a patio or along a prominent street. There are a number of elements to consider when designing a Pedestrian-Oriented street, including:

- the roadway, which should provide lanes for automobile and bicycle movement and parking;
- the roadside, which should be divided into the boulevard zone for amenities such as lighting, trees, furnishings and the sidewalk zone for pedestrian movement; and
- the interface, which is the area between the sidewalk and the property front façade of buildings (see Figure C17).

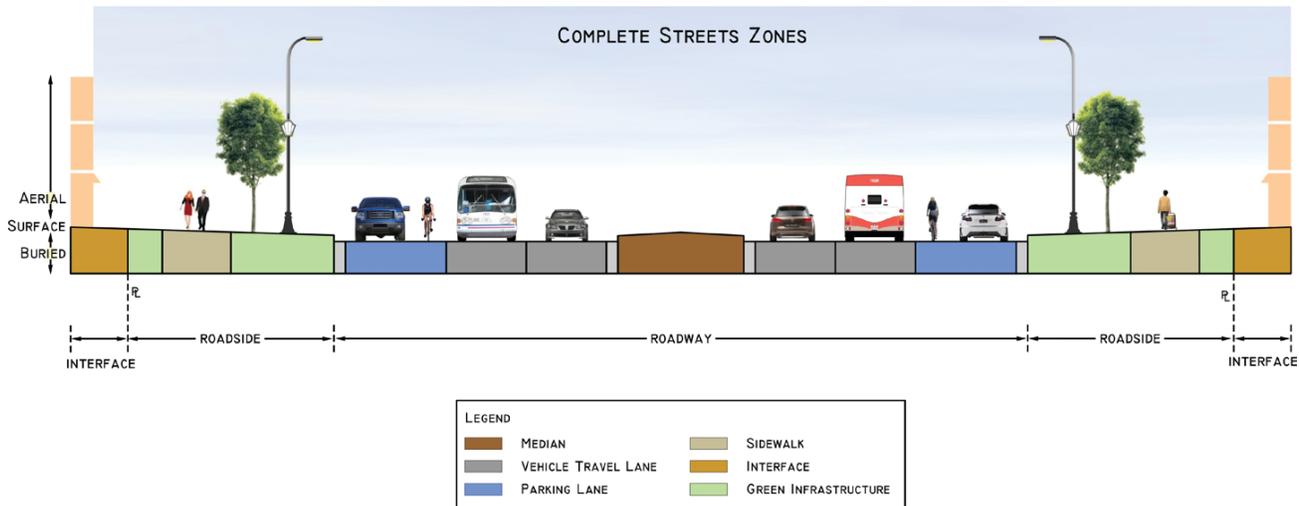


Figure C17: The three horizontal street zones include the roadway, the roadside and the interface. The configuration of these three zones varies depending on the land use context and transportation needs of the area in which they are set.

Appendix C: Neighbourhood Design

C.10.1 Roadway Design

In Activity Centres, the roadway zone (which provides 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 C18, C19 and C20.



Figure C18: This image shows how the use of curb extensions, a centre median and on-street parking enhance a pedestrian street.



Figure D19: 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 C20: 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.

C.10.2 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 C21, C22 and C23:

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



Figure C21: 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 D22: This image shows a bicycle shelter located at a transit stop in Toronto. The shelter provides secure lock-up in a prominent location.



Figure C23: 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.

Appendix C: Neighbourhood Design

Other roadside elements that may be considered in Activity Centres and elsewhere in the Neighbourhood, as deemed appropriate and as shown in Figures C24, C25 and C26, include the following:

- 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 C24: 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 C25: 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 C26: 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.

Lane Access Only

The streetscape along the central amenity space in Activity Centres and Neighbourhood or Urban Corridors shall be designed to provide a Public Realm free of conflict between pedestrians and automobiles; see Figures C27, C28 and C29. This will be achieved by

- 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 C27: 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 C28: 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 C29: 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.

C.10.3 Interface Zone

Consistent Building Setbacks

Buildings in Activity Centres shall be built with a consistent setback from the sidewalk to enhance the pedestrian experience. The setback may be varied somewhat to accommodate spaces that increase street activity, such as plazas and patios; see Figures C30, C31 and C32.



Figure C30 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 C31: 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.

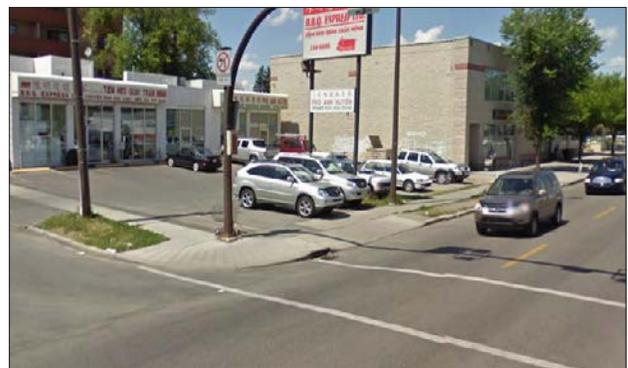


Figure C32: This photo shows Centre Street N.W. Adjacent buildings have widely varying setbacks. This not only diminishes the pedestrian environment from an aesthetic perspective, but it also poses the possibility of conflict between pedestrians and drivers.

Active Frontages

Buildings in Activity Centres and along Corridors must provide active entrances to the street to enhance the amount of activity along the street. Examples are shown in Figures C33, C34 and C35. 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 to the sidewalk from each main-floor unit.



Figure C33: 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 C34: 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 C35: 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 is the ratio of average building height to the width of the area it is meant to frame, such as a street or amenity space (see Figure C36). Appropriate Enclosure Ratios create a sense of shelter and comfort for pedestrians and park users. For smaller-scale centres such as an NAC, appropriate building heights range between one-sixth and one-third the width of the adjacent street or amenity space. 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, one prominent building framing an amenity space may provide appropriate enclosure.



Figure C40: 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 D: ENVIRONMENTAL DESIGN GUIDELINES

D.1 Overview

Council has directed that environmental Sustainability is an important component of Calgary's growth through such documents as the MDP & CTP, *the Triple Bottom Line Policy*, *the Environmental Action Plan*, and Council's adoption of the *Melbourne Principles for Sustainable Cities*.

The Environmental Design Guidelines address specific ways to apply the environmental Sustainability considerations within the Plan. Outline Plan/Land Use Amendment and Development Permit applications should demonstrate how proposals adhere to the following guidelines. Alternative environmentally sustainable design solutions that are not outlined in these guidelines will be supported by the Approving Authority provided that the alternative will produce the same or improved results.

D.2 Green Infrastructure

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

1. The following measures should be considered to be incorporated into the Green Infrastructure network:
 - a. Green and Brown Roofs - encouraging the use of roof top gardens, vegetated roof surfaces and vegetated walls that support a variety of insect and bird life and mitigate against climate change through the intake of carbon dioxide.
 - b. Natural Boundaries - promoting the use of vegetation for boundary definition (e.g., hedgerow) rather than the exclusive use of man-made materials (e.g., fencing and walling) in order to support a variety of species, mitigate against climate change and provide benefits of shelter and shading from weather conditions.



D.3 Water

Development within the Plan Area should consider the whole water cycle by implementing a water management hierarchy as outlined in the guidelines below.

1. Water conservation measures in site planning and building design are encouraged, including, but not necessarily limited to, the following:
 - a. stormwater source control best management practices and LID strategies to treat and store stormwater runoff and reduce associated pollutants;
 - b. Natural water balance modeling (using natural water storage and drainage solutions, such as bioswales, bioretention areas, reduced flow and run-off rates, pervious surfaces, absorbent landscaping, etc.);
 - c. naturalized stormwater management methods, such as wetlands and bioswales, to increase onsite infiltration and minimize runoff;
 - d. rain gardens, open ditches or swales, and pervious pavement on driveways and parking areas to maximize stormwater infiltration and minimize runoff into environmental areas;
 - e. on-site rainwater collection systems and site features that use non-potable water (reclaimed-water and rain water) for irrigation or other uses; and
 - f. drought-tolerant vegetation for landscaping and xeriscaping strategies that lower irrigation demands.
2. Minimize Demand for Water by:
 - a. Ensuring water fittings in all buildings incorporate low-flow technology while providing a suitable standard of service (e.g., low flow and aerated shower heads, low volume baths etc.).



Appendix D: Environmental Design Guidelines

- b. 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 6 inches; encouraging the use of mulch; and installing efficient, high performance irrigation infrastructure where irrigation is deemed necessary.
3. Supply Water from Local Sources by:
 - a. Examining the potential to harvest rainwater and recycle grey-water then store and reuse it for internal building functions requiring non-potable water (e.g., toilets and urinals), with a water main back-up to ensure operation during a rainwater or greywater shortage.
 - b. Providing rain barrels or other technology that captures and reuses rain water for use in landscape irrigation and as a water conservation and stormwater management method.
 - c. Maximizing permeable surfaces and bioretention in appropriate areas (e.g., sidewalks, parking lots and driveways) by using materials such as grasscrete, permeable asphalt and gravel pavers. This limits the disruption and pollution of natural water flows by managing stormwater runoff.
 - d. Developing sustainable drainage systems. For example, create wetlands, swales, ponds or vegetation strips to store stormwater and act as a filtering and cleaning system thereby reducing the level of run-off from the development.



D.4 Energy

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

1. Reduce energy demand by utilizing measures that:
 - a. Maximize passive solar design. Consider street design patterns, lot/building orientations and internal layouts that capitalize on sunlight access for the main living areas of residential development, commercial and retail development, and pedestrian sitting areas during cold periods of the year and minimize it during warm periods of the year. Building orientations should be encouraged to also address the roof space available for the efficient use of photo voltaic and solar thermal panels.
 - b. Maximize use of east-west streets for optimal solar orientation.
 - c. Consider energy-efficient building design and practices where possible in all building types (e.g., by increasing levels of insulation and minimizing air leakage; utilizing whole building efficient mechanical ventilation with heat recovery; installing low energy lighting and energy efficient appliances).
 - d. Construct solar-ready buildings in the Plan Area.
2. Maximize energy supply efficiency by:
 - a. Encouraging local supply and Community energy schemes, such as district energy and co-generation/combined heat and power (CHP) plants, where feasible. Compact, High-Density, Mixed-Use development will help moderate heat and power demand over the day and increase the feasibility of on-site energy supply, district heating or CHP. As a minimum, buildings over 5,000m² floor area should complete an analysis on the technical and economic feasibility of employing a district energy and CHP scheme.
 - b. All Outline Plan applications including all or part of the Neighbourhood Corridor should include an analysis of the feasibility of employing District Energy for it.
3. Encourage the use of low-carbon and renewable energy sources at both the site-wide and individual unit level to reduce greenhouse gas emissions and non-renewable energy use (e.g. ground and air source heat pumps; solar thermal (hot water); PV; wind turbines, etc.).



D.5 Waste Reduction

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

1. Minimize waste generated while constructing and refurbishing development by implementing waste management methods that outline waste-recovery targets and a waste-monitoring protocol (e.g., Site Waste Management Plans, centralized materials handling, Modern Methods of Construction and Environmental Management Systems).
2. Maximize the reuse of materials and the use of recycled materials in construction.
3. Consider the lifecycle of buildings and infrastructure (e.g., by implement 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 reuse of building structures and materials).
4. Provide the space and facilities to encourage the waste diversion in buildings and within the Public Realm.
5. Provide information Community members on matters related to minimizing waste (e.g., provide design information, as-built information, maintenance recommendations and future refurbishment strategies).
6. Consider composting at the individual, Community or business scale to reduce valuable resources going to landfill (e.g., use composting bins for residential units with gardens, or promote the use of Community composting units).



APPENDIX E: DESIGN STATEMENT

What are Design Statements?

Design Statements are documents that explain the design concepts behind a development application. They should demonstrate that the applicant has thought carefully about how everyone, including disabled people, seniors and young children, will be able to use the development.

When do they apply?

A Design Statement should be included at the Outline Plan/Land Use Amendment, tentative plan and Development Permit stages of the planning process (excluding householder applications or changes of use).

What should they include?

Design Statements should include a written description and explanation of the planning application. The Design Statements should demonstrate the developers' and designers' commitment to achieving good design and ensuring accessibility and should demonstrate how they meet legislation and policy.

Sometimes photos, maps and drawings may be needed to further illustrate the information. They will be available alongside the application and should avoid jargon or overly technical language. The amount of detail they contain should reflect how complex the application is.

Typically, Design Statements should explain:

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 development access have been dealt with, including the following:
 - How have relevant City policies been taken into account?
 - What consultation has been undertaken?
 - How will prospective users gain access to the development from the existing transportation network, (particularly pedestrians, cyclists and transit)?
 - What are the reasons for choosing the main points of access to the site and the layout of internal routes?
 - How will features that ensure access be maintained?

The Process

- Has the application assessed the site's full context, including physical, environmental, social, and economic characteristics and relevant planning policies, particularly MDP and CTP policies, in addition to relevant Plan policies?
- Does the design take into account any Community involvement results?
- Does the Statement show that the scheme emerged from a rigorous process of assessment, involvement, evaluation and design and is not trying to justify a pre-determined solution?

Environment and Landscaping

- How has the development been designed with the natural environment and the services it provides in mind (i.e., 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?
- Will it help to make the place look good and work well and will it meet any specific aims for the site?

Appendix E: Design Statement

Use

- Has the application outlined the use or function of all buildings and spaces?
- Will the application help to create an appropriate mix of uses in the area?
- Will 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?
- Are the applicable Density/Intensity targets met?
- Could the Neighbourhood's existing services and infrastructure support the amount of development planned?

Layout

- Does the Design Statement show how buildings, public and private spaces and street furniture will be arranged on the site and how the relationship between them is optimal in terms of access, walkability, connectivity, safety and the overall character and quality of the area?
- Does it outline 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 like 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 (i.e., in terms of urban design, building materials, landscaping, art and architectural details, etc.)?

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?

How will they be used?

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

APPENDIX F: FORM-BASED CONTROL PROCESS

F.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 land uses, blocks, Density and parking within the Plan Area.

Design Policies address streets, buildings, parks and subdivision of land within the Plan Area.

Special Policies address transit, pedestrian, housing and environmental elements within the Plan Area.

Management Policies address 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.

F.2 Decision-Making

A subdivision application or Development Permit application within the Plan Area shall be subject to the Land Use Bylaw. However, the Statutory Plan shall be referred to and applied as the Approving Authority determined appropriate 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.

F.3 Land Use Bylaw Compliance

1. It is recognized that in certain instances an inconsistency may arise between a policy in this Plan and a provision in the Land Use Bylaw; if this occurs:
 - a. the Approving Authority shall consider granting a relaxation of the rules of the Land Use Bylaw in favour of this Plan, in accordance with the powers contained in the Land Use Bylaw or the MGA (as the case may be) where this 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 this Plan.
2. This 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.

APPENDIX G: COMMUNITY & PUBLIC FACILITIES GUIDELINES

The purpose of these guidelines is to provide a reference for locating and designing Community and public facilities within the Plan Area.

Recreation Amenity & Community Centre	
Site Size	<ul style="list-style-type: none"> • 20 hectares (50 acres)
Location Criteria	<ul style="list-style-type: none"> • Located on the existing Open Space site north of the Shepard Residential Area. • Connections to regional pathways and transit routes are very important.
Site and Building Design Considerations	<ul style="list-style-type: none"> • Includes a Community Centre. • May also include public spaces, parks and Recreation Amenities that provide access to nature, cultural events and social gathering areas, and support art, fitness, leisure, culture and sports activities that respond to the needs and interests of both the Community association and the broader service region. • Design is multi-purpose to respond to diverse needs, interests, levels of ability and skill. • Design is flexible and can accommodate a wide range of uses and be converted to other uses in the future. • Amenities are bundled to expand user opportunities, optimize service options and improve the efficient use of the amenities.

Cemetery	
Site Size	<ul style="list-style-type: none"> • Approximately 32 hectares (80 acres), will be blended and designed with adjacent Open Space.
Considerations	<ul style="list-style-type: none"> • Primary use is for cemetery services. Secondary uses may include passive recreation (walking, cycling and nature observation) and environmental health. • Designed to accommodate appropriate multiple uses (e.g., regional pathways connect to the edge of the site). • Access to the adjacent private lands located immediately north. • The concept of “Green Cemetery” is encouraged and may include elements such as biodegradable coffins, natural native vegetation for ground cover, pesticide-free, no steel, copper or brass, no reinforced concrete, and no embalming chemicals.

APPENDIX H: BACKGROUND INFORMATION FOR THE NON-OPERATING LANDFILL

45P2017

The former Foster landfill operated from 1965 to 1978 in Section SE 06-23-28 W4M within The City of Calgary, and consisted of a main cell, previously operated by the County of Rockyview, and a secondary unauthorized cell operated by a previous landowner. The landfill is conceptually illustrated on the Map H: Foster Landfill and 300 metre Setback.

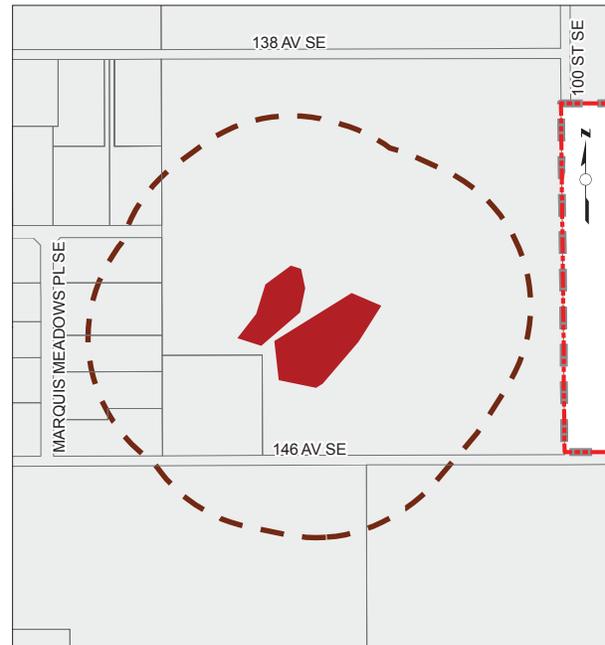
At the time of the approval of the South Shepard Area Structure Plan (2013), the environmental conditions and the regulatory status of the landfill were not clear. Although environmental assessments had been completed, the landfill had not been confirmed closed by Alberta Environment and Parks (AEP). To address concerns about the development potential of the adjacent land and given the available environmental information at the time, a Policy Review Area (PRA) corresponding to the 300 metre closed landfill setback was included in the ASP.

In 2010 through consultation with AEP, a series of environmental assessments of the landfill were initiated by the landowner to assess soil and groundwater conditions and to characterize the landfill waste. Inert materials including ash, glass, metal, wood, and some plastic were identified. The assessments did not identify any contamination risks to human health or impacts that would prevent the development of the surrounding area. One area of concern was the lack of a proper cap on the landfill. On November 13, 2013, AEP issued letters to the landowner and Rocky View County outlining their requirements for landfill closure. In response, the landowner commissioned additional work including the design and construction of a clay cap to meet the current Code of Practice for Landfills. Capping of the landfill was completed in October 2016 and in early 2017 AEP confirmed that the landfill was considered closed and that no further environmental monitoring is required. A copy of AEP's letter dated January 24, 2017 is included in this Appendix.

As a result of the environmental assessments and AEP's confirmation that the landfill is considered closed, the PRA has been removed from the South Shepard ASP. Note that per the Municipal Government Act – Subdivision & Development Regulation, a 300 metre setback to restricted uses is applicable to this non-operating landfill.

Map H

Foster Landfill and 300m Setback



Legend

- City Limits
- Non-operating Landfill Site Disposal Area
- Plan Area
- Non-operating Landfill 300m Setback



Operations
South Saskatchewan Region
2nd Floor, 2938 – 11 Street NE
Calgary, AB T2E 7L7
Telephone: 403-297-7605
Fax: 403-297-2749
www.aep.alberta.ca

January 24, 2017



Dear [Redacted]

RE: Capping of Former Landfill Cells Located on [Redacted] Site location SE 6-23-28 W4M, SE Calgary

Thank you for the Landfill Closure Report, dated November 1, 2016, prepared by Athena Environmental Consultants Ltd. on the capping and closure of the two landfill cells located on your property. One landfill cell was formerly operated by the previous landowner (Foster) and the bigger landfill cell was leased and operated by the Rocky View County Municipal District.

The Landfill Closure Report submitted has been prepared well and the cap design details as constructed meets the Code of Practice for Landfills in Alberta for a cultivated land use. The cap is satisfactory to Alberta Environment and Parks.

As per section 6.3 of the *Standards for Landfills* in Alberta, post-closure monitoring of a landfill is required for 25 years following the final landfill closure, with monitoring starting 30 days following the submission of the final landfill closure report. In this case we are suspending these conditions based on the following:

- the landfills ceased operation in 1978;
- a partial cap has existed since circa 1978; and
- environmental assessments in the past few years have shown only minimal impacts to the groundwater.

If new information comes to light regarding any contaminants that would put the surrounding environment at risk, Environment and Parks may require further monitoring as per the *Standards for Landfills*. The groundwater monitoring wells at the site need to be retained, protected, and maintained in case monitoring is necessary in the future. These groundwater monitoring wells may also be needed to help support any applications for setback variances. In particular, we note that the pathway for fresh water aquatic life for groundwater has not been completely addressed.

If you have any questions regarding this letter, please do not hesitate to contact Mr. Matt Haghghi at (403) 297-7878.

Sincerely:

Dave Gower, M.Sc.
Designated Director under the Act

ec: Paul Leong, City of Calgary
Cole Nelson, Rocky View County
Wendy Thorne, Athena
Matt Haghghi, AEP
Kim Kirillo, AEP
James Jorgenson, AEP

APPENDIX I: SHEPARD HISTORICAL CONTEXT

“Let us not lightly cast aside anything that belongs to the past, for only with the past can we rear the fabric of the future”

(Anatole France, *Tales from Two Townships* (1967), page 5)

First Nations History

Calgary was built on the historical and traditional lands of the Blackfoot people. The Blackfoot people call this place Moh'kinsstis, which means “elbow” (a reference to the Elbow River). Some Blackfoot archaeology sites in the city date back 12,000 years. In 1877, Treaty 7 was signed in this context:

“When the British North America Act was passed in 1867, the responsibility for Indians and Indian lands had been vested in the federal government. Further, the government was bound by the terms of the Royal Proclamation of 1763, which recognized Indians as rightful, occupiers of their hunting grounds until such a time as these were ceded to a government authority. This meant that the railway could not be built until the rights of the Indians along its route had been settled. Therefore, during the period from 1871 to 1876, the government of



Canada had systematically concluded treaties with all tribes in the arable regions of the North-West Territories, with the exception of those inhabiting some 50,000 square miles of land south of the Red Deer River and adjacent to the Rocky Mountains. These lands were occupied by the Treaty Seven First Nations. The Articles of Treaty 7 outlined the areas where the present day Reserves now exist. The making of Treaty 7 occurred at “Blackfoot Crossing” which is located on the Siksika Reserve east of Calgary.” (Treaty 7 Management Corporation. “Treaty No. 7.” www.treaty7.org) .

First Nations archaeology sites are currently used for cultural and spiritual practices, in other words, they are active sites. They promote culture, history and relationships to ancestral knowledge from land bases.

In 1997, Council approved CPS97-65, Identification and Protection of Archaeological Sites in Calgary, which directed Administration to prepare an inventory and assessment of archaeological sites and resources in The City of Calgary.

In 1999, The City and Province jointly undertook this initiative and engaged Lifeways of Canada Ltd. to prepare an inventory of First Nations archaeological sites in Calgary.

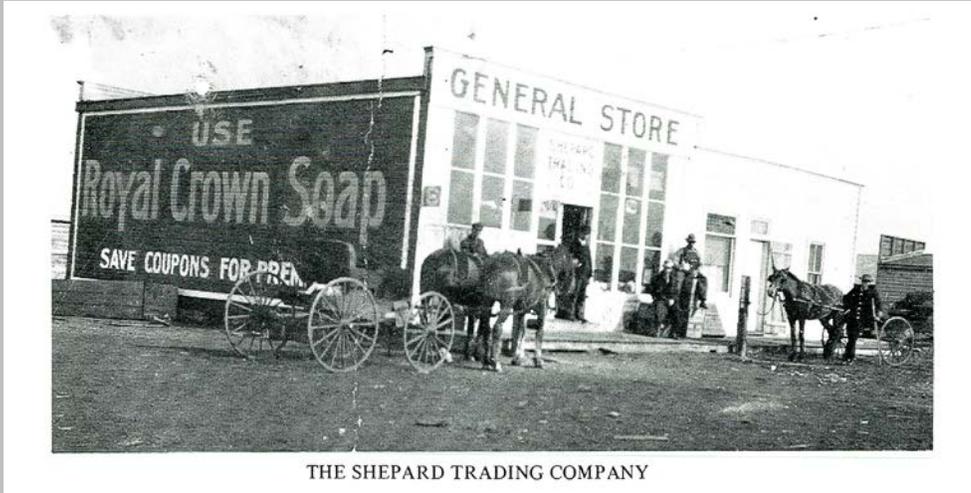
Council approved the recommendation contained in Planning and Transportation Policy Report CPS2001-66 (see below), Native Archaeological Site Inventory, from the S.P.C. on Community and Protective Services, dated 2002 January 23 (as presented to Council by Calgary Aboriginal Urban Affairs Committee (CAUAC)).

Appendix I: Shepard Historical Context

Planning and Transportation Report to the S.P.C. on Community and Protective Services:

Native Archaeological Site Inventory Report Summary from 2001.

- Inventory includes 835 Native Archaeological Sites in present City limits. Of those sites, 293 (approximately 35%) remain intact.
- Of the 293 sites that still exist, 53 assume regional significance. The existing significant sites include 6 valley floor terrace campsites, 3 valley edge campsites, four small tipi ring sites, five large tipi ring sites, 15 bison kills, and 16 processing camps. Of the 31 significant bison kills and processing camps, 20 are located on the East Paskapoo Slopes.
- All rights to archaeological resources in Alberta rest with the Crown. Accordingly, the Province must be advised of the discovery or investigation of such resources and may in turn require that Historical Resources Impact Assessments (HIRA's) be conducted on sites containing significant resources.
- Planning and Transportation: Measures to implement the 2001 CAUAC Resolution:
 - Ensure the Land Use Development circulation list be adjusted to include the protection of all archaeological sites. The Land Use Planning division has implemented enhanced circulation processes with respect to archaeological resources.
 - Forward copies of the Native Archaeological Site Inventory to the Urban Development division and Corporate Properties and Park Development & Operations Business Units.
 - Map areas with high, medium, and low probability of containing archaeological resources in the Calgary area.
- Provincial mapping of areas with high, medium, and low probability of archaeological resources together with criteria for screening development proposals on privately and publically owned lands, will provide a process to review both known archaeological resources and areas of potential for buried archaeological resources.
- Include the following in long-term implementation: geoarchaeological predictive model, establishment of archaeological or cultural reserve classifications, archaeological caveats on title, archaeological management and interpretive master plan, other studies and projects.



THE SHEPARD TRADING COMPANY

Source: Saddles Sleighs and Sadirons (1971) Chestermere Historical Society, Canniff Printing Ltd. Page 381)

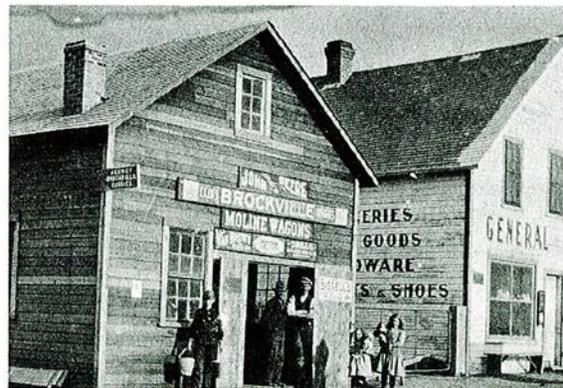
Hamlet of Shepard History

The South Shepard Plan Area contains a historic village area known as Shepard. The laying of the railway tracks in Western Canada in 1883/1884 brought settlers to the Shepard area, and they broke the land for farming and homesteads. Although the CPR line only extended as far as Moose Jaw at the time, the area's landscape began to change with the arrival of the first known settlers John and Ed Patterson, and Jas MacKenzie in 1883 with Jim Patterson joining them a year later. (Anatole France, Tales from Two Townships (1967), pg 300)

In 1889 the first family of African-American origin in the region settled the land at NE 6-23-28-W4M. Dan Lewis's daughter Mildred (age 19) married the famous former slave and cowboy John Ware in 1892.

(Source: CPR Archives 1884. Track Laying Machine. Image Ref #NS19990))

The village area of Shepard is located in the SW ¼ 18-23-28 W4M and is bounded on the west by 84th Street SE, the CPR tracks to the north and the original alignment of 114th Ave SE (Beulah Vesta Road) to the south. The townsite pattern of roads and lots was subdivided and registered in 1906. The pattern of roads and lots established over 100 years ago remains very similar to the current layout of the Community today.



Shepard, 1912, Owen Watson's blacksmith shop, Mr. Robert's store.

(Source: Tales from Two Townships. The Storey of Dalemead, Indus and Shepard, (1967) The Centennial History Committee. Page 62.)

The Community grew around the Shepard Railway Station which was built by the CPR in 1910. The station was named in honour of one of the partners of 'Shepard and Langdon' railway contractors who laid the original railway track from Langdon to Calgary. In 1919, Wm Courtney became the first Station Master for the Shepard station. In 1970, the Shepard station was refurbished and relocated to Heritage Park in Calgary, where it remains today.

Appendix I: Shepard Historical Context



Shepard Station.

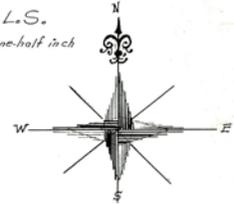
(Source: Tales from Two Townships. The Storey of Dalemead, Indus and Shepard, (1967) The Centennial History Committee. Page 62.)

By 1914, Shepard was a small, busy Community and contained a hotel with a livery barn, a public school, two general stores, a blacksmith shop, a lumber yard, a café, a meat market, a pool hall, a barbershop and two churches (Anglican and Presbyterian). (AMEC, 2008)

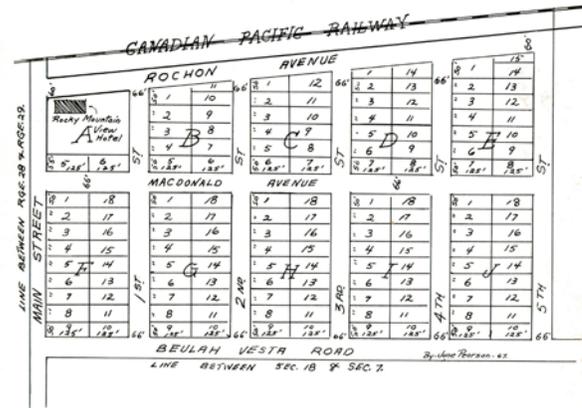
Source: Tales from Two Townships. The Storey of Dalemead, Indus and Shepard (1967) The Centennial History Committee. Page 336.)

-SHEPARD-
 being
 -A SUBDIVISION OF PART OF-
 -S.W. 1/4 SEC.18. T.P.23. RGE.28. W.OF 4TH M.-
 by
 A.G. Tolbert, D.L.S.

Scale of 100 feet to one-half inch



NOTE: That portion outlined thus - is intended to be registered.



(c) www.viewcalgary.com



Shepard Station Relocated to Heritage Park, Calgary
 (Source: AMEC Earth and Environmental, 2008)

An auxiliary British Commonwealth Air Training Plan airfield was located west of the village area of Shepard in 10-23-29 W4M and was used for WWII training during the early 1940s. Many air-men became part of the Community helping local farmers with the harvest and joining in with all the social functions. (Nanton Lancaster Society, 2008)

Although the commercial focus of the Community has significantly changed, the social importance of Shepard as a residential area and social gathering location remains today.

The Community remained as an unincorporated Hamlet of Rocky View County until July 2007 when it was annexed by The City.

The following table is a summary of the families who homesteaded lands within the South Shepard area or were first to live in the village area of Shepard. Many more family names have been documented who farmstedeed in the broader east side of Calgary region but could not be included due to space constraints.

Family Name	Location	Arrival Date	Comments
Jim Smith	N1/2 12-23-29 W4M	1887	Part of Eau Lumber Co. Crew.
Dan Lewis & Family	NE 6, 23, 28 W4M	1889	First family of African-American origin in region. Daughter married John Ware.
Charlie Hawks	S1/4 6-23-28 W4M	1900	
Tomas Owen Watson		1904	First Wheat Pool agent in region.
Wm.Warne	Lived in Shepard village	1913	School caretaker.
Ernie 'Curlie' Bell		1914	Worked at the Roberts store.
Captain Como			Italian Admiral lived south of Shepard.
Effenberger Family		1918	Moved to village in 1942.
James Henry	Lived in Shepard village	1925	
Clydia Pearson	Lived in Shepard village	1925	
Michael Harrigan	SW 7-23-28 W4M		
JT Anderson & Family		1930	Operated one of Shepard stores from 1936-1963.
Frank Alonby Family	Lived in Shepard village	1939	
Dean Nowlin Family	Lived in Shepard village	1939	

APPENDIX J: POLICY FRAMEWORK & REFERENCES

A wide range of City of Calgary plans and policies, consulting reports and existing legislation have been influential in the preparation of the South Shepard Area Structure Plan. Some of these documents have been referenced within the main body of the ASP and consideration should be given to all of these documents at the Outline Plan, Subdivision and Development Permit stage for any development in the Plan Area.

The reference documents are listed below.

Access Design Guidelines (Draft), 2002

Accommodating Growth 2009-2011: Coordinating Municipal Capital Investment

Acquisition of Affordable Housing Lands for Municipal Purposes Policy, 2005.

Advisory Land Use Planning Notes on Abandoned Well Sites, Government of Alberta Municipal Affairs, Information Bulletin No.06/10, August 2010

Affordable Housing Implementation Plan, 2003.

Affordable Housing Strategy, 2002.

Annexation Agreement - Municipal District of Rocky View No. 44 and The City of Calgary, 2006.

Asset Management Strategy, 2003.

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Community Association Policy Framework, 2003.

Corporate Accessibility Policy, 2005.

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East Regional Context Study, 2009

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- Integrated Risk Management Policy, 2004.
- Integration of Emergency Services into The City of Calgary Land Use, Infrastructure, and Mobility Planning Policy, 2010.
- Local Commercial Policy: New Communities in Calgary Direction Input and Recommendations, 2007
- Municipal Government Act, 2000, Government of Alberta
- Open Space Plan, 2002.
- Pathway and Bikeway Plan, 2000.
- Pedestrian Policy, 2008.
- Performance Measures Framework, 2005.
- Plan It Calgary: Key Directions for Land Use and Mobility, 2008.
- Planning Principles for the Location of Care Facilities and Shelters (2011)
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APPENDIX K: ACKNOWLEDGEMENTS

Photo Credits

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Google Street View, Drake Landing, Okotoks, AB, <http://maps.google.ca/>



Google Street View, Garrison Woods, Calgary, AB, <http://maps.google.ca/>



Porous Pavement, <http://www.flickr.com/photos/polkfyn/3047562603/>



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My second rain barrel, Retired person's photostream, <http://www.flickr.com/photos/melindaw/2721533928/>



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File:High Point community garden, http://commons.wikimedia.org/wiki/File:High_Point_community_garden.jpg



Woonerf2, <http://www.flickr.com/photos/29892784@N05/2977326692/>



Portland Courtyard Housing Design Competition, http://www.courtyardhousing.org/images_shared.html



Appendix K: Acknowledgements

Charles Hope Photography, <http://www.calgary.ca/CSPS/Parks/Pages/Locations/SE-parks/Ralph-Klein-Park.aspx.html> RKPark219.jpg



APPENDIX L: 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 Housing Diversity Policies (Section 4.2) 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.

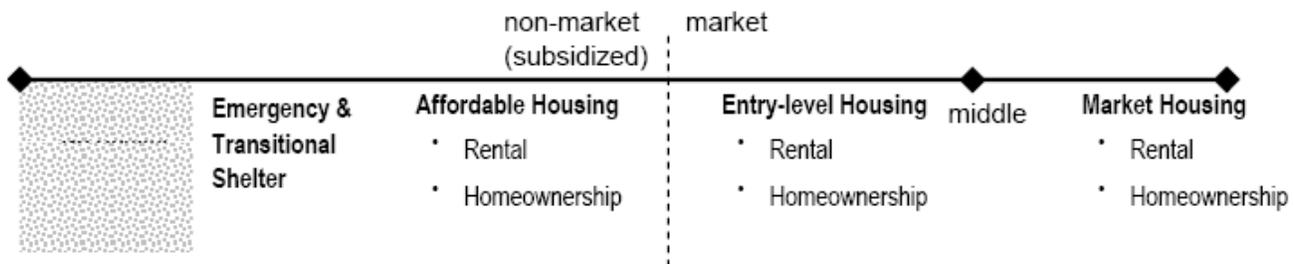
The housing continuum is made up of housing options that include non-market and market housing. The degree of affordability is determined by the relationship between the cost of the housing option and the household income.

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

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 Continuum



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”).

Appendix L: Guidelines for Housing Affordability and Affordable Housing

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 4.2) and Appendix L 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.

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

A range of housing types could be considered, including

- non-market rental;
- 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 4.2, could be determined by a housing needs assessment and the reasonability 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 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 offset 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.

Other Incentives

Most of the funding available for Affordable Housing comes from the provincial and federal governments. Since 2007, the Government of Alberta has matched funds contributed by the Government of Canada for the creation of over 11,000 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 4.2: Housing Diversity, including entry-level and Affordable Housing options.