

# Corporate Report

NO: R063

COUNCIL DATE: March 22, 2004

**REGULAR COUNCIL** 

TO: Mayor & Council DATE: March 18, 2004

FROM: General Manager, Engineering FILE: 5220-02

SUBJECT: Subdivision & Development By-law - Engineering Design Criteria Update

#### RECOMMENDATIONS

1. That the General Manager, Engineering be authorized to review and modify the City Design Criteria and Construction Standards.

- 2. That the Subdivision & Development By-law, 1986, No. 8830 (as amended), be amended to incorporate the updated design criteria and construction standards, as approved by the General Manager, Engineering; and
- 3. That the amended By-law be brought forward for the required readings.

#### **INTENT**

To seek Council's approval to include the revised Design Criteria and Standard Construction Documents in the Subdivision & Development By-law.

#### **DISCUSSION**

Subdivision & Development By-law, 1986, No. 8830, lays out the criteria and standards for the design and construction of municipal infrastructure in the City of Surrey for both Land Development projects and the City's capital work. The Design Criteria and Standard Construction Documents are schedules to the By-law and, consequently, need Council approval for amendments. Generally, an update is done every two years.

Since the last edition in 2002, the City invited the internal and external users of these documents to submit proposed changes for review. As well, an ad-hoc sub-committee of the DAC met with staff to provide their input.

Of the feedback received, most were housekeeping changes to add clarity or to correct and update references.

The most significant changes are highlighted in the attached Table 1. New measures and criteria were introduced to facilitate the increased demand for basement homes. As such, freeboard requirements were reduced for the minimum basement elevation (MBE) and a new low-pressure sanitary system design guideline was developed to service areas that are unserviceable by gravity sewer systems. This new system replaces the old Septic Tank Effluent Pumping (STEP) system because it costs less, reduces odour and reduces the area taken on the lot for this system. The new criteria will be phased in for all new applications, but do not apply to in-stream ones.

With the intensity of the review and the volume of feedback, the Design Criteria and Standard Construction Documents are now considered balanced documents that meet the needs of the City relative to infrastructure maintenance and operations while optimizing the capital cost of construction to the land development industry and the City's taxpayers and ratepayers.

Paul Ham, P. Eng. General Manager, Engineering

# PH/VL:brb Attachment

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## Table 1

Proposed Changes to Engineering Design Criteria and Supplementary Specifications

(2004)

		Resolution
Proposed Change	Issue	

### General

Trench backfill on arterial road	Backfill material is the same for local and arterial roads	Provide crushed granular sub-base to improve the restoration after trench excavation in arterial roads
Frequency of density tests	The frequency of test is left to individual contract administrator	Provide standard acceptance criteria for consistency

# **Sewer & Drainage (to Facilitate Basements)**

Provide gravity or engineered pumped connection to each lot	Access to back yard services for maintenance is very expensive and disruptive.	More flexibility for pumped connections and less for back yard servicing
Change STEP system to Low Pressure Sanitary System	Odour issue in urban setting, cost, footprint impact on lot and septicity of the STEP sewage.	Reduce cost, remove footprint impact on real estate of the septic tank and reduce the corrosion impact on the City sewer system.
Reduce MBE from 0.6m to 0.3m freeboard	0.3m freeboard is generally used in the region	Facilitate more basements in new developments

## Water

Fire Hydrant Spacing	Cluster of hydrants in commercial/commercial areas	Spread out hydrants to reflect current fire fighting procedures
Provide water main on both sides of Major Road Network	Lots of service connections crossing major road network, causing traffic disruption and high maintenance cost	Provide water main on both sides of Major Road Network where there will be ultimately 6 lanes

# **Transportation**

New specification for Superpave	Specification is prepared for each individual contract	Standard specification is provided for designers

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Increase right-of-way and pavement width in Neo-traditional local road sections by between 1.0m and 0.5m

Right-of-way and pavement width is different in road of similar classification. Problems have arisen due to inadequate parking

Provide uniform standard in road and pavement width. Additional width will allow parking on both sides.

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