

## SECTION 2: GENERAL CONSIDERATIONS

### 2.0 INTRODUCTION

This section covers general issues including infrastructure planning requirements, utility line assignments, developer fence locations, entry features, setbacks and other design issues not specifically noted in other chapters.

### 2.1 IN GENERAL

The overall design principles described in the introduction to these standards is the basis on which all construction is undertaken in the City of Prince Albert. These guiding principles are expanded below to provide more specific guidance related to the general issues described above.

### 2.2 LEVEL OF SERVICE OBJECTIVES

#### 2.2.1 Utilities

The community at large expects building lots to have access to all utilities including shallow utilities consisting of electricity, telephone, cable and natural gas. This standard documents how location assignments are made in the road right of way and easements for each utility. This is done so that services can be provided in a consistent manner without the creation of unnecessary conflicts in facilitating the maintenance and repair of the services.

#### 2.2.2 Safe Development Setback Line

The safe development setback line is established with the safety of the public and environmental considerations in mind. These setbacks provide that buildings are not built so near existing right of ways that they would be endangered by the public and protects environmentally sensitive areas and ecosystems. In determining where property lines are located in relation to the safe development setback line, the principle is that no additional restrictions should be placed on the adjacent lots.

#### 2.2.3 Planning Requirements

These infrastructure planning requirements should be viewed as a supplement to the requirements and process administered by the Planning and Development Department. Contact the Planning and Development Department for detailed planning requirements for Master Plans, Development Plans and Subdivisions.

### 2.3 MASTER PLAN – INFRASTRUCTURE REQUIREMENTS

#### 2.3.1 Stormwater – Master Plan Requirements

A Master Plan shall include the following information regarding stormwater management:

- i. Definition of general catchment areas.

- ii. Predevelopment peak flows, volumes and hydrographs, inflow and outflow points.
- iii. Post development peak flows, volumes and hydrographs.
- iv. Generalized storm pond locations and storage volumes.
- v. Proposed location of connections to the downstream Major and Minor systems and proposed release characteristics at each location compared to pre-development characteristics.
- vi. Description of the impacts of the proposed development on the downstream Major and Minor systems and a description of measures proposed to offset negative flooding, erosion and water quality impacts caused as a result of the development.
- vii. A map or description of the Major system flow routes from the boundary of the development to the outlet. Outlets will usually be considered as the first water body or natural channel reached by stormwater runoff from the development.
- viii. System performance for low intensity long duration storms will need to be reviewed. Particularly the performance of stormwater ponds. Examples of these events are to come from actual Environment Canada precipitation data for Prince Albert.
- ix. Identification of offsite water system extensions are required to provide service to the development area complete with order of magnitude cost estimates and projected year of construction.

### **2.3.2 Sanitary Sewer – Master Plan Requirements**

A Master Plan shall include the following information regarding the sanitary sewer system:

- i. Generalized trunk layouts, particularly where they are not expected to follow roadway alignments.
- ii. Land use and sewage generation rates.
- iii. Expected peak flows and design flows.
- iv. Impacts on the existing system and capacity of the existing system at connection locations.
- v. Estimated sewer catchment boundaries at each connection point.
- vi. Conceptual location and size of lift stations and force mains.
- vii. Identification of offsite sanitary sewer system extensions required to provide service to the development area complete with order of magnitude cost estimates and projected year of construction.

This analysis may require a computer network analysis.

### **2.3.3 Water Distribution – Master Plan Requirements**

A Master Plan shall include the following information regarding the water distribution system:

- i. Land uses, expected peak demands, fire flow requirements.

- ii. General pipe layouts.
- iii. Impacts on the existing system and capacity of the system at connection points.
- iv. Identification of offsite water system extensions required to provide service to the development area complete with order of magnitude cost estimates and projected year of construction.

This analysis may require a computer network analysis.

#### **2.3.4 Transportation – Master Plan Requirements**

A Master Plan shall include the following information regarding the transportation system:

- i. Definition of general land use areas.
- ii. Estimated trip generation data for the various land use areas.
- iii. General locations of arterial and major collector roads and intersections.
- iv. General location of pedestrian and bicycle corridors and circulation routes.
- v. Impacts on the existing system and proposed measures to mitigate negative impacts on adjacent arterial roads.
- vi. Impacts on the development from noise off arterial roads and proposed measures to mitigate noise.
- vii. Schematic representation of proposed transit routes.
- viii. Identification of offsite arterial road extensions required to provide access to the development area complete with order of magnitude cost estimates and projected year of construction.

Additional analysis may be required for high traffic generation land uses and areas with limited capacity for increased traffic volumes.

#### **2.3.5 Parks And Open Space – Master Plan Requirements**

A Master Plan shall include the following information regarding parks and open space:

- i. General locations of parks and open space.
- ii. Estimated percentage of reserve dedication by type zoning.
- iii. Classification of municipal reserves.

### **2.4 DEVELOPMENT PLAN – INFRASTRUCTURE REQUIREMENTS**

The Planning and Development Department is the focal point for the development plan process. All required development plan information should be submitted to Planning and Development for distribution.

For each development plan, Planning and Development will distribute to Public Works and Community Services for review and comment.

#### **2.4.1 Stormwater – Development Plan Requirements**

The following information regarding stormwater management shall be included with the supporting documentation submitted with the outline plan:

- i. A description of any differences between the Area Master Plan and the proposed development plan with regard to the storm water management system.
- ii. A conceptual overland drainage plan showing major system overland flow routes and trapped lows within the entire development and demonstrating continuity of flow from upstream developments through the proposed outline plan area.
- iii. A conceptual servicing plan showing the routing of trunk lines and pond outlets.
- iv. Description of how development phasing has been considered so that at no time are the identified peak release rates exceeded during the period from the start of development to the complete build out of the area. The description should include those trigger points, showing by area, when various stormwater management facilities become necessary.
- v. Refined storm pond locations and volumes and a description of phasing strategies if required.
- vi. Description of proposed sources of make-up water for wet pond facilities.

#### **2.4.2 Sanitary Sewer – Development Plan Requirements**

The following information regarding the sanitary sewer system shall be included with the supporting documentation submitted with the development plan:

- i. A comparison between the Master Plan and the development plan noting the changes and their impacts.
- ii. A conceptual servicing plan will be included with the information showing the location of sanitary sewers, lift stations and any other sanitary facilities.
- iii. A description of development phasing, noting trigger points where sanitary sewer facilities or upgrades are required. The phasing should identify by area when each lift station is required.

#### **2.4.3 Water Distribution – Development Plan Requirements**

The following information regarding the water distribution system shall be included with the supporting documentation submitted with the development plan:

- i. A comparison between the Master Plan and the development plan noting the changes and their impacts.
- ii. A conceptual servicing plan will be included with the information showing the location of water mains and any other water distribution facilities.
- iii. A description of development phasing, noting trigger points where water distribution facilities or upgrades are required in order to ensure defined levels of service are maintained.

**2.4.4 Transportation – Development Plan Requirements**

The following information regarding the transportation system shall be included with the supporting documentation submitted with the development plan:

- i. Any differences between the Master Plan and the proposed development plan.
- ii. Location of all roads and laneways within the development.
- iii. Identification of roads as Arterial, Collector or Local.
- iv. Intersections which will require signals and the development trigger points where they become necessary.
- v. Location and conceptual plan of entryway features.
- vi. Description of the impacts of the proposed development on the adjacent existing transportation system.
- vii. Preliminary projected phasing and timing of the build out of the area, noting trigger points at which transportation facilities or upgrades are required.

**2.4.5 Parks And Open Space – Development Plan Requirements**

The following information regarding Parks and Open Space shall be included with the supporting documentation submitted with the development plan:

- i. Location and boundaries of land dedicated as Municipal Reserve.
- ii. The amount of land and percentage dedicated in the completed subdivision.

Detailed open space planning begins based on the approved development plan. A detailed landscape plan will be developed using a public input process that includes the developer and the City of Prince Albert. The detailed landscape plan shall be submitted to the Community Services Department for final approval.

**2.4.6 Electric Distribution – Development Plan Requirements**

A copy of the development plan showing the general layout of the street lights is required.

**2.4.7 Construction Approval – Infrastructure Requirements**

Prior to requesting a service agreement and submitting engineering drawings for construction approval, new phases of development must follow the appropriate process for subdivision.

Developers must also have a detailed landscape planning process for Municipal Reserve.

Developers must also have a detailed stormwater plan for the development.

**2.4.8 Construction Approval Submission**

Submissions for construction approval shall include the following:

- i. A letter stating that these design standards have been followed and detailing any deviations from the standards along with a justification for the deviation.

- ii. Engineering drawings of the subdivision stamped by a Professional Engineer registered to practice in the Province of Saskatchewan.
  - a. The engineering drawings shall follow the requirements under the City's Master Specifications and Standard Detail Drawings and be sufficiently detailed to construct the infrastructure required for the development.
  - b. The drawings shall also include any additional information requested by Public Works acting reasonably.
- iii. Drawings and supporting documentation describing the stormwater system shall include the following information:
  - a. A description of how the area fits in with the rest of the development in terms of drainage, showing that peak release characteristics from the entire development are still below previously defined limits.
  - b. Any interim stormwater management measures required to maintain stormwater releases within requirements.
  - c. Any interim erosion control measures required to protect flow routes until build out is complete.
  - d. Estimated flow depths and velocities for critical locations such as storm pond inlets, outlets and overflows.
  - e. Extent, depth, volume and duration of ponding in both trapped lows and ponds.
  - f. A description of how the storage provided in ponds and trapped lows complies with the requirements of the outline plan.
- iv. Drawings and supporting documentation describing the sanitary and water systems shall include the following information:
  - a. A description of how the area fits in with the rest of the development.
  - b. All pipe and appurtenances required for the utilities.
- v. Drawings and supporting documentation describing the transportation system shall include the following information:
  - a. Location of all lot lines and identification of the ultimate number of dwelling units served at intersections and links or estimated trip generation data.
  - b. Any interim measures required to provide access to the area for regular traffic and/or emergency services until build out is complete.
  - c. Detailed irrigation and landscaping plans for entryways, boulevards and medians and any other area that will ultimately be maintained by City forces.
- vi. The drawings shall include a grading plan showing any pre-existing conditions that may affect building construction such as fill in excess of 1.2 m deep, previously buried pipe or dugouts.
- vii. The drawings shall include the proposed types and locations of all developer constructed facilities within or adjacent to roads, public right of

ways and easements. This particularly applies to fences, entryway features, trees, bushes, boulevard landscaping, and irrigation systems.

- viii. Detailed landscape plans of all Municipal Reserves in the current phase as approved by Community Services or an indication that the minimal landscaping requirements under the service agreement will be followed.
- ix. Drawings shall include proposed locations for the fire hydrants, Canada Post mail boxes and Saskatchewan Power Corporation street lights.

## 2.5 ENVIRONMENTAL CONSIDERATIONS

As stewards of the environment charged with creating a healthy city and protecting the natural endowments within our jurisdiction, the City of Prince Albert promotes any design measures which reduce or mitigate the impacts of development.

Environmental principles of design are discussed in Section 1.1 Design Principles. For the environmental principles to be effectively translated into action they must be considered at all stages of the planning and design process.

## 2.6 TECHNICAL STANDARDS

### 2.6.1 General Conditions

- i. Utilities Located in Lanes:  
Generally, utilities are not to be located in lanes. In those cases where a utility located in a lane is considered advantageous the Director of Public Works will consider it on a case by case basis. In those cases where a utility in a lane is being extended from a previous phase of development the utility shall only continue along the lane to the first available location where it can be brought to the front of lots.
- ii. Standard Line Assignments:  
The standard line assignment and depth zone for the various deep and shallow utilities can be found in the current edition of the City of Prince Albert Master Specification and Standard Detail Drawings.

### 2.6.2 Fences, Entryways and Other Features

- i. Permanent structures built by the developer and located in or adjacent to the road right of way should be located so they do not conflict with the standard line assignments.
- ii. Detailed plans describing the make up of landscaping, fences and entry features to be handed over to the City of Prince Albert must be submitted for approval when requesting a service agreement. Features and landscaping, which require minimal maintenance or are easily maintained by existing City equipment, are preferred.
- iii. The developer shall provide access to the flanking boulevards from adjacent properties to minimize the amount of boulevard to be handed over to the City for maintenance. Standard practice within Prince Albert is that

the adjacent property owner is responsible for maintenance of the adjacent boulevards and associated landscaping.