



**To:** Public Works and Transportation Committee  
**From:** Robert Gonzalez, P.Eng.,  
Director, Engineering

**Date:** September 28, 2004  
**File:** 10-6060-04-01/2004-Vol  
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**Re:** Sunnymede Area Storm Sewer Issues

**Staff Recommendation**

That the Sunnymede Area Storm Sewer Issues report from the Director of Engineering, dated September 28, 2004, be received for information.

for Robert Gonzalez, P.Eng.,  
Director, Engineering

RG:ep  
Att.

<b>FOR ORIGINATING DIVISION USE ONLY</b>		
<b>CONCURRENCE OF GENERAL MANAGER</b>		
<b>REVIEWED BY TAG</b>	YES <input type="checkbox"/>	NO <input type="checkbox"/>
<b>REVIEWED BY CAO</b>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

## **Staff Report**

### **Origin**

Comments concerning drainage issues at 8871 Gay Road were received from Ms. Denise Hodgson, through her letter to Council dated September 20, 2004. At the Regular Council Meeting for Public Hearing on September 20, 2004, Council directed staff to investigate the effectiveness of the storm drainage system in the Sunnymede area.

### **Finding of Facts**

Ms. Hodgson's letter to council (attachment 1), identifies the following drainage concerns:

- a) uncertainties regarding the age of the existing storm sewers in the area
- b) increase in hard surfaces through the removal of grass and trees which may lead to drainage problems in the area
- c) uncertainties regarding the capacity of the existing storm sewers in the area
- d) recent heavy rains that resulted in flooding in the Sunnymede subdivision

The Sunnymede area began developing in 1930's; however, the original ditches were filled from 1959 to 2003 making the pipe system in the area up to 45 years old. Being one of the older areas in the City, the original homes are significantly lower in elevation than the newer properties and may even be lower than the fronting road surface. As such, the low-lying homes are at considerable risk to flooding as they may be below the recommended building elevation.

The trend over the last 50 years has been towards an increase in hard surface area (or imperviousness) for single family homes which leads to a potential increase in stormwater runoff. The Building Regulation Bylaw requires all new single family homes to install perimeter drains surrounding their property which prevents runoff from one property travelling to another.

Staff currently do not have a detailed capacity analysis of the drainage system; however, we have developed a hydraulic model of the drainage network for the western half of the City (approximately No. 5 Road west). We are analyzing the results from the hydraulic model and will be bringing a report outlining potential capacity related problem areas to the December 2004 Public Works and Transportation Committee.

On September 17/18, 2004, the City of Richmond experienced a 100-year rainfall event (i.e. a rainfall that would statistically occur once every 100 years). The rainwater generated by the 100-year rainfall event far exceeds the design level of service that is provided by the City's drainage system (i.e. 10-year rainfall event). The current design standard for our drainage system is to convey the runoff from a 10-year rainfall event. It would not be economical to upgrade our system such that it can convey the 100-year rainfall event.

### **Financial Impact**

There is no financial impact at this time.

## Conclusion

The Sunnymede subdivision is an older subdivision with several properties below the current recommended building elevation. Staff are currently working on a report outlining potential capacity related problem areas in the western half of the City (i.e. No. 5 Road west) and will present this report at the December 2004 Public Works and Transportation Committee.

The September 17/18, 2004 storm event which caused considerable flooding throughout the GVRD and Richmond greatly exceeded Richmond's design level of service of a 10-year rainfall event. A new drainage system designed to our current standards would not be expected to convey all the runoff from a 100-year rainfall event.



Siu Tse, M.Eng., P.Eng.  
Manager, Engineering Planning  
(4075)

EP:ep

Attachment 1: Letter from Ms. Denise Hodgson

September 20, 2004  
Presentation to Mayor and Council  
By: Denise Hodgson, 8871 Gay Road, Richmond

**Zoning Amendment Bylaw 7786 (RZ04-267350)**

**Location: 8640 & 8660 No. 3 Road**

Mayor and Councillors,

My husband and I reside at the above address on Gay Road which abuts to the East of the proposed townhouse development.

We did not oppose the change of zoning from single family residential to townhouse on the above lots facing No. 3 Rd. because we recognized that they were deep lots and probably would be better used with a somewhat higher density. We had for the past ten years been harassed by irresponsible noisy renters of these properties who took the properties into disrepair. We experienced barking dogs, old mattresses, garbage and wrecked cars in the front yard; and noisy house parties which on several occasions required dispersal by the Richmond RCMP.

Thus, we had occasion to be pleased that something positive was going to happen to these properties.

However, our concerns this evening are as follows:

**1. Density**

In an attempt to understand existing neighbourhood townhouse densities in our subdivision on the North side of No. 3 Rd; the only properties found for comparison are on Francis Road.

8111 Francis Rd	22 units	312 sq. m. per unit
8191 Francis Rd	14 units	310 sq. m. per unit
8231 Francis Rd	10 units	267 sq. m. per unit
8311 Francis Rd	10units	290 sq. m. per unit

**Proposed in Bylaw 7786**

8640 -60 No. 3 Rd.	13 units	211 sq. m. per unit (30% higher)
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It is our view that the proposed density is out of line and not comparable to the existing dwelling units in this section of the Broadmoor Area.

To further understand the section of land between Bowcock Rd and Francis Rd and between St Albans and No. 3 Rd, an official area plan or section plan was sought. It appears that there has been no recent overall planning done in this area which would have given us clearer guidelines.

**2. Drainage**

There are uncertainties regarding the age and capacity of existing storm sewers, etc. in our area. A particular concern is the removal of grass and trees and the replacement with buildings and blacktop to such an extent that there could be serious drainage problems in the whole area. The recent heavy rains and resulting flooding in the Sunnymede subdivision (for the second time this year) could be a signal of potential capacity problems in our area also that we would like addressed now.

**3. Traffic/Lack of parking on No. 3 Rd.**

Potential parking pressures in our subdivision may occur due to the few options for guests on the proposed site.

**4. Buffer Area between proposed development and adjacent single family homes**

The rear yard setback for a single family dwelling is considerably greater than the proposed 3 m buffer. For example, after a bylaw variance request, the City required us to provide a 6 m buffer at the rear of our property when we built our home in 1989.

**5. Trees**

It appears that a majority of the mature trees on the property will be removed.

**6. Play space for families with children**