City of Saskatoon Design and Development Standards Manual

Section Two Land Development Process

Version 15





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1 Objective

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 Submissions and Approvals

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

Regulatory and supporting documents that shall be referenced for the design and installation of land development include the following:

- Official Community Plan Bylaw, City of Saskatoon;
- <u>Land Subdivision Bylaw (Bylaw No. 6537)</u>, City of Saskatoon;
- Zoning Bylaw (Bylaw No. 8770), City of Saskatoon;
- <u>Standard Construction Specifications and Drawings: Roadways, Water,</u> and Sewer, City of Saskatoon;
- <u>Standard Construction Specifications and Drawings: Parks</u>, City of Saskatoon;
- Procedures/requirements for development applications and appeals; and
- The Planning and Development Act, Province of Saskatchewan.

2.1 City of Saskatoon

Submissions that are typically required from Proponents during the land development process include the following:

- Neighbourhood Concept Plan;
- Utility and Transportation Plans;
- Application for Subdivision;
- Servicing Agreement;
- Easement Agreement(s); and
- Detailed design documents.

Basic requirements for individual submissions to the CoS are outlined in the following sections of this document. Detailed requirements are available from the CoS website.



2.2 Other Authorities

The Proponent is responsible for obtaining approvals from appropriate authorities in 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.

3 Planning and Research

Saskatoon's Official Community Plan Bylaw, 2020 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.

The development of a new area begins with the amendment of the *Official Community Plan* to allow expansion to occur in a particular area. The CoS Planning & Development Department will then create a sector plan to provide a development framework for the area, which generally encompasses two or more neighbourhoods.

After the creation of a sector plan, either private Proponents or the CoS Saskatoon Land Department may proceed with preparation for development. The following research and assessment shall be completed and submitted at the neighbourhood concept plan (NCP) stage:

- Research shall be conducted to identify the constraints and opportunities for development in the area identified in the plan.
 - This research shall include an assessment of pre-development topography, heritage sites, environmental impacts, traffic impacts, and water and sewer capabilities.
 - An assessment of pre-development hydrology and hydrogeologicalconditions shall also be made at this time and shall include:
 - Consultation with provincial and federal regulatory agencies to identify local resources and concerns;
 - Resource mapping (including existing drainage channels, 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 a 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 crosssections;
- 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, if any, for future groundwater monitoring;
- Evaluation of the feasibility of proposed stormwater management areas and facilities;
- Evaluation of requirements for storm water management in the area to be developed, including connection to the existing system and receiving water concerns; and
- A groundwater mitigation plan shall be submitted to provide possible solutions to be implemented during the detailed design of the neighbourhood 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 preand post-development elevations;
 - Updated groundwater data to support individual phase design should be collected within the past year;
 - Recommendations on grading 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.



Neighbourhood Concept Plan

A Neighbourhood Concept Plan shall be produced once the research phase has been completed. The plan shall provide a comprehensive representation of the proposed development and adequate detail to form the basis for servicing, development, and marketing. The plan shall be submitted to the Planning & Development Department for evaluation who shall obtain comments from various City departments concerning servicing suitability and other requirements.

4.1 **Utility and Transportation Plans**

The City of Saskatoon requires the submission of the following utility and transportation plans at the concept stage of development:

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

5 **Application for Subdivision**

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Once the Neighbourhood Concept Plan and the Utility and Transportation Plans 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 & Development Department for approval.

Requirements for documentation that shall accompany an application for subdivision are set out in the CoS's Subdivision Regulations. Supporting documentation for an application to subdivide a new neighbourhood 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; and
- AutoCAD-compatible digital files.

A copy of the Subdivision Regulations, detailed requirements for submission, and an application form can be found on the CoS website.

The application will be reviewed for completeness and for compliance with applicable policies and regulations. The Planning & Development Department may request comments from other municipal departments or government agencies, and will prepare a report and recommendation for the approval of the Technical Planning Commission (TPC).

5.1 Certificate of Approval

If the recommendation is approved by the TPC, a Certificate of Approval will be issued provided that the conditions of approval are satisfied. These conditions include:

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

5.2 **Appeals**

If an application is recommended for denial, a report will be sent to City Council. Proponents may appeal a recommendation for denial as well as conditions of approval to the Development Appeals Board.

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Servicing Agreement

Proponents shall enter into servicing agreements with the CoS as a condition of the Certificate of Approval. 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.

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**

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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 neighbourhood shall be specified in individual servicing agreements.

The CoS shall make all attempts to define the proponent's costs at the neighbourhood concept 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 Levy);
- Fly-overs; and/or
- Overpasses.

8.2 Offsite Levies

Levies shall apply for the provision of trunk sewers, primary water mains, arterial roadways, and other permanent services to the proposed development. The offsite levies **do not** provide funds for temporary services. A summary of levies isprovided in the following table.



Table 8-1 Levies

Name	Charge Basis	Comments
Arterial Road	Per front metre	 Provides fund for the cost of design and construction of arterial roads. Arterial roadway classification is defined in the <i>Transportation System</i> Section of the manual.
Buffer Strip	Per front metre	Provides funds for the construction and landscaping of buffer strips, associated earth berms and/or sound attenuation structures.
Community Centre	Per front metre	Provides funds for the construction and landscaping of a neighbourhood community centre.
Extended Maintenance	Per front metre	Warrants repairs during the period between 1 and 3 years after the issuance of the Final Acceptance Certificate, which typically corresponds with the period 2 to 5 years after construction.
Fencing	Per front metre	Provides funds for protective fencing along freeways, highways, and railways, or around hazardous structures/facilities serving a prepaid subdivision.
Inspection	Per front metre	Provides funds to cover the cost of inspection services for private developments.
Interchange	Per front metre	 Provides funds for the design and construction of interchanges corresponding to new development since inception.
Municipal Administration	Per front metre	Provides funds to cover the cost of administration salaries for city developments within the land section.



Name	Charge Basis	Comments
Parks and Recreation	Per front metre	 Provides funds for the provision of Leisure Services facilities. A one-time charge against new development. The levy may represent a pre-payment towards a facility to be constructed at a later date, or post-payment for facilities already constructed. The levy is calculated on a citywide frontage basis from current equivalent cost that is needed to construct the applicable facilities within the designated area.
Planning	Per front metre	 Provides funds to defray planning costs related to land development. Includes future growth studies, concept plans, neighbourhood subdivision design plans, zoning, and all related processing, preparation and reporting costs.
Primary Water Main	Per front metre*	 Provides funds for the cost of design and construction of primary water mains that are required to supply the distribution system(s). Water supply mains are not financed by this levy.
Pump Station	Per front metre	 Provides funds for the design and construction of sewage pump stations. The development of some properties may be brought forward with the use of minor manhole sewage pumping before a permanent service is provided.
Street Lighting	Per front metre	Provides funds for the installation of street lighting within prepaid subdivisions and on bordering arterial roads.
Street Signing and Traffic Controls	Per Unit	 Provides funds for the manufacture and installation of 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.



Name	Charge Basis	Comments
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 Agreeme nt	Provides funds to cover the administrative cost of preparing 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 depth.



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 375 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 	
		I his 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.

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.

- 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.

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

9.3 Tendering

All works funded by offsite levies 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 requests 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
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section for requirements.

• Sanitary Sewer Collection Plan Refer to Sanitary Sewer Collection

System section for requirements.

• Storm Water Drainage Plan Refer to Storm Water Drainage

System section for requirements.

• Transportation Plan Refer to Transportation System

Section for requirements.

9.5 Permits

The Proponent shall be responsible for receiving construction permits from the appropriate authorities in a timely manner.



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 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			
Shallow 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