

City of Richmond

Report to Committee

To:

Finance Committee

Date:

October 25, 2007

From:

Andrew Nazareth

File:

General Manager, Business and Financial

Services

Jeff Day, P. Eng., General Manager,

Engineering & Public Works

Re:

2008 Utility Budgets

Staff Recommendation

- 1. That the 2008 Utility Expenditure Budgets outlined in Option 3 on the staff report dated October 25, 2007, from the Managers of Revenue, Water, Sewerage & Drainage, and Fleet & Environmental Programs, be approved as the basis for establishing the 2008 Utility Rates.
- 2. That staff be directed to report directly to Council with the necessary amendment bylaws to bring into effect the proposed Sewer Connection Charges, amendments to the Waterworks and Water Rates Bylaw, changes outlined in the staff report to the Solid Waste and Recycling Regulation Bylaw and the 2008 Utility Rates option recommended by Committee.

Andrew Nazareth

General Manager, Business and

Financial Services

(4365)

Jeff Day, P. Eng.

General Manager, Engineering

& Public Works

(4019)

	FOR ORIGINA	TING DIVI	SION USE ONLY		
			ACTING		
REVIEWED BY TAG	YES	NO	REVIEWED BY CAO	YES	NO
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Staff Report

Origin

This report presents the recommended 2008 utility budgets and rate bylaws for Water, Sewer, Drainage and Solid Waste & Recycling. The utility rates must be established by December 31, 2007 to enable billing in 2008.

Analysis

Key factors contributing to the utility budget increases in 2008 include:

- GVRD regional water rates have increased 4% or \$641,000 in 2008.
- GVRD regional sewer rates have increased 3.8%, or approximately \$500,000.
- In total, regional rate increases represent over one-third of the total increase.
- Increased contributions to capital infrastructure replacement programs in water, sewer and drainage, in accordance with approved replacement plans, represent approximately 50% of the proposed increases.

Long-term infrastructure planning to replace ageing/deteriorating infrastructure will continue to drive budget and rate increases until such time as a sustainable replacement fund is reached. Council has adopted a staged program to increase water and sewer reserves to support infrastructure replacement. The 2008 budget figures presented represent options for increases in the water and sewer reserves for infrastructure replacement.

Recognizing these competing challenges, staff have presented various budget and rate options for 2008, including discretionary and non-discretionary increases.

The 2008 rates outlined represent approximately one-half of the 2007 increase, or 5% in 2008 compared to 11.4% in 2007 (based on a single-family dwelling).

The various options are presented for each of the utility areas in the following sections.

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Water

	2008 W	ater Budget - Optio	ons	
		Option 1	Option 2	Option 3
Key Budget Areas	2007 Base Level	Non-Discretionary	Non-Discretionary	Non-Discretionary
-	Budget	Increases	Plus Discretionary	Plus Discretionary
			Increases with Partial	Increases with Full
			Reserve Increase	Reserve Increase
Operating Expenditures	\$6,000,700			
Equipment/Fuel		\$65,800	\$65,800	\$65,800
Material/Supply		\$60,300	\$60,300	\$60,300
Wages/Salaries		\$186,400	\$186,400	\$186,400
Salary Adjustment		\$35,000	\$35,000	\$35,000
Power		\$1,000	\$1,000	\$1,000
Program Costs		\$80,000	\$80,000	\$80,000
Plant Increase	1		\$181,900	\$181,900
Efficiencies		(\$361,200)	(\$361,200)	(\$361,200)
Open House		•	\$50,000	\$50,000
Rate Stabilization Contribution	\$0	\$0	\$0	<u>\$0</u>
GVRD Water Purchases	511700,000	\$641,000	C(A1.000	C(41,000
GVRD Water Purchases	\$14,600,000	\$641,000	\$641,000	\$641,000
Capital Program	\$5,500,000	\$361,200	\$455,600	\$550,000
		.		
Firm Price/Receivable		\$2,202,000	\$2,202,000	\$2,202,000
Residential Water Metering Program/Appropriated Surplus	\$3,000,000	(000,000,12)	(\$1,000,000)	(\$1,000,000)
Overhead Allocation	C907 500	\$68,100	\$68,100	\$68,100
Overnead Attocation	\$897,500	\$08,100	\$08,100	308,100
Other Fiscal	\$1,000,000	\$0	\$0	S0
70 - 1 A 0 0 - N	000 000 000			
Total 2007 Base Level Budget	\$30,998,200	02.220.700	C2 (/5 B00	63.570.300
Total Incremental Increase Revenues:		\$2,339,600	S2,665,900	\$2,760,300
Apply Rate Levelling Fund	(\$1,244,800)	\$494,800	\$494,800	\$494,800
Investment Income	(\$650,000)	SO	\$454,600 \$0	\$0
Firm Price/Receivable Income	15550,000)	(\$2,202,000)	(S2,202,000)	(\$2,202,000)
Operating Provision	(\$1,000,000)	\$1,000,000	\$1,000,000	\$1,000,000
Meter Income	(==,===,===,	(\$844,300)	(\$844,300)	(\$844,300)
Net Budget	\$28,103,400	,	,	(
N. D.00				
Net Difference over 2007 Base Level Budget		\$788,100	\$1,114,400	\$1,208,800

The reductions in operating expenditures reflect a review of operational service levels endorsed by Council on March 26, 2007. As per Council direction, these funds have been reallocated to the capital program.

Option 2 reflects a partial increase to the capital program, where Option 3 reflects the full increase as per the long-term infrastructure replacement plan. Other variances include an increase in overhead allocation due to a transfer of Public Works salaried positions to labour accounts, as well as an increase in event costs to correspond more closely with actual expenditures.

The budget presented above for all options reflects no monies being collected for rate stabilization in 2008. The rate levelling fund is proposed to be reduced for 2008 to \$750,000. This contribution offsets the increase in regional water purchases. The rate stabilization fund continues to represent an insightful foresight in mitigating the impacts of the continued increase in regional water purchase costs.

Regional Issues

Regional District increases are for the drinking water treatment program. Continued increases over the next five years are anticipated due to the debt service and operating costs associated with the Seymour-Capilano filtration plant, which will be completed in 2008. In addition, there is upward pressure on regional water rates due to the decline in predicted water consumption, costs associated with asset management planning and maintenance, as well as costs related to the purchase of water due to an increased frequency of turbidity events.

Impact on Water Rates

The impact of these various budget options on the water rates by customer class is as follows. The amount of the increase for each option is shown bracketed beneath the rate in italics.

	2008	Water Rates Options	T	
Customer Class	2007 Rates	2008 Option 1 Rate	2008 Option 2 Rate	2008 Option 3 Rate
Single Family Dwelling	\$426.36	\$444.69 (\$18.33)	\$449.81 (\$23.45)	\$451.52 (\$25.16)
Townhouse	\$349.03	\$364.04 (\$15.01)	\$368.23 (\$19.20)	\$369.62 (\$20.59)
Apartment	\$224.91	\$234.58 (\$9.67)	\$237.28 (\$12.37)	\$238.18 (\$13.27)
Metered Rate (S/m³)	\$0.7531	\$0.7855 (\$0.0324)	\$0.7945 (\$0.0414)	\$0.7975 (\$0.0444)

As in prior years, the metered water rates have been calculated to provide additional incentive to encourage flat rate customers to transition to water meters.

Advantages/Disadvantages of Various Options

Option 1

- Represents the minimal increase necessary to sustain operations, with no allowance for plant growth.
- Only partially funds the capital program, which is below that identified in the long-term infrastructure plan.

Option 2

- This option has a lesser impact on the budget and rates than Option 3, but allows for plant growth to be maintained.
- Provides for a partial increase in the capital program.

Option 3

- Has a higher impact on the budget and rates charged to owners.
- Recommended option because it meets all objectives for the phased increases in the capital program contribution, as outlined in the long-term infrastructure plan.

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Sewer

	2008 Sew	er Budget - Options		
		Option 1	Option 2	Option 3
Key Budget Areas	2007 Base Level Budget	Non-Discretionary Increases	Non-Discretionary Plus Discretionary Increases with Partial Reserve Increase	Non-Discretionary Plus Discretionary Increases with Reserve Increase a per Long-Term Pla
On anating Europe ditunes	62 440 000		····	
Operating Expenditures	\$3,449,000	£44.000	546 000	\$46,90
Equipment/Fuel		\$46,900 \$24,400	\$46,900 \$24,400	\$24,40
Material/Supply		\$97,500	\$97,500	\$97,50
• Wage		(\$35,000)		(\$35,000
Salary Adjustment			(\$35,000)	
Power Cost		\$6,400	\$6,400	\$6,40
Program Costs		\$80,000	\$80,000	\$80,00
Plant Increase			\$61,600	\$61,60
Grease Bylaw Enforcement			\$33,100	\$33,10
GVSⅅ O&M	\$9,470,200	\$208,500	\$208,500	\$208,50
GVSⅅ DD Debt	\$3,480,800	\$472,500	\$472,500	\$472,50
GVSⅅ Sewer DCC's	\$4,000,000	\$0	\$0	
GVSⅅ BOD/TSS Charges	852,000	(\$162,000)	(\$162,000)	(\$162,000
GVSⅅ Trunk Main Cleaning	\$0	\$0	\$500,000	\$500,00
Rate Stabilization Contribution	\$1,516,800	\$0	\$0	S
Capital Program	\$3,006,400	\$0	\$250,000	\$500,00
Firm Price/Receivable		\$1,080,000	\$1,080,000	\$1,080,00
Appropriated Surplus	. \$1,000,000	(\$1,000,000)	(\$1,000,000)	(\$1,000,000
Overhead Allocation	\$571,100	\$0	\$0	S
Other Fiscal/	\$57,000	\$90,800	\$90,800	\$90,80
Total 2007 Base Level Budget	\$27,403,300			
Total Incremental Increase	- :,:,	\$910,000	\$1,754,700	\$2,004,70
Revenues:			. , ,	- , , ,
Debt Funding	(\$57,000)	\$24,400	\$24,400	\$24,40
Investment Income	(\$150,000)	\$0	SO	S
Firm Price/Receivable Income		(\$1,080,000)	(\$1,080,000)	(\$1,080,000
Property Tax Levy for DD Debt	(\$3,480,800)	(\$472,500)	(\$472,500)	(\$472,500
GVSⅅ Sewer DCC Levy to Developers	(\$4.000.000)	50	\$0	S
Direct Levy for BOD/ TSS	(\$852,000)	\$162,000	\$162,000	\$162,00
Transfer - Operating Provision	(\$1,000,000)	\$1,000,000	\$500,000	\$500,00
Net Budget	17,863,500			
Net Difference Over 2007 Base Level Budget		\$543,900	\$888,600	\$1,138,600

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Since 2007, the BOD/TSS and GVS&DD DCC sewer levy charges shown are charged directly to developers (in the case of DCC's) and to commercial sewer waste generators (in the case of BOD/TSS) to reduce the impact to the utility rates and property taxes. These charges are identified separately with corresponding offsetting revenues, therefore, these charges do not impact the utility rates and the BOD/TSS charges are not collected through property taxes.

Regional Issues

Ongoing initiatives by Metro Vancouver that impact our rates include upgrades to the Lulu Island Sewage Treatment plant to accommodate growth. As well, Metro Vancouver staff are currently reviewing new technologies that would compress and separate waste so that it could be used as fuel to operate the plant and offset some of the energy costs. Although this technology is initially expensive to purchase it will eventually result in lower operating costs that should benefit us in the future. Another program that has a direct affect on our budget is the acceleration of Metro Vancouver's cleaning program for the Gilbert Road forcemain to address capacity concerns caused by grease build-up.

Impact on Sewer Rates

The impact of these various budget options on the sewer rates by customer class is provided in the table which follows. The amount of the increase for each option is shown bracketed beneath the rate in italics.

	2008	Sewer Rates Options		
Customer Class	2007 Rates	2008 Option 1 Rate	2008 Option 2 Rate	2008 Option 3 Rate
Single Family Dwelling	\$263.61	\$264.14	\$269.15	\$272.84
		(\$0.53)	(\$5.54)	(S9.23)
Townhouse	\$241.20	\$241.68	\$246.27	\$249.64
		(\$0.48)	(\$5.07)	(\$8.44)
Apartment	\$200.88	\$201,28	\$205.10	\$207.91
•		(\$0.40)	(\$4.22)	<i>(\$7.03)</i>
Metered Rate (\$/m ⁵)	\$0.5979	\$0.5991	\$0.6105	\$0.6188
, ,		(\$0.0012)	(\$0.0126)	(\$0.0209)

Advantages/Disadvantages of Various Options

Option 1

- Represents the minimal increase necessary to sustain operations and results in the least impact to property owners.
- Does not meet City's long-term infrastructure plan to increase the capital program for replacement of ageing infrastructure. Capital replacement remains fixed at \$3 million for 2008. The objective is to build the annual infrastructure replacement for sewer to \$4.3 million.

Option 2

- Higher impact on the budget and rates charged to property owners.
- Includes funding for a part-time Bylaw Enforcement staff member to enforce newly proposed grease
 prohibitions (discussed later in this report) and as per a March 26, 2007 report to Council which
 highlighted the need for increased enforcement on grease discharge.
- Includes \$500,000 funding to Metro Vancouver to accelerate and complete the Gilbert Road Trunk Sewer Main inspection and cleaning program. This is the first year of a 4 year program (2008 – 2011) for a total cost of \$2 million. The funding requirement for 2008 has been offset by an increased contribution from the operating provision account.

• Provides for a partial increase in the capital infrastructure program, from \$3 to \$3.25 million. This option partially meets the City's objective for increasing the degree of replacement of aging sewer infrastructure.

Option 3

- Highest impact on the budget and rates charged to owners.
- Recommended option because it meets all objectives as noted in Option 2, and fully conforms with the planned, phased increases in the long-term replacement program objective for aging infrastructure, increasing the capital program from \$3 to \$3.5 million.

Sewer Amending Bylaws

In addition to the rate amendments, changes to the Drainage, Dyke and Sanitary Sewer System Bylaw 7551 are recommended as per the direction provided to staff at the March 26, 2007 Council meeting for regulating oil/grease discharge – new provisions are proposed to prohibit discharge to the sanitary and/or drainage system, with fines of up to \$10,000 for each offense and cost recovery to the City for investigation, prosecution and damages sustained up to \$25,000.

A review of sewer connection charges for residential and commercial properties is currently underway. These user fee-based charges have not been updated for over 10 years and are substantially outdated, resulting in under-recovery of costs. A consultant has been retained to undertake this review. When completed, proposed changes will be brought forward to Council.

Drainage and Dyking

	2008 Drain	age and Dyking Opt	ions	
Utility Area	2007 Rates	2008 Option 1 Rate ¹	2008 Option 2 Rate ¹	2008 Option 3 Rate ¹
Drainage	\$55.75	\$66.90	\$66.90	\$66.90
Dyking	\$11.11	\$11.11	\$11.11	\$11.11
Total Drainage & Dyking	\$66.86	\$78.01	\$78.01	\$78.01
(Increase Over 2007)		(\$11.15)	(\$11.15)	(\$11.15)

¹There is no variation in the rates proposed for Drainage and Dyking. The options are presented for consistency with presentation of the other utility areas.

Background

Drainage - In 2003, a drainage utility was created to begin developing a reserve fund for drainage infrastructure replacement costs. The objective is to build the fund to an anticipated annual expenditure of \$4.85 million, subject to ongoing review of the drainage infrastructure replacement requirements.

As adopted by Council in 2003, the rate started at \$11.15 and is increased an additional \$11.15 each year until such time as the \$4.85 million annual reserve requirement is reached -- expected to take approximately 8 years. The rate in 2007 was \$55.75. The options presented above represent the full increase of \$11.15 as per prior Council approvals.

Dyking – An annual budget amount of \$600,000 was established in 2006 to undertake structural upgrades at key locations along the dyke, which equated to an \$11.11 charge. Continued annual funding is required to facilitate continued studies and upgrades as identified through further seismic assessments of the dykes. No increase in the \$11.11 rate is proposed for 2007. This will result in revenues of approximately \$650,000 in 2008, based on residential unit growth projections.

Solid Waste & Recycling

·	TOO BOIR IT USE	& Recycling Budge		0.453
		Option 1	Option 2	Option 3
Key Budget Areas	2007 Base Level	Non-Discretionary	Non-Discretionary	Non-Discretionary
	Budget	Increases	Plus Discretionary Increases	Plus Discretionary Increases
0 1 5 1	6.152.400		increases	mereases
Operating Expenditures	\$452,600	602.000	\$07,000	\$97,000
Wage Increase		\$97,000	\$97,000	
 Equipment/Fuel Increase 		\$21,000	\$21,000	\$21,000
Operating Cost Increase		\$12,500	\$12,500	\$12,500
Collection Contracts	\$3,130,800	(\$121,400)	(\$121,400)	(\$121,400)
Contracts – Security	\$10,000	\$0	\$0	\$0
Disposal Costs	\$2,099,300	\$120,000	\$120,000	\$120,000
Program Costs	\$1,141,600			
Equipment/Fuel Increase		\$6,000	\$6,000	\$6,000
Adjustment		(\$28,200)	(\$28,200)	(\$28,200)
Wage Increase		\$54,200	\$54,200	\$54,200
Efficiencies		(\$19,800)	(\$19,800)	(\$19,800)
Program Costs		\$80,000	\$80,000	\$80,000
Environmental Programs	\$593,400			
Wage Increase		\$5,000	\$49,700	\$96,600
Equipment/Agreements		\$10,200	\$10,200	\$10,200
Rate Stabilization	\$717,800	\$0	(\$21,700)	(\$21,700)
Total	\$8,145,500			
Net Difference Over 2007 Base Level Budget		\$236,500	\$259,500	S306,400

The cost variations identified for 'Collection Contracts' and 'Disposal Costs' reflect new pricing received in the new garbage/recycling collection contract, which commences in January, 2008. Other variations reflect negotiated salary increases and budget transfers from other cost centers.

Option 2 includes a request for part-time resource assistance within Environmental programs to offset the additional workload created by large/special projects (RAV line, Oval, etc.).

Option 3 includes the above and a request for an additional regular full-time Environmental Specialist position dedicated to pollution and contaminated issues soil management. At the present time, we attempt to have Bylaws staff more involved in seeking resolution on complaint-based pollution matters. Unfortunately, this results in staff concerns around safety due to a lack of technical expertise. This is also reactive as opposed to focused on more preventative approaches. In addition, greater technical expertise is needed in contaminated sites management due to a shift in provincial direction which places liability onto the City to administer provincial conditions for development approvals. Greater oversight and processes are needed as well in relation to land transactions, whereby the City undertakes property acquisitions. At the present time, processes are lacking for ensuring that property the City acquires is suitable for its intended use.

Staff also recommend that the per cubic yard rate for yard and garden trimmings disposal at the Recycling Depot be increased from \$15.00 to \$20.00. This is recommended to deter use of the facility by commercial operators, which has increased in the last two years. Commercial operators can deposit yard and garden trimmings at Ecowaste Landfill for \$13.50 per cubic yard. The current cost variance is not sufficient to discourage use of the Recycling Depot by commercial operators in favour of Ecowaste.

Impact on Rates

The impact of these various budget options is provided in the table which follows. The amount of the increase for each option is shown bracketed beneath the rate in italics.

	2008 Solid Waste	e & Recycling Rates	Options	
Customer Class	2007 Rates	2008 Option 1 Rate	2008 Option 2 Rate	2008 Option 3 Rate
Single Family Dwelling	\$209.89	\$211.76	\$211.76	\$212.50
		(\$1.87 <u>)</u>	(\$1.87)	(\$2.61)
Townhouse	\$168.61	170.22	\$170.22	\$170.96
		(\$1.61)	(\$1.61)	(\$2.35)
Apartment	\$45.39	\$46.70	\$47.42	\$48.17
•		(\$1.31)	(S2.03)	(\$2.78)
Business Metered Rate (\$/m³)	\$24.25	\$23.65	\$24.37	\$25.13
,		(-\$0.60)	(\$0.12)	(\$0.88)

YVR and City Agreement

As part of the approval process for the 2007 utility expenditure budgets and rates, Council also approved execution of an agreement dated July 4, 2006 with the Vancouver International Airport Authority. This agreement outlined fiscal and maintenance responsibilities between the Vancouver Airport Authority (YVR) and the City for three sections of watermain on Sea Island where the new Canada Line tracks cross the City's watermains. This agreement was never executed as Richmond legal counsel required further review of the document. A slight change to the agreement has been made to eliminate language which committed Council to undertake future bylaw amendments. This change is primarily administrative in nature, therefore, a new agreement is presented for proposed execution by Council. A copy is included as Attachment 1. Staff suggest that when the rates are presented to Council, a recommendation to endorse this updated agreement be included.

Water and Sewer Amending Bylaws

It is proposed to include language in the water and sewer rates amendment bylaws which will provide the provision for development permit applicants of small residential subdivisions or building permit applicants for a single residential lot to engage City services for service connection designs on a cost-recovery basis. This is proposed to address increasing concerns where backups have occurred, infrastructure mainlines have been hit during construction, and service connection installations have been installed at unsuitable elevations. Processes have been put in place with the Development Applications Department to ensure clear communications are in place regarding the requirement for professional design service connections which conform to City standards. The proposed bylaw change will make access to professional engineering design services from the City available to these applicants. Applicants would continue to have the option to engage private professional engineering services, should they choose.

Total 2008 Utility Rate Options

The total 2008 utility billing, including the four major utility areas, is detailed in the following table, which shows the total utility rate options by customer class for 2008. A comparison to 2007 rates is also provided. The increases over 2007 rates for each option are shown in bracketed italics beneath the rate amount.

2	008 Total Annu	al Utility – Rate (Options	
	-	Total	Total	Total
		Option 1 Rate	Option 2 Rate	Option 3 Rate
Customer Class	2007 Rates	Non-	Non-Discretionary	Non-Discretionary
		Discretionary	Plus Discretionary	Plus Discretionary
		Increases	Increases with	Increases with
			Partial Reserve	Reserve Increase Per
			Increase	Long-Term Plan
Single-Family Dwelling	\$966.72	\$998.60	\$1,008.73	\$1,014.87
, ,		(\$31.88)	(\$42.01)	(\$48.15)
Townhouse	\$825.70	\$853.95	\$862.73	\$868.23
(on City garbage service)		(\$28.25)	(\$37.03)	(\$42.53)
Townhouse	\$724.93	\$751.41	\$760.91	\$766.43
(not on City garbage service)		(S26.48)	(\$35.98)	(\$41.50)
Apartment	\$538.04	\$560.57	\$567.81	\$572.27
•		(\$22.53)	(S29.77)	(S34.23)
Metered Water (\$/m³)	\$0.7531	\$0.7855	\$0.7945	\$0.7975
•		(\$0.0324)	(\$0.0414)_	(\$0.0444)
Metered Sewer (\$/m³)	\$0.5979	\$0.5991	\$0.6105	\$0.6188
,		(\$0.0012)	(S0.0126)	(\$0.0209)
Business: Garbage	\$24.25	\$23.65	\$24.37	\$25.13
		(-\$0.60)	(\$0.12)	(\$0.88)
Business: Drainage & Dyking	\$66.86	\$78.01	\$78.01	\$78.01
2 . 0		(S11.15 <u>)</u>	(\$11.15)	(\$11.15)

The Option 3 rate is recommended to ensure best management practices concerning infrastructure maintenance are maintained and that the adopted strategy for long-term infrastructure replacement is continued.

Financial Impact

The budgetary and rate impacts associated with each option are outlined in detail in this report. In all options, the budgets and rates represent full cost recovery for each respective area. The Option 3 rates maintain the existing practices of reserve funding for capital replacement programs.

Conclusion

The utility rate strategy represents a comprehensive approach to addressing current increases in regional charges for water purchases, water filtration and sewer treatment. Regional increases continue to represent a considerable portion of these increases in utility rates. This trend will continue for the foresceable future as the challenges associated with addressing growth and new demands for water treatment are managed. The rates outlined also represent continued funding toward sound management and replacement of the City's infrastructure.

Suzanne Bycraft

Manager, Environmental Programs

(3338)

Tom Stewart, AScT.

Manager, Sewerage & Drainage

(3301)

Steve McClurg

Manager, Water Services

(1209)

Ivy Wong,

Manager - Revenue

(4046)

Attachment 1 - Vancouver International Airport Letter on the 3 Watermains



September 28, 2007.

Steve McClurg Manager, Water Services City of Richmond 5599 Lynas Lane Richmond, BC V7C 5B2

Dear Steve,

Re: Canada Line Tracks Crossing of Water Mains on Sea Island

Further to our meeting of April 27, 2006 and our subsequent email of May 4, 2006, the following will summarize the Agreement reached between the City of Richmond (COR) and Vancouver International Airport Authority (Authority) regarding the issues related to the crossing of the Canada Line tracks over the watermains on Sea Island. Portions of the following 3 watermains situated under the Canada Line tracks are at issue: 42 inch watermain, 24 inch watermain and 30 inch watermain.

42 inch watermain

- The Authority will direct the Canada Line contractor, RSL, to install a parallel concrete sleeve pipe (60 inch or larger) adjacent to the existing 42 inch watermain for the purposes of future replacement when required.
- COR will not be obligated to pay for the cost of the installation of the above referenced concrete sleeve pipe. The cost of installation including water tieins will be the sole responsibility of the Authority. The water tie-ins must be performed by COR staff.
- 3. The Authority will be responsible for 100% of maintenance costs for the subject section of the 42 inch watermain (or the 60 inch or larger concrete sleeve pipe, as the case may be) for a period of 5 years from completion of construction of the Canada Line. Following this 5 year period, the Authority

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Attachment 1 - Vancouver International Airport Letter on the 3 Watermains (cont'd)

and COR will share, on a 50/50 basis, any future maintenance costs for this section of the 42 inch watermain (or the 60 inch or larger concrete sleeve, as the case may be) as per Bylaw No. 5637, as amended by Bylaw No. 8153 relating to Schedule G, Rates for Vancouver International Airport Authority.

24 inch watermain

- 4. The Authority will direct RSL to replace the 24 inch watermain (lying perpendicular to the Canada Line tracks) with HDPE pipe. The HDPE pipe will be situated under the Canada Line tracks and extend 10 metres on each side of the Canada Line tracks.
- 5. The cost of installation including watermain tie-ins will be the responsibility of the Authority. The water tie-ins must be performed by COR staff.
- 6. The Authority will be responsible for 100% of the maintenance costs for the 24 inch watermain.

30 inch watermain

- 7. The Authority will direct RSL to install a parallel concrete sleeve (42 inch or larger) adjacent to the section of the 30 inch watermain situated under the Canada Line tracks for the purposes of future replacement when required.
- The cost of any future installation including watermain tie-ins will be the responsibility of the Authority. The water tie-ins must be performed by COR staff.
- 9. The Authority will be responsible for 100% of the maintenance costs for the 30 inch watermain and 42 inch or larger concrete sleeve and any new watermain installations, as the case may be.
- 10. Light fill will be used over the section of the Canada Line tracks crossing over the subject watermains that are not replaced with HDPE pipe.

COR will not be liable for any damages to the Canada Line tracks resulting from water leaks, breaks or water erosion related repairs of the above referenced portions of the subject watermains unless such damage and required repairs are due to the negligence of COR for work performed by COR.

Attachment 1 – Vancouver International Airport Letter on the 3 Watermains (cont'd)

kindly	eve the foregoing reflects our agreement on the watermain issues. Will you y sign in the space below signifying your acceptance on the above and return a to my attention.
Thanl	k you for your cooperation regarding this issue.
Since	rely,
	nic Fiore tor, Capital Facilities Development
AGRE	ED AND ACCEPTED BY:
Name	:
Title:	
Date:	
cc:	Carlos Rocha – Design Technologist – Major Projects Vern Shaver – RSL Thor Fairburn – SNC Lavalin John Lenahan – YVR (ENG) Sergio Custodio – YVR (LCS)