

# Cavanagh Neighbourhood Area Structure Plan

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Office Consolidation September 2018

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*Prepared by:*

*City Planning Branch  
Urban Form and Corporate Strategic Development  
City of Edmonton*

**Bylaw 16497 was adopted by Council in July 2013. In September 2018, this document was consolidated by virtue of the incorporation of the following bylaws, which were amendments to the original Bylaw 16497:**

Bylaw 16497	Approved July 15, 2013 (to adopt the Cavanagh NASP)
Bylaw 16617	Approved December 9, 2013 (to redesignate the Special Study Area in the central portion of the neighbourhood as Low Density Residential and Row Housing land uses by updating relevant figures, text, and statistics, and to update sanitary and storm flows in Figures 10 and 11)
Bylaw 18500	Approved September 5, 2018 (to redesignate land from low density residential to medium density residential and remove a portion of top-of-bank roadway)

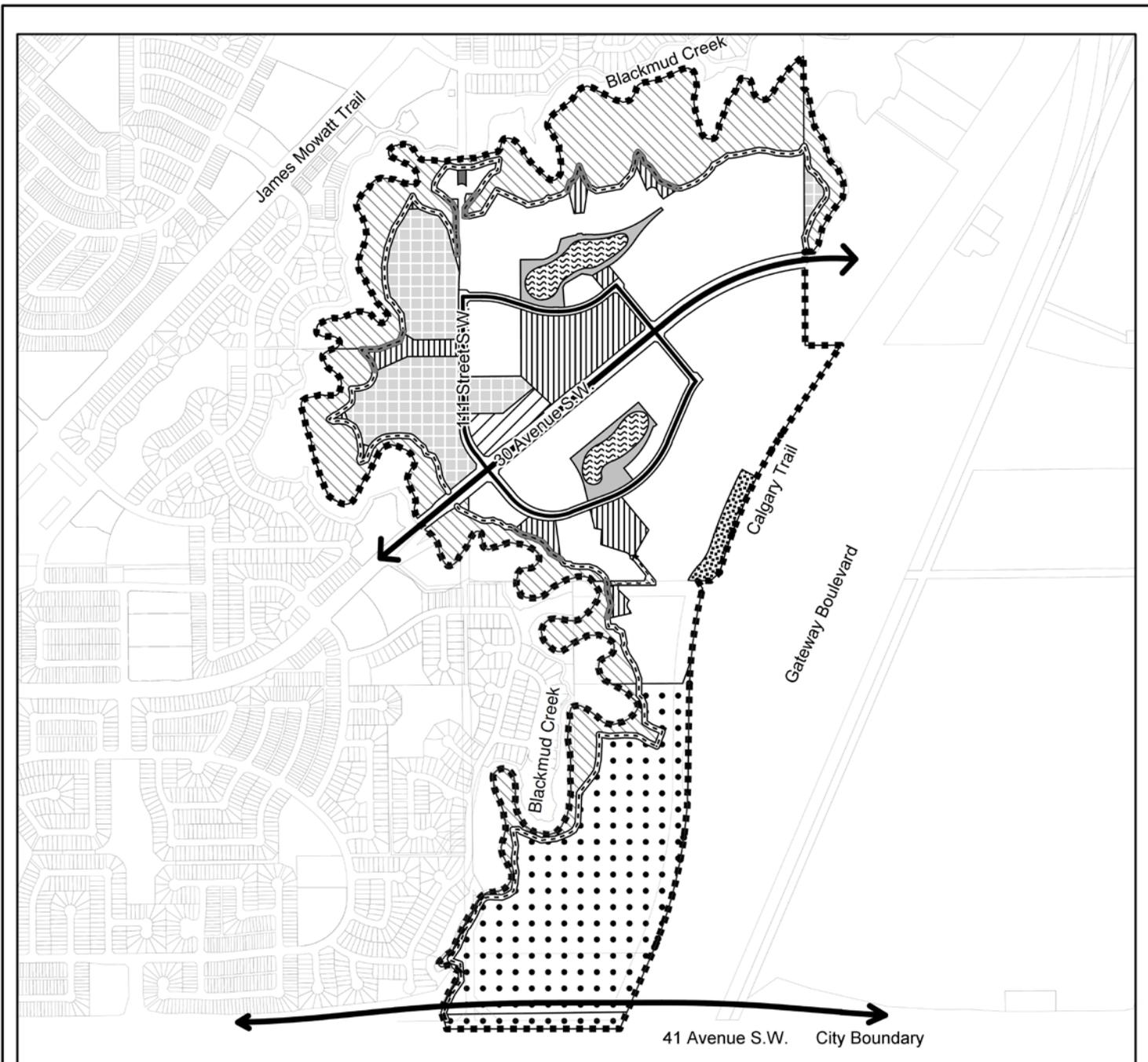
*Editor's Note:*

This is an office consolidation edition for the Cavanagh NASP, as approved by City Council on July 15, 2013. For the sake of clarity a standardized format was utilized in this Plan. Private owner's names have been removed in accordance with the Freedom of Information and Protection of Privacy Act. All text changes are noted in the right margin and are italicized where applicable. Where it provides clarity, names of City departments have been standardized to reflect their present titles. Furthermore, all reasonable attempts were made to accurately reflect the original Bylaw.

This office consolidation is intended for convenience only. In case of uncertainty, the reader is advised to consult the original Bylaws, available at the Office of the City Clerk.

**City of Edmonton**

**Urban Form and Corporate Strategic Development**



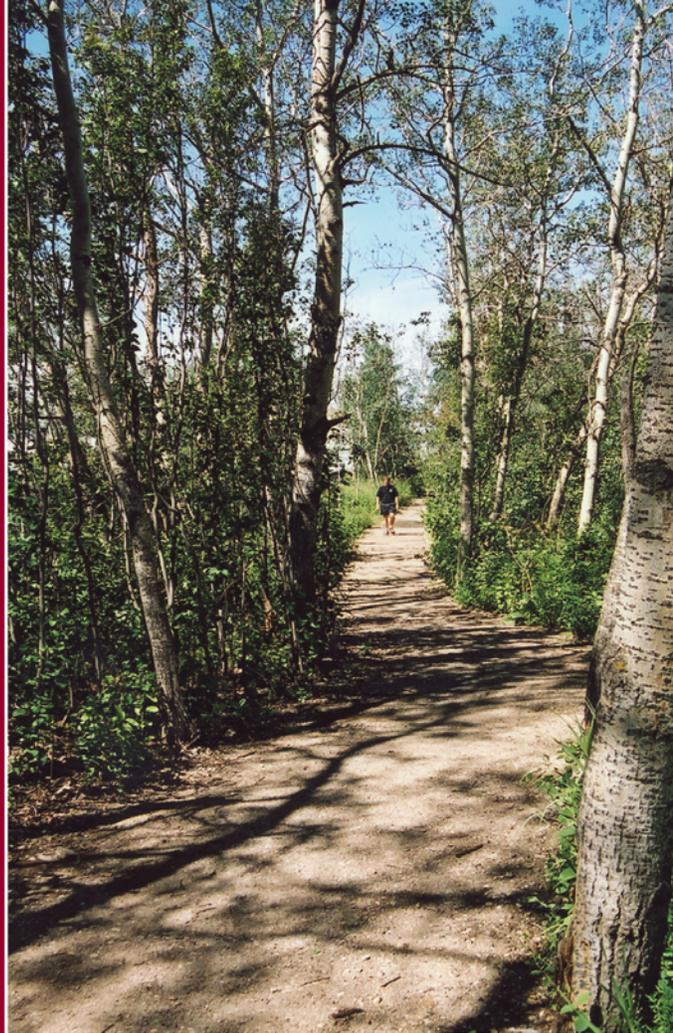
**BYLAW 18500  
APPROVED  
CAVANAGH**

Neighbourhood Area Structure Plan  
(as amended)



- |  |  |   |                                |   |                     |
|--|--|---|--------------------------------|---|---------------------|
|  | Low Density Residential  |  | Stormwater Management Facility |  | Top of Bank Roadway |
|  | Medium Density Residential<br>(Low Rise / Multi / Medium<br>Density Units) |  | Park / School                  |  | Collector Roadway   |
|  | Row Housing  |  | Environmental Reserve          |  | Arterial Roadway    |
|  | Neighbourhood Commercial   |  | Greenway                       |  | Top of Bank Walkway |
|  | Government Lands   |  | Walkway                        |  | NASP Boundary       |

**Note:** Location of collector roads and configuration of stormwater management facilities are subject to minor revisions during subdivision and rezoning of the neighbourhood and may not be developed exactly as illustrated.



# CAVANAGH

## Neighbourhood Area Structure Plan

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July 2013

Prepared for:  
Melcor Developments Ltd.  
Blackmud Trading Company Ltd.  
7 Oaks Developments Inc.  
Rohit Group of Companies  
Southbrook Developments



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## 1. Administration

### 1.1 - Purpose

The purpose of the Cavanagh Neighbourhood Area Structure Plan (NASP) is to depict the land use framework as well as the development and servicing goals for Cavanagh. This NASP specifies the following:

- The location, configuration and area of various land uses including residential, commercial, parks, open spaces, and public utility land uses;
- The anticipated density of residential development;
- The pattern and alignment of the arterial and collector roadway and pedestrian walkway system;
- The required servicing infrastructure concept; and,
- The implementation and phasing of development.

### 1.2 - Authority

The Cavanagh NASP was adopted by Edmonton City Council on (insert date) as Bylaw (insert Bylaw number) in accordance with Section 633 of the *Municipal Government Act* (MGA).

### 1.3 - Timeframe

Development in Cavanagh is expected to commence upon City approval and is estimated at current absorption rates, to be complete within 7-10 years.

### 1.4 - Interpretation

All symbols, locations, and boundaries shown in the NASP figures shall be interpreted as conceptual unless otherwise specified in the document, or where they coincide with clearly recognizable physical or fixed features within the plan area.

For each subsection under Land Use Concept, a description of applicable land use strategies (e.g. Urban Design) and types (e.g. Residential) is provided for the plan followed by applicable objectives, policies, implementation, rationale, and technical summary

A policy statement containing “shall” is mandatory and must be implemented. Where a policy proves impractical or impossible, an applicant may apply to amend the plan. A policy statement containing “should” is an advisory statement and indicates the preferred objective, policy and/or implementation strategy. If the “should” statement is not followed because it is impractical or impossible, the intent of the policy may be met through other agreed-upon means, without formal plan amendment.

### 1.5 - Monitoring

Policies, text, and mapping information contained within this document may be amended from time to time, by Council approved bylaw, in order to respond to and remain current with planning and development issues and trends affecting suburban development.

## 1.6 - Amendment

Amendments to the Cavanagh NASP document involving policies, text, statistics or mapping shall be completed in accordance with the *Municipal Government Act*, *The Way We Grow: Edmonton's Municipal Development Plan (MDP)*, the *Heritage Valley Servicing Concept Design Brief (SCDB)* and all other applicable bylaws, policies, and procedures.

## 1.7 - Orientation

This document contains three sections and two appendices.

- Section 1 provides administrative information and an orientation to the plan.
- Section 2 describes the Cavanagh NASP location, context, and background information on the Plan area such as land ownership, topography, and existing land uses.
- Section 3 describes the land use, transportation, and servicing concepts for the Cavanagh NASP.
- Appendix A contains information on the broader policy context with which the NASP complies.
- Appendix B contains a list of technical studies prepared to support and guide the preparation of the development and servicing concepts.

## 2. Plan Context

### 2.1 - Location

Cavanagh is composed of nineteen parcels listed in **Table 1 - Land Ownership**. Cavanagh is one of 14 neighbourhoods in the Heritage Valley Servicing Concept Design Brief (SCDB), and covers approximately 147 ha in the southwest portion of Edmonton (see **Figure 1 – Location Plan**).

The NASP area is defined by the following boundaries (see **Figure 2 – Context Plan**):

- North – Blackmud Creek
- East – Queen Elizabeth II Highway (Calgary Trail)
- South – 41 Avenue SW (City Boundary)
- West – Blackmud Creek

North and west of the neighbourhood across Blackmud Creek are the developing communities of Blackmud Creek, Callaghan and Allard. The Cashman Neighbourhood (formerly Neighbourhood 7A) is located to the northeast. The Queen Elizabeth II Highway is located to the east and Leduc County is located to the south.

### 2.2 - Background

The Cavanagh NASP was prepared in response to the current and anticipated market demands in the Edmonton area as well as the aspirations of the landowners within the plan area. Further information regarding land ownership, implementation, and site context can be found in **Section 2 – Plan Context** (see **Table 1 – Land Ownership** and **Figure 3 – Land Ownership**).

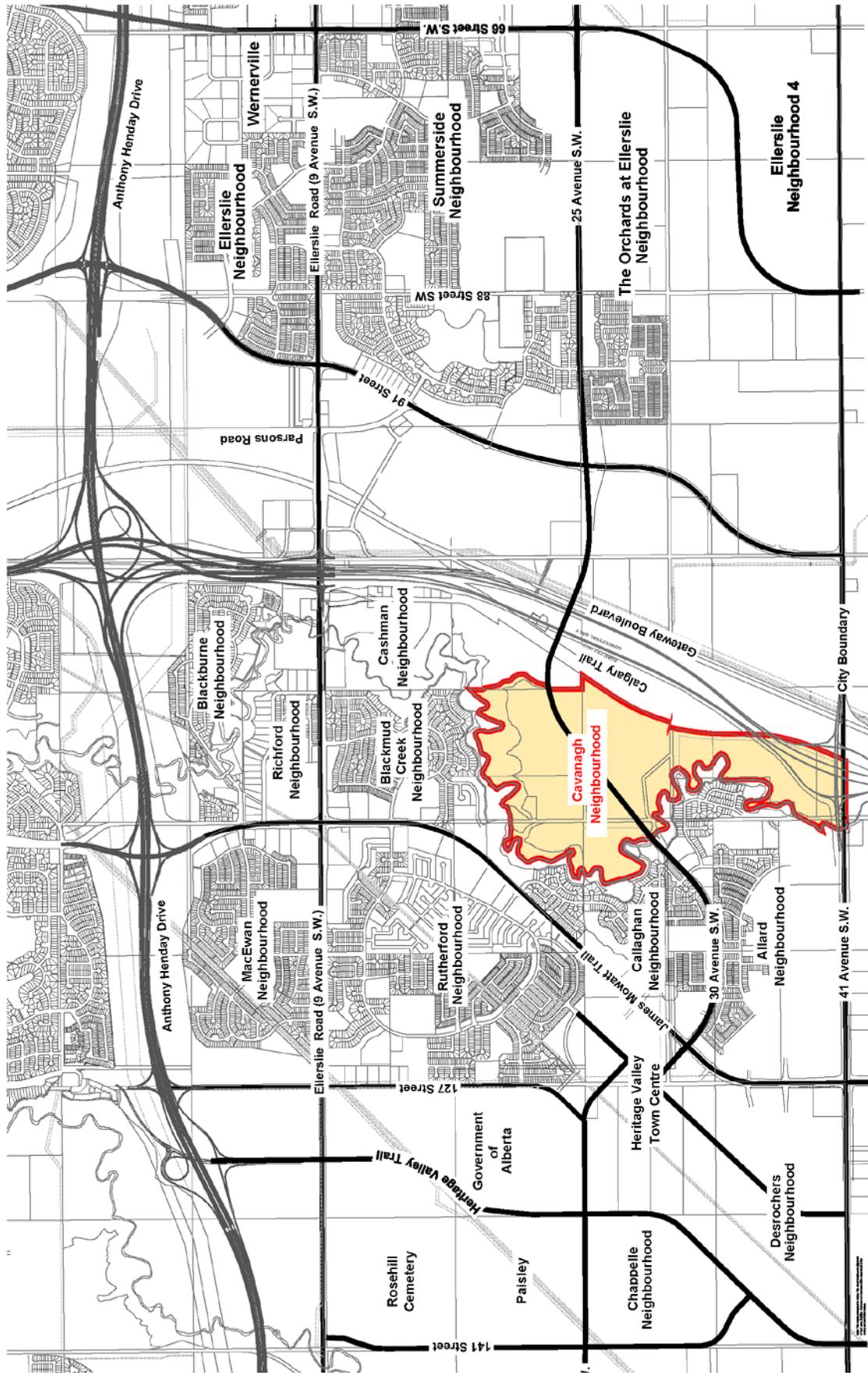
The preparation of this NASP has been guided by existing City of Edmonton statutory plans and policies including *The Way We Grow*, *The Way We Move*, *The Way We Green*, The Heritage Valley SCDB, Suburban Neighbourhood Design Principles (SNDP), Urban Parks Management Plan (UPMP), the City of Edmonton Housing Mix Guidelines as well as the Capital Region Growth Plan. Conformance to these policies is reference in **Appendix 1**.

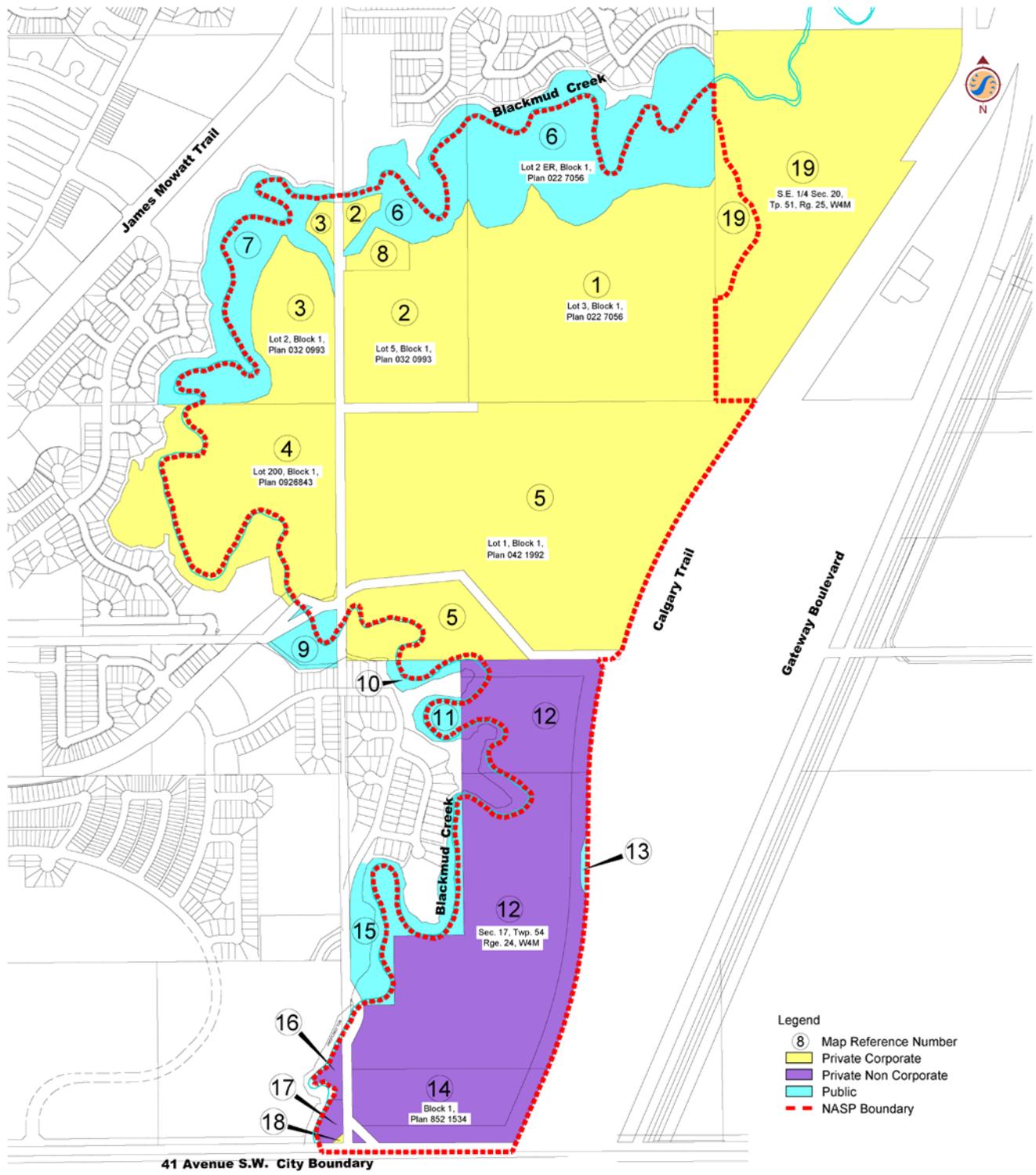
The plan area is suitable for a NASP and represents a logical extension of infrastructure and services related to currently planned and developing neighbourhoods. It is designated as “Developing, Planned and Future Neighbourhoods” by *The Way We Grow* and is adjacent to the developing neighbourhoods of Blackmud Creek, Callaghan, Allard and Cashman. Proximity to existing and planned infrastructure services will provide the necessary means of meeting the required municipal standards for the development of the neighbourhood.

The Cavanagh plan area consists of undeveloped agricultural lands, a number of farmsteads and residences and a former 26-hectare golf course.

The NASP is designed in accordance with City of Edmonton servicing standards. Development staging and extension of infrastructure shall be contiguous, efficient, and economical while having regard for potential environmental and ecological impacts.







41 Avenue S.W. City Boundary

Note: This map is conceptual in nature. The exact location and alignment of land uses, facilities, roadways and services will be determined at the zoning and subdivision



# Cavanagh Neighbourhood

May 2013

## 2.3 - Land Ownership

The NASP was prepared on behalf of five private corporate owners who own, manage or have agreement for sale on the majority of the lands within the neighbourhood. The remaining lands are held by a number of owners who are in support of this NASP application (see **Table 1 – Land Ownership** and **Figure 3 – Land Ownership**).

**Table 1 - Land Ownership**

Reference Number	Titled Owner	Legal Description	Area in NASP	Titled Area
1	*Private Corporate	Lot 3, Block 1, Plan 022 7056	23.00 ha	23.00 ha
2	*Private Corporate	Lot 5, Block 1, Plan 032 0993	9.32 ha	9.32 ha
3	*Private Corporate	Lot 2, Block 1, Plan 032 0993	5.82 ha	5.82 ha
4	*Private Corporate	Lot 200, Plan 1, Plan 092 6843	14.73 ha	19.47 ha
5	*Private Corporate	Lot 1, Block 1, Plan 042 1992	36.85 ha	38.20 ha
6	Government	Lot 2 ER, Block 1, Plan 022 7056	9.71 ha	12.43 ha
7	Government	Lot 2 ER, Block 1, Plan 032 0993	4.45 ha	14.14 ha
8	Private Corporate	Lot 1, Plan 792 1638	0.88 ha	0.88 ha
9	Government	Lot R-Two, Plan 632NY	0.30 ha	1.29 ha
10	Government	Lot 16 ER, Block 14, Plan 094 1825	0.29 ha	0.75 ha
11	Government	Lot 18 ER, Block 14, Plan 094 1825	0.49 ha	0.97 ha
12	Private Non-Corporate	Sec 17-54-24-W4	27.58 ha	32.72 ha
13	Government	Plan 300 PX	0.14 ha	0.14 ha
14	Private Non-Corporate	Block 1, Plan 852 1534	6.07 ha	6.07 ha
15	Government	Lot 41 ER, Block 14, Plan 012 0118	1.32 ha	4.64 ha
16	Private Non-Corporate	Lot B, Plan 4948MC	0.27 ha	0.27 ha
17	Private Non-Corporate	Lot C, Plan 4948MC	0.39 ha	0.39 ha
18	Private Corporate	SE ¼ 18-51-24-W4	0.02 ha	15.24 ha
19	Private Corporate	SE ¼ 20-51-25-W4	1.96 ha	27.45 ha
<b>Total</b>			<b>147.44 ha</b>	

\*Identifies Participating Owners.

#### 2.4.1 - Topography

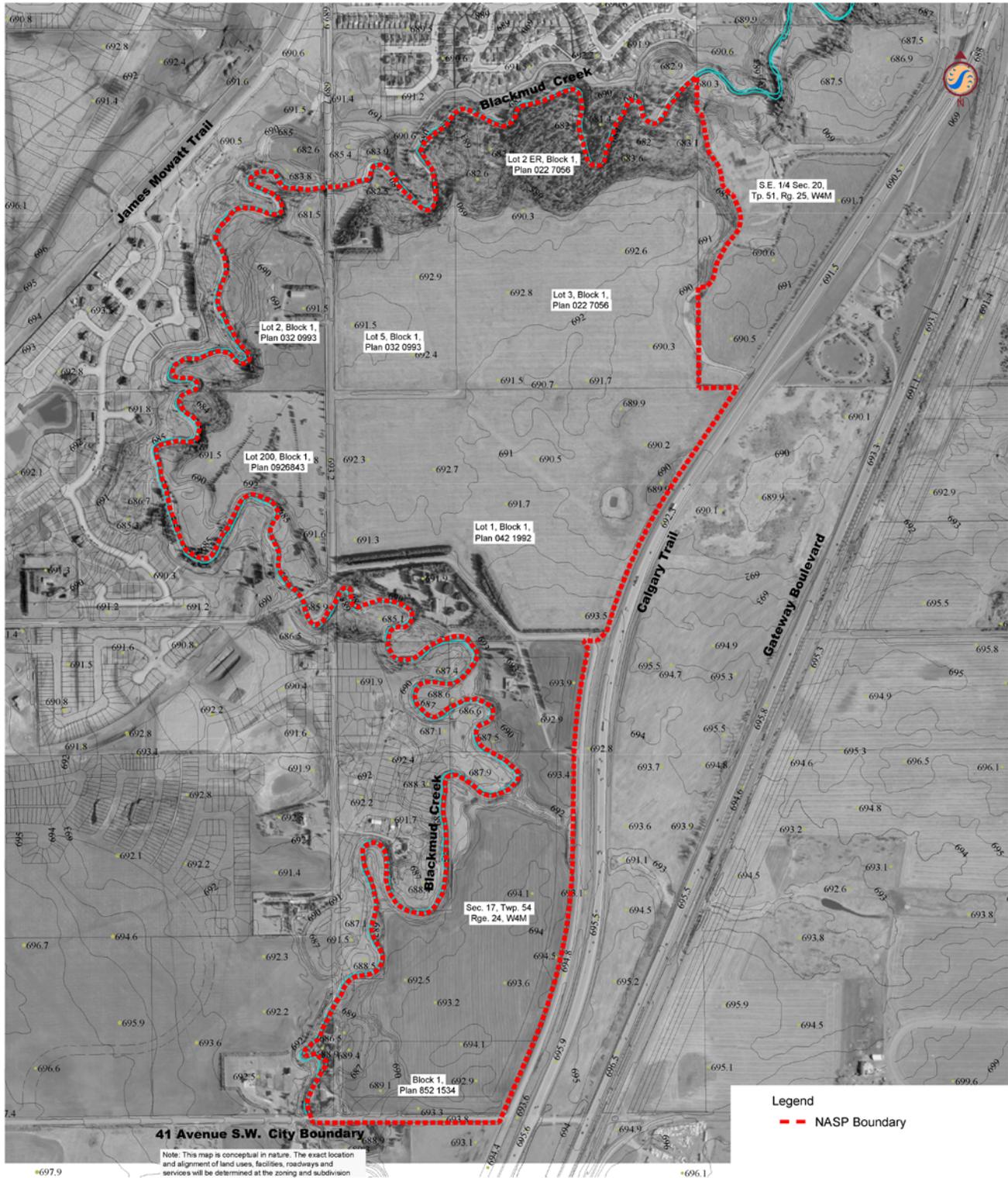
The topography of the lands in Cavanagh is relatively flat in the northern portion and gently sloping in the south. Elevations rapidly decrease towards the Blackmud Creek ravine. There are several depressions and natural drainages along the margins of Blackmud Creek (see **Figure 4 – Site Contours**). Elevations throughout the plan area vary between 694 m in the south to 689 m near the ravine.

The majority of the lands within the plan area have minimal tree cover except for the areas within the Blackmud Creek ravine (see **Figure 5 – Site Features**).

#### 2.4.2 - Soil and Groundwater Conditions

Soils within Cavanagh include black and dark brown alleviated chernozems of the Malmo series (Bowser et al. 1962). The site consists of silty clay loams with plowzone, where present and extends through most of the 'A' horizon (estimated to be between 10cm to 20cm thick).

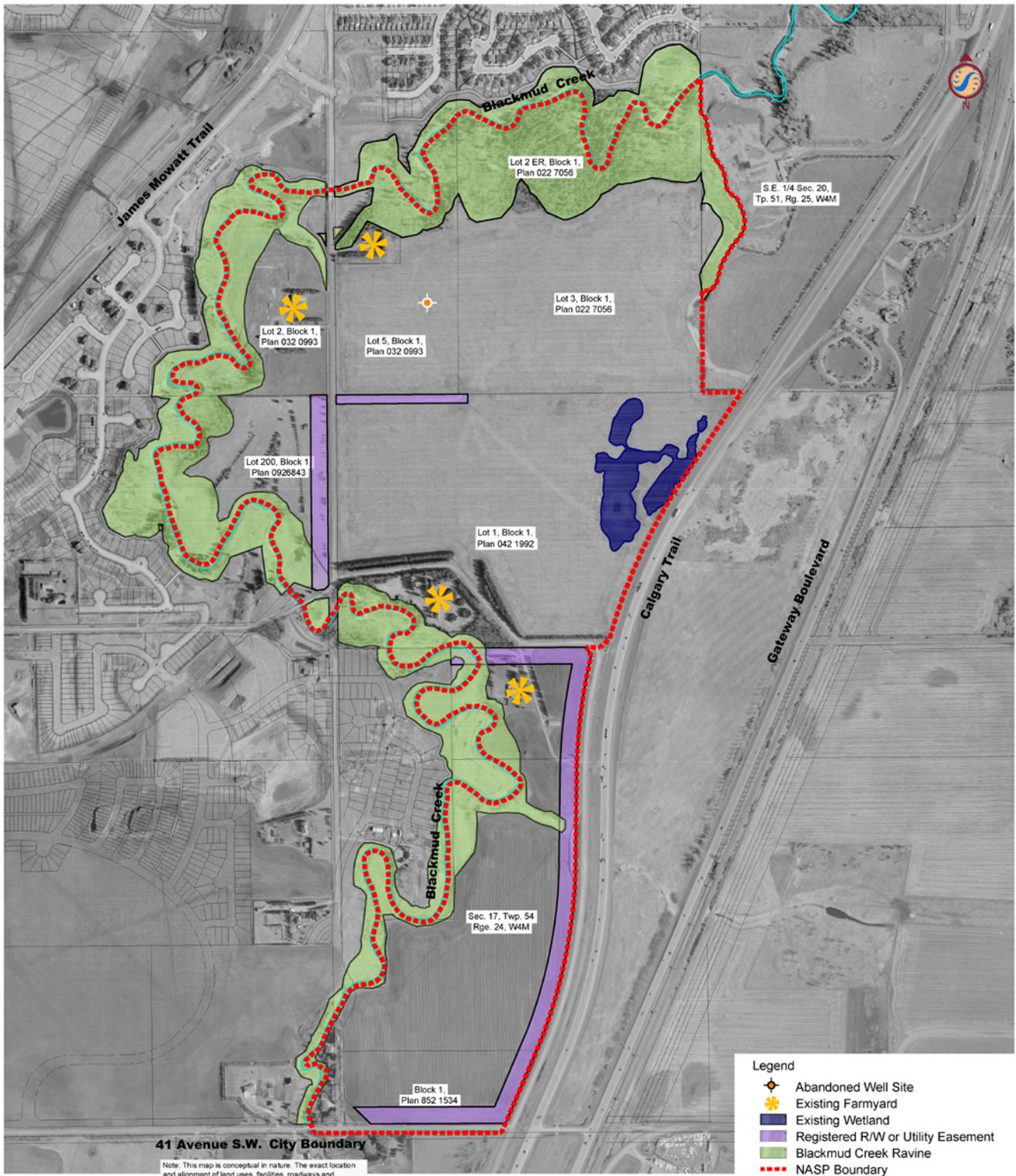
A Geotechnical Investigation was conducted for the participating landowner(s) of the following properties (Lots 2 & 5, Block 1, Plan 032 0993, Lot 3, Block 1, Plan 022 7056, Lot 200, Plan 1, Plan 092 6843 and Lot 1, Block 1, Plan 042 1992) contained within the plan area. The Geotechnical Investigation has been submitted to the City of Edmonton under separate cover and reviewed by the City of Edmonton's Geotechnical Engineer. A top-of-bank walk was completed with City administration and participating landowners in April 2012 to determine an agreed upon top-of-bank line along the Blackmud Creek ravine. A top-of-bank walk was not completed for lands owned by non-participating landowners.



# Cavanagh Neighbourhood

May 2013

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# Cavanagh Neighbourhood

May 2013

### 2.4.3 - Natural Areas and Ecological Resources

The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas (1993) identifies the Blackmud Creek ravine as a major environmental feature within the plan area (see **Figure 5 – Site Features**).

#### 2.4.3.1 Blackmud Creek Ravine

The Blackmud Creek Ravine functions as a critical linkage to the North Saskatchewan River and tableland natural areas. The ravine is high in biological diversity and supports a number of rare wildlife and plant species. The ravine system is utilized as a major wildlife corridor, which connects to the Whitemud Creek and eventually with the North Saskatchewan River Valley. All proposed bridge structures crossing the Blackmud Creek will conform to the City of Edmonton's Wildlife Passage Guidelines. Any required setbacks, easements and other efforts to preserve and enhance this environmentally significant feature will be pursued in accordance with City of Edmonton policies and guidelines.

### 2.4.4 - Wetland Assessment

A Wetland Assessment prepared by Stantec Consulting Ltd. has been submitted under separate cover to Alberta Environment and Water (AENVW) and Alberta Sustainable Resource Development (ASRD). The Wetland Assessments were conducted on behalf of the participating landowners in Cavanagh.

AENVW (administrator of the *Water Act*) and ASRD (administrator of the *Public Lands Act*) shall be contacted regarding any drainage areas/wetlands that are to be disturbed. Under the *Water Act*, AENVW has a policy of no net loss in regards to wetlands in Alberta, and as such, requires compensation to be made if a wetland is to be disturbed. Under the *Public Lands Act*, ASRD can claim ownership of the bed and shore of water bodies deemed reasonably permanent. Within Cavanagh, the drainage area identified in the associated Wetland Assessment will be disturbed and converted to a constructed wetland as development proceeds. Consultation with AENVW and ASRD will occur and appropriate regulatory approvals will be obtained.

### 2.4.5 - Existing Land Uses

As shown in **Figure 5.0 – Site Features**, the majority of the land within the Cavanagh NASP is currently used for agricultural purposes with existing farmhouse/residential properties situated throughout. The former 7 Oaks Golf Course is situated in the west-central portion of the plan area adjacent to the Blackmud Creek Ravine and north of the future 30 Avenue SW arterial roadway.

None of the existing land uses pose any significant constraints to future urban development. Future development of all properties within the neighbourhood is at the discretion of the respective landowners.

### 2.4.6 - Environmental Site Assessment

The following information presented in **Table 2 – Environmental Site Assessments** and illustrated on **Figure 6 – Environmental Site Assessment** is based on the Phase I Environmental Site Assessment (ESA) conducted for the participating landowners within the plan area. The City of Edmonton requires that individual landowners provide ESAs or disclosure statements prior to the rezoning stage. The Phase I ESA evaluates the types and location of surface and/or subsurface impacts that may be present on the subject site and adjacent areas.

As part of the preparation of this NASP, Phase I ESA's have been completed on the following properties: Lot 3, Block 1, Plan 022 7056; Lot 5, Block 1, Plan 032 0993; Lot 2, Block 1, Plan 032 0993; Lot 200, Block 1, Plan 092 6843; and Lot 1, Block 1, Plan 042 1992.

**Table 2 - Environmental Site Assessments**

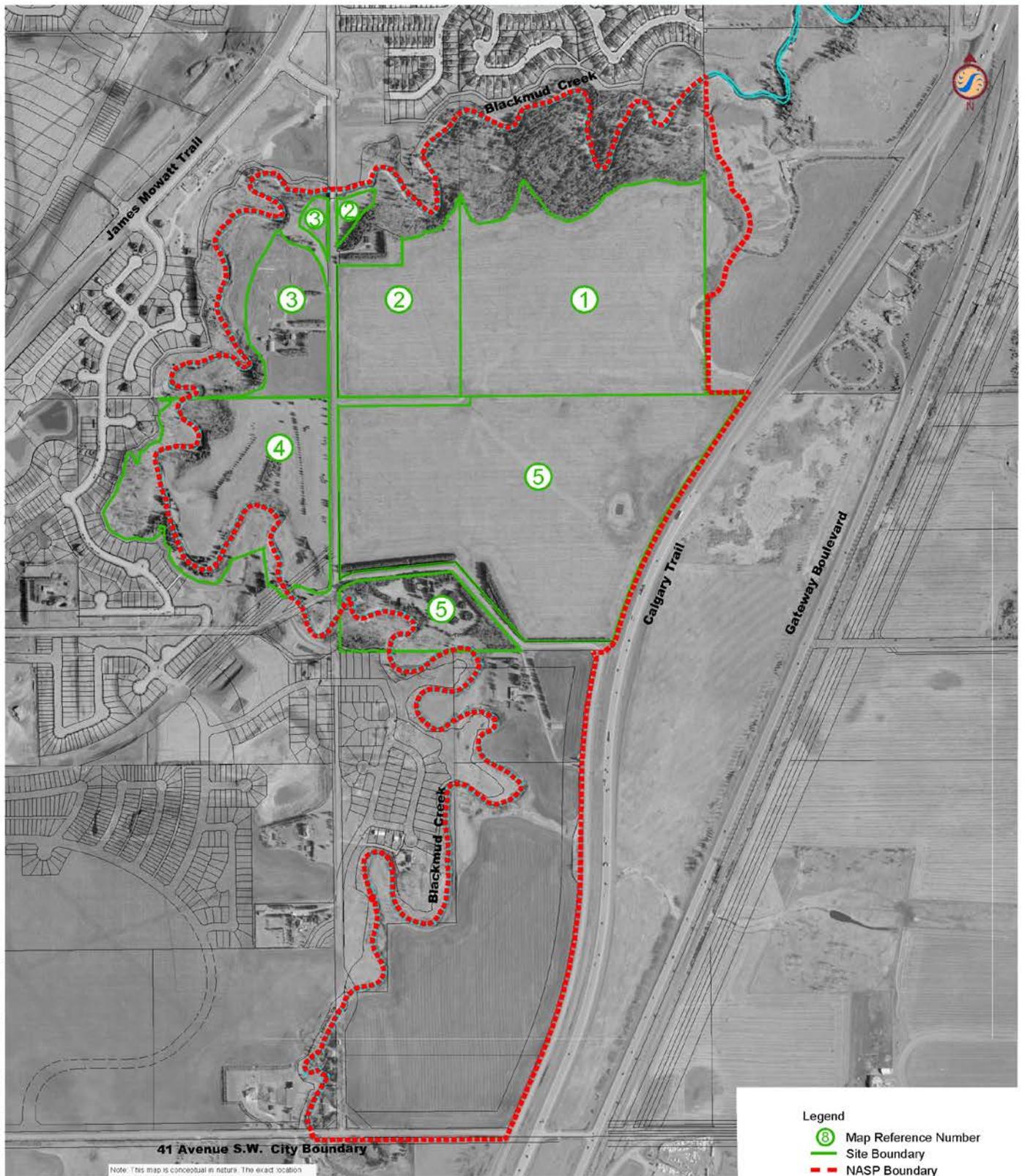
Map Reference Number	Titled Owner	Legal Description	ESA
1	Private Corporate	Lot 3, Block 1, Plan 022 7056	Phase I ESA Submitted
2	Private Corporate	Lot 5, Block 1, Plan 032 0993	Phase I ESA Submitted
3	Private Corporate	Lot 2, Block 1, Plan 032 0993	Phase I ESA Submitted
4	Private Corporate	Lot 200, Block 1, Plan 092 6843	Phase I ESA Submitted
5	Private Corporate	Lot 1, Block 1, Plan 042 1992	Phase I ESA Submitted

#### 2.4.7 - Historical Resources

A Historical Resources Impact Assessment for *Historical Resources Act* requirements has been completed for the participating lands and submitted to Alberta Culture and Community Spirit (ACCS) in support of the Cavanagh NASP. **Table 3 – Historical Resources Overview** presents a summary of the parcels that were included in the HRIA.

**Table 3 – Historical Resources Overview**

Map Reference Number	Titled Owner	Legal Description	HRIA
1	Private Corporate	Lot 3, Block 1, Plan 022 7056	Submitted
2	Private Corporate	Lot 5, Block 1, Plan 032 0993	Submitted
3	Private Corporate	Lot 2, Block 1, Plan 032 0993	Submitted
4	Private Corporate	Lot 200, Block 1, Plan 092 6843	Submitted
5	Private Corporate	Lot 1, Block 1, Plan 042 1992	Submitted



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#### 2.4.8 - Pipelines, Wells, and Utility Corridors

The Energy Resources Conservation Board Pipeline License Register confirmed that no major pipeline transmission licenses exist within the Cavanagh NASP. There are a number of local gas lines situated throughout the plan area (see **Figure 5-0 – Site Features**). These gas lines are located within designated easements/rights-of-way adjacent to the government road allowances (111 Street SW, 30 Avenue SW and Queen Elizabeth II Highway).

One abandoned well site has been identified within the north central portion of the plan area. This well site has been identified as 04-20-51-24-4, which was abandoned in 1949 prior to going into production.

#### 2.4.9 - Non-Participating Lands Requiring Further Study

Lands owned by non-participatory landowners have not received the full technical review required and are subject to further relevant studies (e.g. ESA, HRO, HRIA, slope stability analysis, wetland assessment), in accordance with City policies and procedures at the rezoning stage.

#### 2.4.10 - Leduc County Interface

An urban-rural interface exists between the City of Edmonton and Leduc County. The lands immediately south of the NASP (across 41 Avenue SW) are designated as Agricultural by the County. Urban development adjacent to agricultural uses is recognized and 41 Avenue SW (particularly in its ultimate form as a major regional facility) provides a clear delineation between the City and County.

### 2.5 - Public Involvement

Consistent with Policy C513 – City of Edmonton’s Public Involvement Policy, advance notification was sent to surrounding property owners and affected Community Leagues on August 21, 2012, advising them of the application to create the Cavanagh NASP and encouraging them to contact either the Sustainable Development Department or the applicant (*a private consultant*) to communicate any possible concerns.

As part of the planning process, a public meeting was held by the City of Edmonton’s Sustainable Development Department on April 25<sup>th</sup>, 2013 at the Ellerslie Rugby Club. Mailed notification letters were sent to landowners in proximity to the NASP area advising of this meeting. The meeting was also advertised in the Edmonton Examiner on April 17<sup>th</sup>, 2013. At the meeting, landowners had an opportunity to review and comment on the NASP. Landowners have also be notified of the Public Hearing and given the opportunity to provide either written or verbal comments to Council.

### 3. Land Use, Transportation, and Servicing

#### 3.1 - Vision

Cavanagh is a comprehensively planned residential community taking advantage of the topography, natural environmental features, existing/planned transportation facilities and other locational attributes.

#### 3.2 - Goals and Objectives

The Cavanagh NASP was prepared in accordance with the policies and principles in The Way We Grow, the Heritage Valley Servicing Concept Design Brief (SCDB) and other relevant provincial, municipal and statutory documents (see **Appendix 1**). The overall goals of the Cavanagh Plan are to establish a neighbourhood that:

- ❖ Provides a framework to deliver a high quality, comprehensively planned neighbourhood by defining the general land use program, linkages, servicing concepts and development staging;
- ❖ Combines land use decisions with sustainable development and urban design principles;
- ❖ Promotes connectivity within the community and encourages a pedestrian oriented environment;
- ❖ Provides a balanced transportation system that maximizes transit access and connects major inter-and intra-neighbourhood focal points;
- ❖ To accommodate existing uses (i.e. other properties and existing residences) within the plan area to ensure compatibility with planned uses;
- ❖ Provides efficient, orderly, contiguous and staged infrastructure and urban development; and,
- ❖ Maintains a high regard for the Blackmud Creek ravine.

The following plan objectives were developed to assist in achieving the above noted goals:

#### Green Development

- 1) Consider sustainable development principles in the planning and design of the Cavanagh NASP.
- 2) Encourage naturalized landscaping on public and private lands.

Bylaw 16617  
December 9, 2013

#### Urban Design

- 3) Promote high quality urban design that supports innovative building design.
- 4) Design streets that are pedestrian friendly, safe, and form an integral and attractive component of the public realm.
- 5) Ensure neighbourhood infrastructure and design elements address year round weather conditions.
- 6) Develop low density residential uses in the form of single/semi-detached housing, limited row housing, and medium density residential uses in the form of row housing and low-rise/medium density housing to a high urban design standard.
- 7) Create identifiable focal points that are integrated with the open space system of the neighbourhood.
- 8) Develop park spaces and stormwater management facilities that are visually and physically accessible, well connected and aesthetically pleasing.

#### Ecology

- 9) Establish an Urban Development Line, based upon geotechnical recommendations and current City Policy, to ensure enjoyment, preservation and protection of the North Saskatchewan River Valley and Ravine System.
- 10) Strengthen Edmonton's ecological network.

#### Environment

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- 11) Ensure that the environmental status of the lands within Cavanagh is suitable for development and that Environmental Site Assessments (ESAs) are complete and up-to-date at the time of rezoning.
- 12) Preserve and protect the Blackmud Creek and ravine through the use of environmental reserves.
- 13) Integrate the Blackmud Creek and ravine with urban development by providing a connection to the walkway and open space system in conformance with the North Saskatchewan River Valley Bylaw and other applicable City policies.
- 14) Minimize Oil and Gas well sites potential environmental hazards and disruption of future residential areas through careful neighbourhood design in conformance with municipal standards.
- 15) Ensure development is appropriately integrated with abandoned well sites and adheres to ERCB and City of Edmonton Policies.

#### Historical Resources

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- 16) Ensure that historical, archaeological and paleontological resources are identified and conserved, where applicable.

#### Residential

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- 17) Provide a variety of housing typologies that cater to a range of income, demographic and household types.
- 18) Ensure a compact urban form that uses land responsibly and efficiently.
- 19) Establish an overall residential density that meets or exceeds the density targets established by the Capital Region Growth Plan and Suburban Housing Mix Guidelines.
- 20) Locate Low-Rise/Medium Density Housing development to facilitate access to collector roadways, public transit and/or in proximity to park spaces.
- 21) Establish affordable housing opportunities in Cavanagh.

#### Commercial

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- 22) Provide neighbourhood commercial opportunities to satisfy the needs of residents and provide local employment opportunities within the neighbourhood.
- 23) Ensure that commercial developments form an attractive and vibrant destination.

#### School, Parks and Open Space

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- 24) Accommodate City of Edmonton requirements for park sites within the neighbourhood.
- 25) Locate park spaces within the neighbourhood to ensure accessibility via pedestrian linkages and automobiles.
- 26) Design a connected and integrated open space system that encourages active transportation.
- 27) Provide school/park sites that are accessible and appropriately serviced for program requirements.

## Transportation

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- 28) Provide an efficient, safe and logical transportation system within the NASP area to address pedestrian, bicycle, and vehicular transportation and public transit demands of the residents.
- 29) Promote connectivity and pedestrian access to amenity areas such as parks, natural area, open spaces, and institutional uses by providing an alternative circulation system.
- 30) Provide opportunity for roadways to be developed with innovative and/or alternative standards.
- 31) Maximize transit access to the greatest number of residents in accordance with City of Edmonton Transit System Guidelines and demands.
- 32) Create adequate locations for neighbourhood access.
- 33) Ensure that maximum length of cul-de-sacs in residential settings do not compromise City emergency access.
- 34) Provide noise attenuation where residential uses back onto major transportation corridors (i.e. Queen Elizabeth II Highway), which have been designated or will be designated as truck routes.
- 35) Ensure that the cost of arterial roadways is shared throughout the Heritage Valley catchment area.

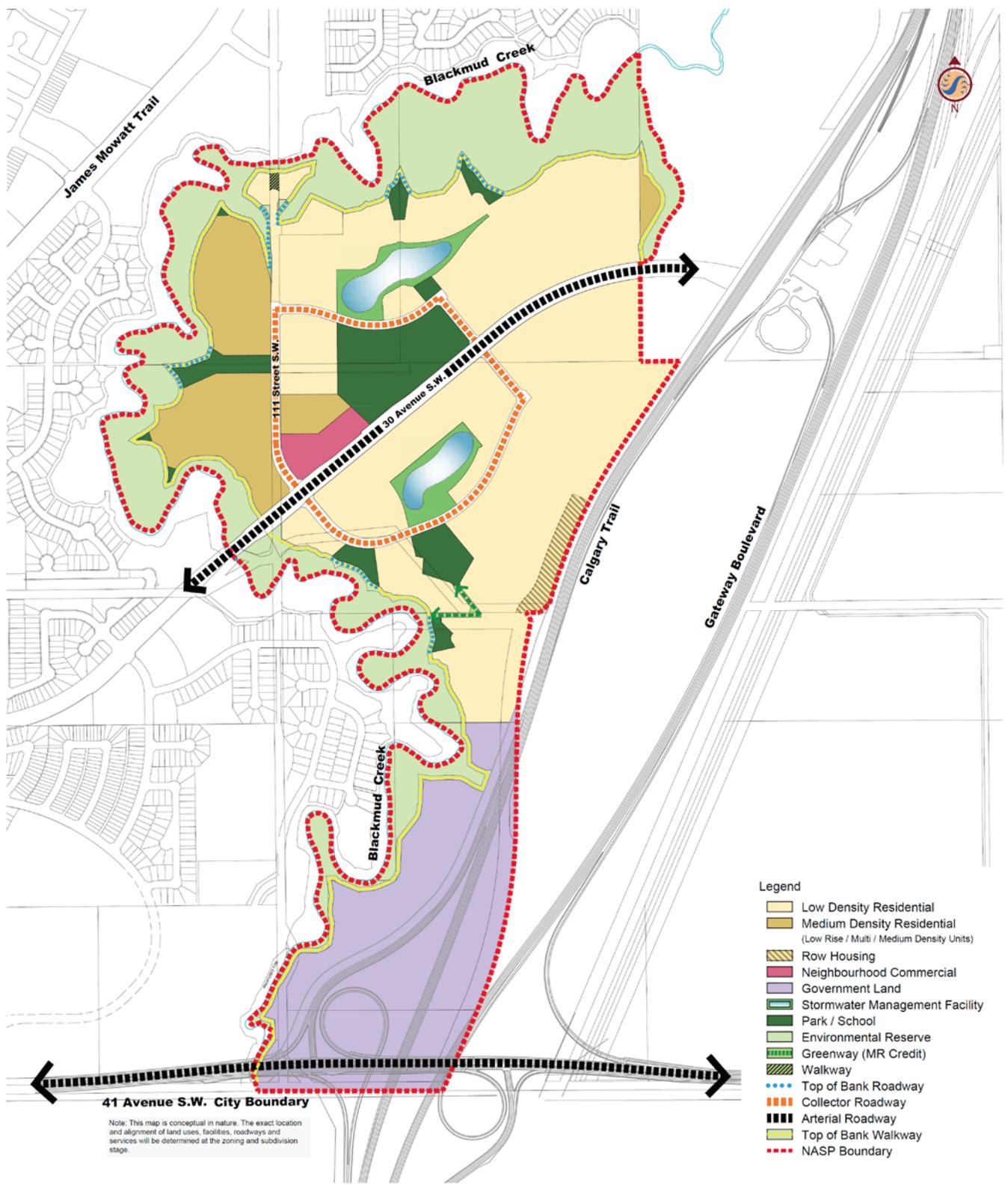
## Infrastructure

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- 36) Ensure that Cavanagh is serviced to a full urban standard in an efficient and contiguous manner.

# Land Use Concept

# Figure 7



## Cavanagh Neighbourhood

Figure 7 - Land Use Concept

Table 4 – Land Use and Population Statistics (As amended by Bylaw 18500, September 5, 2018)

**CAVANAGH NEIGHBOURHOOD STRUCTURE PLAN  
LAND USE AND POPULATION STATISTICS  
BYLAW 18500**

	Area (ha)	% of GA
<b>GROSS AREA</b>	<b>147.44</b>	<b>100.0%</b>
Environmental Reserve		
Blackmud Creek	24.46	
Public Upland Area (ER*)	5.37	
Arterial Road Right-of-Way	4.24	
Provincial / City of Edmonton Lands	26.09	
<b>Subtotal</b>	<b>60.16</b>	
<b>GROSS DEVELOPABLE AREA</b>	<b>87.28</b>	
Parks and Open Space**	8.24	9.4%
School (S K-6)	4.44	
Pocket Parks	3.00	
Greenways	0.23	
Top of Bank Parks	0.57	
Neighbourhood Commercial	1.44	1.6%
Transportation		
Circulation	13.09	15.0%
Infrastructure / Servicing		
Stormwater Management Facilities	5.06	5.8%
<b>TOTAL Non-Residential Area</b>	<b>27.83</b>	<b>31.9%</b>
<b>Net Residential Area (NRA)</b>	<b>59.45</b>	<b>68.1%</b>

**RESIDENTIAL LAND USE AREA, UNIT & POPULATION COUNT**

Land Use	Area (ha)	Units/ ha	Units	People / Unit	Population	% of NRA
<b>Low Density Residential (LDR)</b>						
Single/ Semi-Detached	47.04	25	1,176	2.8	3,293	79.1%
<b>Medium Density Residential (MDR)</b>						
Row Housing	1.22	45	55	2.8	154	2.1%
Low Rise/Medium Density Housing	11.19	90	1007	1.8	1,813	18.8%
<b>TOTAL Residential</b>	<b>59.45</b>		<b>2,238</b>		<b>5,260</b>	<b>100.0%</b>

**Sustainable Measures**

Population Density (ppnha) = 88.5

Unit Density (upnha) = 37.6

Low Density / Medium Density Unit Ratio = 54% / 46%

Population (%) within 500m of Parkland =100%

Population (%) within 400m of Transit Service = 99%

Population (%) within 600m of Commercial Service = 96%

**Presence/ Loss of Natural Area features = All existing natural features are retained.**

Protected as Environmental Reserve (ha)= 29.83

Conserved as Naturalized Municipal Reserve (ha) = N/A

Protected through other means (ha) = N/A

Lost to Development (ha) = N/A

**STUDENT GENERATION COUNT**

<b>Public School Board</b>		<b>349</b>
Elementary School	175	
Junior High	87	
Senior High	87	
<b>Separate School Board</b>		<b>175</b>
Elementary School	87	
Junior High	44	
Senior High	44	
<b>Total Student Population</b>		<b>524</b>

\*As per TOB Policy C542, the area between the TOB roadway and the Urban Development Line shall be deducted from the gross area. Exact areas will be confirmed at the time of subdivision and through legal survey.

\*\*Areas dedicated as Municipal Reserve to be confirmed by legal survey.

### 3.2.1 - Green Development

*One of the goals of this NASP is the promotion of green building techniques, the preservation of natural ecological features and their integration into the neighbourhood.*

Objective 1	NASP Policy	Implementation
Consider sustainable development principles in the planning and design of the Cavanagh NASP.	The City shall encourage opportunities for innovative design, techniques and technologies that support ecological processes, cost effectiveness and environmental stewardship in the development of the neighbourhood	Where appropriate, the neighbourhood should incorporate alternative development standards such as energy efficient lighting and alternative road construction standards. Alternative development standards shall be reviewed at the subdivision and detailed design stages.
<p><b>Rationale:</b></p> <p>The use of alternative development standards will be addressed within the design of the neighbourhood at the subdivision and site specific building level. This plan encourages consultations with the City and applicable agencies to explore the use of alternative development standards (i.e. consideration for alternative design and servicing techniques or roadway cross sections that differs from the City of Edmonton standards) as a way of achieving sustainability.</p>		

Objective 2	NASP Policy	Implementation
Encourage naturalized landscaping on public and private lands.	Landscaping of parks and open spaces should incorporate native and adapted plant species where appropriate.	<p>Develop parks and open space areas using native and adapted plant species.</p> <p>Specific species for landscaping on public properties shall be determined between the developer and City Administration at the time of review of landscaping plans and as part of the engineering drawing review.</p>
<p><b>Rationale:</b></p> <p>The use of native plant species generally requires less irrigation and maintenance than non-native species, which serves to minimize costs associated with development and maintenance. Naturalized landscaping within open spaces provides opportunities to create wildlife habitat and strengthens the ecological network within the neighbourhood. Non-native species, on the other hand, require more maintenance and weaken an ecosystem's biodiversity and ecological network.</p>		

Objective 3 deleted by Bylaw 16617, December 9, 2013.

### Technical Summary

No specific technical requirements are identified.

#### 3.2.2 - Urban Design

*Cavanagh NASP incorporates relevant principles of urban design to establish an appealing, pedestrian friendly and sustainable community in support of the NASP Vision.*

Objective 3	NASP Policy	Implementation
<p>Promote high quality urban design that supports innovative building design.</p>	<p>i) Where appropriate, locate and orient buildings such that they define and reinforce public places such as parks and amenity areas.</p> <p>(ii) In appropriate areas, provide reduced setbacks, street orientation, and active frontages for buildings along collector roadways to create a pedestrian friendly built form.</p>	<p>i) &amp; ii) Building orientation, design, and architecture will be determined at the zoning or development permit stage.</p>
<p><b>Rationale:</b></p> <p>Building design enables the urban form to take on a unique identity and character, and to foster a sense of place and belonging. Cavanagh will be comprised of several pedestrian-friendly streetscapes and public spaces. The built form surrounding these spaces are encouraged to be architecturally enhanced and incorporate innovative design practices.</p>		

Objective 4	NASP Policy	Implementation
<p>Design streets that are pedestrian friendly, safe, and form an integral and attractive component of the public realm.</p>	<p>i) Streetscape design should consider symmetry, variety, massing and opportunities for innovative site design.</p> <p>ii) Appropriate landscaping such as boulevard trees should be provided along the primary pedestrian linkage system (i.e. arterial or collector roads).</p>	<p>i) Details regarding the specific type and location of residential uses and roadway cross sections shall be determined at the rezoning, subdivision or detailed design stages where consideration for these elements shall be given.</p> <p>ii) The design of roadways, including provision of landscaping (i.e. boulevard trees) and sidewalks shall be implemented at the detailed design stage of development, to the satisfaction of the City of Edmonton.</p>
<p><b>Rationale:</b></p> <p>Designing attractive residential streetscapes by using similar or compatible housing forms and zoning designation</p>		

provides a comfortable physical environment. At the subdivision stage, the function of the roadway will dictate the appropriate cross sections to be used. To ensure comfortable pedestrian movement and safety, sidewalks should be separated from carriageways by treed boulevards.

Objective 5	NASP Policy	Implementation
<p>Ensure neighbourhood infrastructure and design elements address year round weather conditions.</p>	<p>i) Ensure the neighbourhood is designed to accommodate infrastructure programming requirements in the public realm including snow clearing and landscaping requirements.</p> <p>ii) Design streetscapes to take into account opportunities to capture sunlight and reduce northern winds.</p>	<p>i) Boulevards shall be used to accommodate snow removal and year round service vehicles.</p> <p>Alternative development standards shall meet infrastructure programming needs for all seasons and are to be reviewed at the engineering drawing stage.</p> <p>ii ) Higher density residential and commercial sites will be designed considering building orientation and variations in façade treatment to reduce sun shadowing and prevent wind tunnelling at the design stage.</p>

**Rationale:**

Neighbourhood design of streets and buildings accommodate winter climates providing a comfortable physical environment for people to enjoy the outdoors throughout all four seasons. At the subdivision and detailed design stages, orientation of the roadway and function of the boulevards will dictate the appropriate cross sections to be used. To ensure comfortable pedestrian movement and safety, sidewalks should be separated from carriageways by treed boulevards to allow for snow storage and buildings should be oriented to capture sunlight and reduce wind tunnelling.

Objective 6	NASP Policy	Implementation
<p>Develop low density residential uses in the form of single/semi-detached housing, and medium density residential uses in the form of row housing and low-rise/medium density housing to a high urban design standard.</p>	<p>Low Density (single/semi-detached) and Medium Density (row housing and low-rise/medium density housing) residential uses shall be appropriately designed to ensure uniformity in built form, unit siting, use of architectural elements and transitioning.</p>	<p>i) &amp; ii) Low and Medium Density Residential development shall be implemented through the appropriate sections of the Zoning Bylaw.</p> <p>iii) The developer/landowner shall implement specific architectural controls to be adhered at the time of rezoning and/or development permit stages.</p>

**Rationale:**

The character of the neighbourhood will be enhanced through regulation of the built form by means of

architectural controls.

The neighbourhood will promote the mixing of low density residential (single/semi-detached) land uses along the majority of the roadways in the neighbourhood to create a unique streetscape. Due to the compact nature of the neighbourhood, low-rise/medium density housing and row housing will be developed in close proximity to single/semi-detached uses. Details pertaining to urban design, and land use transitioning and interface shall be dealt with at the zoning and/or development permit stages.

Objective 7	NASP Policy	Implementation
<p>Create identifiable focal points that are integrated with the open space system of the neighbourhood.</p>	<p>i) Focal points may include schools, parks, commercial areas and stormwater management facilities.</p> <p>ii) Focal points shall function as amenity space for residents and should be comprised of one or a combination of the following elements: public art, seating area, plaza, street furniture, gazebo, fountain/water feature or other architectural elements.</p> <p>iii) Convenient, safe and efficient pedestrian connections for the neighbourhood into and through open spaces and focal points shall be provided.</p>	<p>i) <b>Figure 9 – Pedestrian Network</b> illustrates the connectivity of key neighbourhood focal points.</p> <p>ii) Details regarding the provision and placement of architectural elements within focal points shall be determined at the detailed design stage of development.</p> <p>iii) Details regarding the placement of pedestrian connections/crossings shall be determined at the subdivision approval and/or development permit stages.</p>

**Rationale:**

Neighbourhood focal points create community destinations within the neighbourhood. Through creative design and site planning these focal points can become active neighbourhood places which are alive and establish an identity for the community. Neighbourhood focal points include the Blackmud Creek ravine, commercial centre, pocket parks and stormwater management facilities. These serve as key amenity spaces for local residents and add to the attractiveness, character and image of the neighbourhood.

The location of the stormwater management facilities have been determined based upon topography (e.g. low elevations) and with regards to ensuring an adequate area for stormwater and utility functions. The park spaces have been located to be easily accessed and utilized by residents. The stormwater management facilities and parks are generally connected via shared-use paths and sidewalks.

Objective 8	NASP Policy	Implementation
<p>Develop park spaces and stormwater management facilities that are visually and physically accessible and aesthetically pleasing.</p>	<p>i) The stormwater management facilities (SWMF) shall be designed using Crime Prevention Through Environmental Design principles, accessible through public lands, and</p>	<p>i) The location and configuration of the SWMF's and parks are conceptually illustrated in <b>Figure 7 – Land Use Concept</b> and may be refined prior to zoning.</p>

	<p>not land –locked by private development.</p> <p>ii) Guided by Edmonton’s Urban Parks Management Plan, the design of parks and open space shall provide adequate access, safety, and programmability</p> <p>iii) The SWMF’s should be designed as a constructed wetland providing habitat opportunities for wildlife and improve water quality.</p> <p>iv) Emergency access to the SWMF’s shall be provided.</p>	<p>ii) The Subdivision Authority shall have regard for the provision of lands dedicated for parks and SWMF’s.</p> <p>iii) Landscaping of the SWMF’s shall be determined between the Developer and City Administration at the time of engineering drawing review as part of the subdivision process.</p> <p>iv) The location of the emergency access to the SWMF’s shall be determined at the subdivision approval stage.</p>
<p><b>Rationale:</b></p> <p>The location, configuration and design of the SWMF’s and parks have been integrated into the overall pedestrian network and to provide vistas from the abutting roadways. This will promote them as walking destinations and enhance their surveillance to prevent crime. The SWMF’s and parks will be designed to serve as a destination for pedestrians and cyclists and to provide passive recreational opportunities.</p>		

*Technical Summary*

No technical study requirements are identified.

3.2.3 - Ecology

The Cavanagh NASP ensures that the Blackmud Creek ravine is preserved and protected through the establishment of an Urban Development Line (UDL) demarcating the boundary between the developable upland area (urban development) and non-developable area (Environmental Reserve). *The City’s Top of Bank Policy (Policy C542) states that a minimum of 30% of the urban development line shall be either Top-of-Bank walkway or land used for municipal purposes. However, the development pattern and site limitations in the northeast corner of the plan area result in an approximate Top-of-Bank roadway for the entire NASP of 23%. A 10 m wide top of bank walkway is required in this area at the subdivision stage, to extend public access along the western edge of the ravine. [Deleted].*

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Objective 9	NASP Policy	Implementation
<p>Establish an Urban Development Line, based upon geotechnical recommendations and current City Policy, to ensure enjoyment, preservation and protection of the North Saskatchewan River Valley and Ravine System.</p>	<p>i) The Urban Development Line (UDL) shall separate developable from non-developable areas to preserve and protect the North Saskatchewan River Valley and Ravine System, ensuring that urban development is reasonably safe from environmental hazard and risk, and that public access, visual</p>	<p>i) Geotechnical reports and slope stability analysis have been submitted for the participating landowners properties demarcating the Urban Development Line.</p> <p>ii) Lands that meet the criteria for Environmental Reserve (ER) under Section 664(1) of the MGA shall be dedicated to the City of Edmonton</p>

	<p>amenities and recreational opportunities are maximized.</p> <p>ii) Lands below the Urban Development Line shall be protected from urban development.</p> <p>iii) A minimum setback of 10m, or the setback recommendations of the geotechnical and slope stability analysis – whichever is greater – shall be provided between the top-of-bank and the Urban Development Line. This area shall provide for public access circulation, and civic purposes including geotechnical monitoring and repair, firefighting, emergency access and public safety.</p> <p>iv) A restrictive covenant shall be registered on all properties abutting the Urban Development Line.</p>	<p>at the time of subdivision.</p> <p>iii) The Urban Development Line shall be demarcated at the time of subdivision.</p> <p>iv) The Subdivision Authority shall ensure all subdivisions abutting the Urban Development Line provide restrictive covenants.</p>
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**Rationale:**

The North Saskatchewan River Valley and Ravine System comprises an important ecological system within the Cavanagh NASP and the Heritage Valley SCDB. The Blackmud Creek Ravine shall be protected and preserved as per the MGA, MDP, Top-of-Bank Policy C542, other strategic policies and guidelines.

The top of bank (TOB) and Urban Development Line (UDL) have been established through site visits with participating landowners and city staff, pursuant to geo-technical and slope-stability analysis, and the requirements of Policy C542. A determination of TOB and UDL for non-participating landowners will be required prior to rezoning and subdivision.

A minimum 10 m Public Upland Area has been provided in all instances along the entire length of the TOB, between the TOB and UDL, except where a greater setback is warranted based upon geotechnical considerations. Lands deemed to be designated as Environmental Reserve shall be determined at the time of subdivision.

*The City's Top of Bank Policy (Policy C542) states that a minimum of 30% of the urban development line shall be either Top-of-Bank walkway or land used for municipal purposes. However, the development pattern and site limitations in the northeast corner of the plan area result in an approximate Top-of-Bank roadway for the entire NASP of 23%. A 10 m wide top of bank walkway is required in this area at the subdivision stage, to extend public access along the western edge of the ravine. [Deleted]. This access is provided for circulation and amenity purposes, connection to the park system within the River Valley and Ravine System, slope repair and geotechnical monitoring, firefighting, emergency and public safety, drainage control and for dealing with encroachment issues.*

A restrictive covenant will be required as a condition of subdivision approval for all properties on or abutting the Urban Development Line. Legal, surveyed demarcation of the UDL will be undertaken prior to or concurrent with subdivision and development approval.

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Objective 10	NASP Policy	Implementation
Strengthen Edmonton’s ecological network.	<ul style="list-style-type: none"> <li>i) The Cavanagh NASP shall integrate and link land use components (i.e. Blackmud Creek Ravine, SWMF’s, Pocket Parks and walkways) to encourage ecological connectivity and opportunities to create additional habitat.</li> <li>ii) Plantings of native species should be utilized to add to the habitat value of the green network within the neighbourhood.</li> <li>iii) A Wetland Assessment shall be completed for each titled area within the NASP.</li> <li>iv) Where possible explore opportunities for the retention of wetlands through a variety of mechanisms including retention, compensation or incorporation with SWMFs.</li> </ul>	<ul style="list-style-type: none"> <li>i) <b>Figure 7 – Land Use Concept</b> guides the development of the NASP.</li> <li>ii) Relevant City of Edmonton conservation planning and policy shall be adhered to (e.g. Policy C531).</li> <li>iii) Wetland Assessments will identify any potential wetlands, determine the required regulatory approvals, and potential sustainability of wetlands with future development. A Wetland Assessment is required for each titled area prior to the rezoning approval.</li> <li>iv) Existing wetlands are identified on Figure 5 - Site Features. Compensation opportunities for Class III, IV, and V wetlands shall be explored at the subdivision stage.</li> </ul>
<p><b>Rationale:</b></p> <p>The function and integrity of the ecological network in the Cavanagh NASP is limited. The plan area is primarily agricultural land and the only ecological component identified by the City of Edmonton Ecological Network map is the Blackmud Creek Ravine</p> <p>Developing a new network with plantings of native and/or semi-native species is a preferable approach to create connectivity and habitat value within the NASP area and between ecological network components located within and outside the NASP boundaries. From an ecological perspective, the NASP concept includes the following components: Blackmud Creek Ravine, stormwater management facilities, pocket parks and walkways.</p>		

*Technical Summary*

An Ecological Network Report (ENR) was prepared for Cavanagh NASP and submitted under separate cover in support of the NASP. The ENR identifies natural features and provides an assessment of the existing ecological network as well as provides recommendations on how to conserve and protect the natural area.

A Wetland Assessment was prepared on behalf of the participating landowners. The Wetland Assessment identifies any potential wetlands, determines potential sustainability of wetlands in the context of future development, and outlines required regulatory approvals.

### 3.2.4 - Environment

*In order to ensure that the lands within the Cavanagh NASP area are suitable for development, the environmental status of the land must be evaluated. The City requires that Phase I Environmental Site Assessments (ESA) be submitted, reviewed, and endorsed prior to the rezoning stage of development.*

Objective 11	NASP Policy	Implementation
<p>Ensure that the environmental status of the lands within the Cavanagh is suitable for development and that Environmental Site Assessments (ESAs) are complete and up-to-date at the time of rezoning.</p>	<p>i) Determine the likelihood, types, and location of environmental concerns that may be present on the lands prior to rezoning.</p> <p>ii) Phase I ESA reports older than 1 year from the date of rezoning application shall be updated, and any Phase I ESA report older than 5 years from the date of rezoning application shall be redone.</p> <p>iii) Where necessary, contaminated material shall be removed and disposed of in an environmentally sensitive manner, in accordance with Federal, Provincial, and Municipal regulations.</p>	<p>i) &amp; ii) ESAs and any follow-up shall receive sign-off by City administration prior to the rezoning stage of development.</p> <p>iii) Site remediation, where necessary, shall be conducted prior to rezoning. An environmental site assessment report verifying the remediation shall be submitted for approval by City administration prior to rezoning of the subject lands.</p>
<p><b>Rationale:</b></p> <p>Lands within the Cavanagh NASP will be suitable for development and their environmental status confirmed prior to rezoning. Those lands identified as contaminated must undergo remediation according to Federal, Provincial, and Municipal standards.</p>		

Objective 12	NASP Policy	Implementation
<p>Preserve and protect the Blackmud Creek and ravine through the use of environmental reserves.</p>	<p>i) Lands below the Blackmud Creek top-of-bank shall be dedicated as Environmental Reserve.</p> <p>ii) Should the Provincially owned lands become available for development, a geotechnical/slope stability assessment, top-of-bank walk, and an amendment to the Cavanagh NASP shall be required.</p>	<p><b>Figure 7 – Land Use Concept</b> outlines the area allocated for environmental reserve (Blackmud Creek ravine) in the plan area. In accordance with City Policy C542, land dedicated at the subdivision stage as environmental reserve includes all land between Blackmud Creek and the urban development line, established by a geotechnical slope stability analysis and top-of-bank walk with City administration.</p>

**Rationale:**

The Cavanagh NASP plans to highlight and preserve the ecological and recreational elements of the Blackmud Creek and its ravine by implementing appropriate development setbacks and providing access and/or viewpoints to this natural feature.

<b>Objective 13</b>	<b>NASP Policy</b>	<b>Implementation</b>
Integrate Blackmud Creek and ravine with urban development by providing a connection to the walkway and open space system in conformance with the North Saskatchewan River Valley Bylaw and other applicable City policies.	<p>i) The top-of-bank walkway shall be integrated into the pedestrian circulation network to provide connection to trails, recreational amenities, transit stops and focal points.</p> <p>ii) A public upland setback shall be provided between the top-of-bank and urban development line to allow for a top-of-bank walkway.</p>	<p>i) <b>Figure 7 – Land Use Concept</b> and <b>Figure 9 – Pedestrian Network</b> conceptually guide the location of the neighbourhood connections, which connect residents to the Blackmud Creek ravine. Exact locations and detailed design will be finalized at the subdivision and engineering drawing stages. The Top-of-bank walkway and emergency access connections to the roadway network shall be provided in accordance with the Top-of-Bank Policy.</p> <p>ii) Minimum requirements for public upland setbacks shall be determined in accordance with City Policy C542, at the subdivision stage.</p>

**Rationale:**

Cavanagh has a comprehensive pedestrian and shared use circulation system. The active transportation opportunities are further enhanced by the advantageous location to the Blackmud Creek ravine and the associated top-of-bank walkway.

<b>Objective 14</b>	<b>NASP Policy</b>	<b>Implementation</b>
Minimize Oil and Gas well sites potential environmental hazards and disruption of future residential areas through careful neighbourhood design.	<p>i) Urban development shall maintain the minimum ERCB setback from active and suspended wells. This setback shall be applied from the property line of the proposed development to the well-head.</p> <p>ii) Where development occurs in proximity to operating oil and gas facilities, subdivision design shall accommodate the continued transport and maintenance needs of</p>	<p>i) &amp; ii) <b>Figure 5 – Site Features</b> illustrates the approximate locations of existing facilities, which will be confirmed prior to the rezoning and subdivision approval.</p> <p>Applications involving oil and gas facilities shall adhere to all relevant requirements of the ERCB, City Policy C515 –Oil and Gas Facilities, Abandoned Well Sites and “Policy Guidelines for the Integration of</p>

	<p>the oil and gas company while minimizing the impact on adjacent development. This will include the provision for temporary emergency access, while oil and gas wells are still operating within the neighbourhood.</p> <p>iii) Abandoned well areas should only assume land uses that will allow for immediate maintenance should the well ever require servicing. Parks or roadways (i.e. more open areas) are preferred designations that allow for the maximum movement of repair equipment on the abandoned well site.</p> <p>iv) A temporary identification marker should be placed as precisely as possible on the abandoned well site to prevent damage both to the well site and to the construction or excavation equipment.</p>	<p>Resource Operations and Urban Development” (1985). Setback requirements shall be confirmed at time of subdivision approval.</p> <p>iii) <b>Figure 5.0 – Site Features</b> illustrates the location of abandoned well sites. <b>Figure 7.0 - Land Use Concept</b> illustrates land designations. Consideration for appropriate land uses shall be determined at time of rezoning.</p> <p>iv) Appropriate temporary identification markers shall be placed on site prior to rezoning approval.</p>
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**Rationale:**

Policies relating to existing and abandoned oil and gas uses will ensure conscientious residential development around oil and gas well sites and pipelines at all stages of the plan implementation and construction process while minimizing potential disturbances to the area’s future residents. Urban development in the vicinity of all resource well sites will be planned in accordance with the City policy document entitled “Policy Guidelines for the Integration of Resource Operations and Urban Development” (1985) and Policy C515 “Oil and Gas Facilities” (2007) and other relevant City procedures. Development of lands involving abandoned wells shall comply with ERCB guidelines for development around abandoned wells. An assessment of risk and nuisance will be conducted on operating or suspended oil and gas wells, as directed by existing or future City policy for the integration of oil prior to any rezoning of the parcel where the facility is located.

<b>Objective 15</b>	<b>NASP Policy</b>	<b>Implementation</b>
<p>Ensure development is appropriately integrated with abandoned well sites and adheres to ERCB and City policies.</p>	<p>i) Development shall adhere to the requirements and setbacks of the ERCB regulations and City of Edmonton policies for oil and gas facilities and abandoned well sites.</p> <p>ii) Identify, assess, and remediate</p>	<p>i) Setback requirements shall be designed to comply with relevant requirements of the ERCB regulations and City of Edmonton policies and will be confirmed at time of subdivision approval.</p>

	any contamination to acceptable levels prior to development.	<p>Subdivision planning must adhere to all relevant ERCB and City of Edmonton regulations, including Policy C515.</p> <p>ii) All parcels of land shall provide a Phase I Environmental Site Assessment and/or Update to be reviewed and signed off, prior to rezoning. It will include a comprehensive report detailing assessment of: site information, information obtained from online databases, and site visit.</p>
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**Rationale:**

There is one abandoned well site identified in the north central portion of the plan area. Policies relating to existing and abandoned oil and gas facilities will ensure conscientious residential development around oil and gas well site and abandoned pipelines at all stages of the plan implementation and construction process while minimizing potential disturbances to the area’s future residents. Urban development in the vicinity of all resource well sites will be planned in accordance with City policies and procedures. Development of lands involving abandoned wells shall comply with ERCB guidelines for development around abandoned wells. An assessment of risk and nuisance will be conducted on operating or suspended oil and gas wells, as directed by City policy prior to any rezoning of the parcel where the facility is located.

<b>Objective 16</b>	<b>NASP Policy</b>	<b>Implementation</b>
Ensure that development respects the ongoing operation and integrity of existing pipeline infrastructure.	<p>i) Integrate the existing pipelines into the NASP to make use of potential shared-use paths and pedestrian linkages while having regard for the safe, ongoing operation of these facilities.</p> <p>ii) Pipeline rights-of-way located on or across lands dedicated for parks shall not be given Municipal Reserve credit.</p>	<p>i) <b>Figure 5 – Site Features</b> illustrates the location of the pipelines.</p> <p>The Subdivision Authority shall have regard for lots and site design ensuring that appropriate setback distance between pipelines and residential uses.</p> <p>ii) The Subdivision Authority shall determine the reserves owing for areas to be dedicated as Municipal Reserve (MR) and will be confirmed by legal survey at the time of subdivision. Existing utility rights-of-way shall be abandoned and relocated before being considered for MR at the subdivision stage.</p>

**Rationale:**

**Figure 5 – Site Features** illustrates the location of existing gas/utility rights-of-way. There are two gas lines ROW located within the plan area. These gas lines will be ultimately abandoned and relocated within the public roadway

network at the time of development. Development abutting the pipelines shall be implemented according to the Edmonton Zoning Bylaw with respect to setbacks to ensure the integrity of the pipelines and safety of the public.

*Technical Summary*

Phase I Environmental Site Assessments have been completed for the participating landowners in support of the Cavanagh NASP. The Phase I ESA’s confirm that the majority of the lands are free of contamination and therefore suitable for development (see **Table 2 – Environmental Site Assessments** and **Figure 6 – Environmental Site Assessment**. Follow-up items identified within the respective ESA shall be addressed prior to the rezoning of the subject areas, as per the implementation strategy.

3.2.5 - Historical Resources

*Pursuant to Section 31 of the Historical Resources Act, development proponents and/or their representatives are required to report the discovery of any archaeological, historic period or paleontological resources, which may be encountered during construction.*

Objective 17	NASP Policy	Implementation
<p>Ensure that historical, archaeological and paleontological resources are identified and conserved, where applicable.</p>	<p>Participating landowners within the plan area shall submit a Statement of Justification (SoJ) for <i>Historical Resources Act</i> Requirements (formerly Historical Resources Overview) and, if necessary, a Historical Resources Impact Assessment (HRIA).</p>	<p><b>Table 3 – Historical Resources Overview</b> confirms that a SoJ has been completed for the participating landowners within the plan area and submitted to Alberta Culture and Community Spirit (ACCS).</p> <p>Where required, Historical Resources Impact Assessments (HRIA) shall be submitted prior to rezoning approval.</p> <p>Those lands which have not received clearance on SOJ studies shall be required to submit and receive sign off prior to rezoning.</p>
<p><b>Rationale:</b></p> <p>According to the Statement of Justification for <i>Historical Resources Act</i> requirements there is a moderate to high potential for discovery of archaeological, paleontological, or historical resources or structures within the lands along the Blackmud Creek Ravine.</p> <p>Prior to the initiation of any land surface disturbance activities, HRIA reports must be submitted and approved by ACCS for the four parcels identified. Those lands which have not completed a Statement of Justification for <i>Historical Resources Act</i> Requirements must submit documentation to ACCS prior to initiating development.</p>		

*Technical Summary*

A Statement of Justification (SoJ) and HRIA for *Historical Resources Act* Requirements were submitted to Alberta Culture and Community Spirit (ACCS) in support of the Cavanagh NASP. Per Section 31 of the *Historical Resources*

Act, development proponents and/or their representatives are required to report any archaeological, historic or paleontological resources encountered during construction and cease all work.

### 3.2.6 - Residential

Approximately 60.0 hectares of the Plan area is designated for residential land uses. The specific land uses will be determined on the basis of market conditions and consumer preferences at the time of zoning approval and are identified on **Figure 7 – Land Use Concept**. The area, number of dwelling units, and population attributed to each form of residential development is shown in **Table 4 – Land Use and Population Statistics**.

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**Low Density Residential (Single/Semi-detached housing and limited Row Housing)** shall be developed at a density of 25 units/ha.

**Medium Density Residential (Row Housing and Low-Rise/Medium Density Housing)** shall be developed at a maximum height of 4 storeys, and with densities ranging from 45 units/ha to 90 units/ha. Residential uses anticipated would be row housing, stacked row housing or low rise apartments consistent with the applicable zones available in the City of Edmonton Zoning Bylaw.

Objective 18	NASP Policy	Implementation
<p>Provide a variety of housing typologies that cater to a range of income, demographic and household types.</p>	<p>i) A mixture of residential dwelling types including single/semi-detached, row housing and low-rise/medium density housing shall be provided, allowing consumer choice, and a range of affordability options.</p> <p>ii) Low density residential areas shall provide opportunity for a mixture of single or semi-detached housing, and street-oriented row housing along individual block faces and/or from block face to block face.</p> <p>iii) The NASP shall allow for more intensive and/or innovative forms of low and/or medium density residential housing.</p>	<p>i) <b>Figure 7 – Land Use Concept</b> illustrates the general location of residential land use designations.</p> <p>ii) Low Density Residential development shall be implemented through the applicable section(s) of the Zoning Bylaw.</p> <p>iii) The City of Edmonton Zoning Bylaw provides for a range of densities and housing forms that shall be applied at the rezoning stage. Innovative or site specific development may be developed by use of Direct Development Control Provision (DC1 or DC2).</p>
<p><b>Rationale:</b></p> <p>Providing a variety of housing types promotes the creation of a well-balanced neighbourhood, one which can accommodate a range of income groups and market segments, various types and sizes of households and also allows families to remain within the same community throughout their life-cycle. The ability to mix housing forms along a block face will create visual interest, variety and market appeal, while discouraging monotonous streetscapes by mixing compatible housing forms (single detached, semi-detached, and row housing).</p> <p>Within the area designated Low Density residential, a variety of innovative housing forms such as single or semi-detached housing units will be developed in accordance with the applicable residential zones in the Zoning Bylaw.</p>		

Row Housing and Low-Rise/Medium Density Housing areas will be developed using the applicable residential zones available in the Zoning Bylaw or Direct Control zoning.

Objective 19	NASP Policy	Implementation
<p>Ensure a compact urban form that uses land responsibly and efficiently.</p>	<p>The neighbourhood shall incorporate and support increased densities to make more efficient use of the land.</p>	<p><b>Figure 7 – Land Use Concept and Table 4 – Land Use and Population Statistics</b> illustrate planned distribution and overall density for the NASP that meets the City of Edmonton Council approved Suburban Housing Mix Guidelines and minimum density target for Priority Growth Area Cw of the Capital Region Growth Plan.</p> <p>Applications for rezoning and subdivision shall conform to this NASP.</p>
<p><b>Rationale:</b></p> <p>Compact development increases residential densities, and contributes to increased efficiency in the provision of municipal services, public transit, schools and nearby commercial developments and neighbourhood amenities.</p>		

Objective 20	NASP Policy	Implementation
<p>Establish an overall residential density that meets or exceeds the density targets established by the Capital Region Growth Plan and Suburban Housing Mix Guidelines.</p>	<p>i) The Cavanagh NASP shall meet or exceed the approved Suburban Housing Mix ratio for new neighbourhoods.</p> <p>ii) The Cavanagh NASP shall meet or exceed the approved density target as set out by the Capital Region Growth Plan.</p>	<p>i) <b>Figure 7 – Land Use Concept and Table 4 – Land Use Concept and Population Statistics</b> shall guide intensified suburban development.</p> <p>ii) The Cavanagh NASP exceeds the minimum density target of 30 dwelling units per net residential hectare, established by the Capital Region Growth Plan.</p>
<p><b>Rationale:</b></p> <p>The approved Suburban Housing Mix ratio for new neighbourhoods in the City of Edmonton recommends the provision of 65% to 85% Low Density Residential (Single/Semi-Detached) and 15% to 35% Medium Density Residential (Row Housing and Low Rise/Medium Density Housing). The Cavanagh NASP exceeds this ratio. Maintaining higher residential densities results in a more efficient use of municipal infrastructure and services and helps meet the demand for housing in the City’s growing suburban neighbourhoods.</p> <p>The Cavanagh neighbourhood is located in the Capital Region Growth Plan’s Priority Growth Area “Cw” which sets a minimum density target of 30 units per net residential hectare. The Cavanagh NASP exceeds this target.</p>		

Objective 21	NASP Policy	Implementation
<p>Locate Low-Rise/Medium Density Housing development to facilitate access to collector roadways, public transit service and/or in proximity to park spaces.</p>	<p>Row Housing and Low-Rise/Medium Density Housing development should be located abutting collector and/or arterial roadways, near commercial use and along transit routes.</p>	<p><b>Figure 7 – Land Use Concept</b> conceptually illustrates the location of Row Housing and Low-Rise/Medium Density Housing development along collector and arterial roadways (possible bus routes).</p> <p>Development shall be implemented through and in accordance with the City of Edmonton’s Zoning Bylaw.</p>
<p><b>Rationale:</b></p> <p>Location of Low-Rise/Medium Density Housing along transit routes and within walking distance of commercial uses, creates a more compact, walkable and liveable neighbourhood.</p>		

Objective 22	NASP Policy	Implementation
<p>Establish affordable housing opportunities in Cavanagh.</p>	<p>i) Developments shall comply with the City of Edmonton’s affordable housing policies and guidelines.</p> <p>ii) The NASP shall allow for a greater variety of housing types, creating a more inclusive neighbourhood.</p> <p>iii) Opportunities such as secondary suites, garage suites or garden suites should be encouraged among builders.</p>	<p>i) City of Edmonton’s affordable housing policies and guidelines shall be applied prior to rezoning.</p> <p>ii) <b>Figure 7 – Land Use Concept</b> indicates the location of various residential land uses.</p> <p>iii) Secondary suites, garage suites or garden suites shall be implemented through the applicable sections of the Edmonton Zoning Bylaw.</p>
<p><b>Rationale:</b></p> <p>Providing a variety of housing types creates affordable housing options for a variety of households. Secondary suites can further provide an important potential source of affordable housing for singles and other small households, and create mortgage helpers for the owner of the principle dwelling.</p>		

*Technical Summary*

No specific technical requirements were further identified.

### 3.2.7 - Commercial

The Cavanagh NASP includes one neighbourhood convenience commercial site.

Objective 23	NASP Policy	Implementation
Provide neighbourhood commercial opportunities to satisfy the needs of residents and provide local employment opportunities within the neighbourhood.	Neighbourhood Convenience commercial development opportunities shall be provided to serve the daily needs of local residents within the NASP area.	<b>Figure 7 – Land Use Concept</b> illustrates the location and general configuration of commercial areas, which will be confirmed prior to rezoning approval.
<p><b>Rationale:</b></p> <p>The neighbourhood convenience commercial site is adjacent to 30 Avenue SW and 111 Street SW. This site will serve as a destination for neighbourhood and adjacent residential housing. The location of the commercial site provides good visibility and frontage along two major roadways.</p>		

Objective 24	NASP Policy	Implementation
Ensure that commercial developments form an attractive and vibrant destination.	i) Commercial sites shall be located along arterial and/or collector roadways and be accessible by multiple modes of transportation.	<p>i) <b>Figure 7 – Land Use Concept and Figure 9 – Pedestrian Network</b> guide the development of the NASP.</p> <p>Site access and orientation of commercial buildings, streets and pedestrian connections will be further defined at the subdivision and development permit stages.</p>
<p><b>Rationale:</b></p> <p>The land use concept provides one neighbourhood commercial node within the plan area. Commercial uses provide local employment opportunities for residents to live, work, and shop in the same neighbourhood, reducing the dependency on commuting outside of the community and, in turn, shrinking residents’ carbon footprint.</p> <p>Prominent frontage along 30 Avenue is a significant component influencing the location of the commercial site. The location provides opportunities for access from adjacent arterial and/or collector roadways, minimizing traffic shortcutting through residential areas, and maintaining appropriate traffic patterns and volumes within the neighbourhood core.</p> <p>The location of the commercial site is within walking distance of residential areas and accessible by internal neighbourhood linkages. Walkability to commercial site reduces the number of vehicle trips required to meet the day-to-day commercial needs of residents within Cavanagh.</p>		

#### *Technical Summary*

No specific technical requirements were further identified.

### 3.2.8 - School, Parks and Open Space

The NASP proposes a variety of pocket parks and top-of-bank parks within an integrated open space system (see **Figure 9 – Pedestrian Network**). The area attributed to Park and Open Space is shown in **Table 4 – Land Use and Population Statistics**.

Objective 25	NASP Policy	Implementation
<p>Accommodate City of Edmonton requirements for school/park sites within the neighbourhood.</p>	<p>i) The NASP shall follow the guidelines for the hierarchy and distribution of park spaces as prescribed in the Urban Parks Management Plan.</p> <p>ii) The Municipal Reserve owing for Cavanagh shall be dedicated in full as land, cash-in-lieu of land or an acceptable combination thereof. The values for cash in place of land shall be agreed upon prior to subdivision.</p> <p>iii) Servicing shall be provided to the school site and parks (where required) in order to accommodate any and all facilities which may be developed on site.</p> <p>iv) Municipal Reserve sites shall maintain unencumbered access to public roadways and/or walkways.</p> <p>v) <i>The City's Top of Bank Policy (Policy C542) states that a minimum of 30% of the urban development line shall be either Top-of-Bank walkway or land used for municipal purposes. However, the development pattern and site limitations in the northeast corner of the plan area result in an approximate Top-of-Bank roadway for the entire NASP of 23%. A 10 m wide top of bank walkway is required in this area at the subdivision stage, to extend public access along the western edge of the ravine. [Deleted].</i></p>	<p>i) The school site, pocket parks, Top-of-Bank parks and open spaces are conceptually illustrated in <b>Figure 7 – Land Use Concept</b>.</p> <p>ii) The Subdivision Authority shall determine the MR owing for the Cavanagh NASP and the areas dedicated as MR shall be confirmed by legal survey at the time of subdivision.</p> <p>iii) The neighbourhood servicing scheme shall ensure that the type and amount of servicing provided to school and parkland adequately meets the needs of future facilities and shall adhere to UPMP guidelines. Any proposal that seeks to provide less than full services along the entire roadway adjacent to parkland shall be reviewed by City of Edmonton.</p> <p>iv) Access from public parks to public roadways and/or walkways shall be determined at the time of subdivision.</p> <p>v) TOB walkways and roadway shall be provided in compliance with City Policy C-542, Development Setbacks from River Valley/Ravine Crests.</p> <p>TOB walkway and roadway will be dedicated to the City of Edmonton with regard to the logical extension of development and services at the time of subdivision.</p>
<p><b>Rationale:</b></p> <p>The Urban Parks Management Plan (UPMP) provides strategic direction for the acquisition, design, development, and management of Edmonton’s parkland until the year 2016. The NASP uses the UPMP as a guiding document to</p>		

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distribute, configure, and service park sites and land assembly guidelines.

#### School/Park

The school and park site, approximately 4.6 ha, is located north of 30 Avenue in the central portion of the neighbourhood. This location is intended to accommodate an elementary school (S K-6). The development of the school is dependent upon available funding and need.

#### Pocket Parks

There are three Pocket Parks located in the Cavanagh NASP. These parks maintain appropriate public roadway frontage and are accessible via the overall pedestrian network. The placement of the Pocket Parks will ensure that residents are within 500 m of park space, offering convenient access to parkland. These parks are intended to serve as gathering places for residents and provide opportunities for passive recreation space.

*The City's Top of Bank Policy (Policy C542) states that a minimum of 30% of the urban development line shall be either Top-of-Bank walkway or land used for municipal purposes. However, the development pattern and site limitations in the northeast corner of the plan area result in an approximate Top-of-Bank roadway for the entire NASP of 23%. A 10 m wide top of bank walkway is required in this area at the subdivision stage, to extend public access along the western edge of the ravine. [Deleted].*

#### Stormwater Management Facilities

Two Stormwater Management Facilities (SWMF's) are proposed for the NASP. These facilities serve as an amenity area and form part of the open space system within the community. The location and configuration of the SWMF's integrates with the overall pedestrian network and provides vistas from abutting roadways. The SWMF's will serve as a destination for residents and provide passive recreation opportunities. The extent of public open space around the facility will depend on City policies at the time of development.

#### Municipal Reserves

In accordance with the Municipal Government Act, approximately 10% of the gross developable lands is to be dedicated as Municipal and School Reserve through way of the dedication of land, cash-in-lieu, or a combination thereof.

Utility servicing (i.e. water, gas, electrical, sewer, etc.) for the park sites will be provided, as required, through the engineering drawings and servicing agreement processes and shall be constructed to relevant City standards.

The area and percentage of Gross Developable Area attributed to each form of park and open space development is shown in **Table 4 –Land Use and Population Statistics**.

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Objective 26	NASP Policy	Implementation
Locate parks spaces within the neighbourhood to ensure accessibility via pedestrian linkages and automobiles.	i) Parks shall have frontage along public roadways to ensure sightlines, natural surveillance, and adequate lighting. Landscaping and design of park spaces shall take into consideration basic CPTED principles and design principles included in the Design Guide for a Safer City and Urban Parks Management Plan	i) The Subdivision Authority shall have regard for the subdivision design to ensure adequate public roadway frontage on all parks using UPMP as a guiding document, as illustrated in <b>Figure 7 – Land Use Concept</b> . ii) Design and development of

	<p>(UPMP).</p> <p>ii) Park space shall be designed to accommodate active and/or passive recreation activities for different age groups.</p> <p>iii) Design of stormwater management facilities shall incorporate landscaping, walkways and access for maintenance purposes.</p>	<p>future parks and open spaces shall consider programming needs of the community and be implemented at the rezoning, subdivision, and development permit stages, based on requirements of the City of Edmonton.</p> <p>iii) The design of stormwater management facilities will comply with City of Edmonton standards and be determined at the detailed design stage.</p>
<p><b>Rationale:</b></p> <p>Parks have been located adjacent to public roadways and are connected by a network of shared-use paths, greenways, walkways and sidewalks ensuring a high level of accessibility to the residents. A school site has been located in the central portion of the neighbourhood and connected with a shared use path and collector roadway frontage.</p>		

Objective 27	NASP Policy	Implementation
Design a connected and integrated open space system that encourages active transportation.	The NASP shall incorporate a variety of pedestrian linkages via a network of sidewalks, walkways and shared-use paths that connects park spaces, stormwater management facilities and various other focal points.	<b>Figure 7 – Land Use Concept</b> and <b>Figure 9 – Pedestrian Network</b> conceptually guide the location of the neighbourhood park, open spaces, pedestrian connections and SWMF’s which shall connect residents to the focal points. Location and design will be finalized at the subdivision and engineering drawing stages.
<p><b>Rationale:</b></p> <p>Cavanagh NASP provides a pedestrian network that is highly connected and convenient via a network of sidewalks, walkways, and shared-use paths. All parks and open spaces are connected to the pedestrian network within the neighbourhood to ensure that they are accessible to the residential land uses within the plan area and the surrounding developing neighbourhoods. The park locations are linked with linear corridors, enabling additional recreational options and increasing active transportation (i.e. walking, bicycling, in-line skating) possibilities within the neighbourhood. These connections will be provided by a combination of minor pedestrian connections and shared-use paths.</p>		

*Technical Summary*

A Parkland Impact Assessment (PIA) has been submitted under a separate cover outlining Cavanagh’s compliance with the UPMP vision and guidelines.

### 3.2.9 - Transportation

The overall transportation network within the Cavanagh NASP is based on the provision of efficient vehicular, transit and pedestrian circulation. This is conceptually illustrated in **Figure 8 – Transportation Network** and **Figure 9 – Pedestrian Network** which identifies the roadway network and alternative circulation system that accommodates the movement of automobiles, transit, bicycles and pedestrians within the neighbourhood and the connections to adjacent communities.

Objective 28	NASP Policy	Implementation
<p>Provide an efficient, safe and logical transportation system within the NASP area to address pedestrian, bicycle, and vehicular transportation and public transit demands of the residents.</p>	<p>i) A well-integrated system of arterial, collector and local roadways shall be established for vehicular and pedestrian circulation within the NASP boundaries and the adjacent neighbourhoods.</p> <p>ii) Landowners / developers shall be responsible for the closure, removal and remediation of road rights-of-way planned to facilitate development, including park and school sites.</p> <p>iii) Front drive access will be minimized along the collector roadways and no front drive accesses will be permitted across from school sites.</p> <p>iv) Access to future potential TUC release lands adjacent to the QEII and 41 Avenue SW shall be accommodated from the neighbourhood.</p>	<p>i) Road right-of-way and arterial road widening shall be dedicated to the City of Edmonton in accordance with the NASP at the subdivision stage of development.</p> <p>ii) Roadway design shall be in accordance with City of Edmonton design regulations. Opportunities for innovative or alternative designs shall be reviewed by the City of Edmonton at the subdivision and detailed design stages. <b>Figure 7 – Land Use Concept</b> conceptually guides the development of land. Road closure bylaws shall be approved by City Council prior to subdivision and development.</p> <p>iii) Front drive accesses will be reviewed at the subdivision and detailed design stages.</p> <p>iv) Appropriate access to the future potential TUC release lands adjacent to the QEII and 41 Avenue SW shall be provided at the subdivision stage.</p>
<p><b>Rationale:</b></p> <p>The transportation network has been designed to meet both the internal and external traffic flow requirements generated by the neighbourhood in accordance with City of Edmonton’s guidelines and standards. A hierarchy of roads are intended to facilitate the efficient movement of vehicular traffic (see <b>Figure 8 - Transportation Network</b>). Vehicular access to the surrounding roadways will be provided via two neighbourhood access points (103 A Street and 30 Avenue SW), with an additional potential future flyover to the east.</p> <p><b>Regional Roadway Network</b></p> <p>The Cavanagh NASP will benefit from a high level of accessibility to the Capital Region area as a result of its close proximity to the following existing regional roadways (see <b>Figure 8 - Transportation Network</b>). These roadways include:</p>		

- Anthony Henday Drive
- Calgary Trail / Gateway Boulevard

**Arterial Roadways**

Arterial roadways facilitate the movement of intra-municipal traffic and generally maintain limited direct access to adjacent land uses. 30 Avenue SW is designated as an arterial roadway within the Cavanagh plan area. Appropriate spacing of intersections and access-egress requirements are respected along this arterial roadway.

Lands within the NASP will be subject to an Arterial Road Assessment (ARA) to cost-share the construction of arterial roadway facilities needed to service the area. In general terms, the ARA outlines the developer’s responsibility for roadway construction within a catchment area and is based on the estimated costs of constructing arterial roads in a catchment area.

**Collector Roadways**

Collector roadways, which provide internal/external accesses, are spaced at appropriate intervals to facilitate traffic progression and to ensure that sufficient distance is available to allow for right and left turn-bay development. The looping collector roadway provides internal/external access to the area. It provides efficient and convenient access to residential areas and prevents cut-through traffic.

**Local Roadways**

Local roadways provide access to adjacent land uses and maintain a limited role in the overall movement of traffic within the Cavanagh NASP.

**Parking**

Parking for vehicles will generally be provided off-street in conjunction with development applications.

Objective 29	NASP Policy	Implementation
<p>Promote connectivity and pedestrian access to amenity areas such as park, natural area, open spaces, and institutional uses by providing an alternative circulation system.</p>	<p>i) A network of hard-surfaced sidewalks, walkways, and shared-use paths shall be provided to promote walkability, cycling and access to park space, open space, Blackmud Ravine, and stormwater management facilities.</p> <p>ii) Minor walkways shall be provided to promote walkability and access to transit facilities and neighbourhood amenities.</p>	<p>i) <b>Figure 9 – Pedestrian Network</b> shall guide the future application of walkways, sidewalks and shared-use paths.</p> <p>ii) The Subdivision Authority should have regard for the dedication of walkways to promote walkability and appropriate access to transit facilities and neighbourhood amenities. All local and collector roadways in Cavanagh shall be developed with sidewalks.</p>

**Rationale:**

Neighbourhood connectivity contributes to the development of a compact, integrated community with a balanced transportation network. Neighbourhoods that have a high degree of connectivity encourage residents to walk thereby reducing the number of trips made by vehicles and promote neighbour interaction. Connectivity is

characterized by a logical network of movement that links destinations, provides access and is integrated with its environment.

**Pedestrian Network**

An efficient and continuous walkway network connecting key nodes within the NASP will provide pedestrian access throughout the neighbourhood. All local and collector roadways shall be developed with sidewalks providing a sufficient level of pedestrian access within the NASP.

The pedestrian circulation network has been designed to encourage the continuation of a pedestrian route from the adjacent neighbourhoods via the Blackmud Creek Ravine.

**Walkways**

A number of walkways are proposed in the plan area, which serve as minor pedestrian connections. These walkways enhance pedestrian connectivity in the NASP as well as provide connections to adjacent residential enclave and major pedestrian facilities (e.g., sidewalks along collectors/arterial roadways).

**Bicycle Circulation**

Bicycle circulation within the Cavanagh NASP is designed to follow the collector and local roadway network. Bicycle routes will be integrated with the shared-use path and walkways connecting internal and adjacent residential areas and amenities. Routes will be clearly marked using appropriate signage and markings in order to minimize potential conflicts between vehicles, cyclists, and pedestrians in the neighbourhood.

Objective 30	NASP Policy	Implementation
<p>Provide the opportunity for roadways to be developed with innovative and/or alternative standards.</p>	<ul style="list-style-type: none"> <li>i) Opportunities for roadways to be developed with innovative and/or alternative standards shall be explored.</li> <li>ii) The developer shall provide the land necessary for roads and public utilities to achieve the goals and objectives of the NASP.</li> <li>iii) Bridges crossing the Blackmud Creek shall be designed in accordance with the Wildlife Passage Engineering Design Guidelines to mitigate impacts.</li> </ul>	<ul style="list-style-type: none"> <li>i) Roadway design shall be in accordance with City of Edmonton design regulations. Opportunities for innovative or alternative designs shall be reviewed by Transportation Services prior to subdivision.</li> <li>ii) <b>Table 4 – Land Use and Population Statistics</b> and <b>Figure 7 – Land Use Concept</b>, illustrate the approximate land dedication requirements for roadways and public utilities to adequately service the NASP. Areas shall be confirmed at time of subdivision to the satisfaction of the Subdivision Authority.</li> <li>iii) Transportation Services, in conjunction with the Office of Biodiversity, will review wildlife passage designs.</li> </ul>

**Rationale:**

The NASP has been designed, in part, with a goal of minimizing roadway infrastructure through narrower roadways and dispersal of vehicular traffic flow throughout the neighbourhood, and increasing connectivity for pedestrians and wildlife. To help achieve this goal, less land for internal roadways is anticipated. These factors will facilitate a compact, walkable and connected community with a balanced transportation system. Where possible, a reduced or alternative standard will be used which may reduce the width of the carriageway, provide sidewalks on both sides and parking on one side. In consultation with the City of Edmonton, ecological connectivity through the Blackmud Creek will be maintained by an innovative and/or alternative bridge design in accordance with the City of Edmonton's Wildlife Passage Engineering Design Guidelines, to provide vehicular and pedestrian connectivity as well as protect local wildlife movement.

Objective 31	NASP Policy	Implementation
Maximize transit access to the greatest number of residents in accordance with City of Edmonton Transit System Guidelines and demands.	i) The location of all residential land uses should be within 400 m of a transit route.  ii) Transit service shall be provided in accordance with Transit System Guidelines.	i) Edmonton Transit will determine the routing for public transit along the arterial and collector roadways which have been identified as future transit routes.  ii) In an effort to provide transit service earlier in the development of the neighbourhood, participating landowners shall cooperatively fund transit service for the first two years of service.

**Rationale:**

Future public transit services will be extended into the Cavanagh NASP area in accordance with City of Edmonton Transit System Guidelines and demands. The neighbourhood has been designed to ensure that the majority of residents are within 400 m (approximately 5 minute walk) of transit service. Convenient and accessible transit areas are reinforced through a continuous network of pedestrian walkways and multi-use trails.

Future transit routes will be established on the basis of the proportion of trips, which are expected to be generated from within the neighbourhood and adjacent areas. Future transit service will be accommodated within the neighbourhood along the internal collector roadway network. Transit routes shall be developed to a suitable standard to accommodate transit service and provide a high level of access to all areas of the neighbourhood.

Objective 32	NASP Policy	Implementation
Create adequate locations for neighbourhood access.	Collector roadways shall maintain proper access to arterial roadways in order to facilitate appropriate traffic flow in and out of the neighbourhood.	<b>Figure 8 – Transportation Network</b> illustrates the collector roadway intersections with the arterial roadway.  Provision of roadways for access in residential settings shall be determined prior to subdivision

		approval.
<b>Rationale:</b>		
The location of access points are illustrated in <b>Figure 8 – Transportation Network</b> , and have been developed to ensure that adequate access by a variety of transportation modes is provided throughout the plan area with the support of the Transportation Impact Assessment (TIA).		

<b>Objective 33</b>	<b>NASP Policy</b>	<b>Implementation</b>
Ensure the maximum length of cul-de-sacs in residential settings do not compromise City emergency access.	i) Development of long cul-de-sacs should be avoided. ii) In circumstances where cul-de-sacs exceed 120 m, the provision of proper emergency access to adjacent development shall be required.	i) and ii) Cul-de-sac lengths in residential settings shall be determined prior to subdivision approval.  The Subdivision Authority should ensure cul-de-sacs are in accordance with the applicable City policies and directives.
<b>Rationale:</b>		
Subdivision design should ensure that the length of cul-de-sacs do not exceed 120 m in order to reduce impacts to City operations (e.g., emergency access, garbage collection and snow clearing).		

<b>Objective 34</b>	<b>NASP Policy</b>	<b>Implementation</b>
Provide noise attenuation where residential uses back onto major transportation corridors (i.e. QE II Highway), which have been designated or will be designated as truck routes.	Appropriate noise attenuation shall be provided for residential uses adjacent to the QE II Highway.	A noise attenuation assessment is required for residential development adjacent to major transportation facilities prior to subdivision, in accordance with the City of Edmonton Urban Traffic Noise Policy C506.
<b>Rationale:</b>		
Residential areas adjacent to QE II Highway shall require the developers to address noise concerns. A Noise Attenuation Needs Assessment shall be carried out in accordance with City of Edmonton’s Urban Traffic Noise Policy at the time of subdivision. Based on the results of the study, noise attenuation devices may be required (i.e. berm and fence) to be incorporated in the design of subdivisions bordering QE II Highway.		

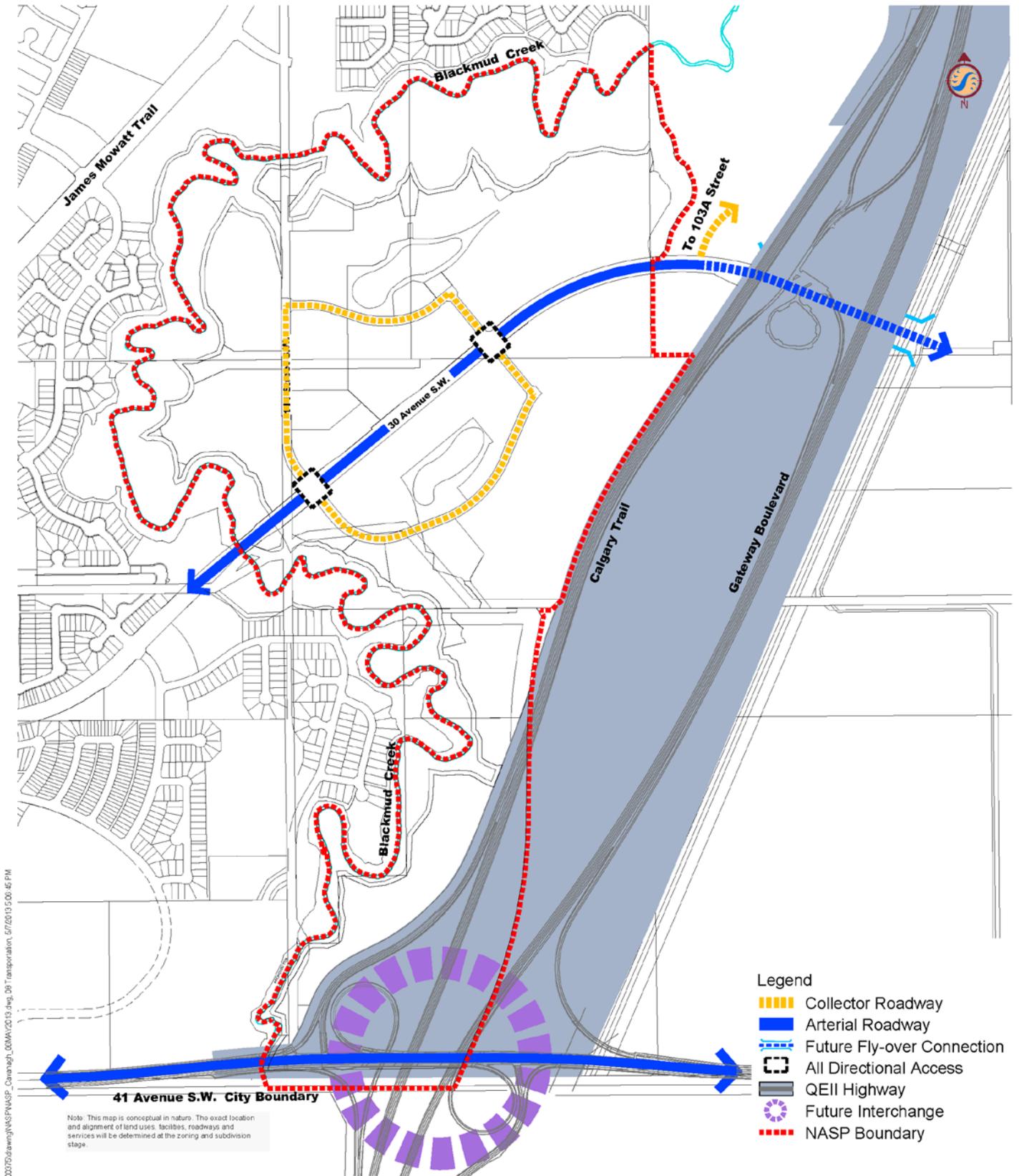
<b>Objective 35</b>	<b>NASP Policy</b>	<b>Implementation</b>
Ensure that the cost of arterial roadways is shared throughout the Heritage Valley catchment area.	i) Lands within the Cavanagh NASP shall be subject to an Arterial Road Assessment (ARA) to cost share the roadway facilities needed to service	i) The Arterial Roads for Development Bylaw 14380 identifies that Cavanagh NASP is within the Heritage Valley

	<p>the area.</p> <p>ii) The transportation network shall be generally designed and constructed consistently with this Plan.</p>	<p>Catchment area.</p> <p>ii) The transportation network for the NASP will be provided in accordance with the requirements of the City of Edmonton.</p>
<p><b>Rationale:</b></p> <p>In general terms, the ARA outlines the arterial roadway facilities needed to service a catchment area, all developer responsibilities for roadway construction within the catchment area and are based on the estimated costs of constructing arterial roads in a catchment area.</p>		

*Technical Summary*

A Transportation Impact Assessment (TIA) has been submitted under separate cover for review and approval by Transportation Services. Other access and roadway requirements will be determined at the rezoning and subdivision stages to the satisfaction of Transportation Services.

A Noise Attenuation Needs Assessment has been submitted in support of the NASP.



- Legend**
- Collector Roadway
  - Arterial Roadway
  - - - Future Fly-over Connection
  - All Directional Access
  - QEII Highway
  - Future Interchange
  - NASP Boundary

Note: This map is conceptual in nature. The exact location and alignment of land uses, facilities, roadways and services will be determined at the zoning and subdivision stage.

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# Pedestrian Network

## Figure 9



# Cavanagh Neighbourhood

Figure 9 – Pedestrian Network

### 3.2.10 - Infrastructure, Servicing and Staging

The Cavanagh NASP will be a fully serviced neighbourhood designed and constructed in accordance with City servicing standards.

Objective 36	NASP Policy	Implementation
<p>Ensure that the Cavanagh NASP is serviced to a full urban standard in an efficient and contiguous manner.</p>	<p>i) Sanitary and stormwater servicing shall be provided in accordance with the approved Neighbourhood Design Report for the Cavanagh NASP.</p> <p>ii) Water servicing to the NASP area shall be provided in accordance with the approved Water Network Analysis.</p> <p>iii) Shallow utilities shall be extended into the plan area as required.</p>	<p>i) ii) Approval of engineering drawings and servicing agreements shall be required for installation of water, sanitary, and stormwater servicing.</p> <p>iii) Installation of shallow utilities shall be executed through servicing agreements.</p>
<p><b>Rationale:</b></p> <p><b>Sanitary Servicing</b></p> <p>The flow of the sanitary system designed for Cavanagh moves from south to north/northeast. The sanitary servicing system is illustrated on <b>Figure 10 - Sanitary Servicing</b>. Further details regarding the sanitary drainage schemes for Cavanagh are provided in the associated Neighbourhood Design Report to be submitted under separate cover.</p> <p><b>Stormwater Servicing</b></p> <p>As shown on <b>Figure 11 - Stormwater Servicing</b>, two stormwater management facilities are designated within the NASP. The stormwater management facilities have been located based on natural drainage patterns and pre-development sub-basin drainage boundaries. Additional details regarding the stormwater drainage schemes for the NASP are provided in the associated Neighbourhood Design Report that has been submitted under separate cover.</p> <p><b>Water Servicing</b></p> <p>The conceptual design for the water distribution network for Cavanagh is shown in <b>Figure 12 - Water Servicing</b>. Water services for the neighbourhood will be extended from the northeast within the Cashman neighbourhood and follow 30 Avenue SW. Water servicing within the neighbourhood will be designed to provide peak hour flows and fire flows for low, medium, and high density residential uses. Water looping will be provided in accordance with the requirements of EPCOR Water as per the Water Network Analysis.</p> <p><b>Shallow Utilities</b></p> <p>Power, gas and telecommunication services are all located within close proximity to the NASP and will be extended into the plan area as required.</p> <p><b>Development Staging</b></p> <p><b>Figure 13 - Staging Plan</b> shows the anticipated direction of development for Cavanagh.</p>		

The anticipated sequence of development for Cavanagh is expected to proceed from the south-central portion of the plan area and advance in a north/northeast direction.

In general, development will proceed in a manner that is contiguous, logical and economical with respect to municipal servicing. Development of individual phases may vary from the actual zoning and subdivision applications depending on contemporary market demands and aspirations of the respective landowners. Should sufficient demand warrant or engineering design be made more efficient, portions of separate phases may be developed concurrently.

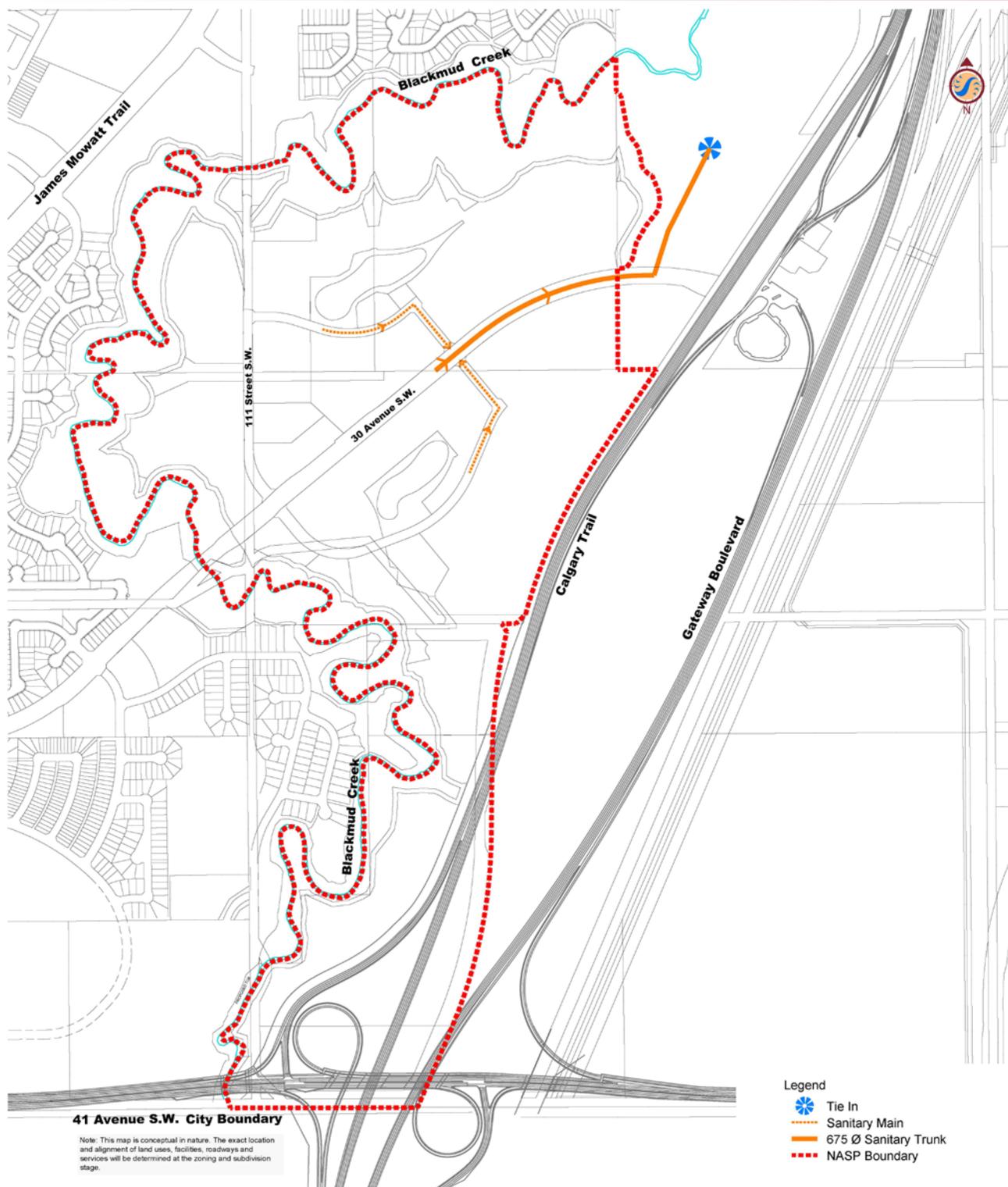
### *Technical Summary*

The Heritage Valley NASP will be designed in accordance with City of Edmonton servicing standards. Development staging and extension of infrastructure will be contiguous, efficient, and economical while having regard for potential environmental and ecological impacts.

Details regarding stormwater drainage and sanitary service schemes for the Cavanagh NASP are provided in the associated Neighbourhood Design Report submitted under separate cover by Stantec Consulting Ltd. Water looping will be provided in accordance with the requirements of EPCOR Water Services Inc. A neighbourhood level and subdivision level WNA will be required at the time of subdivision.

# Sanitary Servicing

# Figure 10



## Cavanagh Neighbourhood

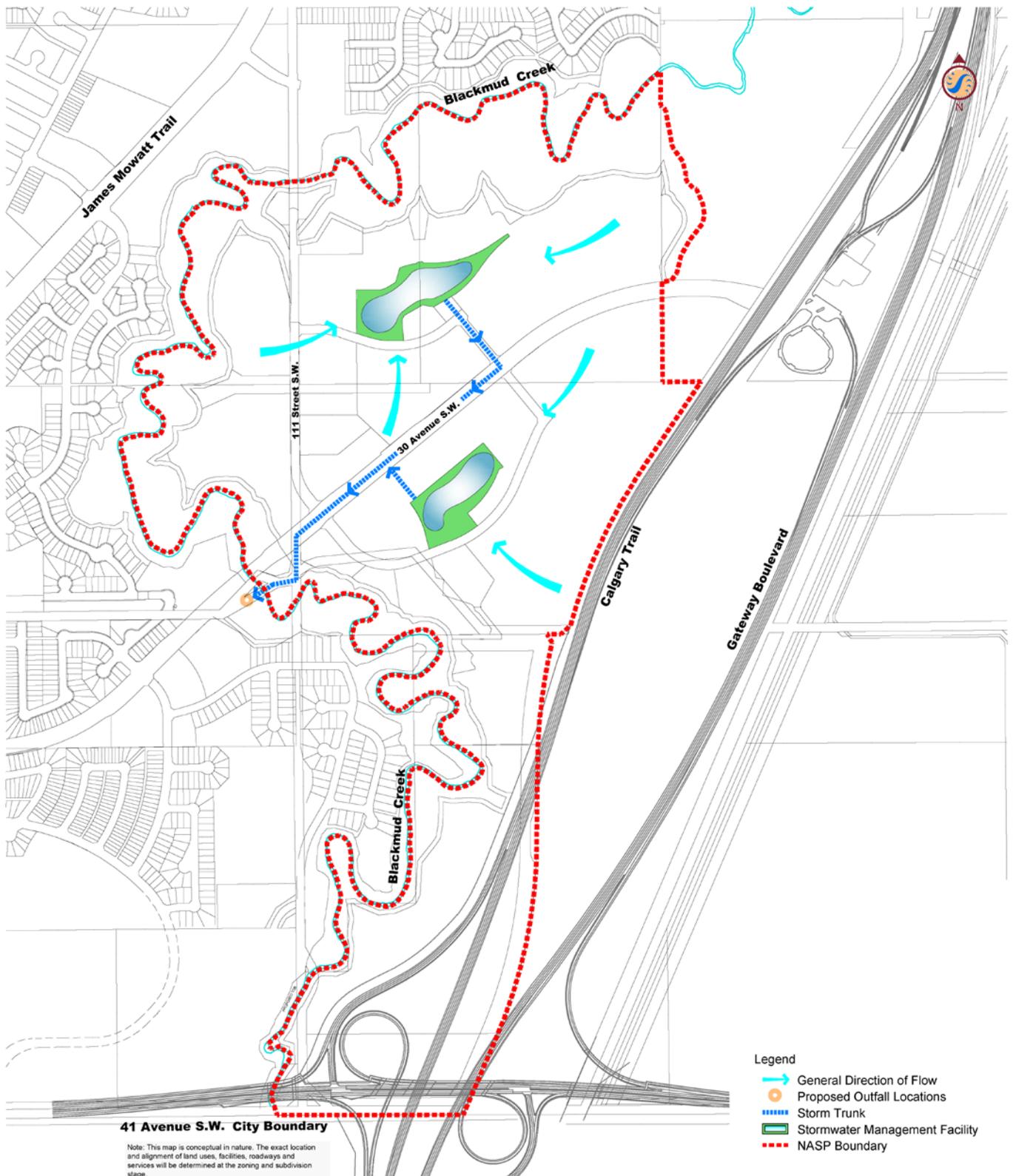
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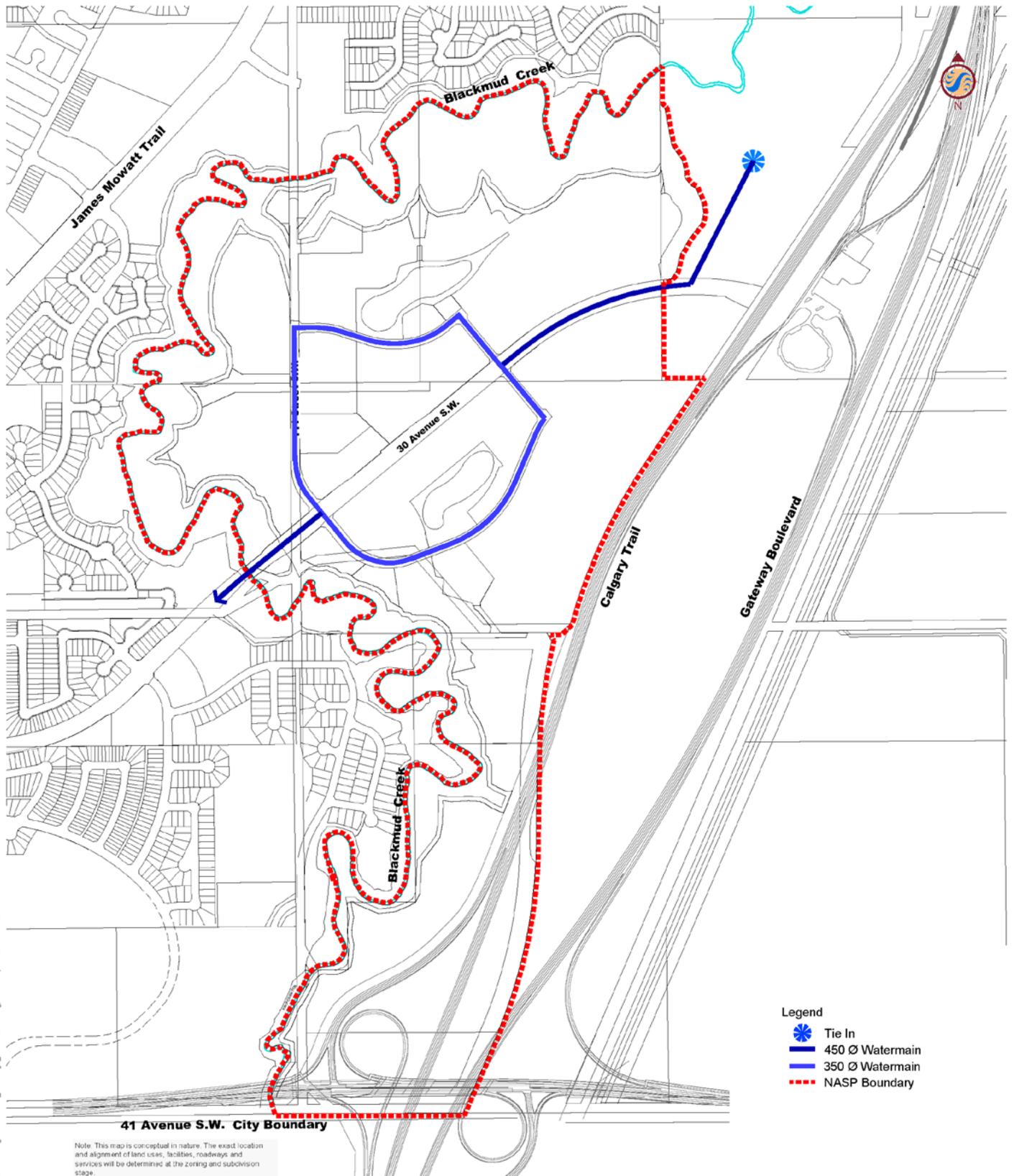
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Figure 10 - Sanitary Servicing

# Storm Water Servicing

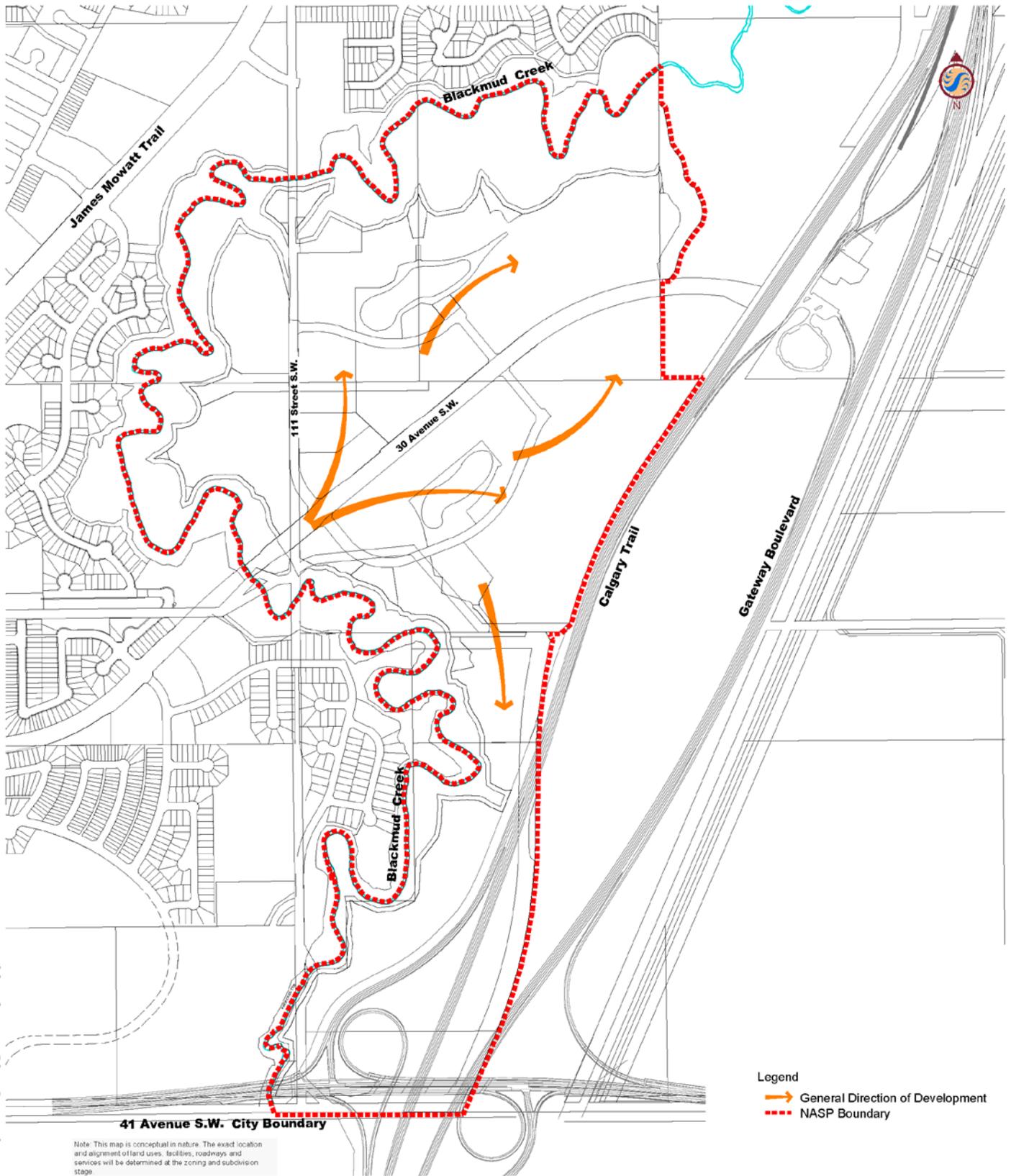
# Figure 11





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- Legend**
-  General Direction of Development
  -  NASP Boundary

Note: This map is conceptual in nature. The exact location and alignment of land uses, facilities, roadways and services will be determined at the zoning and subdivision stage.

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# Cavanagh Neighbourhood

## 4. Appendix A - Planning Policy Context

The Cavanagh NASP is in conformance with and supports a number of policies and guidelines identified in the “Capital Region Land Use Plan”, “The Way We Grow”, “The Way We Move”, the “City of Edmonton’s Suburban Neighbourhood Design Principles”, “Heritage Valley Servicing Concept Design Brief”, and other relevant policy / statutory documents. This section of the Plan describes the relevant policies from these documents and outlines the NASP’s conformance to each policy. Applicants seeking amendments to the NASP or applying for rezoning, subdivisions or development permits are required to consult the actual documents for specific guidance on detailed requirements as they apply to particular properties.

- Capital Region Growth Plan (CRGP) “Growing Forward” – The CRGP was approved by the Government of Alberta on March 11, 2010. The Growth Plan provides a vision for the Capital Region in the future.
- Municipal Development Plan (MDP) “The Way We Grow” - The MDP is a document that provides the policies and strategies to help guide growth and development in Edmonton over the long-term.
- Transportation Master Plan (TMP) “The Way We Move” – The TMP is the overarching strategic document that provides the framework for how the City of Edmonton will address its future transportation needs.
- Environmental Strategic Plan “The Way We Green” – This strategic document provides a systematic approach to guide the City of Edmonton to become a more sustainable and resilient city.
- Heritage Valley Servicing Concept Design Brief (SCDB) –The SCDB is a non-statutory document which establishes the general framework for land use, municipal infrastructure and servicing and environmental requirements in the Heritage Valley area of southwest Edmonton
- Suburban Neighbourhood Design Principles (SNDP) - The City of Edmonton’s Suburban Neighbourhood Design Principles describes a variety of design principles intended to encourage flexibility and innovation in the design and servicing of new neighbourhoods.
- Smart Choices for Developing Our Community – Council Recommendations - The Smart Choices Recommendations were approved by City Council on March 23, 2004, to promote urban sustainability.
- Crime Prevention Through Environmental Design (CPTED) – These guidelines are based upon the theory that the proper design and effective use of the built environment can reduce crime, the fear of crime, and improve the quality of life.
- Urban Parks Management Plan (UPMP) – These guidelines provide strategic direction for the acquisition, design, construction, maintenance, preservation and animation (or use) of parks.
- Winter City Strategy, For the Love of Winter – This Strategy provides strategic direction for innovation, urban design and programming of outdoor public and private spaces to be enjoyed throughout the winter season.

The following tables summarize key objectives from the above-noted policy documents applicable to the Cavanagh NASP and demonstrate how each has been incorporated into the NASP.

### 4.1.1 - Capital Region Growth Plan: Growing Forward

The primary purpose of the Capital Region Land Use Plan is to manage sustainable growth that protects the region’s environment and resources, minimizes the regional development footprint, strengthens communities, increases transportation choice and supports economic development. The Heritage Valley NASP aims to accomplish these objectives through an integrated and strategic approach to planning which coordinates planning and development decisions in the Region and identifies a regional development pattern to complement existing infrastructure, services and land uses.

The Cavanagh NASP complies with the following Growth Plan strategies:

Capital Region Land Use Plan	Cavanagh NASP
I. Protect the Environment and Resources	
<p>A. Preserve and Protect the Environment</p> <p><b>Policy (ii)</b> – Any development which fragments contiguous natural features, functions and habitat, such as water systems, moraines, forests, wetlands and wildlife habitat and corridors shall be discouraged.</p> <p><b>Policy (vi)</b> – Manage land use distribution patterns to reduce reliance on automobiles.</p>	<p>The Cavanagh NASP preserves and protects the Blackmud Creek Ravine.</p> <p>A network of roadways, sidewalks, walkways and shared-use paths will provide residents with the ability to drive, walk, or cycle, through the neighbourhood or into the surrounding region.</p>
II. Minimize Regional Footprint	
<p>B. Concentrate New Growth Within Priority Growth Areas</p> <p><b>Policy (i)</b> – Most new growth shall occur within priority growth areas.</p> <p><b>Policy (ii)</b> Priority shall be given to accommodating growth in major employment areas and in locations that meet at least three of the following four criteria:</p> <ul style="list-style-type: none"> <li>a) Existing and proposed multi-movement corridors, including transit nodes;</li> <li>b) Adjacent to existing and proposed major employment areas;</li> <li>c) Redevelopment and intensification opportunities within existing urban areas; and</li> <li>d) Locations that utilize existing infrastructure and servicing capacity or logically and efficiently extend that infrastructure.</li> </ul> <p><b>Policy (v)</b> Priority growth areas shall incorporate intensive forms of development that significantly exceed existing development patterns.</p>	<p>Cavanagh neighbourhood is located Priority Growth Area “C<sub>w</sub>” which sets a density target of 30 – 40 units per net residential hectare in order to facilitate development within existing development patterns.</p> <p>The NASP meets the density target.</p> <p>Cavanagh NASP is situated near the QE II Highway, Anthony Henday Drive, Ellerslie Road and James Mowatt Trail, and takes advantage of existing infrastructure and servicing capacity in south Edmonton.</p> <p>The NASP continues the trend of residential intensification in suburban areas.</p>
<p>D. Support Expansion of Medium and Higher Density Residential Housing Forms</p> <p><b>Policy (i)</b> – New residential development shall provide a greater proportion of higher density residential units.</p> <p><b>Policy (iii)</b> – Greenfield developments shall make provision for a mixture of uses including a diversity of housing forms, community services, local retail and employment opportunities.</p> <p><b>Policy (iv)</b> – Transit accessibility must be included in the design of all new developments.</p>	<p>The Cavanagh NASP provides the opportunity for residential units as medium density housing.</p> <p>30 Avenue SW and the collector roadways, which will accommodate transit service, are within 400m from the majority of residential land uses within the NASP.</p> <p>The proximity of these roadways along with careful attention to subdivision design will ensure the NASP meets the goals of the Capital Region Growth Plan in providing transit accessibility.</p>
III. Strengthen Communities	
<p>B. Support Healthy Communities</p>	<p>Cavanagh includes a comprehensive walkway and open space system that encourages active</p>

Capital Region Land Use Plan	Cavanagh NASP
<p><b>Policy (ii)</b> – Improve accessibility to community services by providing sidewalks, bicycle trails to encourage walking and cycling and locate these services within proximity to transit, where possible.</p>	<p>transportation and a healthy lifestyle.</p>
<p>C. Support Public Transit</p> <p><b>Policy (i)</b> Provide a mix of higher intensity land uses along transit corridors, at nodes, and employment centres.</p> <p><b>Policy (iii)</b> – New developments shall be designed for connectivity and accessibility to transit facilities.</p>	<p>Higher residential densities have been located adjacent to arterial and/or collector roadways to promote walkability and transit usage.</p>
<p>D. Support Innovative and Affordable Housing Options</p> <p><b>Policy (ii)</b> – All residential developments shall provide a greater variety of housing types.</p>	<p>The Cavanagh NASP allows for the development of a range of residential housing types based on Single/Semi-Detached, Row Housing, and Low-Rise/Medium Density Housing.</p>
IV. Increase Transportation Choice	
<p>A. Integrate Transportation Systems with Land Use</p> <p><b>Policy (iii)</b> – Design Transportation infrastructure to support multiple modes of transport.</p> <p><b>Policy (iv)</b> – Support development of inclusive communities to reduce the need for travel.</p>	<p>A network of roadways, sidewalks and walkways will provide residents with the ability to drive, walk, or cycle, through the neighbourhood or to the surrounding neighbourhoods.</p>
<p>B. Support the Expansion of Transit Service in Various Forms</p> <p><b>Policy (i)</b> – Expand and extend the level, quality and range of public Transportation options available to serve the Region.</p> <p><b>Policy (iv)</b> Support multi-modal transportation options by providing multi-use streets sufficient to accommodate bicyclists, motorists and pedestrians.</p>	<p>The Cavanagh NASP has been designed to support public transportation.</p> <p>A network of roadways, sidewalks and walkways will provide residents with the ability to drive, walk, or cycle, through the neighbourhood and transit stops.</p>

#### 4.1.2 - Municipal Development Plan: The Way We Grow

The Municipal Development Plan (MDP), “The Way We Grow,” approved in May 2010, is the City’s strategic growth and development plan. Through its MDP, the City of Edmonton will shape the city’s urban form and direct the development and implementation of more detailed plans.

The plan is closely integrated with the Transportation Master Plan (TMP) to achieve more coordinated decision making. The plan also includes a regional component which addresses the coordination of future land use, growth patterns and Transportation systems with Edmonton’s neighbouring municipalities.

The Cavanagh NASP complies with the following policies:

Municipal Development Plan: The Way We Grow	NASP Compliance with Policy
<b>3.2.1.1</b> – Ensure a combination of single family and multi-family housing development potential is available for the next 30 years.	The NASP will provide single family and multi-family housing for approximately 10 years at current absorption and development rates in southwest Edmonton.
<b>3.2.1.3</b> – Achieve a balance between residential, industrial, commercial, institutional, natural and recreational land uses in the city through land development policies and decisions.	The NASP establishes a variety of development opportunities through the provision of various land use components – residential, commercial and parks.
<b>3.6.1.6</b> – Support contiguous development and infrastructure in order to accommodate growth in an orderly and economical fashion.	Development for Cavanagh will be contiguous, efficient, and economical, and fills an undeveloped gap in the Heritage Valley area.
<b>4.3.1.1</b> – The City of Edmonton will take municipal reserve, school reserve or municipal and school reserve, or cash-in-lieu in accordance with the Municipal Government Act and will use the land or money for purposes as defined by the Municipal Government Act.	Municipal reserves shall be provided as a combination of land and cash-in-lieu.
<b>4.3.1.5</b> – Time the development of parks as closely as possible with the development they are intended to serve.	The development of parks and open spaces will coincide with residential development in Cavanagh.
<b>4.4.1.1</b> – Provide a broad and varied housing choice, incorporating housing for various demographic and income groups in all neighbourhoods.	The NASP includes a mix of housing forms and sizes to support a range of income levels and household types.
<b>4.5.1.2</b> – Encourage new development and infill redevelopment to incorporate affordable housing that is visually indistinguishable from market housing.	The Cavanagh NASP incorporates a mix of housing types and lot sizes to accommodate various demographic and household types.
<b>4.6.1.1</b> – Support Corporate initiatives to improve walkability and other active transportation modes.	The NASP has a well-connected and integrated roadway network and open space system which allows residents the opportunity to choose modes of transportation other than the private vehicle.
<b>4.6.1.3</b> – Support the design of accessible and safe active transportation networks in accordance with best practices in universal design.	The network of roadways, sidewalks, walkways and shared-use paths will be designed according to best practices in universal design and will provide residents with the ability to walk, cycle, in-line skate,

Municipal Development Plan: The Way We Grow	NASP Compliance with Policy
	etc. within the neighbourhood.
<b>5.5.1.2</b> – Incorporate sustainable neighbourhood design principles, low impact development and ecological design approaches when planning and building new neighbourhoods.	The NASP preserves the Blackmud Creek Ravine and mature tree stands through a combination of Environmental and Municipal Reserves and encourages active modes of transportation with walkways along the top-of-bank and throughout the neighbourhood.
<b>5.6.1.4</b> – Design density, land uses and buildings to benefit from local transit service by minimizing walking distances to transit service and by providing safe and comfortable pedestrian streetscapes and high quality transit amenities.	Higher density residential areas have been located near arterial and/or collector roadways to promote walkability and transit use. All other uses have a high degree of access to arterial and collector roadways with transit service.
<b>5.7.1.1</b> – Design streets, sidewalks and boulevards to provide safe, accessible, attractive, interesting and comfortable spaces for pedestrians, cyclists, automobiles and transit and to accommodate utilities, landscaping and access requirements for emergency response services.	The NASP supports the construction of Complete Streets, as a means of providing pedestrian safety and attractive street designs. Boulevards and medians may be used to improve the appearance and function of the streetscape.
<b>7.1.1.7</b> – Public projects, new neighbourhoods and developments will protect and integrate ecological networks, as identified in the Natural Connections Strategic Plan, by adopting an ecological network approach to land use planning and design.	The NASP protects and integrates the Blackmud Creek Ravine into the neighbourhood.
<b>7.4.1.1</b> – Link parks and open spaces with natural systems through development and design to strengthen the connectivity of Edmonton’s ecological network, where feasible.	Parks, storm water management facilities and other open spaces are inter-connected in order to serve as neighbourhood destinations and to provide passive recreation opportunities where possible. These same trails and connections will also contribute to enhancing ecological connectivity.
<b>8.1.7.3</b> – Upon provincial approval of the Capital Region Plan Addendum, Edmonton’s new Area Structure and Neighbourhood Structure Plans in the Capital Region Plan’s priority growth area B, F, Cw or Ce will be required to meet or exceed the Capital Region’s minimum density targets.	The Cavanagh neighbourhood is located in the Capital Region Growth Plans Priority Growth Area “Cw” which sets a minimum density target of 30 units per net residential hectare. The neighbourhood meets this target.
<b>9.3.1.4</b> – In consultation with the Energy and Resources Conservation Board (ERCB), ensure development setbacks from oil and gas pipelines are achieved through the subdivision approval process.	Urban development in the vicinity of all resource well sites and pipelines will be planned in accordance with City policy and procedures.

#### 4.1.3 - Transportation Master Plan: The Way We Move

The Transportation Master Plan (TMP) “The Way We Move”, is the framework that responds to the City of Edmonton’s future Transportation needs. The TMP directs policies and gives guidance for funding projects and programs that work towards an integrated Transportation network. The TMP strives to ensure transit sustainability and increase transit ridership, improve travel options to reduce barriers between different modes of Transportation, increase traffic safety and manage traffic congestion to facilitate travel through and around the city.

The Cavanagh NASP complies with the following TMP strategic goals:

TMP Strategic Goal	NASP Compliance with Strategic Goal
<p><b>Transportation and Land Use Integration</b></p> <p>The transportation system and land use/urban design complement and support each other so that the use of transit and transportation infrastructure is optimized and supports best practices for land use.</p>	<p>The NASP provides a network of roadways which are compatible and complementary to the primarily residential development within the neighbourhood, with access to transit which meets the City’s 400m walking distance guideline.</p>
<p><b>Access and Mobility</b></p> <p>The Transportation system is interconnected and integrated to allow people and goods to move efficiently throughout the city and to provide reasonable access with a variety of modes for people across demographic, geographic, socio-economic and mobility spectrums.</p>	<p>The NASP transportation network encourages multiple modes of Transportation, including public Transportation, personal vehicle, and active Transportation to accommodate local residents and connect residents with services in surrounding communities.</p>
<p><b>Transportation Mode Shift</b></p> <p>Public Transportation and active Transportation are the preferred choice for more people making it possible for the Transportation system to move more people more efficiently in fewer vehicles.</p>	<p>The NASP has been designed to support direct, safe, convenient and accessible routes for all residents and provides a well-integrated network between sidewalks, walkways and a shared-use path connecting people to amenities.</p>
<p><b>Sustainability</b></p> <p>Transportation decisions reflect an integrated approach to environmental, financial and social impacts thereby creating sustainable, liveable communities that minimize the need for new infrastructure and increase residents’ quality of life.</p>	<p>The NASP supports sustainable development by providing increased residential densities, public transit and active transportation opportunities. Services are located nearby and are readily accessible.</p>
<p><b>Health and Safety</b></p> <p>The Transportation system supports healthy, active lifestyles, and addresses user safety and security including access for emergency response services, contributing to Edmonton’s liveability.</p>	<p>The network of sidewalks, walkways and shared use paths provide residents with the ability to walk, or cycle through the neighbourhood, improving health and wellness.</p>

#### 4.1.4 - The Way We Green

The City of Edmonton’s Environmental Strategic Plan, The Way We Green, is a framework to guide the protection and preservation of Edmonton’s environmental resources. It sets out the principles, goals, objectives, and strategic actions for Edmonton to live in balance with nature.

This NASP complies with The Way We Green’s following objectives:

The Way We Green Objectives	NASP Compliance with Policy
<p><b>3.3</b> – The City of Edmonton protects preserves and enhances a system of conserved natural areas within a functioning and interconnected ecological network.</p>	<p>The Blackmud Creek abuts the eastern boundary of the NASP. The ravine will be preserved and appropriately buffered from development using Environmental Reserve, maintaining the ravine system’s connectivity and ecological significance.</p> <p>The Cavanagh NASP does not identify any other natural or ecologically significant areas to be retained.</p>
<p><b>3.4</b> – The City restores ecologically degraded and / or damaged ecological systems and linkages to protect, expand and enhance biodiversity</p>	<p>This NASP encourages the use of native and/or semi-native vegetation to be integrated into the landscaping of parks and SWMFs to naturalize open spaces, expand the urban forest and provide additional habitat for birds and wildlife.</p>
<p><b>3.5</b> – The City protects, manages and integrates natural wetlands into new and existing developments as key assets in Edmonton’s ecological network</p>	<p>This NASP identifies a Class II wetland that has minimal ecological connectivity within the NASP area and ensures that the loss of this wetland will be appropriately compensated at the time of subdivision.</p>
<p><b>3.6</b> – The City protects, preserves, and enhances its urban forests.</p>	<p>Neighbourhood roadways will be constructed using the City of Edmonton Design standards ensuring boulevard trees are provided enhancing the urban forest throughout the neighbourhood in alignment with the Urban Forest Management Plan.</p>
<p><b>3.7</b> – The City protects, preserves, and enhances the North Saskatchewan River Valley and Ravine System as Edmonton’s greatest natural asset</p>	<p>The Blackmud Creek ravine will be preserved and appropriately buffered from development using Environmental Reserve. All proposed bridge crossings will also be designed in accordance with Edmonton’s Wildlife Passage Engineering Design Guidelines to ensure ecological connectivity is maintained throughout the ravine.</p>
<p><b>3.8</b> – The City protects, preserves and improves the North Saskatchewan River Valley and Ravine System as an accessible year-round place for recreation and activity for people of all ages</p>	<p>In accordance with Top of Bank Policy, a shared use path will be constructed within the Public upland Setback to link residential neighbourhoods with access points into the ravine system. Shared use paths along the Top of Bank allows the ravine system to be enjoyed through all seasons of the year from jogging and biking in the summer to cross-country skiing and snowshoeing in the winter.</p>
<p><b>3.9</b> – The City mitigates the impact of development upon the natural functions and character of the North Saskatchewan River Valley and Ravine System</p>	<p>This NASP ensures that the Blackmud Creek is an important and protected feature within the neighbourhood, as well as the city. Development setbacks are ensured to buffer the ravine from</p>

	residential development in accordance with Top of Bank Policies and several viewpoint parks are allocated to provide balanced active and passive recreation opportunities along the ravine's edge.
<b>3.10</b> – The City utilizes parks and open spaces to complement and enhance biodiversity, linkages, habitat and the overall health of Edmonton's ecological network	The design of the Cavanagh NASP trail network, greenways, stormwater management facilities, and parks will be designed using best practices to enhance neighbourhood and ecological connectivity, and landscaped to incorporate native and/or semi-native plant species, expand the urban tree inventory, and provide additional habitat for birds and wildlife.
<b>3.11</b> – The City expands and enhances Edmonton's inventory of parks and open spaces for the ecological, health, recreation and educational benefits they provide	The Cavanagh NASP allocates several viewpoint, ravine, and pocket parks in the neighbourhood. In accordance with the Municipal Government Act, Municipal Reserve will be dedicated as land, cash-in-lieu, or a combination thereof, at the time of subdivision.

#### 4.1.5 - Heritage Valley Servicing Concept Design Brief

The Heritage Valley Servicing Concept Design Brief (SCDB) establishes a general framework for land use planning, and infrastructure and service provision within the Heritage Valley area. It provides policy and design directions for urban development with an emphasis on servicing. The Heritage Valley SCDB is not a statutory plan; however, it has been adopted by a City Council Resolution to make it an effective planning instrument. This has enabled the SCDB to serve as a policy context for subsequent NASPs in the Heritage Valley area.

The Cavanagh NASP complies with the following SCDB strategic goals:

Heritage Valley SCDB Principles	NASP Compliance with SCDP Principles
<b>3.1 (1)</b> – Promote sustainable community design	The NASP establishes higher residential densities, which optimizes the land for suburban development.
<b>3.1 (3)</b> – Create a compact, pedestrian-oriented community	The NASP pedestrian network is at the heart of the plan, ensuring a high level of connectivity. Higher residential densities and compact development forms promote efficient development patterns.
<b>3.2 (4)</b> – Establish a linked system of public open spaces	The park sites, stormwater management facilities, Blackmud Creek Ravine and other open spaces are all connected by pathways and shared-use paths and are accessible to adjacent roadways.
<b>3.2 (5)</b> – Provide a diversity of housing types in each neighbourhood	Single/Semi-detached, Row Housing and Low-Rise/Medium Density Housing uses allow for the development of diverse housing types.
<b>3.2 (6)</b> – Support housing at increased densities in support of the City's intensification strategies and to encourage the use of transit	The NASP proposes a more intensified housing unit ratio of 46% LDR and 54% MDR, with a total net residential density of 39 units per net residential hectare

Heritage Valley SCDB Principles	NASP Compliance with SCDP Principles
<b>3.3 (2)</b> – Ensure that each neighbourhood is designed with a focal point	The stormwater management facilities and park sites serve as community focal points.
<b>3.5 (1)</b> – Provide a balanced network for movement	The NASP provides opportunities for movement by vehicle, public transit, bicycle, walking, etc. via a network of roadways, sidewalks, walkways and transit routes.
<b>3.5 (2)</b> – Provide a Transportation system that reflects the character of the intended development and meets the unique demand of each neighbourhood, as well as the City’s wider Transportation objectives.	The modified grid roadway system, walkways, collector and arterial roadways ensures that the majority of the neighbourhood is within a 400 m walking distance to transit.
<b>3.5 (3)</b> – Improve connectivity	Walkways, sidewalks and roadway patterns improve connectivity to community focal points, transit routes and adjacent neighbourhoods.
<b>3.5 (5)</b> – Streets, pedestrian paths and bike paths should contribute to a system of fully connected and interesting routes to all destinations	Streets, sidewalks and walkways are provided by the NASP and connect the community to focal points and destinations.
<b>3.7 (2)</b> – Protect and enhance the natural features of the community when designing and planning neighbourhoods, facilities and services	Naturalized landscaping along open space corridors should work to restore ecological connections within the area.

#### 4.1.6 - Suburban Neighbourhood Design Principles

The purpose of the Suburban Neighbourhood Design Principles (SNDP) is to encourage flexibility and innovation in the design and servicing of new neighbourhoods. The applicable principles are listed below:

Suburban Neighbourhood Design Principle	NASP Compliance with SNDP Principles
<b>Principle 1:</b> Design neighbourhoods with the intent of sharing common infrastructure facilities among neighbourhoods	Through site orientation, location, and connectivity these developments will provide options for service delivery for adjacent neighbourhoods.
<b>Principle 2:</b> Design and locate school and community facilities to provide inter-neighbourhood focal points	The park sites within the NASP have been located within residential nodes to serve as community focal points.
<b>Principle 3:</b> Design the arterial and collector roads along a grid pattern, peripheral to the neighbourhoods. Use local roadways to distribute neighbourhood traffic from/to these arterial and collector roadways.	The Cavanagh NASP proposes a system of local and collector roadways connecting to adjacent arterial roadways (30 Ave SW).
<b>Principle 4:</b> Design neighbourhood streets (both neighbourhood design and cross section of roadway) with standards that cater to the main intended use of the road.	City standards and regulations ensure that streets are designed to accommodate pedestrians, cyclists and vehicles. Streets, sidewalks and pathways have standardized widths and materials depending on their function. Street types are organized in a hierarchical

Suburban Neighbourhood Design Principle	NASP Compliance with SNDP Principles
	<p>fashion, depending on their use.</p> <p>New roadway cross-sections will be considered as an innovative way of making local roadways more efficient for traffic movement and more enjoyable for residents.</p>
<p><b>Principle 5:</b> Provide convenient pedestrian and bicycle access throughout the neighbourhood and especially between destination points within and outside the neighbourhood</p>	<p>Pathways, walkways, sidewalks and shared-use paths connect pedestrians and cyclists to community focal points and destinations such as the Blackmud Creek Ravine, park sites, stormwater management facilities and adjacent neighbourhoods.</p>
<p><b>Principle 6:</b> Provide Transit Services to the edges of new neighbourhoods using the arterial and collector roadways in conjunction with appropriately designed, strategically located and conveniently accessed transit waiting zones</p>	<p>Future transit service is appropriate along the collector and arterial roadway network. Alignment of collector roadways and the strategic location of walkways are designed so that all areas of the neighbourhood are accessible to transit stops within a 400m walking distance.</p>
<p><b>Principle 7:</b> At the area and neighbourhood planning stage, plan the location of the school / park facilities relative to neighbourhood staging such that they can be consolidated, serviced, and available early in the development of a neighbourhood or catchment area</p>	<p>Distribution of park sites throughout the neighbourhood ensures that parkland will be developed on a timely basis.</p>
<p><b>Principle 9:</b> Explore opportunities to provide smaller, dispersed open space and parks in a neighbourhood to provide for localized needs while meeting the recreational needs of residents of the catchment area</p>	<p>There are three pocket park sites located within the NASP which will accommodate opportunities for passive recreation.</p>
<p><b>Principle 10:</b> Optimize the use of land and capital requirements for facilities such as churches, schools, community leagues and storm water management</p>	<p>Park sites and stormwater management facilities are located together to maximize their use potential.</p>
<p><b>Principle 11:</b> Create a linked open space system through open spaces created by stormwater management facilities, some utility rights-of-way, preservation of appropriate natural areas and drainage courses, and school and park open spaces</p>	<p>The NASP provides excellent opportunities for linkages throughout and beyond the plan area to connect residents with amenities and potential commercial service areas. An integrated open space system and shared-use paths provide linkages between the Blackmud Creek Ravine, stormwater management facilities and pocket park sites, as well as access to visual amenities, and passive and active recreation opportunities.</p>
<p><b>Principle 12:</b> Locate multi-family uses toward the edge of new neighbourhoods and close to the community and neighbourhood focal points</p>	<p>Higher density residential uses have been located near arterial roadways, with connections to neighbourhood focal points.</p>
<p><b>Principle 13:</b> Use stormwater management techniques which provide an alternative(s) to the manmade lakes and dry ponds typical to Edmonton</p>	<p>The NASP has been designed to incorporate the existing topography taking advantage of the existing contours and depressions for the SWMF's.</p> <p>Alternative stormwater management techniques should be considered, such as constructed wetlands,</p>

Suburban Neighbourhood Design Principle	NASP Compliance with SNDP Principles
	where appropriate, and will be pursued at the subdivision stage to the satisfaction of the City of Edmonton.

#### 4.1.7 - Urban Parks Management Plan

The Urban Parks Management Plan (UPMP) provides strategic direction for the acquisition, design, development, and management of Edmonton's parkland until the year 2016. This plan was adopted by City Council in August 2006.

Urban Parks Management Plan Principle	Cavanagh NASP Compliance
<b>Principle 1 – Active Living:</b> City and partner actions demonstrate a strong commitment to active living through the acquisition of a network of connected parks and open spaces.	The NASP identifies a network of parks, open spaces, stormwater management facilities and shared-use paths which create a connected and public open space system.
<b>Principle 2 – Urban Wellness:</b> City and partner actions demonstrate a strong commitment to building social capital and urban wellness in the community through the development of urban parks.	The Cavanagh NASP ensures visual and physical access to parks, and public safety through application of CPTED principles.
<b>Principle 3 – Natural Capital:</b> City and partner actions demonstrate a strong commitment to preservation of natural capital through ecological decision making.	Naturalized landscaping along open space corridors should work to restore ecological connections within the area and along the Blackmud Creek Ravine.
<b>Principle 4 – Creative Urban Design:</b> City and partner actions demonstrate a strong commitment to a higher quality of life and urban sustainability through placemaking, creative urban design and the provision of diverse landscape opportunities and experiences.	The design of the NASP promotes opportunities to enhance the community's quality of life through placemaking, creative urban design, and provision of diverse landscape opportunities. The NASP ensures land uses adjacent to public parks are complementary.
<b>Principle 5 – Safe Parks:</b> City and partner actions demonstrate a strong commitment to user safety through the creation and management of safe park environments.	The NASP ensures visual and physical access to parks, and public safety through application of CPTED principles.
<b>Principle 7 – Integrated Parks:</b> City and partner actions demonstrate a strong commitment to the integration of City, school and community facilities into the park system to meet community need.	The Cavanagh NASP provides a variety of parks and open spaces to meet the community needs.

As a requirement of the UPMP, a Parks Impact Assessment (PIA) for the Cavanagh NASP (which outlines various parkland parameters) has been submitted separately. The more specific aspects related to parkland design and development will be addressed during the subdivision and rezoning stages.

#### 4.1.8 - City of Edmonton Housing Mix Guidelines

Council approved (1991) guidelines recommend the ratio of dwelling types in new suburban neighbourhoods be based on a mix of 65% to 85% LDR units and 15% to 35% MDR units. These guidelines encourage a mix of housing types, a range of choice in housing, and a measure of intensification.

The Cavanagh NASP exceeds this ratio and proposes a mix of 46% LDR (Single/Semi-Detached) and 54% MDR (Row Housing and Low-rise/Medium density residential). In keeping with more recent policy, this plan seeks to achieve a degree of intensification, to provide a choice of housing forms within the neighbourhood, and to generally make more efficient use of new suburban land. This density should support public transit, use infrastructure more effectively, provide a user base for community facilities, and encourage greater social mix.

#### 4.1.9 - Resource Well Sites and Pipelines

Development of lands within Cavanagh shall be in accordance with policies from the City: “Policy Guidelines for the Integration of Resource Operations and Urban Developments” and “Policy C515: Oil and Gas Facilities”, and the Energy Resources Conservation Board (ERCB). Development will comply with any future updates or revisions to City policy regarding integration of resource operation. These guidelines focus on:

- Resource consolidation by the operators
- Development setbacks
- Urban design
- Surface improvements for resource leases and flow-line right-of-way; and
- Operation guidelines.

The ERCB is the agency with jurisdiction on matters related to oil and gas resource activities. It has rules, regulations and guidelines for these activities in their predevelopment, operating and post-operating (abandoned) stages.

The NASP will follow the ERCB guidelines governing development around operating facilities.

The ERCB has well-established procedures for well site abandonment and guidelines for development around abandoned facilities.

#### 4.1.10 - Winter City Strategy

The City of Edmonton’s Winter City Strategy, *For the Love of Winter*, provides strategic direction to create a more inviting, vibrant and prosperous place for residents, business, industry and tourists throughout the winter months. Adopted by City Council in 2012, this Strategy outlines 10 goals as well as an action plan to achieve these goals, with an emphasis on urban design, active transportation, and outdoor recreation. In support of the City of Edmonton’s Winter City Strategy, the design of the Cavanagh NASP promotes opportunities to enhance the community’s way of life through placemaking, creative urban design, and diverse landscapes; identifies a network of greenway corridors linking public parks and open space, community focal points, and Blackmud Creek ravine; and ensures safe public transit and active recreational opportunities are incorporated to allow residents to enjoy all four seasons.

## 5. Appendix B - Technical Studies

The following technical studies have been completed in support of the Cavanagh NASP:

- Neighbourhood Design Report (NDR)
- Hydraulic Network Analysis (HNA)
- Transportation Impact Assessment (TIA)
- Environmental Site Assessments (ESA) Phase I
- Environmental Network Report (ENR)
- Wetland Assessment (WA)
- Historical Resources Overview (HRO)
- Geotechnical Report
- Parkland Impact Assessment (PIA)