City of Saskatoon Design and Development Standards Manual

Section Two Land Development Process

Version 17





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Objective 1

The land development process shall guide the orderly and rational development of the City of Saskatoon (CoS) in a manner that balances the environmental, social, and economic needs of the community.

2 Land Use Applications (Submissions, Approvals, and Appeals)

The Proponent is responsible for being aware of the regulatory requirements governing land development, and for compliance with these requirements.

In addition to the manual, regulatory and supporting documents that shall be referenced for the design and construction of land development include, but are not limited to, the following:

- The Planning and Development Act. 2007
- Bylaw No. 9700 The Official Community Plan Bylaw. 2020
- Bylaw No. 6537 The Subdivision Bylaw, 1985
- Bylaw No. 8770 Zoning Bylaw, 2009
- Standard Construction Specifications
- Standard Construction Drawings
- A10-017 Park Development Guidelines
- Approved Secondary Plans (e.g., Sector Plans, Concept Plans, and/or Corridor Plans)
- C09-041 Wetland Policy
- Transportation Master Plan

2.1 City of Saskatoon (CoS)

Development applications to the CoS which are typically required from Proponents during the land development process include, but are not limited to, the following:

- Development Permits (e.g., New OUD/TUD & Semi-Detached)
- Land Use and Zoning
 - New Concept Plan or Concept Plan Amendment (e.g., Minor, Intermediate or
 - Discretionary Use Application (e.g., Standard, Complex, or Highly Complex)
 - Official Community Plan Amendment (e.g., Text and/or Map)
 - Zoning Bylaw Amendment (e.g., Text and/or Map)
 - Rezoning (e.g., Low Density, Med/High Density, Consistent with Approved Concept Plan)
 - **Direct Control District**
- Subdivision and Condominium

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- Registration of Condominium
- Subdivision
- Architectural Control District (e.g., Major, Minor)
- Other
 - Endorsement of Liquor Permit
 - Minor Variance
 - Zoning Verification Letter

As part of the land development process, Proponents may be required to submit additional documentation with their applications, which can include, but is not limited to, the following:

- Utility and transportation plans (see section 4.1 of this document for more details)
- Wetland Mitigation Plan (see section 4.2 of this document for more details)
- Detailed design documents

Additionally, depending on the proposed development, Proponents may be required to enter into the following agreements with the CoS:

- Servicing Agreement (see section 6 of this document for more details)
- Easement Agreement(s) (see section 7 of this document for more details)

Before construction of a development can proceed, Proponents are required to obtain the appropriate Building and Development Permits from the CoS.

Basic requirements for development applications to the CoS are outlined in the following sections of this document. Procedures/requirements for development applications and appeals can be found in the *Zoning Bylaw, 2009 (Bylaw No. 8770)*.



2.2 Other Stakeholders and Authorities

Development applications (e.g., Application for Subdivision) may require engagement of Rights Holders, and other relevant agencies and organizations. It is the responsibility of the Proponent to ensure these groups participate in the necessary steps of the process. These groups include, but are not limited to, the following:

- Saskatoon Police Service
- Saskatoon Fire Department
- Saskatoon Light and Power
- SaskPower
- SaskEnergy
- TransGas
- SaskTel
- Shaw Cable Systems
- Canada Post
- Saskatchewan Health Authority
- Rural Municipality of Corman Park
- Canadian National Railway
- Canadian Pacific Railway
- Saskatoon Public School Board
- Greater Saskatoon Catholic Schools
- Meewasin Valley Authority
- John G Diefenbaker International Airport

The Proponent is responsible for obtaining approvals from appropriate authoritiesin a timely manner.

A plan of survey shall be submitted to the Controller of Surveys for approval to register the plan with the Information Services Corporation (ISC) of Saskatchewan.

2.3 **Appeals**

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An individual has the right to appeal to the Development Appeals Board when:

- The issuance of a development permit is refused because it would contravene the Zoning Bylaw, 2009 (Bylaw No. 8770).
- A Development Officer is alleged to have misapplied the Zoning Bylaw, 2009 (Bylaw No. 8770) in issuing a development permit.
- A minor variance approval is revoked, refused, or approved with terms and conditions.



- A Development Officer issues an Order to Remedy Contravention
- An application for a subdivision has been denied.
- If conditions have been included on a Discretionary Use approval

Visit the <u>City's website</u> and/or the *Zoning Bylaw, 2009 (Bylaw No. 8770)* for more details on the Development Appeals process and how to file an appeal.

3 Planning and Research

The Official Community Plan (OCP) records the policies and guidelines that are used to evaluate development and land use decisions. The document is used to direct the growth of the CoS.

When a Proponent wishes to develop a new area, they will pursue a Concept Plan¹, which must adhere to the direction provided in the OCP and the relevant Sector Plan². Research shall be conducted by the Proponent to identify the constraints and opportunities for development in the area identified in the Concept Plan. This research shall include, but is not limited to, the following:

- An assessment of pre-development topography, heritage sites, environmental impacts, traffic impacts, and water and sewer capabilities.
- A hydrological report providing an assessment of predevelopment hydrology and hydrogeological conditions, which shall include:
 - Consultation with provincial and federal regulatory agencies to identify local resources and concerns.
 - Resource mapping (including existing drainage channels, wetlands and water bodies, groundwater recharge areas, steep slopes, and areas subject to erosion).
 - Determination of the water level elevation and surface area of water bodies and their seasonal variations.
 - Installation and monitoring of piezometers and nested piezometers where appropriate to determine groundwater elevations and vertical and lateral groundwater flow. At least one

¹ A comprehensive plan showing land use patterns, street layouts, open spaces, and other relevant design details for a defined area. A Concept Plan may be undertaken for a Neighbourhood, Urban Centres, Industrial Employment Areas, or other similar areas. For more information, see the OCP.

² A comprehensive plan that provides a broad framework for urban development and includes the location and size of future neighbourhoods and/or employment areas, arterial road alignments, parks, and significant natural areas and open spaces. A Sector Plan can be undertaken for a full Sector or other configuration of several neighbourhoods or employment areas. For more information, see the OCP.



- (1) year of groundwater monitoring data is preferred to enable piezometers to equilibrate and to capture seasonal change.
- Determine soil properties and conditions for the neighbourhood and detailed analysis of hydrogeological conditions including cross-sections.
- Prepare appropriate maps showing groundwater elevations and depth contours and their seasonal variations.
- Prepare a report which interprets the findings from the hydrogeologic testing in relation to proposed land uses of the neighbourhood.
- Provide recommendations for future groundwater monitoring, including frequency.
- Evaluation of the feasibility of proposed stormwater management areas and facilities.
- Evaluation of requirements for storm water management in the areato be developed, including connection to the existing system and receiving water concerns.
- A groundwater mitigation plan shall be submitted to provide possible solutions to be implemented to ensure the maximum expected groundwater levels are below the elevation of the basement foundation footings. The following shall be considered in the plan:
 - A groundwater contour map showing the minimum expected groundwater depth for the neighbourhood pre- and post-development elevations.
 - Updated groundwater data to support individual phase design should be collected within the past year.
 - Recommendations on grading or land use plan adjustment to ensure basement foundation footings are above the expected maximum groundwater table.
 - A vertical hydraulic conductivity contour map for the undisturbed (pre-development) and disturbed (postdevelopment) soils within the neighbourhood boundary and possibly beyond
 - Perforated sub-drains can be used in some areas to mitigate and lower the groundwater table; however, they shall not be used in low permeable soils with hydraulic conductivity less than 1.0 x 10⁻⁵m/s.



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- Compliance with the Monitoring Well Installation, Maintenance and Decommissioning Standard for all monitoring wells installed on public property and private land as part of a Concept Plan, Sector Plan and Neighborhood Plan.
- If wetlands are present, a Wetland Mitigation Plan shall be submitted to provide possible solutions for the avoidance of wetlands during the Concept Plan stage, to ensure the least amount of impact to wetlands. For more details on the requirements of a Wetland Mitigation Plan, see the Wetland Policy (C09-041)
- Natural Area Screening Phase I
- Traffic Impact Assessment (TIA)
- Phase 1 Environmental Site Assessment
- Historic and Archaeological Review

The Proponent can contact the Development Review section of the Planning and Development Department for additional discussion and guidance on the technical requirements prior to completing a Concept Plan (or amendment).



4 Concept Plan (or Amendment) Application

A Concept Plan shall be produced once the research phase has been completed. The Concept Plan shall provide a comprehensive representation of the proposed development and adequate detail to form the basis for servicing and development. Proponents may be submitting a new Concept Plan, or an amendment (minor, intermediate, or major) to a Concept Plan previously submitted. An application for a Concept Plan (or amendment) shall be submitted to the Planning and Development Department for evaluation who shall obtain comments from various CoS departments concerning servicing suitability and other requirements.

4.1 Utility and Transportation Plans

The CoS requires the submission of the following utility and transportation plans at the Concept Plan stage of development:

•	Water Distribution Plan	Refer to <i>Water Distribution System</i> (Section 4) for requirements.
•	Sanitary Sewer Collection	
	Plan	Refer to Sanitary Sewer Collection System
•	Sewage Pump Station Design Report	(Section 5) for requirements.
•	Storm Water Drainage	
	Plan	Refer to Storm Water Drainage System
•	Storm Water Storage	(Section 6) for requirements
	Basin Design Report	
•	Transportation Plan	Refer to <i>Transportation System</i> (Section 8) for requirements.

When tying into an existing utility or transportation network, the Proponent is responsible for acquiring and analyzing the best available information or estimates for the existing network. See also *Service Connections* (Section 7).



4.2 Environmental Plans

The City has adopted a *Wetland Policy (C09-041)* which provides guidance to Proponents on achieving responsible integration of wetlands into the urban environment. A Wetland Mitigation Plan is required as an integral part of any Concept Plan (or amendment) that has the potential to impact wetlands. Proponents shall ensure the Concept Plan (or amendment) adheres to the *Wetland Policy (C09-041)*.

Wetland Mitigation Plan
 Refer to Wetland Policy (C09-041) for requirements.

As outlined in the *Wetland Policy (C09-041)*, the Proponent is responsible for compensatory measures to offset impacts to wetlands.

4.3 Required Figures

When submitting an application for a Concept Plan (or amendment), the Proponent shall at a minimum, include the following figures:

- Land Ownership Map
- Site Inventory Map
- Land Use Plan
- Open Space Plan(s)
- Infrastructure and Servicing Plan(s)
- Transportation Network Plan(s)

For additional guidance on the requirements for Concept Plan (or amendment) applications, contact the Planning and Development Department.

5 Application for Subdivision

Once the Concept Plan (or amendment) and supporting information have been approved, an application for subdivision is required. The application, together with the appropriate supporting documentation and fee, shall be submitted to the Planning and Development Department for approval. The Proponent is responsible for engagement of Rights Holders, and other relevant agencies and organizations, obtaining approvals prior to submission of an application for subdivision.

Requirements for documentation that shall accompany an application for subdivision are set out in the *Subdivision Bylaw*, 1985 (*Bylaw No. 6537*). Supporting documentation for an application for subdivision include:



- A plan of proposed subdivision
- Letters from utility agencies and other departments within the City with comments on easements, servicing requirements, etc.
- A good quality site plan
- AutoCAD-compatible digital file

A copy of the *Subdivision Bylaw, 1985 (Bylaw No. 6537)*, detailed requirements for submission, and application forms, can be found on the <u>City's website</u>.

The application will be reviewed for completeness and for compliance with applicable policies and regulations. The Planning and Development Department may request comments from other municipal departments, government agencies, or others who may have an interest during review. Once the review is complete, the application may be approved in whole or in part, approved subject to conditions, or refused.

5.1 Certificate of Approval

If the application is approved, a Certificate of Approval will be issued provided that the conditions of approval are satisfied. Conditions may include but are not limited to:

- Servicing agreement(s);
- Easement agreement(s);
- Payment of area development charges; and
- Payment of approval fees.



6 Servicing Agreement

Proponents shall enter into servicing agreements with the CoS as a condition of the Certificate of Approval. Servicing agreements are prepared by the Land Development section in the Construction and Design Department of the CoS. Individual servicing agreements are linked to the portion(s) of development that is/are scheduled to be under construction.

Each agreement outlines the responsibilities, quality standards, area development charges, and liabilities that are assigned to the Proponent and to the CoS within each construction area, including any obligations for compensatory mitigation measures proposed in the Wetland Mitigation Plan.

7 Easement Agreement

Where a buried utility crosses private property, the Proponent shall provide a legal easement. The easement shall allow the private property overlying the utility to be accessed for maintenance purposes.

7.1 Easement Widths

Buried utilities in new subdivisions are to be located within rights of way in accordance with the standard drawings that are referenced in Appendix A.

- Utilities shall be constructed parallel to property lines wherever possible.
- Minimum easement widths are specified in the following table.
- The CoS shall approve all easement locations and widths.

Table 7-1
Minimum Easement Widths

Description	Minimum Easement Width (m)
Water or storm or sanitary main	6.0
Any two of above in common trench	7.5
Any two of above in separate trenches	9.0
All 3 of above plus a shallow buried utility (gas, power, etc.)	12.0



8 Area Development Levies/Charges

Area development charges are also commonly referred to as prepaid service charges. The charges that apply to each proposed development shall be specified in individual servicing agreements.

The CoS shall make all attempts to define the Proponent's costs at the Concept Plan stage. Unforeseen costs may be charged as they arise at the discretion of the CoS.

8.1 Offsite Construction or Reconstruction Charges

Offsite construction or reconstruction charges shall apply to upgrading or reconstruction work, of existing utilities and transportation infrastructure, which will need to be undertaken to adequately service or accommodate the proposed development.

These charges will vary according to the requirements of individual developments and may be unique to a particular development. Examples of offsite construction or reconstruction charges include:

- Additional sound attenuation solutions
- Additional traffic signals for a residential neighbourhood (in excess of the two covered by the Street Signing and Traffic Controls Service Charge)
- Fly-over
- Overpasses

8.2 Offsite Service Charges

Service Charges (whether incurred as Servicing Agreement Fees or Development Levies) shall apply for the provision of trunk sewers, primary water mains, arterial roadways, and other permanent services to the proposed development. The offsite service charges do not provide funds for temporary services. A summary of service charges is provided in the following table.



Table 8-1 Service Charges

Name	Charge Basis	Comment s
Arterial Road	Per front	Provides fund for the cost of design
	metre	andconstruction of arterial roads.
		Arterial roadway classification is defined in the
		Transportation System (Section 8) of the manual.
Buffer Strip	Per front	Provides funds for the construction and
	metre	landscaping of buffer strips and associated
		earthberms on the perimeter of
		neighbourhoods where required, or
		adjacent to arterial roadways and railway
		facilities. Sound walls are not financed by
		this service charge.
Extended	Per front	Warrants repairs during the period between 1 and
Maintenance	metre	3years after the issuance of the Final Acceptance
		Certificate, which typically corresponds with the
		period 2 to 5 years after construction.
Fencing	Per front	Provides funds for protective fencing along
	metre	freeways, highways, and railways, or around
		hazardous structures/facilities serving a
		prepaid subdivision.
Inspection	Per front	Provides funds to cover the cost of inspection
	metre	services for private developments.
Interchange	Per front	Provides partial funds for the design and
	metre	construction of interchanges corresponding to new developmentsince inception.
Lanes	Per front	Provides funds for the cost of design and
	metre	construction of laneways
Municipal	Per front	Provides partial funds to cover the cost of
Administration	metre	administrationsalaries for city developments
		within the land section.



Name	Chargo	Comments
Ivallie	Charge Basis	Comments
Parks and	Per front	Provides funds for the provision of Leisure
Recreation	metre	Services facilities.
rtooroation	mode	A one-time charge against new development.
		The service charge may represent a pre-
		payment towards afacility to be constructed at
		a later date, or post-payment for facilities
		already constructed.
		The service charge is calculated on a citywide
		frontage basisfrom current equivalent cost that
		is needed to construct the applicable facilities
		within the designated area.
Planning	Per front	Provides funds to defray planning costs related
	metre	toland development.
		Includes future growth studies, Sector Plans,
		Concept Plans, planning studies,
		neighbourhood subdivision design plans,
		zoning,and all related processing, preparation
		and
Drimary Water	Per front	reporting costs.
Primary Water Main	metre*	Provides funds for the cost of design and construction of primary water mains that
IVIAIII	metre	construction of primary water mains that
		arerequired to supply the distribution system(s).
		 Water supply mains are not financed by this
		service charge.
Pump Station	Per front	Provides funds for the design and construction
	metre	ofsewage pump stations.
		The development of some properties may be
		brought forward with the use of minor
		manhole sewage pumping before a
		permanent service is
	D ()	provided.
School Land	Per front	Based on the cost of acquiring land for the
	metre	potential elementary school-site property in
		each developing neighbourhood.



Street Lighting	Per front metre	Provides funds for the installation of street lightingwithin prepaid subdivisions and on bordering arterial roads.
Street Signing and Traffic Controls	Per Unit	 Provides funds for the manufacture and installation all street signing (name plates, traffic signs, arterial route signs). Provides funds for design and installation of two pedestrian corridors or pedestrian-activated signals and two traffic signals that are required in or adjacent to a prepaid subdivision.
Trunk Sewer	Per Front Metre*	 Provides funds for the cost of design and construction of trunk sanitary and storm sewer systems. Includes mains, storm water storage basins, major surface drainage facilities and control works, and storm drainage discharge works.
Underground Electrical	Per Lot	 Provides funds for the installation of an Underground Residential Distribution (URD)system. Includes distribution transformers, secondary cables, and pedestals.
Servicing Agreement	Per Agreement	Provides funds to cover the administrative cost ofpreparing servicing agreements with private developers.

^{*}Charges are assessed on a front metre basis for most services but may be charged on an area basis if the parcel exceeds a certain dept.



8.3 Direct Servicing

Direct servicing charges shall be applicable to the provision of services within the proposed development. A summary of direct servicing charges is provided in the following table:

Table 8-2
Direct Servicing Charges

Name	Charge Basis	Comments
Grading	Per front metre	 Provides funds for the stripping of topsoil from streets and easements, and for setting the design grades to accommodate surface drainage and utility installations. The charge also provides for topsoil stockpiling.
Natural Gas Utility	Per front metre	Covers the natural gas costs that are not absorbed by SaskEnergy.
Paving	Per front metre	 Provides funds for the design and construction of paved streets. Includes preparation of subgrade, placement and compaction of subbase, placement and compaction of base, placement and preparation of asphalt pavement, oil flushing to provide a sealant, and initial line and crosswalk painting.
Sanitary Sewer Mains	Per front metre	 Provides funds for the design and construction of a sanitary sewer collection system. This includes mains, which are usually 600 mm in diameter or less, and manholes as required.
Servicing Agreement	Per agreement	Provides funds to cover the cost of development and administration of the servicing agreement(s) for the proposed development.



Name	Charge Basis	Comments
Sidewalks and/or curbs Storm Sewer System	Per front metre Per front metre	 Provides funds for the design and construction of concrete sidewalks and curbs, not including median curbs. Provides funds for the design and construction of a storm drainage system. This includes pipes, which are normally less than 1350 mm in diameter, catch basins, manholes and outfall structures.
Water and Sewer Service Connections	Per lot	 Provides funds for the design and construction of water and sewer service connections from the mains in the street to a point inside the property line. Includes all prepaid residential lots, including duplex lots if the survey shows two lots prior to the sale by the CoS. The charge for residential connections does not provide for storm water connections or the actual hook-up to the building. Commercial, institutional, school, and industrial service connections are not subject to a prepaid charge as they are the responsibility of the Proponent/lot owner.
Water Mains	Per front metre	 Provides funds for the design and construction of a water distribution system. This includes mains that are usually 400 mm in diameter or less, valves, and fire hydrants.



9 Detailed Design

The Proponent shall receive formal approval from the CoS to proceed with all, or a portion of, detailed design. Detailed design documents include drawings and specifications for streets, curbs, sidewalks, and all applicable buried utilities.

The City assumes the weeping tile/sump pump elevation is 2.5 m below lot grading surface elevation and will require an area to have groundwater mitigation measures if the seasonal groundwater elevation is higher elevation than 2.5 m below lot grading, to mitigate perpetual sump pumping.

Note that "seasonal groundwater" represents the most shallow groundwater condition anticipated, based on the hydrogeological studies for the area. The seasonal groundwater level shall be defined as one (1.0) metre above the maximum observed level in studies of the area.

Groundwater levels fluctuate seasonally and between dry and wet periods and the City acknowledges that groundwater levels can vary between levels recorded in the Concept Plan hydrogeological study. Justification and/or proposed groundwater mitigation measures will be required within detailed design where the seasonal groundwater is at a higher elevation than 2.5 m below lot grading surface or seasonal groundwater elevations are lower than what is recorded in the hydrogeological studies.

Five (5) copies of these documents shall be submitted to the CoS for approval. The documents shall later be incorporated into the construction contract(s).

9.1 Drawings

All drawings shall conform to the size, scale and layout of the present CoS Drawing/CAD standards, found on the <u>City's website</u>.

Additionally:

- Profiles shall show finished street and lane grades with all important elevations and grade percentages clearly marked.
- Elevations shall be provided at every change in direction and at 50 m intervals.
- All existing and proposed underground services shall be shown.
- All final drawings for approval shall bear the stamp of a licensed Saskatchewan Professional Engineer.



9.2 Specifications

Specifications shall outline standards comparable to current CoS specifications for similar work, found on the <u>City's website</u>.

Additionally:

 All final specifications for approval shall bear the stamp of a licensed Saskatchewan Professional Engineer.

9.3 Tendering

All works funded by offsite service charges shall be publicly tendered.

9.4 Staging

The construction of developments is typically staged, with servicing completed initially and lots and parcels sold in phases over several years. If the Proponent elects to stage the project, each stage shall be a cohesive unit and shall, in the opinion of the CoS, have sufficient road and utility links to function safely and effectively.



The CoS requires the submission of utility and transportation plans at the detailed design stage. These plans shall illustrate the planned provision of services throughout all stages of construction:

•	Water Distribution Plan	Refer to Water Distribution System (Section 4) for requirements.
•	Sanitary Sewer Collection Plan	Refer to Sanitary Sewer Collection System (Section 5) for requirements.
•	Storm Water Drainage Plan	Refer to <i>Storm Water Drainage System</i> (Section 6) for requirements.
•	Transportation Plan	Refer to <i>Transportation System</i> (Section 8) for requirements.

The CoS requires compliance with all sections of the Design and Development Standards Manual, regardless of whether listed above.

9.5 Permits

The Proponent shall be responsible for receiving construction permits from the appropriate authorities in a timely manner, including the appropriate Building and Development Permits from the CoS.



Appendix A Applicable Standard Drawings

Proponents shall be responsible for referencing standard drawings that are applicable to their development. Drawings are available from the <u>City's website</u>.

Drawings are subject to revision, addition, or deletion. Revised drawings shall be renamed using the date of latest revision. Proponents are responsible for ensuring that they are referencing the latest version of any standard drawing.

Drawings that are applicable to the utility easements include the following:

Drawing Number	Title
Buried Utilities	
102-0007-001	Utilities Placement Standards
102-0007-002	Utilities Placement Standards
102-0007-003	Utilities Placement Standards
102-0007-005	Utilities Placement Standards
102-0007-006	Typical Roadway Crossing Electrical Sleeve
102-0007-007	Typical Roadway Crossing Irrigation Sleeve
102-0007-008	Base/Ducting Installation – Typical Median Cross Section

Source:

http://www.saskatoon.ca/business-development/development-regulation/specifications-standards