

 **PLAN ADOPTION AND PLAN AMENDMENT APPLICATION**  
**STILLWATER NEIGHBOURHOOD STRUCTURE PLAN**  
**RIVERVIEW AREA STRUCTURE PLAN**

This application proposes to adopt the Stillwater Neighbourhood Structure Plan (NSP) and to amend the Riverview Area Structure Plan (ASP) to align with the land uses and infrastructure servicing proposed in the Stillwater NSP.



## RECOMMENDATION AND JUSTIFICATION

Sustainable Development is in SUPPORT of this application because:

- The proposed residential densities meet the targets established for new neighbourhoods established in the Capital Region Growth Plan;
- The proposed land use concept provides an appropriate mix of residential densities, commercial use areas and public uses (schools and park sites); and
- The application provides protection for significant wetland sites, upland tree stands, and wildlife connectivity.

## THE APPLICATION

1. BYLAW 17735 to amend the Riverview Area Structure Plan (ASP) to align with the land uses and infrastructure servicing proposed in the Stillwater Neighbourhood Structure Plan (NSP); and
2. BYLAW 17736 to adopt the Stillwater Neighbourhood Structure Plan (NSP) to establish land use patterns, generally align arterial and collector roadways, establish residential densities, and establish a pattern for servicing and development phasing.

### 1. Amendment of the Riverview Area Structure Plan (ASP)

Bylaw 17735 proposes to amend the Riverview ASP, originally approved in July 2013 and amended in September 2015 to facilitate the adoption of The Uplands NSP and the River's Edge NSP.

The amendment revises the land use concept, reflecting a more detailed study of the area within the future Stillwater neighbourhood and current economic analysis for residential and commercial uses. All supporting figures have been revised accordingly, aligning the ecological connectivity, transportation networks and servicing schemes to reflect the revised land use concept.

As a result of this detailed planning, the residential area for the ASP increases by 12.65 ha overall. The proposed housing mix for the neighbourhood decreases Single and Semi-detached Housing and increases Row Housing, Low-rise and Medium to High Rise Housing. The overall residential density remains unchanged at 32 dwelling units/net residential hectare (du/nrha).

**ASP Residential Density Changes**

Land Use		Proposed	Approved	Net Difference	
Single/Semi-detached	Area (ha)	544.15	539.52	4.63	
	<i>25 du/nrha</i>	Units	13,601	13,488	113
	<i>2.8 people/dwelling unit(p/du)</i>	Population	38,081	37,767	314
Row Housing	Area (ha)	37.60	35.44	2.16	
	<i>45 du/nrha</i>	Units	1,690	1,595	95
	<i>2.8 p/du</i>	Population	4,730	4,465	265
Low-rise/Medium Density Housing	Area (ha)	43.39	42.58	0.81	
	<i>90 du/nrha</i>	Units	3,903	3,832	71
	<i>1.8 p/du</i>	Population	7,024	6,898	126
Town Centre Mixed Uses / MDR	Area (ha)	2.8	2.80	0	
	<i>90 du/nrha</i>	Units	252	252	0
	<i>1.8 p/du</i>	Population	453	453	0
Mixed Use Residential **	Area (ha)	6.24	2.00	4.24	
	<i>150 du/nrha</i>	Units	936	450	486
	<i>1.5 p/du</i>	Population	1,404	675	729
Town Centre Mixed Uses / HDR	Area (ha)	0.49	0.49	0	
	<i>225 du/nrha</i>	Units	109	109	0
	<i>1.5 p/du</i>	Population	163	163	0
Total Residential	Area (ha)	634.67	622.83	11.84	
	Units	20,491	19,726	765	
	Population	51,855	50,422	1,433	

A commercial area, southwest of Maskêkosihk Trail NW and 199 Street NW, is revised, replacing the Town Centre Commercial designation with a smaller and realigned Mixed Uses/Main Street Retail area. A Community Commercial area in the southwest corner of the Stillwater neighbourhood has been revised, decreasing its area by 0.59 ha.

<b>Land Use</b>	<b>Proposed</b>	<b>Approved</b>	<b>Net Difference</b>
Town Centre Commercial (with Main Street)	21.95	21.30	0.65
Mixed Uses / Commercial	3.29	6.12	(-2.84)
Community Commercial	14.60	14.55	(-0.05)
Neighbourhood Commercial	6.12	4.99	1.13

Four wetland features located within the future Stillwater neighbourhood are to be preserved. The proposed ASP amendment also revises the areas designated as Environmental Reserve to incorporate the wetlands based on the hydrology and ecological assessment of the features. Additional areas have been designated as Natural Area in order to preserve important tree stand features and to act as wildlife corridors.

School/Park areas have been slightly revised as a result of the realignment of collector and arterial roads within the Stillwater neighbourhood.

The ASP amendment revises the land use and population statistics, conforming to the 2010 Terms of Reference for the Preparation and Amendment of Residential Area Structure Plans. This ensures consistency between all neighbourhood plan statistical calculation methods.

## 2. Adoption of the Stillwater Neighbourhood Structure Plan (NSP)

Bylaw 17736 proposes the adoption of a new Neighbourhood Structure Plan (NSP) for the Stillwater neighbourhood. The proposed NSP, encompassing 315.71 ha, establishes a land use and servicing framework to support residential, commercial, school and park uses, while protecting significant environmental features and wildlife corridors. The proposed NSP has been prepared in accordance with the 2014 Terms of Reference for the Preparation and Amendment of Neighbourhood Structure Plans. The proposed NSP establishes a future neighbourhood population of 12,555 residents at full build-out.

The Stillwater NSP proposes to establish:

- The location of various land uses;
- The density of residential development;
- Connectivity to passive and active recreation uses;
- The required road and utility infrastructure to support development;
- Opportunities for low impact development; and
- The development phasing within the neighbourhood.

A total of four distinct commercial hubs are planned. Two Community Commercial areas are located in the southwest and northwest corners of the plan area, totalling 10.57 ha. A 6.94 ha Town Centre Commercial with Main Street area is planned for the northeast corner, and a 1.13 ha Neighbourhood Commercial area is located in the approximate centre of the neighbourhood.

The predominant land use within the Stillwater neighbourhood is residential, comprising 149.42 ha or 55.4 % of the gross developable area. A range of densities are proposed, including Single and Semi-detached housing, Row housing, Low Rise/Medium Density Housing and Residential/Mixed use. A residential density of 34.1 du/nrha is achieved in the proposed NSP.

Three large wetland features and a fourth smaller wetland are preserved through dedication of environmental reserves. Additionally, tree stands and other environmental features adjacent to the wetlands are preserved as Natural Areas.

Two large school and park areas, totalling 14.74 ha, are established within the NSP, located in the northern and southern portions of the plan area. Four additional pocket parks, totalling 2.00 ha, provide additional open spaces for residential areas located further from the large park/school sites. In total, 24.56 ha are provided for open space, recreation and school uses, amounting to 9.1% of the gross developable area within the neighbourhood.

The City of Edmonton's Inventory of Environmentally Sensitive and Significant Natural Areas and a Phase II Ecological Network Report (ENR) identify four natural areas to be retained within the Stillwater neighbourhood. These include three wetland complexes and a linear tree stand. The proposed NSP largely retains these sites through dedication as environmental reserve or as Natural Area.

Five stormwater management facilities (SWMF) are proposed to serve the neighbourhood. Three SWMF areas are located adjacent to the large wetland features. The NSP proposes to integrate these SWMF with the wetland features to provide an ecological network that increases stormwater capacity while improving the water which is ultimately discharged into Wedgewood Creek and the North Saskatchewan River. The SWMFs will be naturalized to mimic natural attributes of prairie wetlands, providing passive green space, wildlife habitat, and educational opportunities, while effectively managing stormwater flows.

Two areas are designated as Special Study Areas, recognizing that additional detailed study is required to ensure future development is compatible with wetland features and park needs. One Special Study Area, adjacent to the northern school site, is identified as a swing site for the potential expansion of the school and community park site. Should additional land be required to accommodate the school and park facilities, this land could be dedicated as municipal reserve. Otherwise, this area will be developed as Low Density Residential uses.

An additional Special Study Area is located adjacent to a wetland complex on the west-central portion of the plan area. This area may be required for stormwater management, dependent upon greater study of the wetland feature and development requirements. If the area is determined to not be necessary to service the wetland complex, it will revert to Low Density Residential.

The transportation network proposed in the Stillwater NSP serves the needs of internal and external traffic, in accordance with City guidelines and standards. Arterial, collector and local roadways facilitate the efficient movement of vehicular traffic. The proposed NSP provides policies to support transit and active modes of transportation.

Servicing for sanitary and stormwater management is planned to accommodate the proposed development, in accordance with City servicing standards. The planned staging of development proposed in the NSP ensures contiguous development.

## SITE AND SURROUNDING AREA

The subject site, located south of Maskêosiik Trail NW and those lands lying between 215 Street NW and the future realignment of 199 Street NW, contains undeveloped agricultural land and wetland sites. A communications tower and accessory facilities are located in the north-west portion of the subject site.

Land immediately adjacent to the subject area is largely undeveloped and are currently operating as agricultural use. Large lot, country residential uses are located nearby, to the south and east.

	<b>EXISTING ZONING</b>	<b>CURRENT USE</b>
<b>SUBJECT SITE</b>	(AG) Agricultural Zone	Agricultural use, public utility
<b>CONTEXT</b>		
North	(AG) Agricultural Zone	Agricultural use
East	(AG) Agricultural Zone	Agricultural use
South	(AG) Agricultural Zone	Agricultural use
West	(CR) Country Residential District (Parkland County)	Agricultural use



APPROXIMATE BOUNDARY OF PROPOSED STILLWATER NSP

## PLANNING ANALYSIS

The proposal to adopt the Stillwater NSP and related Riverview ASP amendment is supported by policies contained in Edmonton's Municipal Development Plan, The Way We Grow. The Plan designates the NSP as "Developing and Planned and Future Neighbourhoods" and it is deemed suitable for urban development. The proposed neighbourhood plans conform to several policy objectives contained in The Way We Grow, in particular those detailed in sections:

3.6.1.6: Support contiguous development and infrastructure in order to accommodate growth in an orderly and economical fashion;

4.4.1.1: Provide a broad and varied housing choice, incorporating housing for various demographic and income groups in all neighbourhoods;

7.4.1.1: Link parks and open spaces with natural systems through development and design to strengthen the connectivity of Edmonton's ecological network, where feasible; and

7.1.1: Protect, preserve and enhance a system of conserved natural areas within a functioning and interconnected ecological network.

## REGIONAL CONSIDERATIONS

The application has been circulated to Parkland County and Enoch Cree Nation for comment. No concerns were expressed regarding the application.

The proposed Riverview ASP amendment and the Stillwater NSP conform to the policies of the Capital Region Plan. The proposed residential density of 34.1 du/nrha is within the density targets for Priority Growth Areas. The main purpose of the Capital Region Land Use Plan is to manage sustainable growth in order to protect the region's environment and resources, minimize the regional development footprint, strengthen communities within the region, increase choice of transportation and encourage economic growth. The proposed NSP will achieve these objectives by coordinating planning and development decisions in the region and identifying a regional development pattern to complement existing infrastructure, services and land uses. The Stillwater NSP is located in Priority Growth Area Cw, which has a minimum density target of 30 units per net residential hectare (upnrh).

## INTEGRATED INFRASTRUCTURE MANAGEMENT PLANNING (IIMP) STRATEGY

Integrated Infrastructure Management Planning (IIMP) for the Stillwater NSP is a high-level analysis that provides Council with information about the infrastructure required for development of the neighbourhood. The broad-based analysis performed at this stage of the area development provides a general indication of future cost implications and revenue potential, which can help inform high-level decision making.

The IIMP review was completed for a neighbourhood development build-out of 21 years, starting in 2017. Based on the information available at this time, the review generally shows that Stillwater will require a developer infrastructure investment of over \$176 million as well as a capital investment by the City of approximately \$103 million. Capital and operating

expenditures may be required as early as 2017 to support the anticipated development of the neighbourhood.

## **DESIGNING NEW NEIGHBOURHOODS, GUIDELINES FOR EDMONTON'S FUTURE RESIDENTIAL COMMUNITIES**

The Designing New Neighbourhood Guidelines were approved in May 2013 with the intent of establishing a common vision in the preparation of new NSPs. The vision is comprised of 12 desired outcomes, each of which is accompanied by a set of principles that recognize the context and uniqueness of the neighbourhood.

### Outcome 1: Neighbourhoods are connected

The Stillwater NSP will create a well-connected neighbourhood by providing linkages through a network of streets, paths, ecological connections and park systems. Further to this, the proposed NSP contains implementation policies ensuring appropriate design elements realized upon development.

### Outcome 2: Neighbourhoods are unique and inviting

The proposed NSP is distinct as it provides protection for significant wetland sites, upland tree stands, and wildlife connectivity.

### Outcome 3: Neighbourhoods are inclusive

The NSP is predominantly designated for residential development and proposes a variety of housing types including opportunities for affordable housing. The design of neighbourhood infrastructure and parks is intended to accommodate people of all ages and abilities. Multi-modal streets, pedestrian connections and a designated pedestrian zone are a prime consideration of the transportation network, allowing residents to have access to neighbourhood destinations, amenities and services.

### Outcome 4: Neighbourhoods provide residents with convenient access to full range of transportation options

The transportation network has been designed to efficiently move internal and external traffic flows throughout Stillwater and surrounding neighbourhoods. The Stillwater NSP proposes to accommodate multiple modes of travel including vehicles, buses, pedestrians and bicycles.

### Outcome 5: Neighbourhoods support viable uses, services and facilities

The Stillwater NSP plans for a Town Centre Commercial with Main Street in the north east corner of the neighbourhood. This is adjacent to a private resident's association site which could accommodate a community building and either indoor or outdoor recreational facilities. The northwest corner is designated for Community Commercial Uses which would provide opportunities for smaller scale retailers to service the community.

#### Outcome 6: Neighbourhoods are cost effective

The NSP proposes the logical extension of infrastructure and services from existing neighbourhoods. The development staging and extension of service will be contiguous, efficient, and economical which will meet municipal standards.

#### Outcome 7: Neighbourhoods conserve and enhance ecosystems and biodiversity

Three SWMFs are located adjacent to the large wetland features. The NSP will integrate these facilities and wetland features to provide a unique ecological area. The SWMFs will be naturalized to mimic natural attributes of prairie wetlands, providing passive green space, wildlife habitat, educational opportunities, while effectively managing stormwater flows.

#### Outcome 8: Neighbourhoods amenities and facilities support the social and recreational needs of residents

The proposed NSP provides a variety of park sites and open spaces in accordance with Edmonton's Urban Parks Management Plan. The diversity in open space ensures convenience and availability for all user groups, residents and visitors. The proposed NSP allows opportunities for edible landscaping elements through landscape design of parks and open spaces, implemented through NSP policy as guided by Fresh: Edmonton's Food and Urban Agricultural Strategy.

#### Outcome 9: Neighbourhoods embrace all seasons

The NSP proposes to consider all weather conditions when designing streetscapes, parks, open spaces and boulevards in order for residences to enjoy the outdoor environment year-round. The Winter City Strategy will be implemented to ensure proper design elements for all-season enjoyment.

#### Outcome 10: Neighbourhoods are safe and secure

The Stillwater NSP proposes a well-designed streetscape in accordance with City Design and Construction Standards and Complete Streets Guidelines. The design ensures emergency response vehicles can access the neighbourhood quickly and circulate efficiently in a safe manner. Furthermore, the NSP proposes to develop parks in accordance with the Urban Parks Management Plan and Crime Prevention Through Environmental Design (CPTED) principles to ensure safety, security and to mitigate risk.

#### Outcome 11: Neighbourhoods are flexible and adaptable

The proposed NSP provides opportunity to respond to changes in demographics and market conditions with the intention that the development can grow and intensify over the long term as the economy evolves and the neighbourhood matures.



## Outcome 12: Resources are used efficiently and responsibly in neighbourhoods

The Stillwater NSP contains policies that encourage new sustainable community design practices and infrastructure design which will reduce resources, water and waste consumption. It also contains policies to minimize energy use and energy requirements in buildings and infrastructure by means of efficient site planning, green building design, and the use of LEED standards, when possible.

## **TECHNICAL REVIEW**

All comments from affected City Departments and utility agencies have been addressed.

Drainage Planning has indicated support of the proposed NSP.

Transportation and Planning Engineering reviewed the application and indicated that a Transportation Impact Assessment (TIA) was completed in support of the first three neighbourhoods of the Riverview ASP, The Uplands, River's Edge and Stillwater. The TIA indicates that full build-out of the neighbourhoods can generally be accommodated on the planned roadway network within the City's Level of Service Guidelines.

Given the constraints of the Riverview area, it is anticipated that significant amount of traffic will access these neighbourhoods via the Cameron Heights/Anthony Henday Drive interchange and Maskêkosihk Trail NW. Even with six traffic lanes, it is anticipated that Maskêkosihk Trail NW between Riverview Way and Anthony Henday Drive will operate at capacity during peak hours. It is anticipated that residents will find alternate modes of travel to single user vehicles (transit, carpooling, cycling, etc.) or will adjust their travel times to spread the peak hour in response to the congestion.

Based on the TIA analysis, it is estimated that approximately two thirds of land within The Uplands, River's Edge and Stillwater can be developed before the existing Cameron Heights/Anthony Henday Drive interchange reaches capacity. As the Riverview ASP area develops, the operations of the existing interchange will be monitored to determine when the planning and construction of upgrades, such as additional lanes along the Anthony Henday Drive on and off ramps, will be required.

Roadways within the Stillwater NSP will be designed using the principles outlined in the Complete Streets Guidelines. The neighbourhood will accommodate multiple modes of transportation, including active transportation, public transit and vehicular travel. The neighbourhood will include an extensive network of sidewalks, walkways, shared-use paths and greenways to accommodate active modes. The network will provide residents with convenient access to neighbourhood destinations and transit service throughout the plan area.

## PUBLIC ENGAGEMENT

<b>ADVANCE NOTICE</b> May 07, 2014	<ul style="list-style-type: none"><li>• As a result of the notification, four (4) individuals requested more information, which Sustainable Development provided. No additional requests were received.</li></ul>
<b>PUBLIC MEETING</b> June 25, 2015	<ul style="list-style-type: none"><li>• 37 attendees</li><li>• Proposal was well received</li><li>• Questions were raised by the owners of the existing country residential development with regard to city water and sewer connections</li></ul>

## CONCLUSION

Sustainable Development recommends that City Council APPROVE this application.

## ATTACHMENTS

- 2a Approved Land Use and Population Statistics Riverview Area Structure Plan - Bylaw 17267
- 2b Proposed Land Use and Population Statistics Riverview Area Structure Plan Bylaw 17735
- 2c Proposed Land Use and Population Statistics Stillwater Neighbourhood Structure Plan– Bylaw 17736
- 2d Approved Riverview Area Structure Plan – Bylaw 17267
- 2e Proposed Riverview Area Structure Plan – Bylaw 17735
- 2f Proposed Stillwater Neighbourhood Structure Plan – Bylaw 17736
- 2g Integrated Infrastructure Management Plan Stillwater Neighbourhood
- 2h Application Summary

**RIVERVIEW AREA STRUCTURE PLAN  
APPROVED LAND USE AND POPULATION STATISTICS  
BYLAW 17267**

	Area (ha)	% GA	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
<b>GROSS AREA</b>	1,435.39	100.0	283.85	317.81	314.85	187.66	331.22
Environmental Reserve / Natural Area (ER) *	52.82	3.7	5.60	30.16	17.06	-	-
Public Upland	1.18	0.1	-	-	1.18	-	-
Pipeline / Utility Right-of-Way	5.06	0.4	-	1.70	3.36	-	-
Altalink Power Corridor	23.63	1.6	23.63	-	-	-	-
Arterial Road Right-of-Way	63.56	4.4	16.59	21.64	16.02	5.24	4.07
Existing Country Residential	115.41	8.0	13.52	-	16.91	66.40	18.58
Existing Natural Area (NW 384)	20.36	1.4	-	-	-	-	20.36
<b>GROSS DEVELOPABLE AREA</b>	1,147.08	80.4	224.51	264.31	260.33	116.01	281.92
Town Centre Commercial	21.30	1.86	15.01	6.29	-	-	-
Mixed Uses / (Main Street) Commercial **	6.12	0.53	2.80	2.83	0.49	-	-
Community Commercial	14.55	1.27	-	10.52	-	4.03	-
Neighbourhood Commercial	4.99	0.44	-	-	2.99	1.00	1.00
Business Employment	39.57	3.45	39.57	-	-	-	-
Parkland, Recreation, School (Municipal Reserve)	114.59	9.99	7.83	25.48	51.38	8.66	21.24
<i>District Activity Park</i>	33.80	2.95	-	-	33.80	-	-
<i>School/Park</i>	38.96	3.40	-	16.48	13.00	-	9.48
<i>Urban Village Park/Pocket     Park/Greenway</i>	23.10	2.01	6.79	1.73	4.58	3.90	6.10
<i>Natural Area (MR)</i>	18.73	1.63	1.04	7.27	-	4.76	5.66
Transportation - circulation	229.06	19.97	44.90	51.26	52.06	23.20	57.64
Transit Centre	1.45	0.13	-	-	1.45	-	-
Stormwater Management Facility	82.99	7.2	17.84	19.73	14.30	8.93	22.19
Public Utility - Communications Facility	8.02	0.70	-	8.02	-	-	-
Natural Area Protection (Through Other Means)	6.29	0.55	-	1.00	-	1.29	4.00
<b>Total Non-Residential Area</b>	522.64	45.56	127.95	124.13	122.67	45.82	102.07
<b>Net Residential Area</b>	624.44	54.44	96.56	140.18	137.66	70.19	179.85

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

Land Use	ASP	Nbhd 1	Nbhd 2	Nbhd 3	Nbhd 4	Nbhd 5
Single/Semi-detached	Area (ha)	539.52	81.68	122.58	111.23	60.20
<i>25 du/nrha</i>	Units	13,488	2,042	3,064	2,781	1,505
<i>2.8 p/du</i>	Population	37,767	5,717	8,580	7,786	4,214
Row Housing	Area (ha)	35.44	4.93	8.00	10.51	6.00
<i>45 du/nrha</i>	Units	1,595	222	360	473	270
<i>2.8 p/du</i>	Population	4,465	621	1,008	1,324	756
Low-rise/Medium Density Housing	Area (ha)	42.58	7.15	7.00	15.43	4.00
<i>90 du/nrha</i>	Units	3,832	644	630	1,389	360
<i>1.8 p/du</i>	Population	6,898	1,158	1,134	2,500	648

Town Centre Mixed Uses / Medium Density Residential	Area (ha)	2.80	2.80	0.00	0.00	0.00	0.00
<i>90 du/nrha</i>	Units	252	252	0	0	0	0
<i>1.8 p/du</i>	Population	454	454	0	0	0	0
Medium to High Density Housing	Area (ha)	2.00	0.00	1.00	0.00	0.00	1.00
<i>225 du/nrha</i>	Units	450	0	225	0	0	225
<i>1.5 p/du</i>	Population	675	0	338	0	0	338
Town Centre Mixed Uses / High Density Residential	Area (ha)	0.49	0.00	0.00	0.49	0.00	0.00
<i>225 du/nrha</i>	Units	109	0	0	109	0	0
<i>1.5 p/du</i>	Population	164	0	0	164	0	0
Total Residential	Area (ha)	622.83	96.56	138.58	137.65	70.20	179.85
	Units	19,726	3,159	4,279	4,751	2,135	5,401
	Population	50,422	7,951	11,060	11,773	5,618	14,021

### SUSTAINABILITY MEASURES

Population Per Net Hectare (ppnha)	80.96	82.34	79.81	85.53	80.03	77.96
Dwelling Units Per Net Residential Hectare (upnrha)	31.7	32.7	30.9	34.5	30.4	30.0
Population (%) within 500m of Parkland		94%		93%		
Population (%) within 400m of Transit Service		100%		100%		
Population (%) within 600m of Commercial Service		66%		43%		
Presence/Loss of Natural Areas						
Protected as Environmental Reserve	52.8	5.60	30.16	17.06	-	-
Conserved as Municipal Reserve (ha)	25.0	1.04	7.27	-	4.76	11.95
Protected through other means (ha)	20.4	-	-	-	-	20.36
Lost to Development (ha)	9.6	7.80	-	15.40	-	-

### STUDENT GENERATION COUNT

#### Public School Board

Elementary School	2,307	449.0	528.6	520.6	232.0	576.4
Junior High	1,153	224.5	264.3	260.3	116.0	288.2
Senior High	1,153	224.5	264.3	260.3	116.0	288.2
<b>Separate School Board</b>						
Elementary School	1,153	224.5	264.3	260.3	116.0	288.2
Junior High	577	112.3	132.2	130.2	58.0	144.1
Senior High	577	112.3	132.2	130.2	58.0	144.1
<b>Total Student Population</b>	6,920	1,347.1	1,585.9	1,561.9	696.1	1,729.3

\* This area includes NW 354 and NW355 (with a setback buffer around them) that may be claimed by the Crown. The boundary of each natural area will be adjusted through subsequent studies, bed and shore survey, and subdivision.

\*\*Mixed Use areas are divided amongst Residential Uses (50%) and Non-Residential Uses (50%) (e.g. Total area is 5.6 ha; area of residential is 2.8 ha and non-residential is 2.8 ha)

**RIVERVIEW AREA STRUCTURE PLAN  
PROPOSED LAND USE AND POPULATION STATISTICS  
BYLAW 17735**

	Area (ha)	% GA	The Uplands	Stillwater	River's Edge	Grandisle	White Birch
<b>GROSS AREA</b>	1,433.29	100.0	283.85	315.71	314.85	187.66	331.22
Environmental Reserve / Natural Area (ER) *	42.49	3.0	5.60	19.83	17.06	-	-
Public Upland	1.18	0.1	-	-	1.18	-	-
Pipeline / Utility Right-of-Way	5.49	0.4	-	2.13	3.36	-	-
Altalink Power Corridor	23.63	1.6	23.63	-	-	-	-
Arterial Road Right-of-Way	58.06	4.1	16.59	16.14	16.02	5.24	4.07
Public Utility - Communications Facility	8.14	0.7	-	8.14	-	-	-
Existing Country Residential	115.41	8.1	13.52	-	16.91	66.40	18.58
Existing Natural Area (NW 384)	20.36	1.4	-	-	-	-	20.36
<b>GROSS DEVELOPABLE AREA</b>	1,158.53	80.8	224.51	269.47	260.32	116.02	288.21
Town Centre Commercial (with Main Street)	21.95	1.9	15.01	6.94	-	-	-
Mixed Uses / Commercial **	3.29	0.3	2.80	-	0.49	-	-
Community Commercial	14.60	1.3	-	10.57	-	4.03	-
Neighbourhood Commercial	6.12	0.5	-	1.13	2.99	1.00	1.00
Business Employment	39.57	3.4	39.57	-	-	-	-
Parkland, Recreation, School (Municipal Reserve)	113.67	9.8	7.83	24.56	51.38	8.66	21.24
<i>District Activity Park</i>	33.80	2.9	-	-	33.80	-	-
<i>School/Park</i>	37.22	3.2	-	14.74	13.00	-	9.48
<i>Urban Village Park/Pocket Park/Greenway</i>	23.49	2.0	6.79	2.12	4.58	3.90	6.10
<i>Natural Area (MR)</i>	19.16	1.7	1.04	7.70	-	4.76	5.66
Natural Area (Protected Through Other Means)	5.29	0.5	-	-	-	1.29	4.00
Resident's Association	0.80	0.1	-	0.80	-	-	-
Transportation - Circulation	231.71	20.0	44.90	53.89	52.06	23.20	57.64
Transit Centre	1.45	0.1	-	-	1.45	-	-
Stormwater Management Facility	82.69	7.1	17.84	19.43	14.30	8.93	22.19
Special Study Area (SWMF/LDR)	2.73	0.2	-	2.73	-	-	-
<b>Total Non-Residential Area</b>	523.86	45.2	127.95	120.05	122.67	47.11	106.07
<b>Net Residential Area</b>	634.67	54.8	96.56	149.42	137.65	68.91	182.14

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

Land Use		ASP	The Uplands	Stillwater	River's Edge	Grandisle	White Birch
Single/Semi-detached	Area (ha)	544.15	81.68	126.21	111.23	58.91	166.14
<i>25 du/nrha</i>	Units	13,601	2,041	3,155	2,780	1,472	4,153
<i>2.8 p/du</i>	Population	38,081	5,714	8,834	7,784	4,121	11,628
Row Housing	Area (ha)	37.60	4.93	10.16	10.51	6.00	6.00
<i>45 du/nrha</i>	Units	1,690	221	457	472	270	270
<i>2.8 p/du</i>	Population	4,730	618	1,279	1,321	756	756
Low-rise/Medium Density Housing	Area (ha)	43.39	7.15	7.81	15.43	4.00	9.00
<i>90 du/nrha</i>	Units	3,903	643	702	1,388	360	810
<i>1.8 p/du</i>	Population	7,024	1,157	1,263	2,498	648	1,458
Town Centre Mixed Uses / Medium Density Residential	Area (ha)	2.80	2.80	0.00	0.00	0.00	0.00
<i>90 du/nrha</i>	Units	252	252	0	0	0	0
<i>1.8 p/du</i>	Population	453	453	0	0	0	0
Mixed Use Residential **	Area (ha)	6.24	0.00	5.24	0.00	0.00	1.00
<i>150 du/nrha</i>	Units	936	0	786	0	0	150
<i>1.5 p/du</i>	Population	1,404	0	1,179	0	0	225
Town Centre Mixed Uses / High Density Residential	Area (ha)	0.49	0.00	0.00	0.49	0.00	0.00
<i>225 du/nrha</i>	Units	109	0	0	109	0	0
<i>1.5 p/du</i>	Population	163	0	0	163	0	0
Total Residential	Area (ha)	634.67	96.56	149.42	137.65	68.91	182.14
	Units	20,491	3,157	5,100	4,749	2,102	5,383
	Population	51,855	7,942	12,555	11,766	5,525	14,067

**SUSTAINABILITY MEASURES**

	ASP	The Uplands	Stillwater	River's Edge	Grandisle	White Birch
Population Per Net Hectare (ppnha)	81	82	84	85	80	77
Units Per Net Residential Hectare (upnrha)	32	32	34	34	30	29
Population (%) within 500m of Parkland		94%	100%	93%		
Population (%) within 400m of Transit Service		100%	100%	100%		
Population (%) within 600m of Commercial Service		66%	98%	43%		
Presence/Loss of Natural Areas						
Protected as Environmental Reserve	39.32	5.60	16.66	17.06	-	-
Conserved as Municipal Reserve (ha)	19.16	1.04	7.70	-	4.76	5.66
Protected through other means (ha)	20.40	-	3.17	-	1.29	24.36
Lost to Development (ha)	9.56	7.80	19.47	15.40	-	-

**STUDENT GENERATION COUNT**

	<b>ASP</b>	<b>The Uplands</b>	<b>Stillwater</b>	<b>River's Edge</b>	<b>Grandisle</b>	<b>White Birch</b>
<b>Public School Board</b>						
Elementary School	2,315	449	538	520	232	576
Junior High	1,157	224	269	260	116	288
Senior High	1,157	224	269	260	116	288
<b>Separate School Board</b>						
Elementary School	1,157	224	269	260	116	288
Junior High	578	112	134	130	58	144
Senior High	578	112	134	130	58	144
<b>Total Student Population</b>	<b>6,942</b>	<b>1,345</b>	<b>1,613</b>	<b>1,560</b>	<b>696</b>	<b>1,728</b>

\* This area includes the bed and shore of NW355 and NW357 that have been claimed by the Crown, as well as other wetlands (and buffer areas) to be retained as E.R. The boundary of each natural area (and their buffer distance) may be adjusted through subsequent studies, bed and shore survey, and subdivision.

\*\*Mixed Use areas are divided amongst Residential Uses (50%) and Non-Residential Uses (50%) (e.g. Total area is 5.6 ha; area of residential is 2.8 ha and non-residential is 2.8 ha)

**STILLWATER NEIGHBOURHOOD STRUCTURE PLAN  
PROPOSED LAND USE AND POPULATION STATISTICS  
BYLAW 17736**

	Area (ha)	% of GA	% of GDA	
<b>GROSS AREA</b>	<b>315.71</b>	<b>100</b>		
Alternative Jurisdiction (Crown Claimed Wetland)	3.17	1.0		
Environmental Reserve (Natural Area) <sup>1</sup>	16.66	5.3		
Pipeline & Utility Right-of-Way	2.13	0.7		
Communication Facility (Existing)	8.14			
Arterial Road Right-of-Way	16.14	5.1		
<b>GROSS DEVELOPABLE AREA</b>	<b>269.47</b>		<b>100</b>	
<b>Commercial</b>				-
Town Centre Commercial	6.94		2.6	-
Community Commercial	10.57		3.9	-
Neighbourhood Commercial	1.13		0.4	-
<b>Parkland, Recreation, School (Municipal Reserve)<sup>1</sup></b>				
School/ Park Site	14.74	} 24.56	5.5	} 9.1 %
Pocket Park	2.00		0.7	
Greenway	0.12		0.0	
Natural Area	7.70		2.9	
<b>Transportation</b>				
Circulation	53.89		20.0	
<b>Residents Association</b>	0.80		0.3	
<b>Infrastructure &amp; Servicing</b>				
Stormwater Management Facilities (SWMF)	19.43		7.2	
Special Study Area (SWMF/LDR)	2.73		1.0	
<b>Total Non-Residential Area</b>	<b>120.05</b>		<b>44.6</b>	
<b>Net Residential Area (NRA)</b>	<b>149.42</b>		<b>55.4</b>	



**RESIDENTIAL LAND USE, DWELLING UNIT COUNT AND POPULATION**

Land Use	Area (ha)	Units/ha	Units	Ppl/Unit	Population	% of NRA
Single / Semi-detached <sup>2</sup>	126.21	25	3,155	2.8	8,834	84%
Rowhousing	10.16	45	457	2.8	1,279	7%
Low Rise/Medium Density	7.81	90	702	1.8	1,263	5%
Mixed Use / Residential	5.24	150	786	1.5	1,179	4%
<b>Total</b>	<b>149.42</b>		<b>5,100</b>		<b>12,555</b>	<b>100%</b>

**SUSTAINABILITY MEASURES**

Population Per Net Residential Hectare (p/nha)	84.0
Dwelling Units Per Net Residential Hectare (du/nrha)	34.1
[Low Density Residential] / [Medium and High Density Residential] Unit Ratio	62% / 38%
Population (%) within 500m of Parkland	100%
Population (%) within 400m of Transit Service	100%
Population (%) within 600m of Commercial Service	98%

Presence/Loss of Natural Areas	Land	Water
Protected as Environmental Reserve	-	16.66
Conserved as Naturalized Municipal Reserve (ha)	7.70	-
Protected through other means (ha)	-	3.17
Lost to Development (ha)	19.47	-

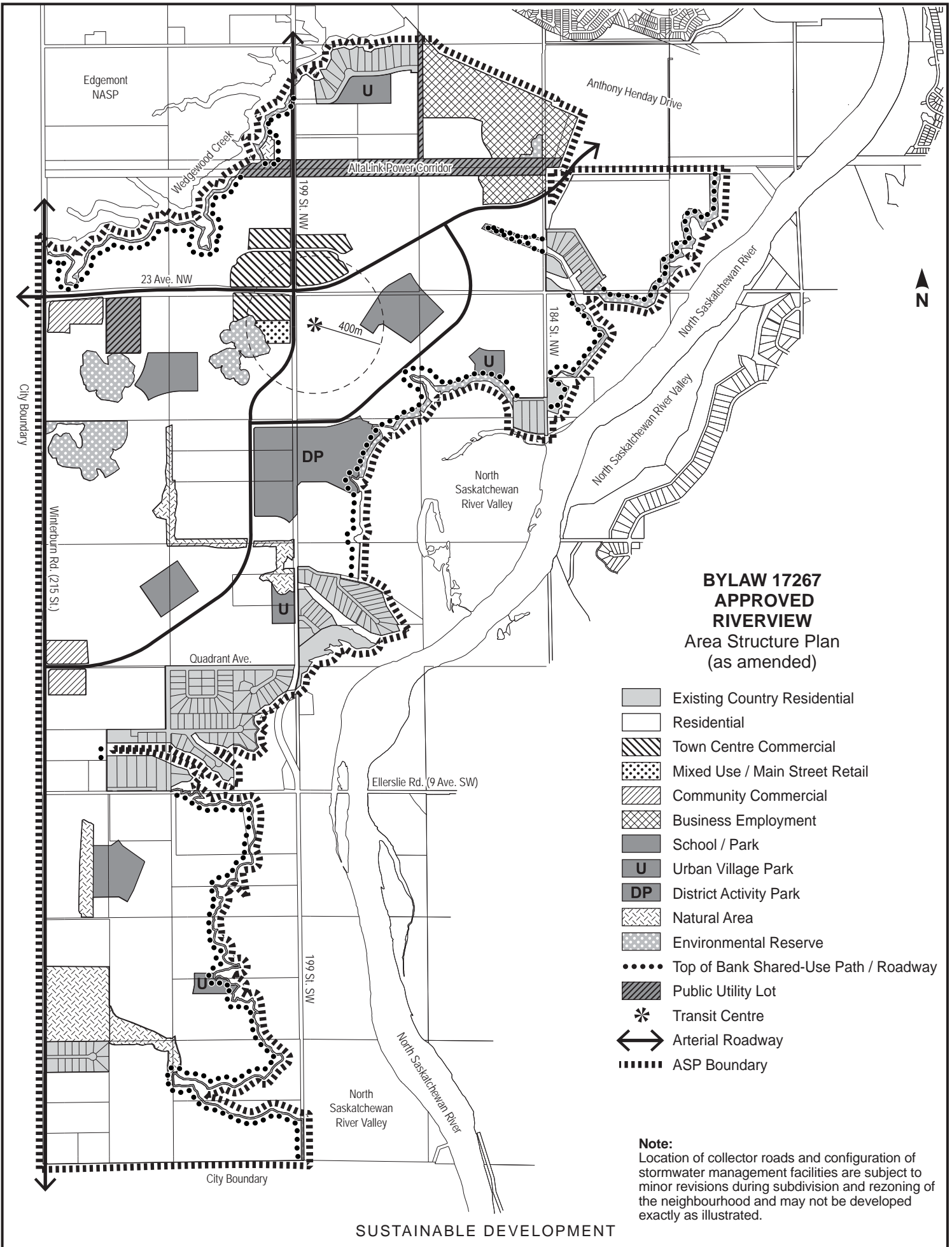
**STUDENT GENERATION STATISTICS****Public School Board**

	1,077
Elementary / Junior High (K-9)	808
Senior High (10-12)	269
<b>Separate School Board</b>	538
Elementary / Junior High (K-9)	404
Senior High (10-12)	134
<b>Total Student Population</b>	<b>1,615</b>

<sup>1</sup> Areas dedicated as Environmental Reserve and Municipal Reserve to be confirmed by legal survey.

<sup>2</sup> The area (0.82 ha) designated as Special Study Area (Park/LDR) will be developed as Single/Semi-detached Housing, unless additional Municipal Reserve is deemed necessary prior to subdivision.

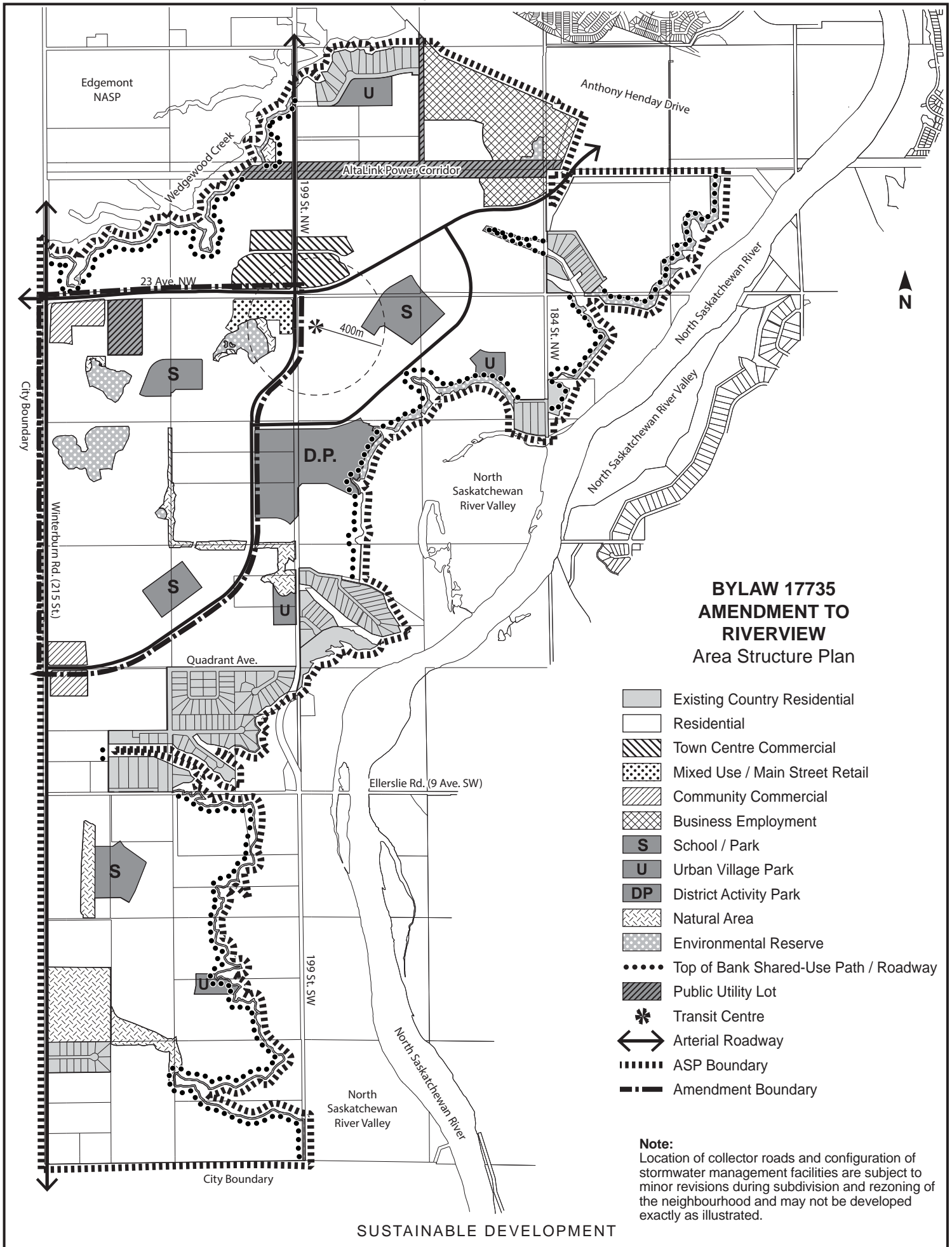
**Note:** Location and configuration of collector roads and land uses (e.g. stormwater management facilities, parkland and natural areas) are subject to minor revisions during rezoning and subdivision of the neighbourhood and may not be developed exactly as illustrated in this Plan.



**BYLAW 17267  
APPROVED  
RIVERVIEW  
Area Structure Plan  
(as amended)**

- Existing Country Residential
- Residential
- Town Centre Commercial
- Mixed Use / Main Street Retail
- Community Commercial
- Business Employment
- School / Park
- Urban Village Park
- District Activity Park
- Natural Area
- Environmental Reserve
- Top of Bank Shared-Use Path / Roadway
- Public Utility Lot
- Transit Centre
- Arterial Roadway
- ASP Boundary

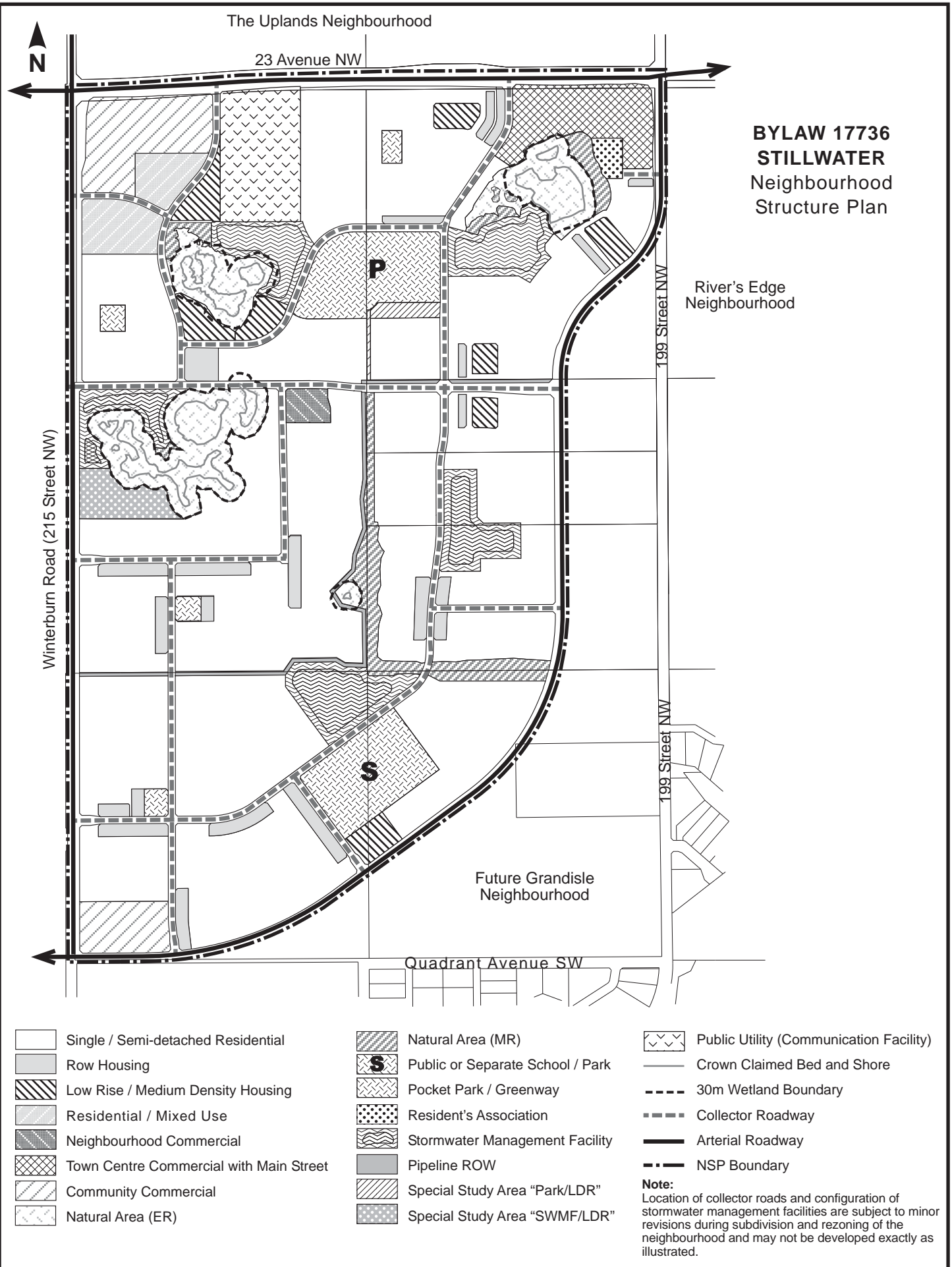
**Note:**  
Location of collector roads and configuration of stormwater management facilities are subject to minor revisions during subdivision and rezoning of the neighbourhood and may not be developed exactly as illustrated.



**BYLAW 17735  
AMENDMENT TO  
RIVERVIEW  
Area Structure Plan**

- Existing Country Residential
- Residential
- Town Centre Commercial
- Mixed Use / Main Street Retail
- Community Commercial
- Business Employment
- School / Park
- Urban Village Park
- District Activity Park
- Natural Area
- Environmental Reserve
- Top of Bank Shared-Use Path / Roadway
- Public Utility Lot
- Transit Centre
- Arterial Roadway
- ASP Boundary
- Amendment 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.



# Integrated Infrastructure Management Planning

## Stillwater NSP

### 1.1 Executive Summary

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Integrated Infrastructure Management Planning (IIMP) for Stillwater Neighbourhood is a high-level analysis that provides Council with information about the infrastructure required for development of the neighbourhood. The broad-based analysis performed at this stage of the area development provides a general indication of future cost implications and revenue potential and can help inform high-level decision making.

The IIMP review was completed for a neighbourhood development build-out of 21 years, starting in 2017. Based on the information available at this time, the review generally shows that Stillwater will require a developer infrastructure investment of over \$176 million as well as a capital investment by the City of approximately \$103 million. Capital and operating expenditures may be required as early as 2017 to support the anticipated development of the neighbourhood.

### 1.2 Purpose

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Integrated Infrastructure Management Planning (IIMP) is a process for the gathering, synthesis, presentation and use of data related to the provision of infrastructure to the three remaining Urban Growth Areas, of which the Stillwater Neighbourhood Structure Plan (NSP) is a part. This document is based on information provided by the applicant in May and June 2016. The actual Plan before Council has slightly different statistics. This report will provide Council with information about the infrastructure required for the development, how it relates to existing infrastructure, timing, implications on the 2015-2018 as well as future Capital Budgets, and implications to the city's operations.

### 1.3 IIMP Background

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The tax revenue generated by new residential neighbourhoods is not meant to pay for the municipal programs and services associated with those neighbourhoods. Property taxation is a tax on wealth as represented by the assessment of residential and non-residential properties under regulations set by the Province.

Residential neighbourhoods exist to provide for housing and community amenities. Other areas of the city, such as industrial areas and commercial nodes, exist to provide employment and wealth generation. The amount of revenue the City needs from property taxation is determined for the City as a whole and takes into consideration the balance between residential and non-residential assessment. A residential neighbourhood is not a microcosm of the entire City and property taxes are not calculated on a neighbourhood basis.

It is difficult to capture all of the indirect costs and benefits that are attributable in whole or in part to new residential neighbourhoods. For example, the City collects dividends from EPCOR, earnings from its investments, and a substantial amount of non-residential tax revenue from dense commercial nodes including West Edmonton Mall, the Downtown core, and South Edmonton Common. These sources all help fund services provided to all neighbourhoods, but are difficult to include in a neighbourhood or area specific analysis. Additionally, secondary benefits accrue from the expenditures of those individuals deriving income directly or indirectly from the development industry. Economic impacts can be estimated by calculating expenditure multipliers. An expenditure multiplier estimates the final value of an incremental dollar spent once the direct and follow-on effects are included. By way of illustration, Alberta's

economic multiplier for construction is 1.6<sup>1</sup>. This means that a dollar of construction activity generates a gross gain of \$1.60 of economic activity for Alberta once direct and follow-on impacts are included. For the Stillwater Neighbourhood, this equates to approximately \$445 million dollars over the construction time of the development, based on a \$278 million investment in public infrastructure (See Tables 3 and 4). Private investment in housing and commercial areas is over and above this.

The challenges facing the City are to balance development costs with the strategic benefits of sustainable growth, to achieve an appropriate balance of residential to commercial/industrial development. Although the City of Edmonton has achieved some success in diversifying its revenue base, property tax remains the largest component of City revenue. The long term sustainability of cities in Canada will depend on a combination of smart, resource efficient growth mixed with a progressive form of revenue generation that provides for the services being enjoyed by citizens in the long term, without providing undue burden to any particular stakeholder.

## 1.4 NSP Background

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The Riverview Area Structure Plan (ASP) is bordered by Wedgewood Creek and Anthony Henday Drive to the north, the North Saskatchewan River to the east, and the City's boundary to the south and west. The ASP has a total gross developable area of 1,147 ha and an expected population of 50,422 people.

An IIMP for the Riverview ASP was completed in 2013. At the time, it was identified that a developer investment in infrastructure of approximately \$1.38 billion as well as an additional investment of approximately \$290 million by the City was required to support full development.

The ASP area includes a total of 5 neighbourhoods. Neighbourhood 1 and 3 were the first two neighbourhoods to begin development approval in Riverview prior to Stillwater Neighbourhood. With a gross developable area of 278 ha and a population of 12,818 people, Stillwater makes up approximately 24.2% of the ASP's gross developable area and 25.4% of the ASP's population. Table 1 includes general Riverview ASP and Stillwater NSP area and population statistics.

**Table 1 – Riverview ASP and Stillwater NSP Statistics**

	ASP	Stillwater
Population	50,422	12,818
% of ASP Population	100%	25%
Gross Area (ha)	1,435	316
% of ASP Gross Area	100%	22%
Gross Developable Area (in ha)	1,153	278
% of Gross Developable Area	100%	24%
Proposed Residential Units	19,726	5,207
% of Residential Units	100%	26%

The proposed Stillwater Neighbourhood NSP includes planned single and multi-family residential development, commercial development, as well as many park uses.

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<sup>1</sup> (Alberta Economic Multipliers 2006, Open Model Direct and Indirect Multipliers, pg 14. Edmonton, 2010)

## **Funding Assumptions**

The Anthony Henday and Cameron Heights/184 Street interchange will require upgrades in the longer term with development of the Riverview area. It is estimated that the cost of the required upgrades are in the order of \$40 million, of which \$10 million is included in the Riverview area Arterial Roadway Assessment (ARA). For analysis purposes only, it is assumed that remaining \$30 million will be city funded. The city funded interchange costs are apportioned to the five neighbourhoods in the ASP based on the gross developable area.

The proposed fire stations, District Park with river valley access, recreation centre, and library within the Riverview ASP area will have an area-wide (or larger) benefit. As a result, the capital and operating costs for these facilities were apportioned to all neighbourhoods within the ASP on a per capita basis.

The widening of arterial roadways from 5 to 6 lanes also has an area-wide (or larger) benefit. The costs associated with the widening are apportioned to the ASP's five neighbourhoods based on gross developable area.

Additional assumptions are listed following Tables 3 and 4 as well as at the end of the report.

## **1.5 Methodology**

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Integrated Infrastructure Management Planning is conducted by working closely with city departments, utilities, and development proponents. Development projections were determined utilizing demographic data from both development proponents and the City of Edmonton's Sustainable Development Department. In this case, both the proponent and the City project a very similar timeline for development. Infrastructure requirements are analyzed with the City's Development Infrastructure Impact Model (DIIM) using data supplied by proponents and information from city departments and utilities to provide a financial forecast based on the demographic projection. Work and analysis performed to date is designed to promote both the effective use of infrastructure and alignment with existing and master plans.

## **1.6 Scenario Analysis**

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The following provides infrastructure information related to the Stillwater Neighbourhood NSP. This section provides data resulting from the analysis of the development build-out scenario. The next section, Building Perspective, provides context to the data.

The IIMP analysis models a 21 year neighbourhood build-out horizon. Construction of the neighbourhood is anticipated to begin in 2017 and be completed by 2037. This build-out time line was provided by the proponent and matches the City's build-out forecasts for the neighbourhood.

### **1.6.1 General Area Information**

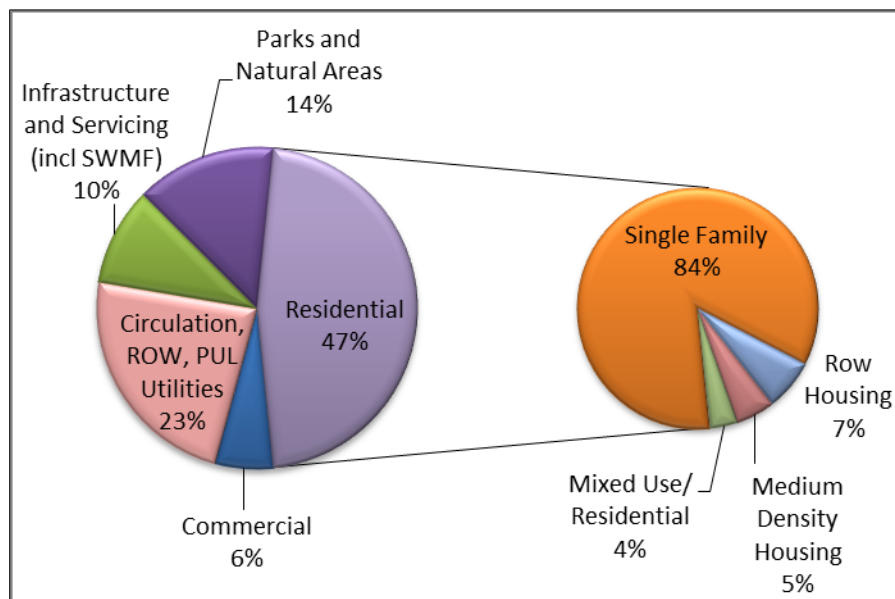
The proponent supplies information with the NSP that is used for Integrated Infrastructure Management Planning. This includes information on land use, population projections and residential units. This information forms the basis for the calculations and justifications for required infrastructure in the proposed communities. Complimenting this base data, current service standards in combination with long term planning and consideration for the capacity of existing facilities nearby contribute to the infrastructure projections.

### **1.6.2 Gross Area Breakdown**

The basic breakdown of the proposed Stillwater Neighbourhood NSP is shown in Figure 1. Out of a total area of 316 ha, 47% (148 ha) is allocated for the development of residential units, 23% (74 ha) is allocated to existing and future roads, pipeline and utility rights-of-way, 24% (75 ha) is allocated to parks,

natural areas and infrastructure and servicing (including storm water management facilities), and the remaining 6% (19ha) is allocated to commercial developments and the Residents Association.

**Figure 1 - Area Breakdown**



There are four different residential land use types planned for this neighbourhood, including: single and semi-detached housing (84%), row housing (7%), low-rise to medium-rise apartments (5%), and town centre mixed-use/medium density residential (4%).

Table 2 includes the area, density, number of units and population for the different types of residential uses.

**Table 2 – Residential Land Uses**

	Area (ha)	Units per Hectare	Number of Units	% of Net Residential Area	People per Unit	Population
Single/Semi-detached Housing	124.36	25	3,100	84%	2.8	8,680
Row Housing	10.16	45	583	7%	2.8	1,632
Low Rise/Medium Density Housing	7.81	90	731	5%	1.8	1,316
Town Centre Mixed Use/Residential	5.24	225	793	4%	1.5	1,190

### 1.6.3 General Infrastructure Breakdown

The amount of infrastructure required to be built by both the developer and the City of Edmonton is a function of many things, including the design of the community, the service standards provided, the amount and density of population served, and the presence of existing infrastructure. Tables 3 and 4 detail the amount of infrastructure required for the proposed community, its approximate cost in 2016 dollars, and the party responsible for its construction based on current standard practice. It should be noted that developers may choose to pay additional development costs.



**Table 3 – Developer Funded Stillwater Neighbourhood Infrastructure**

Infrastructure Type	Quantity	Stillwater Cost (2016\$)
Local Road (lane km)	44.9	\$ 36,395,000
Collector Road (lane km)	17.5	\$ 19,733,000
Arterial Road (lane km)	14.9	\$ 26,762,000
Interchange Contribution		\$ 2,420,000
Shared Use Path (km)	6.5	\$ 913,000
Local Storm Pipes (km)	22.5	\$ 8,986,000
Collector Storm Pipes (km)	8.8	\$ 3,508,000
Arterial Storm Pipes (km)	7.4	\$ 2,978,000
Local Sanitary Pipes (km)	22.5	\$ 7,863,000
Collector Sanitary Pipes (km)	8.8	\$ 3,070,000
Arterial Sanitary Pipes (km)	1.2	\$ 436,000
Stormwater Management Facilities (ha)	21.04	\$ 18,500,000
Service Connections (#)	5303	\$ 23,864,000
Other Storm Sewer Related Costs		\$ 9,200,000
Other Sanitary Sewer Related Costs		\$ 10,900,000
<b>TOTAL</b>		<b>\$ 175,528,000</b>

**Table 4 – City Funded Stillwater Neighbourhood Infrastructure**

Infrastructure Type	Quantity	Riverview ASP Cost (2016\$)	Stillwater NSP Cost (2016\$)
Recreation Centre	1	\$ 125,000,000	\$ 24,530,000
Fire Station	2	\$ 26,000,000	\$ 6,610,000
Library	1	\$ 15,500,000	\$ 3,940,000
River Valley Access			\$ 3,813,000
Parks (ha)	26.4		\$ 5,647,000
Police Vehicles	8		\$ 520,000
Arterial Road Widening (lane km)			\$ 11,541,000
Interchange Contribution		\$ 30,000,000	\$ 7,259,000
Buses	14		\$ 10,251,000
Transit Centre	1	\$ 8,400,000	\$ 2,135,000
Waste Collection			\$ 26,502,000
<b>TOTAL</b>			<b>\$ 102,748,000</b>

**Qualifications for Tables 3 and 4**

The information in Tables 3 and 4 is derived from consultations with the proponent's consultants and the areas responsible for the asset's provision and maintenance within the City. The following additional information is provided to help qualify the quantities and costs in the tables:

### **Infrastructure with Area-Wide Benefit**

For infrastructure that will serve the entire Riverview ASP area, only the proportional share of the cost attributable to Stillwater is included in Tables 3 and 4. The costs of the infrastructure with area-wide benefit were apportioned using Gross Developable Area for transportation facilities and population for all other categories (fire stations, transit centre, recreation centre, library, and river valley access).

### **Community Facilities**

It is anticipated that a Recreation Centre will be constructed on the District Park site in Riverview Neighbourhood 3. The centre is anticipated to be constructed when the Riverview ASP population reaches approximately 50% (25,000 people). The actual timing of the construction of the facility is contingent on funding availability and District Park site land assembly. The Recreation Centre proposed in Riverview is also anticipated to serve the Edgemont community.

### **Edmonton Public Library (EPL)**

Edmonton Public Library has identified one library that would serve the Riverview ASP community and is envisioned to be integrated into the recreation facility site within the District Park to create a Community Meeting Centre type of development. Timing therefore is relational to the recreation facility.

### **Drainage Services**

The costs for storm and sanitary pipes, storm water management facilities, service connections, and other storm and sanitary related costs were provided by the proponent.

### **Edmonton Police Service (EPS)**

The Riverview area does not require a new police division station. Police planning for facilities considers the City as a whole. The Edmonton Police Service opened the South West Division Station in June of 2013. This facility provides service to areas west of Gateway Boulevard and south of Whitemud Freeway, encompassing the Riverview ASP area. This station is expected to accommodate growth needs of the Edmonton Police Service based on anticipated population growth for a significant period. Current planning anticipates the need for an additional station or expansion of the existing station sometime after 2043.

### **Fire Services**

Based upon the proposed Area Structure Plan, Fire Rescue Services will require two fire stations within the Riverview Area. This is based on projections of population density as well as response times to the area. The Riverview area represents unique response requirements due to limited accessibility through municipal and natural boundaries. Fire Rescue Services had already anticipated one fire station servicing Riverview in the current Station Master Plan for service within the next ten years (currently unfunded), however based on the current projections for population growth within this area, development of this station may be required sooner than anticipated.

### **Parks**

The NSP identifies 24.71 ha of parks and natural areas in Stillwater Neighbourhood. Parks capital costs include the grade, level, and seeding of parkland, the provision of trees per park design standards, as well as the preservation of natural areas. Table 4 assumes that all park development costs will be borne by the City. It should be noted that in the past, some developers have contributed to park development costs in some neighbourhoods.

### **Transportation (Roadways)**

Costs for local roads, collector roads, arterial roads, and shared use paths were supplied by the proponent.

For the analysis, it is assumed that the construction cost of the initial 4-lanes of an arterial is the responsibility of the neighbourhood it falls within or that the cost is split between adjacent neighbourhoods if the arterial is located along a neighbourhood boundary. It is further assumed that the cost of an arterial 6-lane widening benefits the area as a whole and the widening cost is therefore apportioned to all the neighbourhoods in the ASP based on the gross developable area.

Capacity improvements will be required to the existing Anthony Hendy and Cameron Heights/184 Street interchange to accommodate full development of the Riverview area. The Arterial Road Assessment Bylaw schedule for the Riverview area is proposed to include a \$10 million developer contribution towards the construction of interchange improvements. A functional planning study will need to be undertaken in the future to determine the scope of the capacity improvements required. At this time, the anticipated cost of the required interchange improvements is anticipated to be in the order of \$40 million. Taking into account the developers' contribution, it is expected that the City and/or the Province and/or other sources would be required to contribute a total of approximately \$30 million. For the purposes of this analysis only, it is assumed that the City would contribute this amount.

### **Transportation (Transit)**

A transit centre will be located in Riverview Neighbourhood 3. Until the Riverview Transit Centre is constructed, routes serving this area will use the Lewis Farms Transit centre.

### **Waste Management**

The cost of additional infrastructure for Waste Management Collection Services, including the purchase of vehicles and the expansion of processing facilities, is included in Table 4. Waste Services has identified that an Eco-Station is not needed in Riverview as the existing Ambleside Eco-Station is anticipated to accommodate Riverview's ASP population.

## **1.6.4 Demographic Based Cost and Revenue Projections**

Forecasting financial impacts into the future is a speculative exercise. The following analysis projects costs and revenues for the proposed development out for 50 years. These projections are based on assumptions, which in a large part consist of what is known of the development at the present time, the current costs for the provision of service and infrastructure, and the length of time required to build both the overall development, as well as the individual components (commercial centres, high density residential projects, etc.) that make it up. The use of the results of this analysis should take this, and the context of the City as a whole, into consideration. The major assumptions used on the analysis are detailed in the end of this report.

The analysis completed considers one build-out development scenario. Both the proponent provided population build-out scenario and the City forecasted population scenario were similar and included a build-out of the neighbourhood in an approximate 21 year time-frame.

As any projection is just that, a projection based on defensible assumptions, it is important to consider that the eventual build-out of the neighbourhood may well be different than that shown in this analysis. The scenario solely examines one potential neighbourhood build-out according to the proposed Neighbourhood Structure Plan and does not consider alternative land use concepts, different development guidelines or patterns, or different densities.

### **1.6.4.1 Scenario Demographics**

Under the proposed development scenario, the total population of the proposed development of 12,818 people would be achieved in approximately 21 years as shown in Figure 2. It is anticipated to take 16 years for the commercial area to be completed.

**Figure 2 –Population Build-Out**

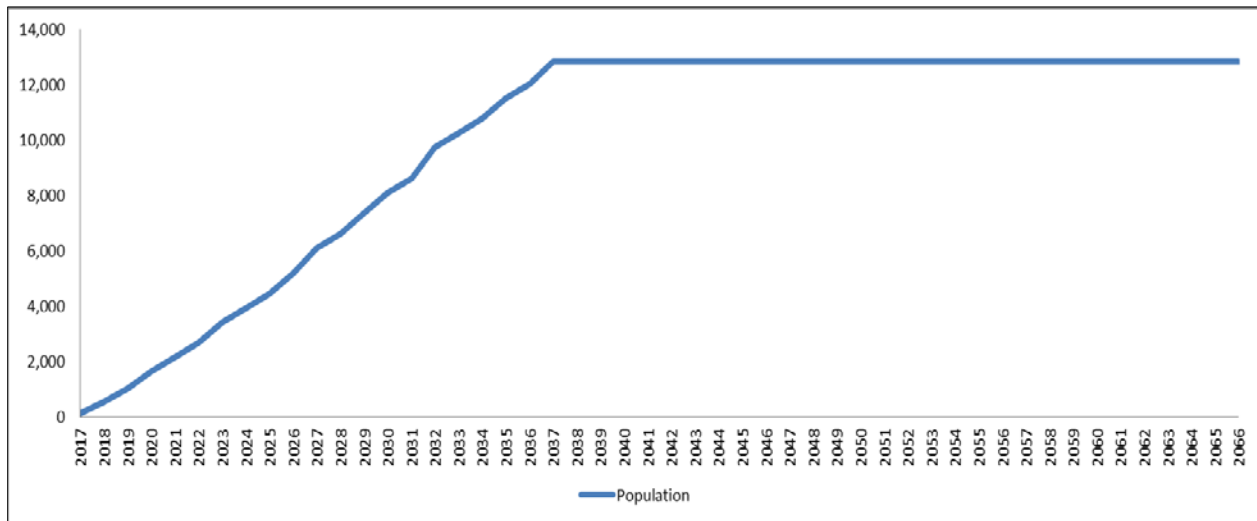
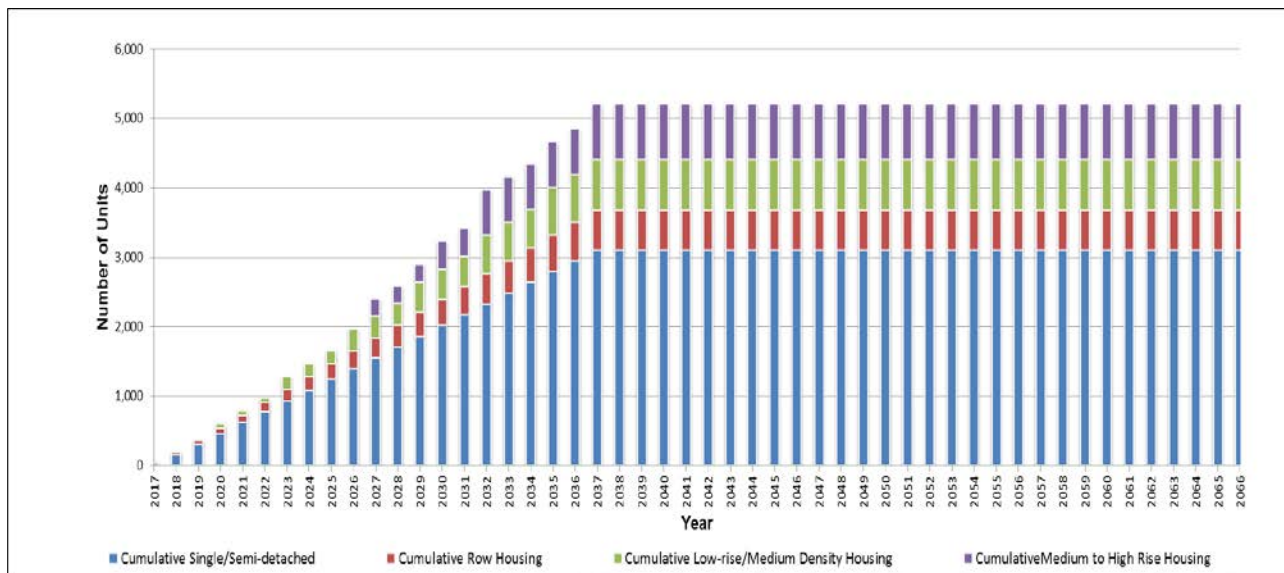


Figure 3 depicts how the projected population growth in Figure 2 translates into housing units of different types. It is cumulative and shows the relative distribution over time.

**Figure 3– Residential Unit Build-Out**



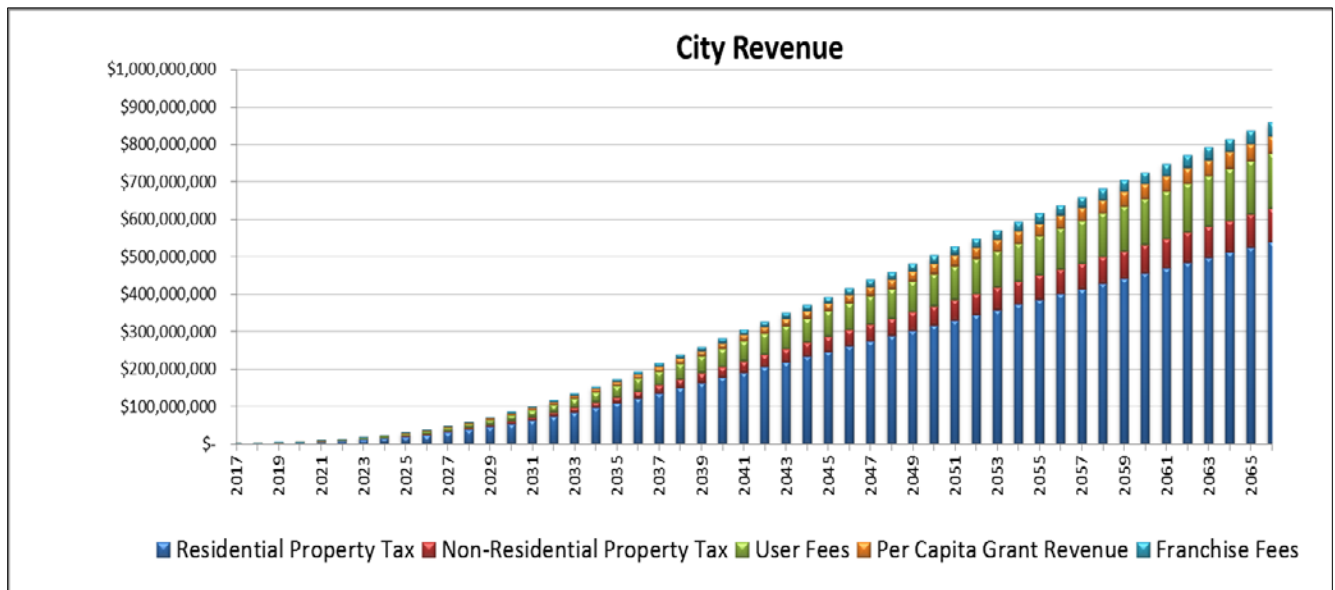
**1.6.4.2 Revenue Expectations**

City revenues come from a variety of sources. In this analysis, those revenues resulting from the proposed community directly were considered. Indirect revenues, such as EPCOR dividends are not included in this analysis. Figure 4 depicts the expected revenues over 50 years and identifies revenues as one of five sources:

1. Franchise Fees: The City receives revenue from Atco Gas and EPCOR Electric customers for the use of public road allowances for their distribution networks.

2. **Per Capita Grant Revenue:** The City of Edmonton relies on provincial and federal grants for a portion of its capital program. Without them, the City is not sustainable given its limited revenue generation options and increasing obligations and service expectations. Although it is difficult to model Grant funding as it varies by program, a general observation is that it increases proportionately with population. A per capita revenue allocation was developed based on existing grants and applied in to the model.
3. **User Fees:** Individual City Departments and business units may charge fees for the service they provide. Examples include transit fees, recreation centre fees, and parking meters.
4. **Non-Residential Property Tax:** Commercially and Industrial zoned areas like office buildings, strip malls, convenience stores, and grocery stores help form complete communities and provide employment and critical services. They also contribute to the City's tax base, and therefore projected revenues from these areas are included.
5. **Residential Property Tax:** All residential units pay municipal tax based on the current year's mill rate and the assessed value of the property. As residential units are created in the model based on population growth, the taxes paid by these units are accounted for.

**Figure 4 –Cumulative Revenues**



### 1.6.4.3 City Expenditure Expectations

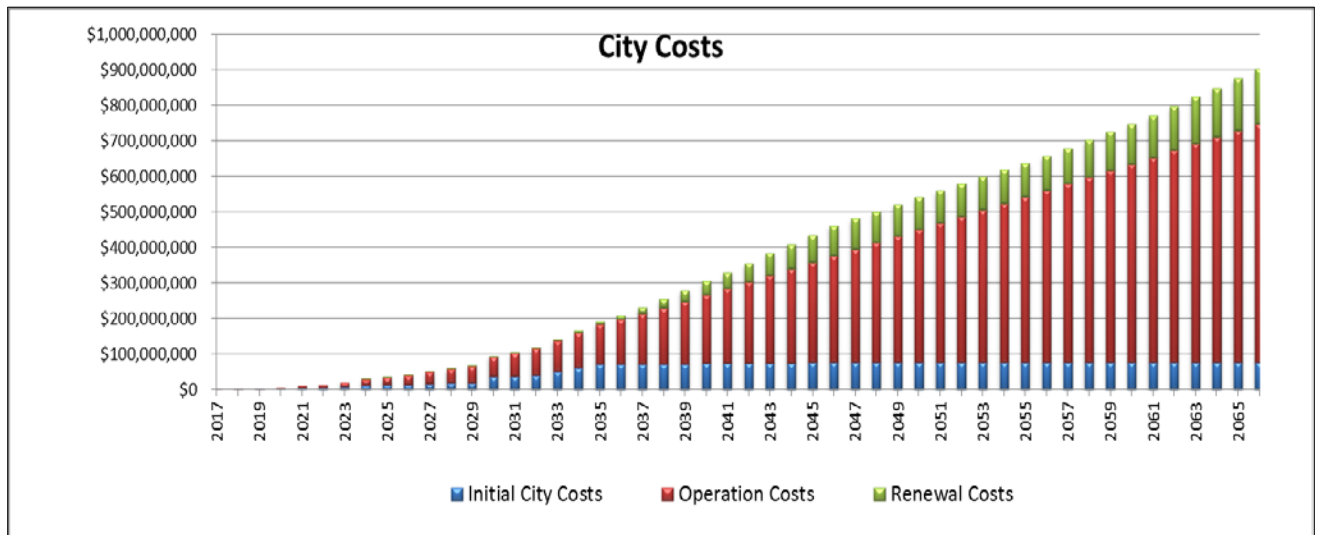
City expenditures are attributable to the provision of a mix of services in the community, building new infrastructure required to provide that service, and maintaining and renewing infrastructure in the community that provides the service the community needs, and enjoys. Figure 5 depicts city costs over a 50 year time span. The expenditure is attributed to three categories:

1. **Initial City Costs:** This represents infrastructure built and funded by the City, and includes police and fire stations, libraries, community facilities, parks, and major transportation facilities. Initial City Costs are funded via the City's capital budget.
2. **Renewal Costs:** Renewal costs represent the reinvestment required to keep the community's infrastructure to an accepted physical standard. These costs are derived from the infrastructure built by both the developer and the City, and include rehabilitative actions throughout the life of the assets, as well as replacement costs at the end of the expected life of the asset. The costs shown calculate

the renewal costs at the expected time of expenditure (i.e. not amortized throughout the life of the asset), and therefore some replacement costs for long lived infrastructure such as sewers are not represented in the scope of the analysis. Renewal Costs are funded via the City's capital budget.

3. **Operating Costs:** Operating costs represent the set of on-going activities and expenses that allow the use of an asset for its intended function. These costs include those required for the use of the asset (e.g. electricity, fuel) and those costs required for the provision of the service provided (e.g. labour). Operating Costs are funded via the City's operating budget.

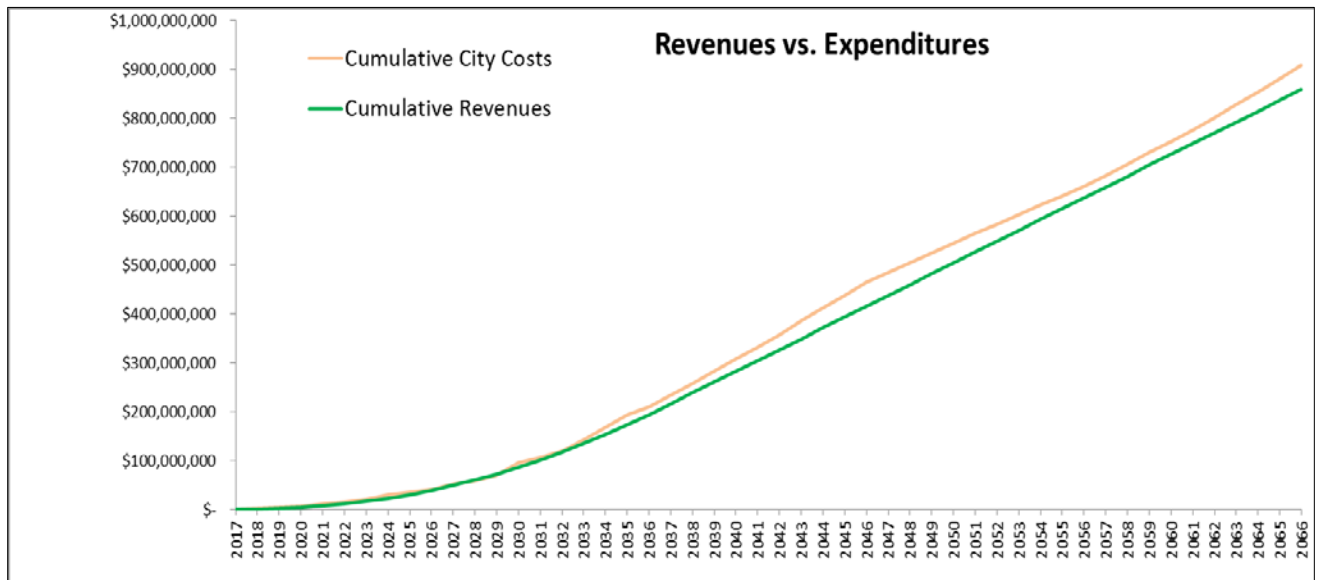
**Figure 5 – Cumulative City Costs**



#### 1.6.4.4 Summary of Revenues and Expenditures

Figure 6 shows the difference in direct expenditures and revenues to the city for the proposed Stillwater Neighbourhood over a 50 year period, highlighting the total net fiscal costs and revenues expected from the proposed community. At year 50, this projected net cost totals approximately \$50 million.

**Figure 6 –Revenues and Expenditures**



# 1.7 Building Perspective

## 1.7.1 Infrastructure Planning

Stillwater Neighbourhood will require approximately \$103 million in initial capital investment by the City. Major infrastructure like arterial road widening needs to be carefully planned and timed to meet the needs of the development.

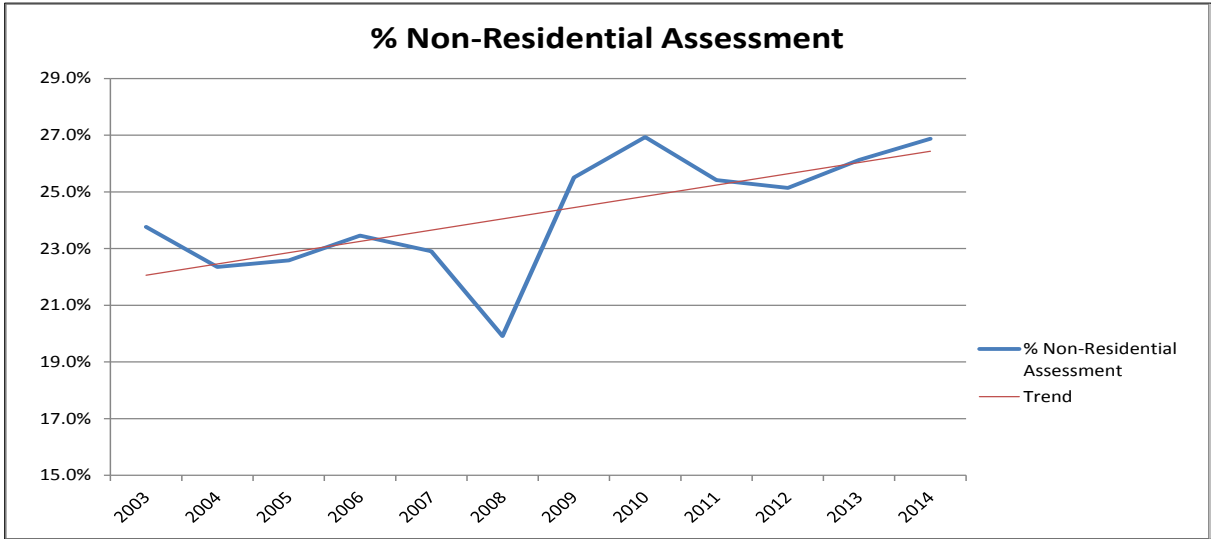
It is anticipated that the information presented in this report will change as planning and development in the neighbourhood progresses and more is known.

## 1.7.2 Sustainability through Balanced Growth

The overall balance of residential and non-residential land in the City of Edmonton is important in a number of ways. Residential areas provide places for people to live and build community. Non-residential areas provide employment, services, and amenities among other things. Both contribute to and are an essential part of the fabric of the City. Maintaining a healthy balance between them is important.

It is therefore important to consider how proposed development, in any form, contributes to the overall balanced growth of the City of Edmonton. Figure 7 indicates the percentage of non-residential assessment out of the total assessment value of all property in the City since 2003. It shows that non-residential assessment makes up approximately 25% of the total assessment base of the City.

Figure 7 – Non-Residential Assessment



The proposed Stillwater Neighbourhood NSP is projected to have 6.2% of its assessment as non-residential as there is a very limited amount of proposed commercial development (18.6 ha) in the neighbourhood and no other business employment development.

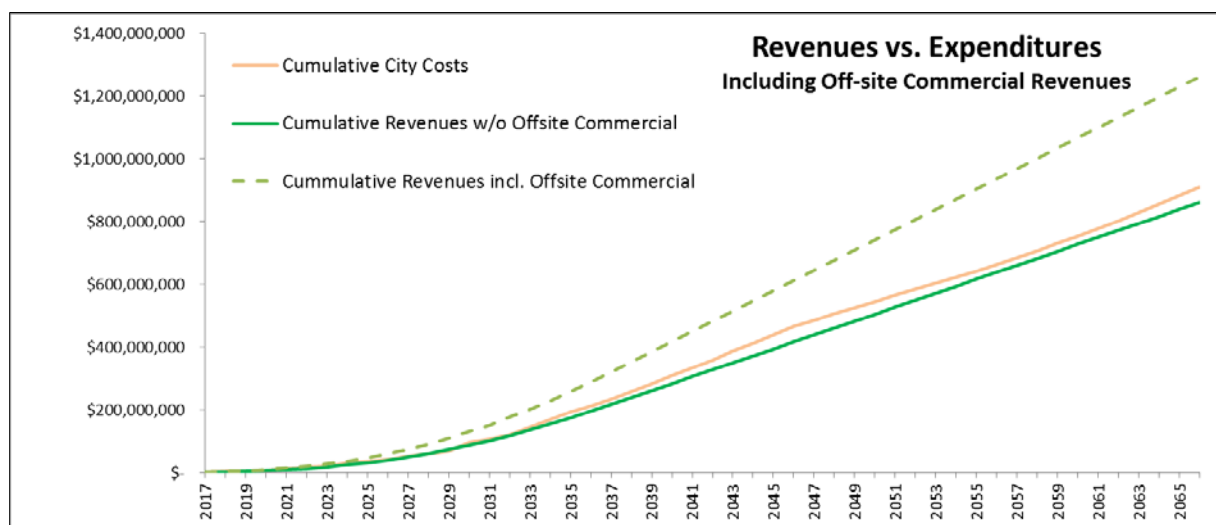
As the City grows its residential areas, it must also grow its non-residential areas to maintain balanced growth. Conversely, the City must grow its residential areas to balance growth in non-residential areas. In other words, for the City as a whole to maintain the current ratio, there needs to be approximately \$5 billion of non-residential assessment for every \$20 billion in residential assessment growth. Not considered here are what the overall ratio should be, and the effects of changing it.

Consider Figure 8 which illustrates the importance of balanced growth and the benefit of maintaining the current non-residential assessment. The premise in this figure is that if the City maintains its current balance of 25% non-residential assessment, by developing commercial and industrial areas throughout

the City, this additional revenue helps to offset the fiscal imbalance indicated by looking at Stillwater Neighbourhood by itself.

Growth in the City’s assessment base has a significant impact on tax revenues. In the last ten years, the accumulated tax revenue from growth is approximately \$1.2 billion.

**Figure 8 – Stillwater Neighbourhood Revenues and Expenditures (Including off-site commercial revenues)**



### 1.7.3 Committed Infrastructure

With both an aging and growing city, balancing investment choices between renewal and growth is a significant challenge. As infrastructure ages, more maintenance and rehabilitation is required to ensure that infrastructure is performing well and continuing to meet the needs of citizens. At the same time, demands arise for new infrastructure to support growth. The split between renewal and growth in the 2015-2018 Capital Budget is 58% per cent for growth and 42% per cent for renewal.

Table 6 shows the existing city wide commitment and financial obligations to already existing neighbourhoods in approved Area Structure Plans by sector. The Capital Cost indicated in Table 4 is for funding new infrastructure and does not include renewal or operations.

**Table 6 - Approved Neighbourhoods and Area Structure Plans**

Sectors	Capital Construction Costs (\$ Million)		Population Demographics		
	Current Funded	Future Funded	NSP Projected	2014 Population	% Complete
North	\$190	\$530	238,898	86,239	36%
South	\$90	\$1,460	392,595	91,437	23%
West	\$60	\$980	169,582	32,377	19%
<b>Total</b>	<b>\$340</b>	<b>\$2,970</b>	<b>801,075</b>	<b>210,053</b>	<b>26%</b>

The infrastructure represented in the current funded column is either currently under construction, or will be in the not too distant future. The future funded column represents the balance of infrastructure required to complete the neighbourhoods analyzed.

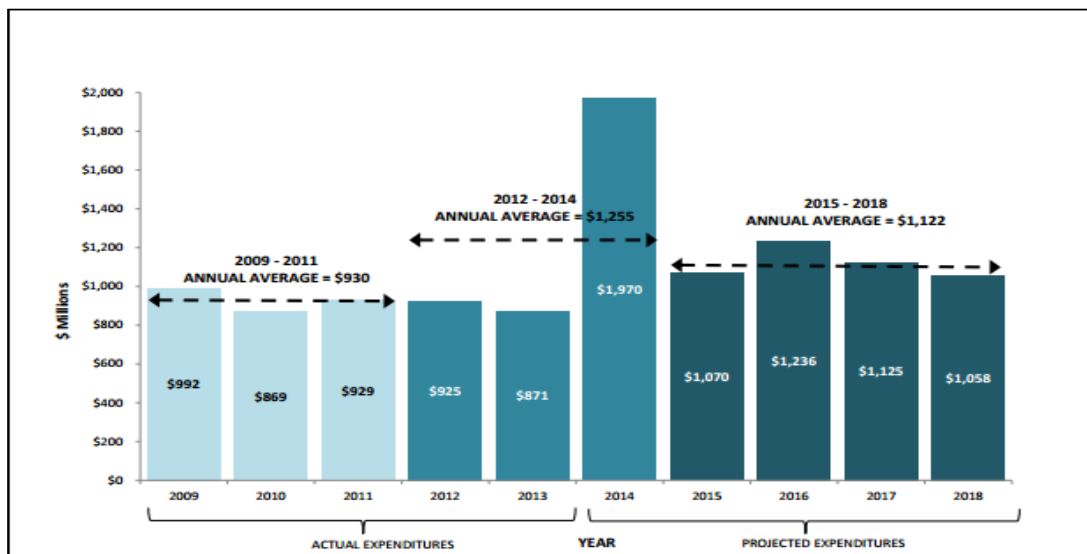


In some cases, the neighbourhoods may take between 20 and 30 years to complete. This should be considered when putting these costs into context. Long term planning for the infrastructure requirements in new growth areas involves understanding how the area will build out and how quickly it will build out, giving planners an idea of what is required now versus what will be required in the future.

During the capital budgeting process, City departments evaluate infrastructure needs in new areas and make recommendations for funding to Council.

The figures in Table 6 are significant, but the City commitment to its capital expenditure is even more significant. Funding for both growth and renewal infrastructure comes in different forms. Figure 9 shows historical and projected funding levels/breakdowns from 2009 to 2018. Administration makes funding and budget recommendations on a City-wide basis. Prioritization considers all capital requirements throughout the City, and incorporates the strategy and objectives of The Way Ahead.

**Figure 9 – 2009-2018 Average Yearly Expenditures per Budget Period**



## 1.8 Impacts of the Riverview Neighbourhood 1 NSP on Future Budgets

As Stillwater Neighbourhood develops, a number of infrastructure projects will require City and other funding to be constructed as well as city funding to operate and maintain the infrastructure.

### 1.8.1 Capital Budget Requirements

The 2015-2018 Capital Budget does not include any capital funding for projects related to the development of Stillwater Neighbourhood. If development occurs as currently anticipated, the development of the neighbourhood may require capital dollars within the 2015-2018 time period for the purchase of new buses and police vehicles to service the area. Unless additional funding can be acquired, any capital expenditures potentially required in the neighbourhood in this time period would need to be deferred until the next budget cycle (2019-2022).

With development of Stillwater Neighbourhood as well as other neighbourhoods in the ASP area as currently anticipated, funding for capital projects is anticipated to be required as follows for the next three budget cycles:

#### Potential 2019-2022 Capital Budget Funding Requirements:

- Buses

- Police vehicles
- Park development

With development of the neighbourhood, additional buses will be required to provide transit service and additional police vehicles will be required to provide service for the residents of the neighbourhood. Funding will be required to develop park spaces and rehabilitate a natural area in the neighbourhood.

#### **Potential 2023 – 2026 Capital Budget Requirements:**

- Buses
- Police vehicles
- Park development and River Valley Access

On-going capital expenditures are required in this period for new buses, police vehicles and park spaces and river valley access development.

#### **Potential 2027-2030 Capital Budget Requirements:**

- Buses
- Parks development
- Arterial Road widening

Along with the purchase of additional buses and the funding of more park development, funds will start to be required for arterial road widening, and bus refurbishment in this period.

#### **Budgets beyond 2030**

Future budgets beyond 2030 will require funding for capital improvements to benefit Stillwater Neighbourhood as well as the other neighbourhoods in the ASP including a recreation centre and library (in approximately 2035), a transit centre (in approximately 2036), arterial roadway widening (in approximately 2040 and 2045), interchange improvements (approximately 2040), and two fire stations (in approximately 2033 and 2041). Funding will also be required beyond 2030 for life cycle investment in Stillwater Neighbourhood including bus and police vehicle replacement as well as roadway resurfacing and reconstruction.

#### **1.8.2 Operating Budgets**

In addition to the requirements of Capital Budget funding, there will also be operating impacts on capital. These include:

- Roadway and traffic operations and maintenance, as well as snow clearing (as early as 2017)
- Transit bus operations and maintenance (as early as 2018)
- Police operations (as early as 2018)
- Parks maintenance and operations (as early as 2019)
- Fire operations (as early as 2034)
- Recreation centre operations and building maintenance (as early as 2036)
- Library operations and maintenance (as early as 2036)

### **1.9 Assumptions**

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The analysis presented in this report involves the combination of modelling using the Development Infrastructure Impact Model, coupled with area and sector specific analysis performed by the business units responsible for both the infrastructure and the provision of service. The gathering and analysis was performed by the Infrastructure and Funding Strategies Section with assistance from Stantec and following City Departments:

- Sustainable Development

- Integrated Infrastructure Services
- City Operations
- Financial and Corporate Services
- Edmonton Public Library
- Edmonton Police Services

### **1.9.1 Area Specific Assumptions**

With respect to the area being analyzed, the following was assumed:

1. Average market values for Ward 5 were used to determine the residential assessment values for Stillwater Neighbourhood.
2. For the commercial and business employment areas, assessment averages were calculated using 2015 city wide commercial and industrial data.
3. Other assumptions are identified in the qualifications following Tables 3 and 4 in the report.

### **1.9.2 Assumptions for the Development Infrastructure Impact Model**

As with any analytical procedure, the results of a model are dependent on the accuracy of the input data, and the strength of its underlying assumptions. In order to achieve a consistent corporate approach, certain assumptions were made to ensure that all neighbourhood development-related infrastructures are compared on the same basis. The following describes some of the assumptions used in the Development Infrastructure Impact Model:

- The Consultant supplied the timing for the neighbourhood's residential, commercial and business employment development.
- An assumption was made with respect to when all of the required infrastructure within a neighbourhood would be completed and in service. For modelling purposes, it was assumed that when the Riverview ASP reaches 100% of its ultimate population, all City and developer built infrastructure would be in place.
- Operation and Maintenance as well as Service Delivery Costs were provided by City Departments or were calculated based on the City of Edmonton 2016 Operating Budget specific to each asset as follows:
  - Linear assets (roads and drainage) - \$ per kilometre
  - Parks - \$ per hectare
  - All Others - \$ per capita
- Major rehabilitation and renewal costs are asset specific and are based on typical lifecycle costs and timetables.
- Tax rates and average assessments for both residential and commercial uses are based on the 2015 tax year.

Prepared by: Infrastructure and Funding Strategies  
July 25, 2016

## APPLICATION SUMMARY

### INFORMATION

Application Type:	Area Structure Plan Amendment; Neighbourhood Structure Plan Adoption
Bylaw(s):	17735, 17736
Location:	South of Maskêkosihk Trail NW, east of Winterburn Road (215 Street) NW and west of 199 Street NW
Address(es):	20703 and 20911 – 23 Avenue NW; 2110, 1504, 1304, 1150, 812, and 104 – 199 Street NW; 603 and 903 Winterburn Road NW
Legal Description(s):	Lot 1, Block 1, Plan 152 1916; Lot A, Plan 2500MC; SW 31-52-25-W4M; and Portions of NE 31-51-25-W4M; Lot 1, Plan 152 1916; Lot 2, Plan 972 0280; SE 31-51-25-W4M; NE 30-51-25-W4M; Lot A Plan 2344TR; and NW 30-51-25-W4M
Site Area:	315.71 ha
Neighbourhood:	Stillwater
Ward - Councillor:	5 – Michael Oshry
Notified Community Organization(s):	Cameron Heights Community League Greater Windermere Community League Wedgewood Ravine Community League West Edmonton Communities Council Area Council
Applicant:	Stantec Consulting Ltd.

### PLANNING FRAMEWORK

Current Zone(s) and Overlay(s):	(AG) Agricultural Zone
Proposed Zone(s) and Overlay(s):	(AG) Agricultural Zone
Plan(s) in Effect:	Riverview Area Structure Plan
Historic Status:	None

Written By:	James Haney/Holly Mikkelsen
Approved By:	Tim Ford
Department:	Sustainable Development
Section:	Planning Coordination