City of Saskatoon Design and Development Standards Manual

Section One

Introduction

Version 16





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1 Objective

This manual has been prepared to provide process and design information to interested parties who require information about the following:

- New subdivision developments, infill development and redevelopment of properties in the City of Saskatoon (CoS).
- Additions or alterations to city owned water and sewer system infrastructure.
- Additions or alterations to city owned active or motorized transportation systems.

The manual identifies minimum acceptable standards for typical conditions encountered during design.

1.1 Scope

These standards apply to the design of municipal services for new subdivisions, infill development and redevelopment of properties in the CoS. Information is also provided on the land development process, construction practices, requirements for the submission of plans and specifications as well as consultant guidelines for inspection and construction.

Standards for the following municipal infrastructure are included:

- Potable Water Distribution System;
- · Sanitary Sewage Collection System;
- Stormwater Collection System;
- Transportation System; and
- Surface Infrastructure.

It should be noted that standards for landscaping will also apply to the development of a new subdivision, infill development and redevelopment of properties. Landscaping standards are outside the scope of this manual and should be obtained from the CoS Parks Department.

2 Regulatory Authority

The CoS has responsibility and authority for the planning, operation, and maintenance of municipal streets and public utilities. At the time of writing, the main Provincial legislation that defines the responsibilities of municipal governments with respect to planning and the provision of services are:

- <u>The Planning and Development Act</u>, Province of Saskatchewan and
- <u>The Cities Act</u>; Province of Saskatchewan.



2.1 The Planning and Development Act

Saskatchewan's Planning and Development Act establishes the legal framework for community planning in the province. The authority to undertake planning and to develop land is delegated to municipal government. The Official Community Plan Bylaw, 2020 and the Zoning Bylaw, 2009 are the main tools that are used to guide planning and development in Saskatoon.

2.2 The Cities Act

The Cities Act of Saskatchewan includes legislation to control the operation and maintenance of municipal streets and public utilities. The CoS is designated as the regulatory body responsible for water delivery, sanitary sewage and storm water collection, garbage collection and roadway systems. The CoS has developed several bylaws, which are referenced throughout this document, to guide the design and construction of utilities for new developments.

2.3 City of Saskatoon

The City of Saskatoon is responsible for the planning, design, operation, and maintenance of the water distribution system, the sanitary sewage system, the stormwater management system, roadways, parks/open spaces, and other CoS assets.

The City of Saskatoon's regulatory role ensures that:

- The City of Saskatoon grows in an orderly fashion;
- All developments are close to existing services;
- All developments adhere to standard engineering design and construction practices; and
- All developments do not overload existing services.

2.3.1 Saskatoon Water Department

The Saskatoon Water (SW) Department provides planning and regulatory services for water distribution, waste water collection, and storm water management. The SW Department also coordinates the Design Standards with other departments.

The Saskatoon Water Department is the deciding authority regarding the intent and interpretation of these standards and the acceptability of proposed alternatives.



2.3.2 Transportation Division

The Transportation Department provides planning and regulatory services for active and motorized transportation.

2.3.3 Construction and Design Division

The Construction and Design (CD) Division provides design and construction services.

- The Land Development Section coordinates service for new land development or redevelopment projects, servicing agreements, subdivision applications, and discretionary use applications.
- The Connections Section coordinates the review of applications and inspection of service connections to the water distribution system, the sanitary sewage system, and the storm water management system.
- The Design & Drafting Section reviews all drawings for adherence to COS drawing standards/requirements and manages the addition of drawings to the COS drawing system.

2.3.4 Technical Services Department

The Technical Services Departmentprovides planning and regulatory services for surface infrastructure.

3 Proponent's Responsibility

The Proponent and the Engineer are responsible for the design and construction of new neighbourhoods in accordance with good engineering practice considering the site-specific conditions of the development and the provision of drawings detailing the design for construction or the field conditions as constructed.

3.1 Regulatory Requirements

Regulatory documents are referred to throughout this document. These references should be taken to refer to the most recent edition of each document.

If conflicts or inconsistencies arise between these standards and provincial or federal regulations, the Proponent is responsible for ensuring that the most stringent requirements are met. The issue must be brought to the attention of the CoS.



3.2 Special Provisions

The Proponent is responsible for satisfying any special provisions, in addition to regulatory requirements, that may be required by the CoS.

3.3 Existing Data

When tying into the existing utility or transportation network, the Proponent is responsible for acquiring and analyzing the best available information or estimates for the existing network.

3.4 Engineering

Proponents must ensure that all work is in accordance with good engineering practice and meets the requirements of applicable codes and regulations.

The Proponent shall engage a Professional Engineer, registered or licensed in the appropriate discipline to practice in the Province of Saskatchewan, to be responsible for design and construction of all engineering works other than those carried out directly by the CoS or an applicable utility.

Private Proponents shall advise the CoS regarding which consulting engineers are assigned to projects. Their specific responsibilities shall be outlined.

The Proponent is responsible for coordinating the design and construction of shallow bury utilities such as natural gas, electrical, telecommunications, and street lighting.

4 Liability

The Proponent shall save harmless the CoS from any and all claims to those services that are their responsibility arising out of, or related to, their development.

5 Important Notes

The information and specifications in this manual will be updated on an as-needed basis. Designers are responsible for referencing the most recent version of the manual in their design. The manual is available from the CoS website:

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



5.1 Contact Information

Inquiries regarding these standards should be directed to the City of Saskatoon. Contact information is provided below:

City of Saskatoon 222-3rd Avenue South Saskatoon, SK S7K 0J5 Telephone: (306) 975-2476

5.2 Alternative Standards

This manual presents standards for routine design procedures, but is not meant to limit creativity and innovation in design. The CoS anticipates that departures from these standards may occur for good reason and for the benefit of the development and the CoS as a whole. The use of alternative standards must be discussed with, and approved by, the CoS at the earliest possible stage of planning.

6 Naming and Civic Addresses

As per the <u>Naming of Civic Property and Development Areas Policy</u>, the CoS shall be responsible for the naming of suburban development areas, neighbourhoods, streets, parks, and major municipally-owned/controlled facilities.

- Roadway names shall be entered on development plans after a suitable name has been selected.
- Block numbering shall be performed in a logical sequence to assist emergency response personnel with the location of civic addresses.



Appendix A Definitions

Term Definition

Contractor: Any appropriately certified person(s) who undertake the

installation of municipal services on behalf of either the

Proponent or the CoS.

CoS: The City of Saskatoon.

Engineer: The professional engineer retained by the Proponent to

be responsible for the design, layout, supervision of installation, recording of as-built information, and for certifying that the design and installation is performed in

accordance with these standards.

Proponent: A person, persons, or corporation who has applied to

subdivide, develop, or service an existing parcel of land, whether as the owner or as an agent for the

owner of the land.



Appendix B Abbreviations

Abbreviation Description

AC Asbestos Cement

ADWF Average Dry Weather Flow

AES Atmospheric Environment Services, Environment Canada

AISI American Iron and Steel Institute

ASTM American Society for Testing and Materials

BOD Biochemical Oxygen Demand

CBR California Bearing Ratio

CI Cast Iron

COD Chemical Oxygen Demand

CoS City of Saskatoon

CSA Canadian Standards Association

d Day

DI Ductile Iron

ESAL Equivalent Single Axle Load

h Hour

ha Hectares

HGL Hydraulic Grade Line

HMA Hot Mix Asphalt



Abbreviation Desc	ription
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HWL High Water Level

I Intensity

I&I Inflow and Infiltration

IDF Intensity, Duration, Frequency

ITE Institute of Transportation Engineers

km Kilometres

kPa Kilopascal

L Litres

m Metres

MH Manhole

min Minute

mm Millimetres

NBC National Building Code

NFPA National Fire Protection Agency

NWL Normal Water Level

PDF Peak Design Flow

PDWF Peak Dry Weather Flow

PE Polyethylene

PVC Polyvinyl Chloride

s second



Abbreviation	Description
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SPS Sewage pump station

SWSB Storm Water Storage Basin

T time

TAC Transportation Association of Canada

TP Total Phosphorous

TSS Total Suspended Solids

WTF Weeping Tile Flow

WTP Water Treatment Plant

WWTP Wastewater Treatment Plant