CITY OF VANCOUVER

COMMUNITY SERVICES GROUP
Planning
Current Planning

MEMORANDUM

April 5, 2012

TO: Mayor and Council

FROM: Y. McNeill, Rezoning Planner, Current Planning

COPY TO: Penny Ballem, City Manager
Sadhu Johnston, Deputy City Manager
David McLellan, Deputy City Manager
Janice Mackenzie, Acting City Clerk
Michael Flanigan, Director of Real Estate Services
Jim De Hoop, Managing Director of Social Development

SUBJECT: **CD-1 Rezoning - 228-246 East Broadway and 180 Kingsway - staff responses to economic questions**

This memorandum brings forward staff responses to questions, asked by Council during the hearing proceedings, concerning economic matters about the above rezoning. Planning has compiled the responses with input from Real Estate Services and Social Infrastructure - Housing Policy.

1. *Confirm the percentage of land lift which created the Community Amenity contribution (CAC) and confirm the proposed CAC allocation.*

   - The offered CAC of $6,250,000 represents approximately 79% of the land lift captured in the rezoning. The proposed allocation of the CAC is $4,500,000 to Arts/Culture and $1,750,000 to affordable housing.

2. *Comment on the impact of reducing the parking to reduce project costs, to reduce density and height.*

   - The recent experience through the City's STIR (Short Term Incentives for rental) Program illustrate that parking reductions certainly help lower overall project costs and will facilitate an increase in inventory of lower priced units (with no parking). Lower parking requirements however would only marginally translate into savings that could manifest in a lower density form and tower height.

   - Any reduction in parking may reduce the level of excavation and shoring costs, but any savings (±$40,000 per unit) would likely be passed along to consumers in support of a successful sales program (the developer's profit margin essentially remains the same) and by lower rents.

- There is a fine balance in reducing parking and selling condos. Many owners and investors will still want parking included in their investment to ensure their exit strategy is maximized and they remain competitive with product on the market for resale (that included parking). Most developers will agree to optimize parking relaxations, but only to a certain extent.

- With regard to rental housing, we have seen with STIR that lower construction costs with reduced parking do contribute to lower rents. Parking is often priced separately in a lease and its cost is directly reflected in the rent. The more units a building can offer without parking, the more affordable those units are.

3. *Do we have data on whether increasing the density in an area improves the impacts affordability of the area? Provide info from recent rezonings, or STIR projects - Did increasing the density lead to an increased level of affordability in these areas? Compare average selling prices (or rental rates) before and after?*

   - The answer to this question on density and affordability can be framed in three ways: 1) at the building or per-unit cost level, 2) at the neighbourhood level in terms of impact, and 3) at the community-wide level in terms of supply/demand.

     1 In terms of the building or per-unit costs, the City does have available data from specialized consultant studies that measure the affect of added density on the cost of producing new housing supply. In those studies, it is concluded that for example:

       a. A 25% increase in density can reduce the per-unit cost of a wood-frame multi-residential unit by $15,000.
       b. A 58% increase in density can reduce the cost by $24,000 per unit on wood-frame construction and $35,000 on concrete multi-residential units.

     2) We are not aware of any research indicating that the development of high-density housing has any impact one way or the other on affordability in the surrounding area. One could, theoretically, look at either assessed value or sales data before and after a new high-density development went into an area to see if there were changes. However, the problem with this approach is that it is extremely difficult to isolate the cause of increases and decreases in value or price, as the broader economy (i.e. employment, immigration, mortgage rates) has a much greater impact on house prices than whether or not a new development occurs in a neighbourhood.

     3) However there is a broader community-wide issue that can impact affordability. For example, the City's share of Metro Vancouver's growth to 2041 is in the range of 50,000 to 75,000 new households (at least 113,000 new residents) – the impact of retaining low densities in areas that are otherwise planned for new growth, would have a detrimental impact on affordability by constraining new supply.

   - The rezoning and development of one site cannot impact affordability in an area. The supply of existing housing stock and the supply of new units through recent development (of which there are many in Mount Pleasant) all contribute to the state of housing affordability in the area. It is noteworthy that the average price per sq. ft.

for housing in Mount Pleasant is around $600, regardless of housing type (detached house, townhouse or apartment). Increasing the supply of smaller units, such as apartments, inherently increases affordability.

- Although density alone does not create affordability, the City cannot improve affordability without new supply. Both market and non-market housing types need opportunities to increase supply with increased density.

4. *Is there any data on the relationship between building height and affordability (i.e. affordable rental units), or on the relationship between building height and economic viability?*

   - The best industry data and analysis, that staff have, was commissioned by Metro Vancouver in two reports authored by Dale McClanaghan:

     1) "Strategies for Increasing the Supply of Rental Housing" (6 pages), and

     2) "Financial and Development Incentives for Encouraging New Rental Housing Construction" (46 pages).

     These reports are attached for Council's reference. The topic is very complex, and the conclusions summarized in the reports provide much clarity not only on the relationship between density, affordability, and development economics, but also on unit mix, type of construction (wood vs. concrete) and ability to finance.

   - As further background data and analysis, also attached is the Coriolis Study:

     3) "Purpose-Built Rental Housing - Economics of New Supply" (134 pages).

     This report was commissioned by Social Infrastructure - Housing Policy. It addresses head on the "Economic Viability Gap" in achieving increased supply of purpose-built rental housing.

Yardley McNeill
Rezoning Planner
Current Planning

5.1 ATTACHMENT 1

Strategies for Increasing the Supply of Rental Housing

October 2009

Rental housing represents an important part of the housing continuum and plays a central role in responding to the housing needs of households with low to moderate incomes.

Metro Vancouver continues to face a chronic shortfall in the number of new rental housing units created each year. The on-going shortage in new rental housing supply means fewer choices for renter households and on-going affordability pressure.

The Need for a Rental Housing Supply Strategy

Access to decent and affordable housing is central to the economic and social well-being of individuals and families across Canada. For many families and individuals with low to moderate incomes, the choices are becoming increasingly more constrained. Over the past ten years, purpose-built rental housing starts across Metro Vancouver have accounted for between 3% and 5% of total housing starts. At the same time, renter households account for approximately 35% of all households across the region. This strategy sets out a range of potential actions to encourage increased investment in new rental housing production including different strategies and initiatives which can be adopted at the federal, provincial, regional and municipal level.

Understanding the Pressures

In recent years, there have been a limited number of new purpose-built rental housing units constructed across Metro Vancouver. This has created pressure for some municipalities as they work to find ways to meet the needs of families and individuals in their communities. The low level of new rental housing construction has also meant increased competition for available units and upward pressure on rents.

Having a sound rental housing system has important implications for housing affordability over the longer term. Nationally, there are more than 900,000 renter households in core housing need. These are households that are unable to find housing in their community at a rent level that they can afford without spending 30% or more of their income on their housing costs. Across Metro Vancouver, there are 79,360 renter households in core housing need, including 31,290 spending at least 50% of their income on their housing costs. These are households which face extreme affordability challenges and which are at increased risk of homelessness.

In preparing the Regional Affordable Housing Strategy which was adopted by the Metro Vancouver Board in November, 2007, the Metro Vancouver Housing Committee grew increasingly concerned about the low levels of new rental housing construction both in terms of the economic and social impact on the region. In particular, the Metro Vancouver region faces the following challenges:

- **High housing costs for both ownership and rental housing**: Housing costs for both ownership and rental housing across Metro Vancouver are among some of the highest in Canada. The most recent CMHC rental market data reported average rents of $1,159 per month for a 2-bedroom apartment. To carry this rent a household needs an annual income more than $46,000. This is equal to 130% of the median income for renter households across the region. The ownership market has also moved out of the reach of many renter households with only 13% of renter households having an annual income of $80,000 or more.

- **High levels of housing need:** The Metro Vancouver region also has a high level of housing need. Based on the most recent Census data, approximately 27% of all renter households are in core housing need. These are households that are unable to find housing in their community at a price that they can afford with the resources they have available. The most recent data (October 1, 2009) published by BC Housing also show that there are more than 7,700 households region-wide who are on the waiting list for social housing.

- **On-going erosion in the supply of affordable units:** Between 1996 and 2006, the number of units which rent at or below $750 per month decreased by almost 35,000 units. This translates into an annual loss of approximately 3,500 units per year and is the result of on-going price inflation, as well as the demolition and conversion of the older more affordable housing stock. The on-going pressure on rents as well as the inability to create replacement units at this point on the housing continuum has important implications for the region's ability to address housing affordability over the longer term.

- **A limited inventory of affordable rental housing stock:** The Metro Vancouver region also has a limited inventory of affordable rental housing stock with a significant proportion of this housing being produced and operated through the private market. Available data suggests that the existing inventory of social housing accounts for approximately one-fifth of the rental housing stock across the Metro Vancouver region and approximately 40% of the units which rent for $750 per month and which are affordable to households with annual incomes of $30,000 or less. The remaining inventory of affordable units can be found in the existing inventory of private market housing including rented secondary suites as well as the existing inventory of purpose-built rental housing stock with the creation of these units being the result of previous government policies and decisions.

- **Limited levels of new rental housing construction:** The limited levels of new rental housing construction also have important implications for affordability over the longer term. Region-wide there have been approximately 3,200 new purpose-built rental housing starts in the past five years. This translates into an average of 640 starts per year and represents less than 10% of the estimated demand. Furthermore, while alternative sources of supply such as rented single detached homes, rented condo stock and secondary suites have helped to meet some of the demand, these alternatives alone are not enough to fill the gap.

Responding to the Pressures

The low levels of new rental housing production, coupled with the on-going erosion of affordability in the existing purpose-built rental housing stock represents a serious issue for the region -one that has long-term consequences and a direct impact on affordability. In 2008 Metro Vancouver commissioned a study to look at the economics of new rental housing supply to identify ways to encourage increased private investment in new rental housing construction.

The study looked at different possible measures or incentives which could improve the competitiveness of rental housing construction relative to other investments and help to reduce the overall economic viability gap. In general, the study found that the most effective measures tended to be in the form of partnerships across different levels of government and included free land, capital grants or other types of financial incentives.

The study also noted that municipal actions in the form of increased density or reduced parking requirements can also help to bring down the cost of new rental housing construction and improve the overall economic viability for some projects. However, there is general agreement that a sustained response will require changes in the Federal tax treatment of rental housing in order to improve the overall economic viability and attractiveness of new rental housing as an investment. There is also agreement that targeted strategies are needed to respond to the specific needs of low income households.

Setting a Course of Action

It is clear that there are challenges within the current rental housing system. Within the Metro Vancouver context, the market has been dominated by strata condo developments with rental housing developments typically being less able to compete for available land. Similarly changes in the Federal tax treatment of rental housing introduced in the late 1970's and early 1980's created conditions where the financial returns generated from rental housing were less attractive when compared with other investments.

Increasing the supply of purpose-built rental housing including housing that is affordable to households with low to moderate incomes is an important objective for the region. Not only does this housing play an important role in meeting the on-going housing needs across the region but having an adequate supply response is also an important determinant of affordability. Furthermore, while rented condo apartment units, rented secondary suites and rented single detached homes can help to fill some of the gap, alone they are not enough to meet the full demand.

In moving forward, this strategy seeks to identify the types of actions or incentives which could be implemented across all levels of government to increase the supply of rental housing that is available. This includes targeted initiatives such as tax-based measures or incentives which can help to improve the overall economic viability of new rental housing construction in order to encourage increased private investment. This is particularly important in markets such as Metro Vancouver where there is an on-going shortage in the supply of rental housing as well as on-going affordability pressures.

The strategies and actions set out in this section recognize that all levels of government have a role to play in creating the conditions needed to increase the supply of rental housing. To this end, the strategies and actions which have been identified focus on improving the effectiveness of the existing rental housing system including the identification of potential strategies for working together with the private sector as well as non-profit housing sector to optimize the effectiveness of public investments in housing.

Federal Actions

1.1 Provide increased Federal funding to expand the supply of affordable housing including one-time funding to expand the supply of rental housing in municipalities and urban centres experiencing:

i. Significant growth pressure;
ii. On-going tight rental market conditions;
iii. A high proportion of renter households in core housing need; and
iv. A chronic shortfall in the supply of affordable rental housing stock.

1.2 Make changes in Federal taxation policies including the use of tax-based measures or incentives to encourage increased private investment in new rental housing construction.

1.3 Work with the Federation of Canadian Municipalities (FCM) to to develop and implement a national housing strategy.

Provincial Actions

2.1 Continue to provide matching Provincial housing contributions as new Federal housing funding is announced.

2.2 Continue to deliver Provincial rental assistance programs such as SAFER (Shelter Aid for Elderly Renters), RAP (Rental Assistance for Working Families) and homeless rent supplement assistance to help address affordability issues among households living in rental housing in the private market.

2.3 Ensure that the income and rent ceilings used in the Provincial rental assistance programs are up-dated on a regular basis to take into account inflation and to better reflect local market conditions and housing needs.

2.4 Ensure that Provincial shelter allowances provided through income assistance as well as minimum wage rates are up-dated on a regular basis to reflect the cost of living and to better reflect local market conditions.

2.5 Ensure that the new Provincial HST initiative does not adversely impact housing affordability or act as a further barrier to new rental housing construction.

Regional Actions

3.1 Continue to support the implementation of the actions set out in the Regional Affordable Housing including establishing specific housing-related policies in the up-dated Regional Growth Strategy.

3.2 Continue to provide leadership at the regional level including the identification of opportunities to work in a coordinated way with other levels of government.

3.3 Identify opportunities or incentives for increasing the supply of affordable housing including:

i. Engaging in partnerships with other levels of government;

ii. Waiving regional development cost charges; and,

iii. Expanding the supply of affordable housing through intensifying the use of existing MVHC properties.

Municipal Actions

4.1 Continue to build support for affordable housing through the development of local Housing Action Plans and through engaging in partnerships with other levels of government as well as the non-profit and co-op housing sectors.

4.2 Explore incentives for reducing the overall cost of new rental housing construction including providing on-going flexibility in planning and zoning requirements such as:

i. Making use of density bonus provisions; and,

ii. Allowing for a reduction in parking requirements where feasible.

4.3 Explore the use of planning tools or measures which can provide a higher level of certainty or predictability for multi-unit residential developments.

4.4 Adopt strategies to encourage secondary suites, coach houses, laneway housing as well as other actions which can help to add to the overall supply of rental housing.

Moving Forward

Nationally approximately 3 in 10 households are renter households. Therefore, not only does a healthy rental housing sector play an important role in ensuring that the full continuum of housing choices is available to Canadians but rental housing also plays an important role in meeting the needs of households in different economic, social and life cycle stages. A healthy rental housing sector also plays an important role in contributing to local and regional economies as well as Canada's overall economic performance. This is accomplished through providing the housing needed to attract and retain workers to support regional and local economies as well as through direct job creation. Regionally, industry experts estimate that each housing start adds approximately 3 new jobs. Furthermore, at the time of the last Census, it was estimated that employment in construction and related trades accounted for approximately 60,000 jobs across the region. Taking these factors into consideration, it is clear that the social and economic contributions of rental housing are very significant.

In looking at some of the challenges in the current rental housing market, it is clear that there is the need for innovative partnerships at all levels of government as well as partnerships with the private and non-profit sectors. The directions and actions set out in this Strategy focus on possible measures and incentives for encouraging increased investment in new rental housing construction as well as targeted strategies for meeting the needs of households at the low end. In keeping with the general approach adopted by the Metro Vancouver Housing Committee, the proposed strategy focuses on potential opportunities to work together with other levels of government as well as other key partners to address gaps in the existing continuum of housing choices as well as to complement and support the actions of others.

5.1 ATTACHMENT 2

Financial and Development Incentives for Encouraging New Rental Housing Construction

Presented To:

Metro Vancouver
Policy and Planning Department
4330 Kingsway,
Burnaby, BC, V5H 4G8

Contact:

Dale McClanaghan
McClanaghan & Associates
4150 West 14th Ave
Vancouver, B.C. V6R 2X5
Phone: (604) 644-9844
Email: dale_mcclan@telus.net

Introduction

Metro Vancouver's rental housing market faces significant pressure both in terms of supply and affordability. More than 3 in 10 households across Metro Vancouver are renters. A healthy rental housing sector is important to the region's long term sustainability objectives. This study was commissioned by Metro Vancouver to gain a better understanding of the financial and development incentives that could be applied to encourage increased private investment in rental housing construction.

The analysis set out in this report looks at different approaches which can be adopted across different levels of government to encourage increased investment in new rental housing construction. This report also establishes important baseline data for engaging other levels of government as well as industry representatives in exploring potential solutions.

This report is divided into a number of different sections:

Section 1: Provides an overview of the current context and the importance of rental housing to the social and economic development of the region. This section also provides an overview of the current pressures and some of the solutions which have been proposed by industry representatives.

Section 2: Outlines the research approach adopted including a discussion of the methodology and underlying assumptions used in evaluating the different measures identified. In looking at the different alternatives, the analysis focused on the extent to which each of the different measures contributed to a reduction in the overall economic viability gap for new rental housing construction as well as the extent to which each of the measures contributed to an improvement in the overall return on equity invested.

Section 3: Provides an overview of the different financial and development incentives modeled. The measures which were examined included actions which could be taken across all levels of government. Lessons learned from other jurisdictions have also been included in this section including the U.S-based experience under the Low Income Housing Tax Credit and the more recent experience of the Australian government. Fourteen different measures were tested in this section and evaluated in terms of their contribution to reducing the overall economic viability gap for new rental housing as well as their contribution toward an improvement in the return on equity.

Section 4: Provides a summary of the key findings and outlines a number of possible next steps.

The Current Context

The Importance of a Healthy Rental Housing Sector

Rental housing represents an important part of the social infrastructure in communities across Canada. Rental housing provides choice for households that do not have the resources needed to gain access to the ownership market and is an important alternative for households who are limited in the choices that they can make because of low income.

Key groups within society who frequently rely on rental housing include young families just starting out, single person households who are unable to carry the cost of ownership on their own, young adults leaving home for the first time and who are just starting on their housing careers, as well as new immigrant families and other households who are in transition. Seniors living alone as well as seniors living on a fixed income also represent an important segment of the rental housing market. These groups depend on a healthy rental housing system – one which provides both affordability and choice.

Recognizing the important role that access to stable affordable housing plays in supporting vibrant and complete communities and in promoting a high quality of life for the region's residents, the Regional Affordable Housing Strategy was adopted by the Metro Vancouver Board in November 2007. Key goals in the Regional Affordable Housing Strategy include identifying opportunities for increasing the supply and diversity of modest cost housing at key points along the housing continuum as well as strategies targeted specifically to meeting the needs of low income renters.

In moving forward on the implementation of the Regional Affordable Housing Strategy, a central priority for the Metro Vancouver Housing Committee in 2009 is to work with the development and finance sectors as well as other levels of government to identify potential fiscal tools and incentives for encouraging new rental housing construction.

The Economic and Social Benefits of Rental Housing

Rental housing also represents an important community asset for meeting the long-term housing needs of the Region's citizens. Not only does a healthy rental housing system ensure that there is adequate choice for households with low and low to moderate incomes but a healthy rental housing system also plays an important role in ensuring that there is the full range of housing choices available to meet the needs of households in different economic, social and life cycle stages.

Ensuring that appropriate strategies are in place to meet future housing demand including an adequate supply of housing (both rental and ownership) has been recognized as a key element in helping to reduce some of the current housing pressures across the region and in terms of helping to secure affordability over the longer term. In particular, Metro Vancouver is recognized as having some of the highest housing costs in Canada (both ownership and rental). Not only do high housing costs have a negative effect on the region's ability to attract and retain workers needed to support the local economy but high housing costs can also consume a significant percentage of a household's disposable income.

For households falling at the lower end of the housing and income scale, the high cost of housing can pose even greater challenges with an increasing number of households with low and low to moderate incomes being unable to find housing in their community at a price that they can afford without spending a significant proportion of their income on their housing costs. For some households, this can result in increased economic and financial vulnerability including an increased risk of homelessness.

There are also important economic benefits of rental housing both in terms of job creation and in terms of the contribution to the regional, provincial and national economy. Expenditures on new residential construction contribute to Canada's overall economic performance and GDP (gross domestic product). Housing construction is also an important economic and employment generator within the region with industry representatives suggesting that each housing start adds approximately three new jobs to the local and regional economy.

A healthy construction sector also has important direct and indirect benefits for the regional and Provincial economy. At the time of the last Census, employment in construction and related trades was estimated to account for approximately 60,000 jobs region-wide. This represents approximately 5% of the region's workforce. The Census also showed that approximately half of all workers engaged in construction-related employment across BC were living in the Metro Vancouver region.

Rental Housing Starts

Figure 1 shows the total housing starts across Metro Vancouver from 1990 to 2008. As shown in Figure 1, rental housing starts have continued to represent a small percentage of the total number of housing starts. Based on the data available, it is estimated that there have been approximately 10,800 new rental housing starts across the region in the last 10 years representing an average of 1,000 units per year or between 3% and 5% of total housing starts.

While rental housing was once seen as a critical element of the Canadian housing continuum and investment in rental housing was a preferred asset class for individual and institutional investors, the data shows that the current mix of housing production has been dominated by ownership scenarios[1]. Furthermore, it is likely that the rental units which have been constructed in recent years are more likely to be targeted to 'high end' renters with the project economics for rental that is affordable to households with low and low to moderate incomes generally being more problematic to make work.

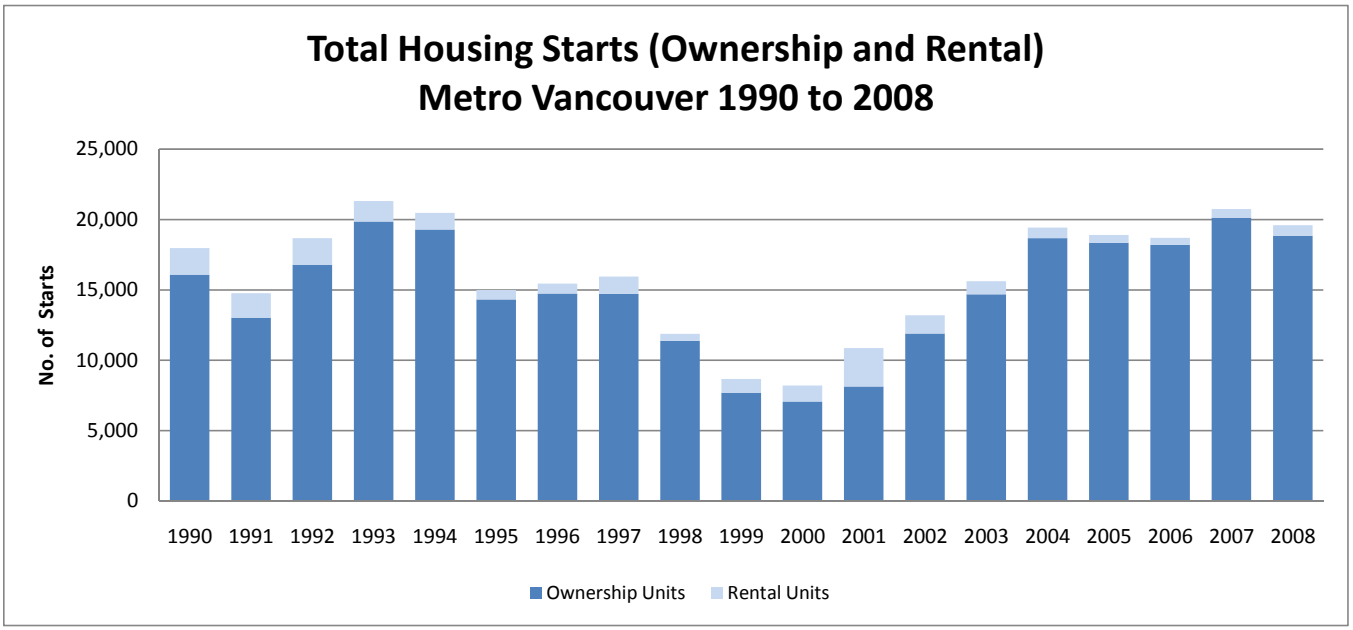

FIGURE 1:
Source: CMHC, Canadian Housing Observer, 2008—up-dated information, CMHC Housing Now, January 2009.

On-going Tight Rental Market Conditions

In a high cost and fast growing housing market such as Metro Vancouver, the rental segment on the housing continuum is under pressure in two ways. First, there continues to be strong demand for rental housing as the Metro Vancouver region continues to grow and attract new households for across the income spectrum. Secondly, there continues to be limited construction of new rental housing. This has created a chronic shortage in rental housing and upward pressure on rents. Figure 2 shows the average vacancy rates in the purpose-built rental housing stock across the region. Similarly, Figure 3 shows average rents for 1 bedroom, 2-bedroom and 3-bedroom units across the region including changes which have take place over time.

[1] Some industry analysts have observed that during the early 1970's (prior to some of the changes in Federal taxation policy) rental housing starts significantly above the levels reported today In the early 1970's nationally rental housing starts averaged 60,000 starts per year. However, by the mid to late 1990's this had dropped to an average of only 7,500 nationally (Lampert, 1999, 2).

As shown in Figure 2, the vacancy rates for the Metro Vancouver region in the purpose-built rental housing stock have continued to fall below 2.5% - the levels considered to be representative of a healthy rental market –one which provides consumers with a reasonable degree of choice and investors with a reasonable return on investment.

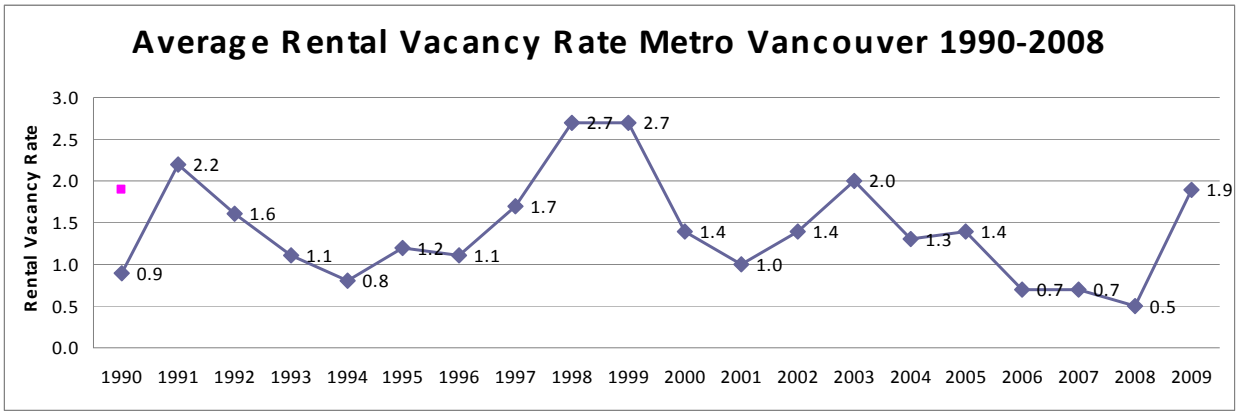

FIGURE 2:
Source: CMHC, Canadian Housing Observer and CMHC Rental Market Report

Figure 3 also shows the impact that the tight rental market conditions have had on average rents across the region. As shown in Figure 3, average rents across the different unit sizes and types have increased by 29% or more in the last 10 years.

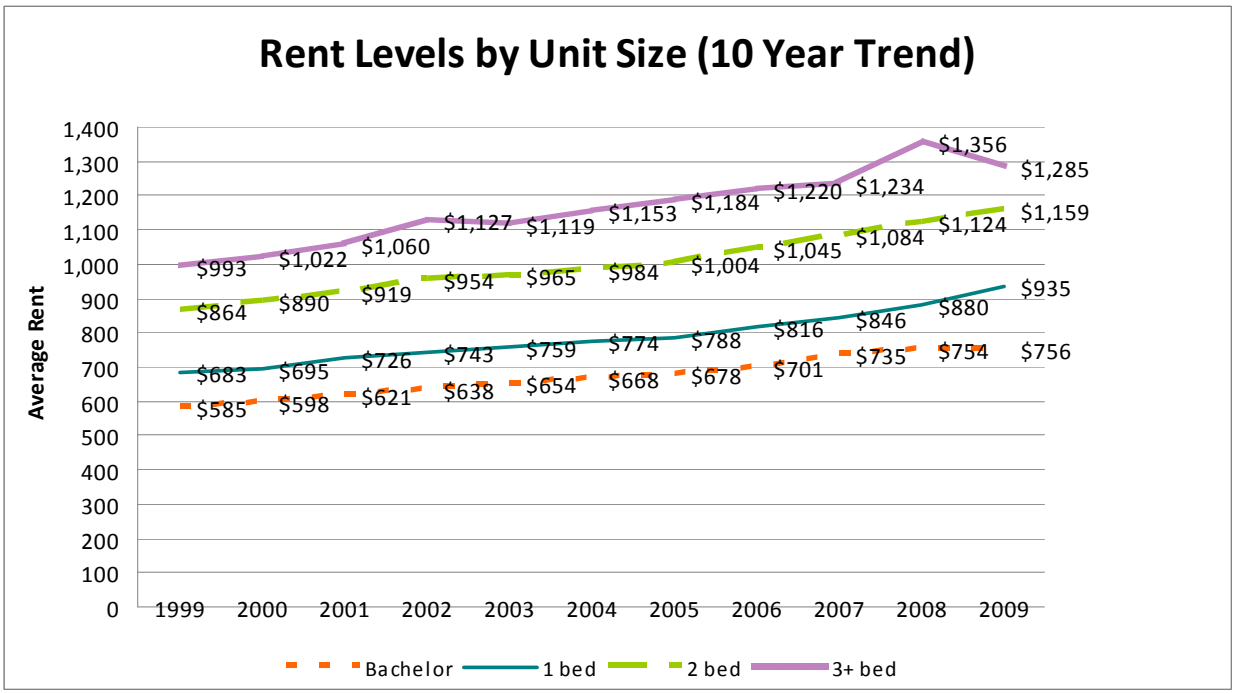

FIGURE 3:
Source: CMHC, Canadian Housing Observer and CMHC Rental Market Report

Low Income Demand

The data in Figure 4 also shows that the market is not necessarily effective at matching demand with supply. As shown in Figure 4, only a small percentage of households with incomes falling at the lower end of the income spectrum have been successful in finding housing that rents at a level that is affordable based on the resources that they have available with the demand for units falling at the lower end of the rent scale exceeding the supply of units available by a factor of more than 2:1.

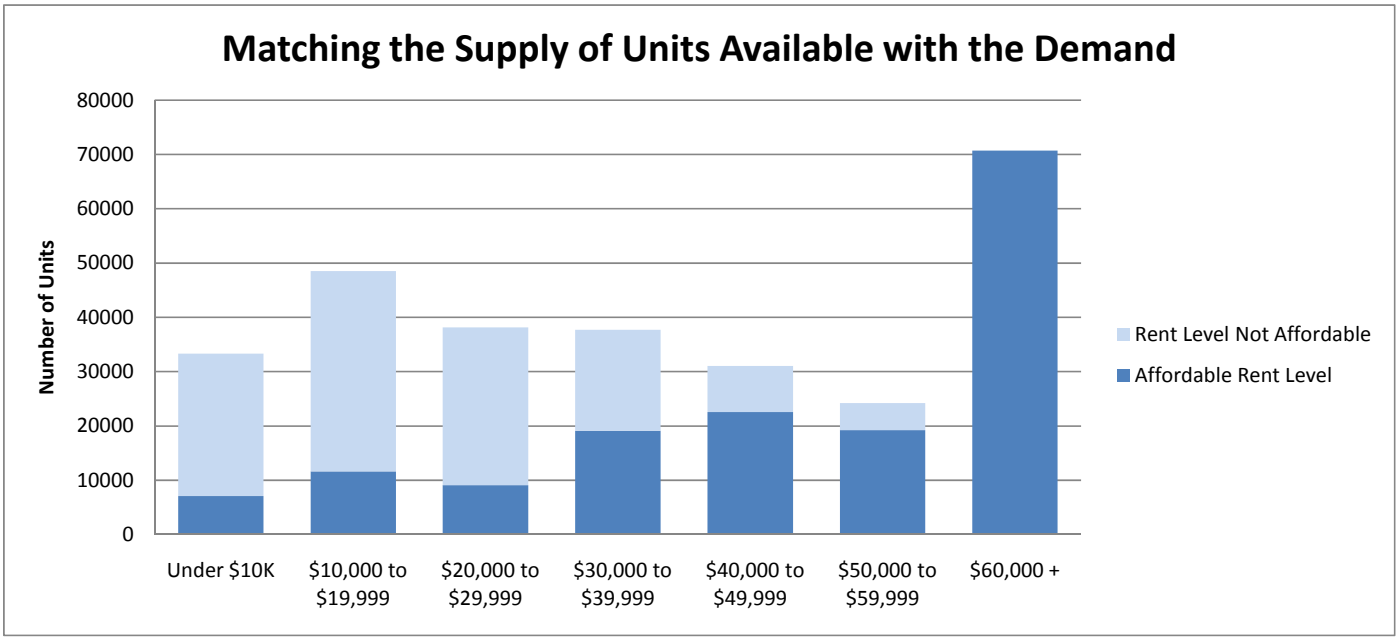

FIGURE 4
Source: Statistics Canada, custom data, 2006 Census.

While it is clear that targeted strategies are needed to address some of the affordability challenges which have been identified, industry representatives will also argue that ensuring that there are strategies in place to increase the supply of rental housing is an important determinant of affordability over the longer term. In addition, most industry representatives will suggest that changes in Federal taxation policies introduced in the late 1970's and early 1980's have had a dampening effect on new rental housing construction and that without changes in the Federal tax treatment of rental housing it is unlikely that there will be significant increases in the supply of new purpose-built rental housing.

Changes in Federal Taxation Policies

The following provides an overview of some of the changes in Federal taxation policies which industry representatives have identified:

- Changes in depreciation rates and CCA provisions for rental housing;
- Changes in taxation rates for rental housing for income tax purposes;
- Elimination of GST for new rental housing construction;
- Access to GST input tax credits for rental operation;
- Changes in the deductibility of soft costs;
- Limitations on the transferability and deductibility of rental losses;
- Deferral of capital gains or capital gains roll-over provisions.

Each of these different measures is discussed in more detail below. In addition, the following section begins to look more closely at the financial impact of the changes which have been identified.

In evaluating the potential impact of each of these different measures, it is important to consider whether the measure will contribute to an improvement in the overall economic viability of new rental housing construction or whether the measure is more likely to contribute to improved returns for existing rental housing operators. For example, some of the measures such as changes in the CCA provisions on their own, without any other changes, will result in a better return for existing building owners but would have no impact in creating the conditions needed to increase the supply.

Changes in CCA Provisions and Depreciation Rates for Rental Housing

The capital cost allowance is the depreciation rate that is allowed on fixed assets over the life of that asset. Under current taxation policies, CCA deductions allow depreciation to be treated as an expense for income tax purposes. Different depreciation methods or capital cost allowances can affect the timing of the expense recognition. Changes in the method of calculating the capital cost allowance of the rate of depreciation simply change the timing of the taxes payable. While depreciation rates have varied over time, the current depreciation rate is set at 4%. In addition, the Federal government has introduced a 'half year rule' which restricts the amount of depreciation that can be claimed in the first year of operation to 2%.

Changes in Taxation Rates for Rental Housing for Income Tax Purposes

Under current taxation rules, to qualify for a lower taxation rate, a business must employ more than five full-time employees. This means that many smaller landlords and building operators are taxed at a higher rate. The distinction is between whether you are an active or passive investor where small landlords are treated as a passive investor and therefore taxed at a higher rate. A reduction in corporate taxes would make the after tax return for rental housing more attractive. Similarly, eligibility for a small business deduction or the treatment of rental housing as active income would make rental housing more favourable as an investment and could attract more small investors to the sector.

Elimination of GST on New Rental Housing Construction

While the Federal government has reduced the effective rate of GST on new rental housing to be aligned with the GST requirements for home ownership, industry representatives have asked that the Federal government eliminate GST for rental housing. A decision to eliminate the GST for new rental housing would help to bring down the cost of construction and result in lower costs per unit. The effect of this change is modeled at a later point in this report.

Access to GST Input Tax Credits for Rental Operations

Residential rents do not include GST. As a result, building owners and operators of rental housing do not have the option of deducting the GST paid for building inputs from the GST that is collected. Furthermore, it should be noted that in many ways the GST treatment of rental housing operations is different from commercial rental and other business arrangements. As a result, unlike other small business owners and operators, rental landlords are unable to recover the GST that they pay for business inputs.

Changes in the Deductibility of Soft Costs

Soft costs are expenditures which are incurred in the development of a new rental project. Allowable soft costs include landscaping, financing fees, property taxes, marketing and promotion expenses as well as legal fees. In the late 1970's and early 1980's the Federal government introduced changes which restricted the types of soft cost deductions allowed. Under current taxation rules, investors are only allowed to capitalize soft costs rather than deduct them. A number of investors have argued that by allowing for the deductibility of soft costs, it would help to make new rental housing construction more viable.

Limitations on the Transferability and Deductibility of Losses

Companies with five or more full-time employees can deduct rental losses against other income. However, these same provisions do not apply to individual building owners. Earlier programs also allowed investors to pool rental losses. However, tax reforms in the early 1970's eliminated this option. Exploring opportunities to allow for greater transferability or deductibility of losses would be beneficial for new rental housing which frequently operates at a loss in the early years.

The changes in Federal taxation policy means losses incurred in the early years of a project cannot be applied to anything other than rental income. By restricting the ability to only deduct rental losses from rental income, the tax shield effect of rental housing is significantly diminished. Under the current provisions, the potential write-off of losses is limited to periods where the building is generating a positive income. By allowing for depreciation expenses as well as other expenses to be transferred and deducted against other income, it would have the effect of improving the after tax return on rental housing in the early years of a building's life. These types of measures would also allow the investor or owner to apply the expense (net loss) or "tax shield" to reduce income from other sources which is taxed at the higher marginal tax rate, thereby making it more attractive to an investor.

The introduction of these types of measures would also help to address losses which are frequently incurred during the early years of a building's operations. The deductibility of business losses or the "flow through of losses" to other business income or high income individuals is a topic of analysis and discussion within the tax policy literature. However, in looking at the Canadian experience in using tax-based programs as well as the experience in other jurisdictions, these types of mechanisms may warrant further consideration.

Deferral or Roll-over of Capital Gains Requirements

In the early 1970's, the Federal government introduced significant changes to the Income Tax Act which made rental properties subject to the payment of a capital gains tax at the time of sale. Industry representatives have argued that the introduction of this tax has disadvantaged rental housing relative to other investments which are not subject to the same measures. The limitations arising from the introduction of capital gains provisions has also limited the potential sale and reinvestment in rental housing assets. As a result, industry representatives have asked that the Federal government consider changes which would allow for the deferral or rollover of capital gains for rental housing provided the funds are reinvested in a similar asset type within a specified time frame. This type of approach is similar to the approach which has been adopted in the U.S.

Looking Forward…

To today's observer, the stock of multi-unit rental housing in Canada is largely composed of buildings that are 35 to 60 years old. These buildings are owned and operated by a wide variety of investors including individual building owners/operators, holding companies, pension funds and REITs (real estate investment trusts). The current inventory of purpose-built rental housing is a maturing asset class where one of the central issues from an owner/operator or investor perspective is the need to maintain a healthy after-tax cash flow to allow for the necessary up-keep and periodic replacement of aging systems.

To some extent, rental housing activity in Canada can be divided into two eras -pre-1980 which saw significant rental supply investment nation-wide and post -1980 which saw a gradual decline in purpose-built rental housing construction. Figure 5 below shows that approximately two-thirds of all renter households across Metro Vancouver (189,845) live in apartment structures (low rise and high rise units).

Of the inventory of units approximately 63 per cent were constructed prior to 1980. These units typically include the purpose-built rental housing stock, rented condo apartment units, as well as social housing units constructed under different government supply programs. The remaining 37 per cent constructed between 1980 and 2006 will include a larger percentage of rented condo apartment units.

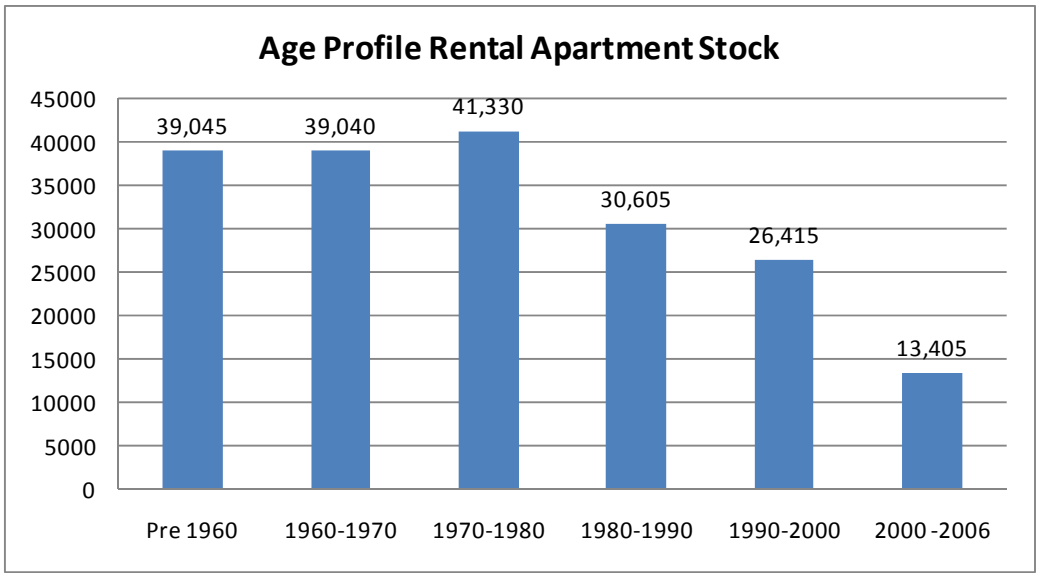

FIGURE 5:
Source: Census data, 2006

Examination of the Possible Measures

Using a pro-forma based model, this report determines the "economic viability gap" for new rental housing construction (wood frame and concrete) and explores the potential use of different possible measures or incentives to close the gap. In undertaking the analysis, the focus was on:

- Quantifying the gap between the project economics of today's development realities and the attendant sources of capital funding available;
- Modeling various factors which can affect the economics of new rental housing construction;
- Identifying the threshold rate of return on investment required to stimulate the creation of new rental supply; and,
- Modeling different potential incentive structures to better understand their impact on the desired outcomes.

In total, 14 different measures were modeled including:

- Elimination of GST on new rental housing
- A 2% reduction in interim construction financing costs
- A one-time capital grant ($50,000 per unit)
- Waving development cost charges
- A 50% reduction in property taxes
- A 1% reduction in mortgage interest
- A reduction in mortgage insurance premiums
- An increase in rental revenue (approximately $250 per unit per month)
- Free land
- A 1% increase in CCA rates
- Changes in capital gains requirements including rollover provisions
- Taxation at small business rates
- Transferability of losses against other income
- Deductibility of soft costs.

The research also looked at the potential contribution that individual municipal incentives could make including a 25% density bonus as well as a 50% reduction in parking requirements.

Evaluating the Alternatives

In evaluating the different measures, the following logic was applied:

1. Determine the capital cost of a typical market rental building of an appropriate scale for both concrete and wood frame construction.

2. Analyze the various components of the operating budget for each of the buildings to determine an appropriate market rent and a reasonable estimate of annual operating expenses.

3. Determine the *net operating income*[2] *(NOI)* for each of the hypothetical developments.

4. Determine the amount of mortgage financing available based on standard underwriting criteria. The difference between the amount of mortgage financing available and the estimated capital cost represents the required equity contribution.

5. Calculate the after tax net cash flow of the building and determine the cash-on-cash return on equity invested[3].

The use of the net operating income (NOI) is an important measure of financial performance as it effectively represents the net cash flow from operations. The calculation of the net operating income is also essential for calculating the cash-on-cash pre-tax rate of return on capital invested or return on investment (ROI).

The return on investment (ROI), in turn, provides the best measure for comparing investment decisions across different asset classes (stocks, bonds, real estate, fine art…). Therefore, using the ROI as a measure of financial return, it is possible to establish a standardized approach which allows for the different effects of financial structure, interest costs, and depreciation and taxation provisions to be understood.

The use of the rate of return on investment also allows for comparisons to be made across different types of real estate assets both in terms of gaining a better understanding of the potential impact that different measures have on the overall economic viability of a project and in reaching the threshold rate of return required to prompt investment in this asset class.

[2] The net operating income is derived by taking the revenue less the operating expenses before the debt payment.

[3] The cash-on-cash return on investment is calculated by taking the cash flow over the equity required.

Determining an Appropriate Rate of Return on Investment

There are two measures of profitability or return on investment for rental buildings; the "cap rate" which is derived by taking the net operating income divided by the purchase price of a building; and, the rate of return on equity which is derived by taking the amount of equity invested in the building divided by the net after-tax cash flow.

The Cap Rate

The cap rate is a short-hand used in the industry to compare the operating cash flow (pre-tax) to the building price. The calculation of the cap rate allows for easy comparisons across buildings or investment decisions without the complexity of income tax scenarios which vary widely by investor. For the purposes of this study, a cap rate of 4.5% is used as the threshold which represents a reasonable rate of return for new rental product. This rate of return is consistent with the level of return expected from buildings which are located in established neighbourhoods and which are in good condition. The threshold for a new rental building under the scenarios modeled suggests that a long term rate of return or cap rate should likely fall within the range of 5 % to 6% after adjusting for tax treatment arising from the various provisions modeled.

The Return on Equity

The return on equity is the other measure which is important. The return on equity takes into consideration both the financial structure (e.g. the amount of debt) as well as income tax considerations. The return on equity is sensitive to changes in the external operating environment including interest rates, mortgage underwriting criteria as well as changes in government policies. The return on equity is also the measure used to determine the point at which an investment decision is considered viable.

For the purposes of this study, in addition to modeling the pre-tax cash items, the study also examined the effects of policy levers that are "below the NOI line" but which can influence rental investment decisions. In fact these measures are equally important, but unfortunately inherently more complicated because they encompass the interaction between financial structure, lending practices, taxation policy and the net after-tax effects of different regulatory policies. Changes in Federal taxation measures fall within this category.

To gain a better understanding of the alternatives available for encouraging new rental housing construction, this report examined different financial, operating and development incentives. In some cases, the types of incentives modeled had a direct impact on the *net operating income* (pre-tax) while in other cases the incentives that were modeled were "below the NOI line." For these measures, the estimated return was adjusted to reflect the pre-tax rate of return at the NOI level. This approached allowed for comparisons to be made across the different measures by creating a standardized measure to allow for the potential reduction in the economic viability gap for new rental housing to be calculated and for the potential improvement in the return on equity to be measured.

Establishing the Base Case Scenarios

To "test" the potential impact of each measure, a base case scenario for both wood frame and concrete construction was established. To validate the capital cost assumptions, the base case scenarios were compared with the information presented at the UDI workshop on rental housing held on March 3, 2009. This comparison helped to ensure that there was a reasonable degree of alignment across the major variables and cost categories. The seminar materials were also used to validate the mortgage underwriting criteria used by CMHC as well as the operating cost scenarios used in this study.

Based Case Scenario -Concrete Development

Table 1, on the following page shows the base case scenario for a 171 unit concrete development. The proposed development includes a mix of 1-bedroom and 2-bedroom units which rent at between $1,380 and $1,760 per month. These rents are affordable to households with incomes which fall between 100 per cent and 125 per cent of the median income for the region. The estimated capital cost is $58.6 million or an average of $342,881 per unit. Under the scenario that was modeled the equity required for this development was equal to $30.4 million and the economic viability gap was estimated to be $2.5 million. An economic viability gap of $2.5 million translates into a shortfall of approximately $14,620 per unit and an estimated return on equity of 1.68%.

Base Case Scenario – 171 units concrete development	
Description	171 units
Unit Mix	1-bedroom / 2-bedroom
Rental Revenue	$1,380 (1-bedroom units) $1,760 (2-bedroom units)
Estimated Construction Cost	$58.6 million
Estimated Cost Per Unit	$342,881
Equity Required	$30.4 million
Expected Return on Equity	10%
Economic Viability Gap	**$2.5 million (annual)**
Yield on Equity	**1.68% (gap 8.32%)**

TABLE 1:
Source: Calculated, pro-forma based analysis (January 2009)

Table 2 shows the base case scenario for an 80 units wood frame development. This scenario uses the same rent levels as the previous scenario ($1,380 for a 1-bedroom unit and $1,760 for a 2-bedroom unit). The estimated capital cost is $20.6 million or an average of $257,221 per unit. The equity required is $6.05 million and the economic viability gap is equal to $343,622 per year. This translates into a gap of approximately $4,295 per unit. The estimated return on equity is approximately 4.32%.

Base Case Scenario – 80 units wood frame development	
Description	80 units
Unit Mix	1-bedroom / 2-bedroom
Rental Revenue	$1,380 (1-bedroom units) $1,760 (2-bedroom units)
Estimated Construction Cost	$20.6 million
Estimated Cost Per Unit	$257,221
Equity Required	$6.05 million
Expected Return on Equity	10%
Economic Viability Gap	**$343,622(annual)**
Yield on Equity	**4.32% (gap 5.68%)**

TABLE 2:
Source: Calculated, pro-forma based analysis (January 2009)

The analysis shows that there is an economic viability gap for both wood frame and concrete development. Based on the base case scenarios modeled, the concrete development provides a 1.68 per cent return on equity while the return on equity for the wood frame development (although somewhat better) is not within the threshold needed to generate a decision to "go forward". Therefore, typically, when a developer or investor gets to this stage in the pro forma exercise they conclude that the project, having failed to achieve an appropriate rate of return on equity, "does not pencil".

The following section begins to examine the different development and financial incentives available to help reduce the overall economic viability gap for new rental housing construction. However, prior to looking at the different measures and incentives, this section provides additional details on the estimated capital costs as well as related financial structure including the debt capacity, equity requirements as well as expected return on equity.

The Estimated Capital Costs

Table 3 sets out the estimated capital cost for wood frame and concrete under the scenarios modeled. This includes estimates for land, soft costs, construction as well as other costs including taxes, contingency etc). The scenarios set out in this report estimate land at approximately $150 per square foot[4]. The sites are assumed to have one parking space per unit at an estimated cost of approximately $30,000 per space.

Estimated Project Costs (Wood Frame and Concrete)

	Wood Frame 80 units	**Concrete** 171 units
Land	$ 4,406,592	$ 19,611,160
Soft Costs	$ 3,569,000	$ 7,658,479
Construction	$ 12,016,000	$ 30,461,828
Other	$ 586,120	$ 901,266
Total Capital Costs	$ 20,577,712	$ 58,632,733
Cost Per Unit	$ 257,221	$ 342,881

TABLE 3:
Source: Estimated capital costs – wood frame and concrete, pro-forma analysis

[4] Land costs are estimated at 150 per square foot and are consistent with the land costs reported in the UDI Rental Housing Workshop held in March 2009.

Equity Requirements and Debt Capacity

There are different types of borrowers and borrowing profiles including individuals, partnerships, corporations (private, public and non-profit). As well, there are different types of vehicles and holding companies including real estate investment trusts (REITs). In determining access to financing, CMHC evaluates the level of risk based on a number of factors including the net worth of the borrower, profitability, liquidity as well as their management history.

Most rental buildings use CMHC mortgage insurance to obtain and enhance access to mortgage finance. Under CMHC's lending criteria, the maximum insurable loan for a rental development is limited to 85% of the lending value or the amount of the loan that can be carried by the borrower at a debt coverage ratio (DCR) which fits CMHC's lending criteria. Based on current CMHC practice, CMHC requires a DCR of 1.3 for a mortgage with a term of 10 years or less and a DCR of 1.2 for a mortgage with a term of 10 years or more. The debt coverage ratio (DCR) (expressed as a ratio e.g. 1.2 or 1.3 is calculated as net operating income divided by interest expense). The amount of the debt coverage ratio required by CMHC can vary by the length of the term of the loan as well as an assessment of the stability of the rental revenue stream. Where interest rates in the short-term are at historic lows, CMHC has tended to adopt a higher DCR requirement. This has the effect of reducing the risk that investors will become over leveraged in the event that interest rates should increase. At the same, this requirement limits some of the potential benefits arising from the current lower interest rates. The scenarios modeled in this report assumed interest rates of 5%.

The loan to value ratio (LTV) is also an important measure for rental housing construction. The loan to value ratio is determined by the amount of equity in a project. When the equity in the project is less than 25%, the project is considered to have a high loan to value ratio and is considered higher risk from a lending perspective. Most high loan to value mortgages will require mortgage insurance. In addition, in some cases even when an LTV of 75% or less is achieved, a lender may still require insurance as a condition of obtaining financing.

CMHC's mortgage insurance premiums vary according to the type of financing required (new construction versus existing) as well as the amount of equity in a development. In determining the financing, for new rental housing construction, the lender (and CMHC) both have to establish a lending value based on applying a cap rate to the expected net operating income of the project. CMHCs mortgage insurance premiums therefore represent a one-time cost which is typically capitalized into the loan amount. By obtaining mortgage insurance, the borrower has the benefit of obtaining mortgage rates at close to Government

of Canada borrowing levels. The more favourable borrowing rates, in turn, can result in a net savings to the project.

Unless a rental project is particularly strong, CMHC will look to a guarantee from the individual investor or corporate borrower. These guarantees vary by the degree of leverage (LTV) and the track record of borrower (capacity and competence). A general practice is to require a guarantee of between 30% and 50% depending on the level of leverage. The lender may also be more flexible if the borrower provides additional security or if the company has a demonstrated track record. It is also the case that a 3rd party guarantee is generally not required if the loan to value ratio is 60% or less.

This study uses CMHC's underwriting criteria and seeks to maximize the amount of mortgage that can be secured. The balance of the estimated capital costs are funded through investor equity. The underwriting example in this scenario focuses on the debt coverage ratio (DCR) which on a new rental building is typically the binding constraint, although rental stabilization periods, loan to value and borrower track records can play an important role in some circumstances.

Assuming a net operating income of $2.2 million for a concrete development and $1.1 million for a wood frame development, Table 4 shows the debt capacity calculation using a debt coverage ratio of 1.3. This calculation determines the maximum amount of mortgage debt that a development can carry as well as the residual earnings after providing for mortgage payments. These earnings, in turn, provide the basis for determining the potential return on equity.

Debt Capacity Calculation	Concrete Development	Woodframe Development
Net Operating Income	$2,209,164	$1,131,600
Maximum Debt Payment at 1.3 DCR	$1,699,357	$870,462
Earnings After Interest/Before Tax	$509,807	$261,138

TABLE 4:
Source: Debt capacity calculation – wood frame and concrete, pro-forma analysis (January 2009)

Estimated Return on Equity

As discussed above, the residual earnings amount, after providing for mortgage payments, is the return on equity. This is calculated by taking the established debt payment capacity that the project can carry and the amount of equity required. The calculation in Table 5 provides an example for the concrete development. Under the scenario modeled, the cash flow for the development allows for an annual mortgage payment of $1,669,357 at an interest rate of 5% over a 35 year amortization period. Therefore at this debt capacity

level, the maximum mortgage amount is approximately $28 million and the related equity is $30.4 million with an associated capital and yield structure as follows:

Capital Structure and Yield- Concrete Scenario				
Concrete Scenario	**Amount**	**% capital**	**Payment / Return**	**Rate / Yield**
Mortgage Debt	**$28,242,360**	48.2%	$1,699,357	**5.00%**
Equity	**$30,390,363**	51.8%	$509,807	**1.68%**
Total Capital (Cost)	**$58,632,723**	100.0%	$2,209,164	
weighted ave. yield				**3.28%**

TABLE 5:
Source: Estimated return on equity calculation –concrete, pro-forma analysis (January 2009)

For the wood frame development, the capital cost structure and estimated return on equity is as follows:

Capital Structure and Yield- Woodframe Scenario				
Wood Frame Scenario	**Amount**	**% capital**	**Payment / Return**	**Rate / Yield**
Mortgage Debt	**$14,530,107**	70.6%	$870,462	**5.00%**
Equity	**$6,047,605**	29.4%	$261,138	**4.32%**
Total Capital (Cost)	**$20,577,712**	100.0%	$1,131,600	
weighted ave. yield				**4.80%**

TABLE 6:
Source: Estimated return on equity calculation –wood frame, pro-forma analysis (January 2009)

In looking at the two scenarios modeled, there are three important observations:

- First, the amount of equity is high, representing approximately 50% of the capital cost in the case of the concrete development and 30% of the capital cost in the case of the wood frame construction.

- Second, the rate of return on equity is very low with the return on equity invested for the concrete development calculated to be 1.68% while the return on equity invested for the wood frame development is 4.32% - both significantly below the expected return on equity which was established at 10%.

- Based on an expected return on equity at 10%, the analysis suggests that the concrete development has a shortfall of approximately 8.32% while the wood frame development has a shortfall of 5.68%.

Financial and Development Incentives Modeled

This section models different financial and development incentives in order to identify potential actions that could be taken to reduce the overall economic viability gap for new rental housing. The incentives modeled in this section include development incentives (measures which can help to reduce capital costs) as well as financial and operating incentives (measures that enhance revenue, reduce operating costs or increase the cash-on-cash return on investment).

The analysis set out in this section focuses on the potential improvement in the overall economic viability gap as well as the net improvement in the return on equity invested. In evaluating the different measures or incentives, the analysis focuses on the contribution that each of the different measures make in terms of improving or achieving the expected return on equity.

The following set out the specific development and financial incentives modeled in this section:

Development Incentives

- Elimination of GST on new rental housing
- Assistance with interim construction financing
- Reduction in CMHC mortgage insurance
- A one-time capital grant of $50,000 per unit
- A reduction in parking requirements
- Density bonus provisions
- Reduction in municipal fees and charges
- Free land

Financial and Operating Incentives

- A 50% reduction in property taxes over 10 years
- A dedicated rent supplement ($250 per unit)
- A reduction in mortgage interest
- Accelerated depreciation including transferability of losses
- Enhanced provisions for soft cost deductibility
- Exploration of the use of tax credit incentives

Development Incentives

In terms of the different development incentives that were tested:

- Elimination of GST on new rental housing;
- Assistance with interim construction financing;
- Reduction in CMHC mortgage insurance;
- A one-time capital grant ($50,000 per unit); ;
- A reduction in parking requirements (50% reduction was modeled)
- A density bonus (25% was modeled)
- Reductions in municipal fees and charges including development cost charges
- Free land.

The measures modeled in this section focus on actions which can help to improve the overall cost profile for new rental housing construction. By lowering the cost of construction, it is also possible to reduce mortgage financing costs and reduce the amount of equity required. Depending on the cash flow of a development, these measures can also help to improve the rate of return on equity.

In evaluating each of the measures set out in this section, the analysis focused on:

- The potential contribution of each measure in terms of reducing the overall economic viability gap for new rental housing construction;

- The net impact of the measure in terms of the overall improvement on the return on equity; and,

- The level of government (Federal, Provincial or municipal) that has the specific authority or decision-making responsibility associated with each measure.

Possible Measure	Contribution	Financial Impact	Importance / Impact on New Supply
Elimination of GST on new rental housing construction	Federal	Under the current Federal guidelines, rental housing receives a partial rebate on the GST paid up to a maximum of $6,300 per unit. Under the scenario modeled, the potential impact of the elimination of GST on new rental housing construction was tested.	Based on the scenario modeled, the elimination of GST would result in a savings of $5,442 per unit or a 2% reduction in capital costs. This translates into a 0.33% improvement in the return on equity.
Reduction in interim construction financing costs	Provincial	Costs incurred during construction can add to the overall cost of a unit. Under the scenario modeled, the potential impact of a 1% reduction in interim construction financing was tested.	This measure would result in a savings of $1,683 per unit or a 1/2% reduction in capital costs. This translates into a 0.10% improvement in the return on equity.
Reduction in CMHC mortgage insurance premium	Federal	Developments seeking CMHC mortgage insurance pay a one-time fee. The amount of the premium is a percentage of the mortgage loan required. Under the scenario modeled, a 1% reduction in CMHC;s mortgage insurance premium was tested.	Under this scenario, a 1%reduction in CMHC's mortgage insurance premium would result in a savings of $2,572 per unit or a 1% reduction in capital costs. This translates into a 0.15% improvement in the return on equity.
One-time capital grant	Federal Provincial	Under the Federal Affordable Housing Initiative capital funding is provided by the Federal government to address housing pressures. These programs typically require that the Provinces make a matching contribution. The Province of BC has taken advantage of these different Federal initiatives and has used the funding to advance a number of different Provincial priorities including *Independent Living BC (*ILBC) as well as the Provincial Homelessness Initiative.	Based on the scenario modeled, a $50,000 capital grant represents a 20% reduction in capital costs. This translates into an improvement of 8.44% in equity and achieves the desired threshold return on investment[5].

[5] While proving to be more feasible, the scenario that was modeled is based on rent levels which fall at the higher end of the rent scale. Given the level of subsidy invested it would be necessary to adjust the rent levels to ensure that the units are provided to households falling at the mid to lower end of the income scale. To target households at a lower rent level could result in the need for a larger grant or operating subsidy in order to ensure that the project economics remain viable.

Possible Measure	Contribution	Financial Impact	Importance / Impact on New Supply
Reduction in municipal fees and charges including development cost charges	Municipal/Regional	Municipal development cost charges average between $12,000 and $13,000 per units across Metro Vancouver. Industry representatives have argued that municipal fees and charges can affect affordability and can act as a barrier to new rental construction.	Based on the scenario modeled, a reduction in municipal development cost charges represents a 5% reduction in capital costs. This translates into a 0.81% improvement in the return on equity.
Reduction in municipal parking requirements	Municipal	It is estimated that parking can add between $25,000 and $50,000 in capital costs depending on the type of structure required. The capital cost estimates set out in this report assume 1 parking space per unit at a cost of $30,000. Under the scenario modeled a 50% reduction in parking is tested.	Based on the scenario modeled, a 50% reduction in parking results in a savings of $15,000 per unit or approximately 6% of capital costs. This translates into a 1.07% improvement in the return on equity.
Density bonus provisions	Municipal	Density bonus provisions granted through municipal rezoning processes can help to improve the overall economic feasibility of a site and contribute to a reduction in the per unit costs.	Under the scenario modeled, a 25% density bonus can reduce the average cost per unit by almost $14,000 and translates into a 1% improvement in the return on equity.
Free land	Federal Provincial Municipal Regional	Under the wood frame scenario modeled, land costs represent approximately 21% of capital costs. This translates into a cost of approximately $55,000 per door. Under the scenario modeled, the potential impact of free land was tested.	Access to free land represents a 21% reduction in capital costs and translates into an 11.60% improvement in the return on equity. However, the contribution of land represents a significant public subsidy and therefore would require some level of adjustment to the proposed rent levels in order to secure the necessary public benefit in the form of improved affordability. Exploring opportunities to intensify the use of existing sites, including the redevelopment of existing social housing stock also represents a potential strategy which could be considered. However, the cost of the replacement units would have to be factored into the analysis.

TABLE 7:
Source: Evaluation of development incentives, pro-forma analysis (January 2009)

Example: Evaluating Potential Rental Housing Incentives

Eliminate GST on New Rental Housing Construction

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000	$435,376	$11,580,624	$144,758	$435,376
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$435,376	$20,142,336	$251,779	$435,376
Financing Structure						
	Equity	$6,047,605	$435,376	$5,612,229		$435,376
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$435,376	$20,142,336		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	$646,845		$646,845	$674	$0
	Net Income (Loss)	(230,725.00)		(230,725.00)	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
Rate of Return						
	Equity	$6,047,605		$5,612,229		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**4.65%**		**0.33%**

Example: Evaluating Potential Rental Housing Incentives

Reduction in Interim Construction Financing

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000	$134,667	$11,881,333	$148,517	$134,667
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$134,667	$20,443,045	$255,538	$134,667
Financing Structure						
	Equity	$6,047,605	$134,667	$5,912,938		$134,667
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$134,667	$20,443,045		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	$646,845		$646,845	$674	$0
	Net Income (Loss)	(230,725.00)		(230,725.00)	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
Rate of Return						
	Equity	$6,047,605		$5,912,938		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**4.42%**		**0.10%**

Example: Evaluating Potential Rental Housing Incentives

Reduction n Mortgage Insurance Premiums

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000	$205,777	$3,363,223	$42,040	$205,777
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$205,777	$20,371,935	$254,649	$205,777
Financing Structure						
	Equity	$6,047,605	$205,777	$5,841,828		$205,777
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$205,777	$20,371,935		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	646,845		646,845	$674	$0
	Net Income (Loss)	-230,725		-230,725	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
Rate of Return						
	Equity	$6,047,605		$5,841,828		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**4.47%**		**0.15%**

Example: Evaluating Potential Rental Housing Incentives

One -time capital grant ($50,000 @ unit)

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000	$4,000,000	$8,016,000	$100,200	$4,000,000
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$4,000,000	$16,577,712	$207,221	$4,000,000
Financing Structure						
	Equity	$6,047,605	$4,000,000	$2,047,605		$4,000,000
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$4,000,000	$16,577,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	$646,845		$646,845	$674	$0
	Net Income (Loss)	(230,725.00)		(230,725.00)	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
Rate of Return						
	Equity	$6,047,605		$2,047,605		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**12.75%**		**8.44%**

Example: Evaluating Potential Rental Housing Incentives

Waiving Development Cost Charges

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000	$960,000	$2,609,000	$32,613	$960,000
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$960,000	$19,617,712	$245,221	$960,000
Financing Structure						
	Equity	$6,047,605	$960,000	$5,087,605		$960,000
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$960,000	$19,617,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	$646,845		$646,845	$674	$0
	Net Income (Loss)	(230,725.00)		(230,725.00)	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
Rate of Return						
	Equity	$6,047,605		$5,087,605		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**5.13%**		**0.81%**

Example: Evaluating Potential Rental Housing Incentives

Parking (50% reduction)

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000	1,200,000	$10,816,000	$135,200	$1,200,000
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$1,200,000	$19,377,712	$242,221	$1,200,000
Financing Structure						
	Equity	$6,047,605	$1,200,000	$4,847,605		$1,200,000
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$1,200,000	$19,377,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	646,845		646,845	$674	$0
	Net Income (Loss)	-230,725		-230,725	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,981.54	$161	$0
	Net Cash Flow	261,138		261,138.46	$272	$0
Rate of Return						
	Equity	$6,047,605		$4,847,605		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**5.39%**		**1.07%**

Example: Evaluating Potential Rental Housing Incentives

Density Bonus of 25%

Woodframe Construction

Size: 80 units

Capital Cost Budget:		Base Case	Change	Total project cost	Cost per unit	Variance
	Land Cost	$4,406,592	$1,101,648	$3,304,944	$41,312	$1,101,648
	Soft Costs	$3,569,000	$0	$3,569,000	$44,613	$0
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$1,101,648	$19,476,064	$243,451	$1,101,648
Financing Structure						
	Equity	$6,047,605	$1,101,648	$4,945,957		$1,101,648
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$1,101,648	$19,476,064		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	646,845		646,845	$674	$0
	Net Income (Loss)	-230,725		-230,725	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,981.54	$161	$0
	Net Cash Flow	261,138		261,138.46	$272	$0
Rate of Return						
	Equity	$6,047,605		$4,945,957		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**5.28%**		**0.96%**

Example: Evaluating Potential Rental Housing Incentives

		Free Land				
	Woodframe Construction					
	Size:	80 units				
Capital Cost Budget:		Base Case	Change	Total project cost	Cost per unit	Variance
	Land Cost	$4,406,592	$4,406,592	$0	$0	$4,406,592
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712	$4,406,592	$16,171,120	$202,139	$4,406,592
Financing Structure						
	Equity	$6,047,605	$4,406,592	$1,641,013		$4,406,592
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712	$4,406,592	$16,171,120		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	$646,845		$646,845	$674	$0
	Net Income (Loss)	(230,725.00)		(230,725.00)	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
Rate of Return						
	Equity	$6,047,605		$1,641,013		
	Cash Flow	261,138		$261,138	$272	$0
	Cash-on-Cash Return	**4.32%**		**15.91%**		**11.60%**

Financial and Operating Incentives

In addition to looking at the different development incentives, the following provides an overview of the different financial and operating incentives that were tested. They included:

- A reduction in property taxes (50% reduction over 10 years)
- A dedicated rent supplement ($250 per unit)
- A reduction in mortgage interest (1% reduction)
- Accelerated depreciation (4% and transferability of losses)

Changes in the rules related to soft cost deductibility as well as the exploration of the use of tax credit incentives were also explored in this section.

Because the interaction between the financial structure, lending practices, taxation policy and the net after-tax effects of different policy decisions, these measures are inherently more difficult to model. Similarly, these elements are highly sensitive to changes in market conditions, interest rates, and lending criteria. Government policies and regulations including decisions which limit rent levels can also have an impact.

In terms of the approach adopted for this research, a discounted cash flow was used to allow for comparisons to be made across different investment decisions. To do this, the study calculated the "below the line NOI" items and then reflected them back into the calculation of the pre-tax rate of return. By adopting this approach, it was possible to measure the potential improvement in the expected return on equity and the extent to which each of these measures could contribute to the conditions needed to encourage increased investment in new rental housing construction.

Possible Measure	Contribution	Financial Impact	Importance / Impact on New Supply
A 50% reduction in property taxes over 10 years	Municipal	Operating costs include property taxes, utilities, building management and building maintenance. In order to ensure that the operation of rental housing is economically viable building owners and operators seek to minimize operating costs. Under the scenario modeled a 50% reduction in municipal property taxes is tested.	A 50% reduction is property taxes, contributes to a reduction of approximately $38,000 in annual operating expenses and translates into 0.64% improvement in the return on equity.
Dedicated rent supplements of $250 per unit per month over a 10 year period.	Provincial	The provision of a dedicated rent supplement of $250 per unit per month was modeled. This translates into an annual subsidy of approximately $3,000 per unit per year. In the case of the proposed wood frame development, this translates into the equivalent of an operating grant of approximately $240,000 per year.	Under the scenario modeled, a dedicated rent supplement of $250 per unit per month would add $240,000 to the operating statement and would mean an improvement of 3.97% in the overall project economics or a return on equity of approximately 8.29%.
A 1% reduction in mortgage interest	Market Based – Subject to inflation, Federal monetary policy and broad macro-economic forces	Interest rates can have a significant impact on the economic feasibility of new rental housing construction. The scenarios modeled in this report assume a 5% interest rate and a 35 year amortization period.	Assuming that it is possible to achieve a 1% reduction the interest rate, it would help to improve the overall return on equity by approximately 2.88%. This would move the expected return on equity from 4.32% to 7.20%.
Accelerated depreciation and transferability[6] of losses	Federal	The scenario assumes an increase in CCA provisions from 4% to 5% along with the transferability of losses at 4%.	A 1% increase in the depreciation rate as well as provisions to allow for a 4% transfer of losses, would result in an improvement of 1.75% in the estimated return on equity and would move the expected return on equity from 4.32% to 6.07%.

TABLE 8:
Source: Evaluation of financial and operating incentives, pro-forma analysis (January 2009)

[6] As discussed at the outset of the report, changes in CCA provisions without allowing the for transferability of losses will only affect the timing of the expense recognition and will not improve the overall economic viability for new rental housing which generally operates at a loss in the early years.

Example: Evaluating Potential Rental Housing Incentives

Reduction in property Taxes

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712		$20,577,712	$257,221	$0
Financing Structure						
	Equity	$6,047,605		$6,047,605		$0
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712		$20,577,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920	-$38,724	$376,644	$392	-$38,724
	Net Operating income (NOI)	$1,131,600	-$38,724	$1,170,324	$1,219	-$38,724
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	$646,845		$646,845	$674	$0
	Net Income (Loss)	(230,725.00)	(38,724.00)	(192,001.00)	(200.00)	-$38,724
Cash Flow	Net Operating income (NOI)	$1,131,600	(38,724.00)	$1,170,324	$1,219	-$38,724
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138	(38,724.00)	299,862	$312	-$38,724
Rate of Return						
	Equity	$6,047,605		$6,047,605		
	Cash Flow	261,138		$299,862	$312	-$38,724
	Cash-on-Cash Return	**4.32%**		**4.96%**		**0.64%**

Example: Evaluating Potential Rental Housing Incentives

Increase Rental Revenue - Dedicated Rent supplements

Woodframe Construction

Size: 80 units

		Base Case	Change	Total project cost	Cost per unit	Variance
Capital Cost Budget:						
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712		$20,577,712	$257,221	$0
Financing Structure						
	Equity	$6,047,605		$6,047,605		$0
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712		$20,577,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520	$240,000	$1,709,520	$1,781	$240,000
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600	$240,000	$1,371,600	$1,429	$240,000
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	646,845		646,845	674	$0
	Net Income (Loss)	-230,725	$240,000	9,275	10	$240,000
Cash Flow	Net Operating income (NOI)	$1,131,600	$240,000	$1,371,600	$1,429	$240,000
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,982	$161	$0
	Net Cash Flow	261,138	$240,000	501,138	$522	$240,000
Rate of Return						
	Equity	$6,047,605		$6,047,605		
	Cash Flow	261,138		$501,138	$522	$240,000
	Cash-on-Cash Return	**4.32%**		**8.29%**		**3.97%**

Example: Evaluating Potential Rental Housing Incentives

Reduction in Mortgage interest

Woodframe Construction

Size: 80 units

Capital Cost Budget:		Base Case	Change	Total project cost	Cost per unit	Variance
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712		$20,577,712	$257,221	$0
Financing Structure						
	Equity	$6,047,605		$6,047,605		$0
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712		$20,577,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480	143,096	$572,384	$596	$143,096
	Capital Cost Allowance (CCA)	646,845		646,845	$674	$0
	Net Income (Loss)	-230,725	143,096	-373,821	(389.40)	$143,096
Cash Flow	Net Operating income (NOI)	$1,131,600	143,096	$1,274,696	$1,328	$143,096
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982	30,997	123,985	$129	$30,997
	Net Cash Flow	261,138	174,093	435,231	$453	$174,093
Rate of Return						
	Equity	$6,047,605		$6,047,605		
	Cash Flow	261,138		$435,231	$453	$174,093
	Cash-on-Cash Return	**4.32%**		**7.20%**		**2.88%**

Example: Evaluating Potential Rental Housing Incentives

Accelerated Depreciation (Capital Cost Allowance @ 4% transfer loss)

Woodframe Construction

Size: 80 units

Capital Cost Budget:		Base Case	Change	Total project cost	Cost per unit	Variance
	Land Cost	$4,406,592		$4,406,592	$55,082	$0
	Soft Costs	$3,569,000		$3,569,000	$44,613	$0
	Construction Costs	$12,016,000		$12,016,000	$150,200	$0
	Other (Taxes and Contingency)	$586,120		$586,120	$7,327	$0
	Total Capital Cost	$20,577,712		$20,577,712	$257,221	$0
Financing Structure						
	Equity	$6,047,605		$6,047,605		$0
	Mortgage Debt	$14,530,107		$14,530,107		
		$20,577,712		$20,577,712		
Operating Income Statement					Per Unit/Month	
	Rental Revenue	$1,469,520		$1,469,520	$1,531	$0
	Total Operating Costs	$337,920		$337,920	$352	$0
	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	Interest Expense	$715,480		$715,480	$745	$0
	Capital Cost Allowance (CCA)	646,845		646,845	$674	$0
	Net Income (Loss)	-230,725		-230,725	(240.34)	$0
Cash Flow	Net Operating income (NOI)	$1,131,600		$1,131,600	$1,179	$0
	add back CCA	646,845		$646,845	$674	$0
	less principal repayment	154,982		154,981.54	$161	$0
	Net Cash Flow	261,138		261,138	$272	$0
	Effect of Deductiblility			$106,134		
	Net Cash Flow + Tax effect			$367,272		
Rate of Return						
	Equity	$20,577,712		$20,577,712		
	Cash Flow	261,138		$367,272	$383	-$106,134
	Cash-on-Cash Return	**4.32%**		**6.07%**		**1.75%**

Other Measures to Consider

Two other potential measures explored in this section, include changes in current tax provisions/requirements related to the deductibility of soft costs as well as the potential use of tax credits or tax-based incentives as a means of encouraging increased investment in rental housing construction. The potential contribution of each of these measures is discussed below:

Soft Cost Deductibility

As discussed earlier in this report, soft costs are expenditures which are incurred in the development of a new rental project. Allowable soft costs include landscaping, financing fees, property taxes, marketing and promotion expenses as well as legal fees. Under current taxation policies, investors are only allowed to capitalize soft costs rather than deduct them. Under the scenarios modeled in this report, soft costs represent between 13% and 17% of the cost of new construction. Similar to the other measures modeled in this report, measures which allow for soft costs to be deducted up-front along with a provision to allow for the transferability of losses would have the potential to improve the overall economic viability of new rental housing and enhance the attractiveness of new rental housing as an investment.

Exploration of the Use of Tax-Based Incentives

The U.S relies on a number of different tax expenditure measures to achieve public policy objectives. These include the use of municipal bonds which are tax exempt and which provide incentives for investment and reinvestment in various forms of community infrastructure. In the U.S, affordable housing falls into this category. Under the U.S. Low Income Housing Tax Credit (LIHTC), developers have access to a source of lower cost equity which can be used to support the development of new rental housing. In exchanges, for access to this funding there are certain requirements which must be met including:

- Rents must be affordable to person with incomes which fall under 60% of the median income for the area;
- The units which are developed must be self-contained;
- The housing that is developed must remain affordable for at least 15 years.

Appendix B provides information on the number of units which have been created through the Low Income Housing Tax Credit and other government supported programs since it was first introduced in 1986. Based on the data reported in Appendix B, there were approximately 45,400 subsidized units created through the LIHTC as well as other initiatives in 2007. This represents approximately 18% of all rental housing units created in that year.

Recent Initiatives Introduced in Australia

In July 2008, the Australian government launched a National Rental Housing Affordability Scheme (NRAS). This program was launched as part of a 2007 election commitment. Under the *National Rental Housing Affordability Scheme*, the Federal government provides an incentive of $6,000 per dwelling unit per year over 10 years to encourage private investment in rental housing. This incentive is provided in the form of a refundable tax offset. Under the program, the State government also provides some additional funding equal to approximately $2,000 per unit per year in direct or in-kind support. Rents for these properties are to be set at 20 per cent below the market rate for eligible tenants. The total cost of the program is approximately $1.7 million per year. During the initial year of operation 3,899 incentives were offered.

Both of these examples are important in that the incentives are structured in a way which encourages investment from the private sector. Similarly, both of these strategies have been recognized as effective strategies for generating the necessary supply response.

The Canadian Experience

Canada, unlike the USA and other jurisdictions has made limited use of tax shelters or tax credit financing. Within the Canadian context, there are four (4) examples of the use of tax credits. These include:

- Funding for natural resource exploration (often called flow-through share financing),
- Film production tax credit,
- The scientific research tax credit (SRTC), and,
- The multi-unit residential building (MURB).

In examining the tax literature, the findings suggest that the Canadian experience with the use of tax credit strategies has received mixed reviews. The natural resource exploration tax credit has remained one of the more successful policy instruments. This program has been in place since the late 1980's and has been expanded in its scope to include Provincial mineral and mining strategies.

In examining the reviews in the taxation literature, the natural resource exploration tax credit has been characterized as a highly efficient method of attracting capital to higher risk endeavours. This program has also been successful in avoiding excessive transaction costs unlike some of the other programs which were reviewed. As well, there is a general sense that this program has been successful in achieving a reasonable balance of monitoring and compliance.

In looking at some of the other models which have been reviewed, the findings suggest that some of the other tax-based initiatives have not been as successful with poor program design or poorly targeted outcomes resulting in the cancelation of the programs. A particularly poorly structured and therefore short lived program was the scientific research tax credit. The MURB (multi-unit residential building) program which was in place in the 1970's and early 1980's has received similar criticisms. In particular, while it was recognized as being successful in terms of helping to attract investment and stimulate a supply response, the overall program outcomes where considered to be poorly targeted and the program was ended.

Learning from Experience

The successful implementation of programs in the U.S. and Australia as well as Canada's experience with the natural resource exploration tax credit suggests that it is possible to use tax-based incentives and market mechanisms to encourage increased investment in rental housing. In looking at potential opportunities to adapt these models to the current housing context, it would be possible to establish a model which builds on the strengths of existing models while learning from those that were less successful. Experience both within Canada and elsewhere suggests that this can be accomplished through good program design with the following being some of the critical factors to take into consideration:

- A clearly defined target group and program allocation mechanism;
- Clear monitoring, reporting and program compliance criteria;
- Transparency of investment expenditures and results;
- Alignment of incentives;
- Clear enforcement and compliance mechanisms.

It would also be beneficial to use established vehicles and financial instruments in order to take advantage of the expertise and experience which already exists in the delivery of these types of initiatives.

Conclusions and Next Steps

The economics of rental housing are challenging. Rental housing operates within a complex climate of macro-economic forces and government policies. Decisions related to rental housing investment or reinvestment therefore are not only tied to the cost of construction but also occur within the context of taxation policies, consumer protection legislation, the prevailing cost of capital and the efficiency of the rental market.

The analysis shows that there are a limited number of measures which on their own could reduce the overall economic viability gap for new rental housing construction. At the same time, it appears that local strategies adopted at the municipal level in combination with changes in Federal taxation measures as well as Provincial initiatives could be beneficial in terms of stimulating investment in new rental housing construction. Based on the examination of the alternatives considered in this report, the most promising measures are likely to include changes in current CCA provisions, deductibility of soft costs as well as the transferability or deductibility of losses against other income.

In examining the different alternatives, it is clear that no single approach can solve the entire problem, nor will the intervention of only one party. Rather, an effective strategy calls for concerted action across all levels of government as well as partnerships with the private and non-profit sectors. Past experience within Canada and elsewhere suggests that it may be time to consider the use of incentive based strategies (including the use of tax incentives) to seek to create the conditions needed to enable new supply.

Selected References

Altus Group Limited. 1998. Understanding Private Rental Housing Investment in Canada. Prepared for CMHC.

CMHC. Fall, 2008. Rental Market Report: Vancouver and Abbotsford CMAs.

CMHC. 2007. Rental Market Report: Vancouver and Abbotsford CMAs.

Canadian Real Estate Association. 2008. Reinvestment in Real Property: The Canadian Real Estate Association's Submission on why Canada Needs Capital Gains Tax Deferrals.

Lampert, Greg. 1999. *Review of Recent Reports on the Rental Market in Canada*. Prepared for the Canadian Home Builders' Association.

Lampert, Greg and Pomeroy, Steve. 2002. *Options for Changes in Federal Taxes to Encourage New Rental Construction.* Prepared of Ontario Ministry of Municipal Affairs and Housing.

Ministry of Housing, Recreation and Consumer Services: Province of British Columbia. 1995. Rental Housing Trends in British Columbia.

Ontario Ministry of Housing. 2001. Affordable Rental Housing Supply: The Dynamics of the Market and Recommendations for Encouraging New Supply prepared for the Housing Supply Working Group.

Ontario Ministry of Housing. Creating a Positive Climate for Rental Housing Development through Tax and Mortgage Insurance Reforms: The Second Report of the Housing Supply Working Group.

Pomeroy, Steve. 2007. *Background Report: Assessing Design Options for an Affordable Housing Tax Credit.* Prepared for the Ontario Non-Profit Housing Association and the Canadian Housing and Renewal Corporation.

TD Economics. 2003. Affordable Housing in Canada: In Search of a New Paradigm.

TD Economics. 2004. Room for Rent: Outlook for Canada's Rental Housing Market.

Appendix A:
Factors Affecting New Rental Housing Construction

In looking at new rental housing construction, it is necessary to consider the following factors:

a) the balance sheet;
b) the income statement;
c) financial structures;
d) fees and levies including GST; and,
e) the regulatory and policy context;

The Balance Sheet

Factors affecting the balance sheet for new rental housing construction include:

- capital costs,
- soft costs,
- design costs,
- development cost charges,
- municipal fees and permits,
- property taxes,
- interest costs during construction,
- GST.

The Income Statement

The income statement is affected by:

a) rental rates;
b) mortgage interest;
c) operating expenses; and,
d) net return on investment.

The elements which make up the balance sheet have an impact on the overall per unit costs while the elements that make up the income statement affect the net operating income and the overall return on investment.

From an investor perspective, investors are looking for stable cash flow and low risk.

Appendix B: The U.S. Based Experience

Units Produced Through the Low Income Tax Credit Program

Year	Total	Unfurnished	Furnished	Condominiums and Cooperatives	Subsidized and Tax Credit*	Others
		Number	Number	Number	Number	Number
2007	253,000	103,700	1,200	93,400	45,400	9,300
2006	283,500	117,200	3,300	102,800	52,700	7,500
2005	258,000	111,900	5,400	81,800	45,200	13,600
2004	285,400	155,000	4,400	59,600	55,700	10,800
2003	261,000	167,800	2,200	41,900	37,800	11,300
2002	288,100	204,100	3,100	37,400	32,100	11,500
2001	281,000	193,100	4,500	45,700	26,700	11,100
2000	300,000	226,200	2,900	36,100	24,400	10,500
1999	291,800	225,900	7,700	34,200	13,600	10,400
1998	273,900	209,900	3,000	34,500	20,000	6,600
1997	247,100	189,200	3,000	35,800	14,100	5,000
1996	251,300	191,300	2,400	36,900	14,200	6,400
1995	212,400	155,000	1,600	36,400	13,700	5,700
1994	154,900	104,000	1,100	34,400	11,800	3,600
1993	124,800	77,200	2,700	32,000	7,700	5,200
1992	155,200	110,200	700	31,100	7,000	6,000
1991	216,500	165,300	2,800	35,300	9,600	3,500
1990	294,400	214,300	2,900	52,600	13,800	10,800
1989	337,900	246,400	4,900	59,700	19,800	7,200
1988	388,600	284,500	4,300	76,200	15,200	8,400
1987	474,200	345,600	7,900	92,300	17,000	11,300
1986	550,200	407,600	11,600	101,700	23,300	6,000
1985	533,300	364,500	7,400	135,800	12,000	13,700
1984	506,000	313,200	9,800	143,600	28,500	10,700
1983	370,700	191,500	4,700	111,800	47,700	15,100
1982	288,200	117,000	5,400	107,900	48,000	10,000
1981	332,500	135,400	6,000	112,600	66,100	12,500
1980	418,900	196,100	9,700	122,800	79,900	10,500
1979	439,300	241,200	12,100	91,800	87,500	6,700
1978	362,700	228,700	11,200	54,500	54,100	14,300
1977	289,400	195,600	16,200	43,000	26,000	8,700
1976	258,200	157,000	12,800	46,300	32,000	10,000
1975	371,400	223,100	11,100	84,600	38,900	13,800
1974	685,400	405,500	20,700	159,000	75,400	25,000
1973	774,800	531,700	36,200	98,100	82,000	26,800
1972	718,200	497,900	37,700	57,300	93,800	31,400
1971	583,400	334,400	32,200	49,100	104,800	63,000
1970	526,000	328,400	48,200	72,500	55,900	21,000

Source: U.S. Census Bureau: Table 8. Total Apartments Completed in Buildings With 5 or more units

Note: Other includes time-sharing units, continuing care retirement units, and turnkey housing (privately-built for and sold to local public housing authorities upon completion)

Appendix C: Summary of Measures Evaluated

The following table shows the potential improvement in the return on equity for concrete and wood frame construction based on current development realities. The table includes information on the different incentives analyzed in the report including the estimated improvement in the return on equity as well as the remaining gap or shortfall to be filled.

Potential Reduction in the Economic Viability Gap (Concrete Development)			
	Base Case Return on Equity (%)	With Incentive (Return on Equity	Shortfall/ Surplus to Return on Equity of 10%
Elimination of GST on new rental housing	1.68	1.75	(8.25)
Lower interest rate during construction	1.68	1.71	(8.29)
One-time capital grant ($50,000 per unit)	1.68	2.33	(7.67)
Waiving development cost charges	1.68	1.83	(8.17)
Reduction in property taxes	1.68	2.27	(7.73)
1% reduction in mortgage interest	1.68	2.8	(7.20)
Reduction in mortgage premiums	1.68	1.71	(8.29)
Increase in rental revenue ($250 per unit per month)	1.68	3.37	(6.63)
Free land	1.68	4.73	(5.27)
CCA at 4%, transferability of losses against other income	1.68	3.77	(6.23)

Potential Reduction in the Economic Viability Gap (Wood Development)			
	Base Case Return on Equity (%)	With Incentive (Return on Equity	Shortfall/ Surplus to Return on Equity of 10%
Elimination of GST on new rental housing	4.32	4.65	(5.35)
Lower interest rate during construction	4.32	4.42	(5.58)
One-time capital grant ($50,000 per unit)	4.32	12.75	2.75
Waiving development cost charges	4.32	5.13	(4.87)
Reduction in property taxes	4.32	4.96	(5.04)
1% reduction in mortgage interest	4.32	7.2	(2.80)
Reduction in mortgage premiums	4.32	4.47	(5.53)
Increase in rental revenue ($250 per unit per month)	4.32	8.29	(1.71)
Free land	4.32	15.91	5.90
CCA at 4%, transferability of losses against other income	4.32	6.07	(3.93)

Specialized Study 2D
Purpose-Built Rental Housing ~ Economics of New Supply

November 2009

Prepared for:
City of Vancouver

By:
Coriolis Consulting Corp.

Table of Contents

1.0 Introduction

1.1 Background

The City of Vancouver is completing a detailed market rental housing strategy. As input to the strategy, the City commissioned several specialized studies to assist staff with the development of policies and tools to encourage the preservation and expansion of the purpose-built rental housing stock.

Coriolis Consulting Corp. was retained to complete Study 2D: "Purpose-Built Rental Housing – Economics of New Supply". This study examines the financial gap between the cost of creating new market rental housing units and the market value of the new rental units to help identify and evaluate potential mechanisms to bridge this financial gap.

The regional development industry has been far more interested in the creation of new strata titled residential units than the creation of new rental housing stock. There are several reasons for this, including:

- Strata titled residential development supports higher land values than rental housing development (based on prevailing market conditions). In order to compete for development sites, developers have to pay the market price for land, which can then only be supported by strata titled projects.
- Strata development has (notwithstanding cyclical downturns including the current one) been very profitable for developers.
- Most developers want to build, sell, and move on to the next project. They are not interested in holding investment property. While there are some investors interested in acquiring rental housing projects, it is less profitable for developers to build for the rental investment market than for the unit sale market.
- Investor interest may be constrained by the risk of government intervention in the performance of the investment (controls on rent increases, limitations on evictions for renovation to increase rents, limitations on conversion to strata, limitations on demolition). Constrained apartment building investor interest leads to constrained developer interest.

The purpose of Study 2D is to evaluate the potential to close the financial gap between purpose-built rental and strata residential development. This report documents our analysis and findings.

1.2 Approach

Our analysis included four main steps:

1. Interviews with selected developers and institutional investors regarding issues such as capital availability, investment strategies, government policies/regulations, and other factors that affect developer interest in creating rental housing stock.
2. Financial modeling of new rental housing and new strata title projects to identify the financial gap, in terms of supportable land value and in terms of developer profit. This modeling was done for a variety of cases to see how the gap varies by structure type (wood versus concrete) and local market conditions (e.g. the high, mid, or low price segments of the market) in different parts of the City.
3. Sensitivity testing to see what kinds of changes in different variables are needed to bridge the gap and to identify the most fertile areas for policy work.
4. Identification/evaluation of strategies and policies.

2.0 Interviews with Developers and Institutional Investors

We contacted seven senior representatives from local multifamily residential developers, institutional investors and commercial real estate brokers who are (or have been) active involved in the Vancouver rental housing market to discuss their perspectives on a wide range of issues that affect their company's interest in the Vancouver rental housing market, including:

- Availability of investment and lending capital for rental housing investment versus new strata title projects for sale.
- Level of interest in rental housing as an investment.
- Major concerns about rental housing development and investment and ways to address the concerns.

Comments that we received can be summarized as follows:

1. Multifamily residential developers indicated that (in the absence of incentives) rental housing development in Vancouver is not financially attractive. The achievable rents (and value of the building) do not justify the cost and risk involved in creating the rental housing. If costs on rental housing could be reduced (through changes in development policies), all of the developers indicated that they would be very interested in building new rental housing in the City.
2. Pension fund investors indicated that annual returns on rental housing investment in Vancouver are low in comparison to other parts of Canada. They noted that this is because Vancouver rental apartment investors are typically willing to accept low annual yields due to the expectation that the overall investment return will benefit from higher long term capital gains than in other jurisdictions due to:

    - The expectation that rents in Vancouver will increase at a strong pace over time and occupancy will remain high in comparison to other markets.
    - The expectation that existing rental properties will appreciate due to long term opportunities for redevelopment.
    - Historic trends in rental building values, which have increased significantly in Vancouver over the long term.

    Institutional investors usually require a minimum annual return (to fund pension or other ongoing annual obligations) so other Canadian rental housing markets (offering higher initial annual yields) are more attractive.
3. Policies and regulations that the City of Vancouver could examine that have the potential to improve the financial viability of rental housing development include (in no particular order):

    - Provide bonus density (on-site or transferable) for developers of rental projects. If the bonus is large enough, it will effectively reduce the average land cost for a developer,

potentially making rental housing development financially viable. It could be necessary to make bonus density for rental housing transferable in some cases if the bonus cannot be accommodated on-site.

- Significantly reduce parking requirements for new rental housing, particularly in locations that are well-served by transit. This will reduce the cost of rental housing construction.
- Streamline the approvals process for rental projects. This could reduce the land holding costs for rental developers and provide more certainty about approvals (reducing risk and the profit margin required by a developer).
- Create certainty about the City's incentives and the expected contributions (DCLs, fees, CACs) to developers. If incentives are short term or subject to change, they will be less effective at increasing the interest in rental housing development. Also, if rental housing development incentives are accompanied by an expectation that developers will make financial contributions (such as a CAC), it will reduce the effectiveness of any incentives.
- Eliminate or reduce the City's portion of property taxes while projects are used for rental. This will reduce operating costs and increase the net operating income from the new project, increasing the project's value.
- Eliminate or reduce the permitting fees and DCLs for new rental projects. This will reduce overall project creation costs if these reduced costs are not shifted to increase land value (which will be the case if the relaxations are not permitted for non-rental projects).
- Make City owned land available at low cost for rental development.
- Examine opportunities to allow rental residential in industrial areas as part of mixed use industrial/residential projects. If rental was the only form of housing that is permitted, this could help reduce land acquisition costs for new rental projects, improving project viability.

4. The Federal government should consider the following:

    - Eliminate GST on new rental buildings[1]. Currently, a purchaser of a new rental building is required to pay GST on the value of the building when rentals in the new building commence (if the developer holds the building, they are required to pay the GST). There are no offsetting input tax credits as residential rents are GST exempt. Therefore, the overall cost to the investor from acquiring a new rental building is increased by the GST.
    - Allow for a capital gains rollover provision on rental housing investment. Most developers did not expect this to increase the financial viability of rental housing development, but they did expect it to increase the number of existing apartment building owners that would be interested in selling their buildings. This could increase the number of potential redevelopment properties available to accommodate new rental housing development.

[1] Some developers noted that GST also impacts strata residential projects. The new unit purchasers (not the developer) pay the GST, but this reduces the sales price that a strata developer could achieve in the absence of GST on new residential projects. Therefore, the financial performance of a new strata building is also affected by GST.

- Provided a tax credit or some other financial incentive to make rental development more attractive.

5. The Province should consider the following:

- Eliminate rent control on new rental buildings.
- Eliminate PST on construction of new rental buildings.
- Provide a tax credit to make rental development more attractive.

3.0 Financial Viability of Rental Housing Development

In Vancouver, strata titled residential development supports significantly higher land values than rental housing development (based on prevailing market conditions). In order to compete for development sites, developers have to pay the market price for land which can then only be supported by strata titled projects. Therefore, for any given site, there is financial gap between developing a new rental housing project and a new strata titled housing project. This financial gap means that development of new purpose-built rental housing in Vancouver is not financially attractive for developers[2].

We completed detailed financial analysis on a wide variety of case study development sites (varying by location, size, zoning) in the City of Vancouver to analyze the viability of new rental housing development and the financial gap between rental housing and strata residential development. This section summarizes our approach and the results of our analysis.

3.1 Approach

To estimate the financial gap between new market rental housing development and strata titled development (or the most valuable use if it is not strata), we used the following approach:

1. We worked with the City to identify development scenarios to model on 19 different case study sites, examining a wide variety of locations, zoning districts and forms of housing development. The case studies include scenarios which examine rental housing development on:
   - Sites currently zoned for highrise apartment use (primarily on the West Side as there are few highrise zoned sites on the East Side of Vancouver).
   - Sites currently zoned for lowrise (4 storey or less) apartment use.
   - Sites currently zoned for mixed use apartment and retail development.
   - Sites currently zoned for attached housing or townhouse use.
   - Sites currently zoned for single family use. These cases examine the viability of building rental apartment projects on sites zoned for single family development. This would require rezoning to allow rental apartment on these sites. Single family sites near Skytrain

[2] Although strata titled development is more attractive from a financial perspective, developers have occasionally built new rental projects in the City. However, this has typically occurred when there is a downturn in the strata market and when site acquisition costs have been low. Typically, these buildings have been strata titled at the outset, but operated as rental, so the owner can elect to convert the building to condominiums at a later date. In addition, some rental buildings have been created as part of a rezoning agreement with the City for large projects that also include strata titled residential units.

Stations were selected for these scenarios on the basis that the City might consider densification near Skytrain Stations.

- Site currently zoned for industrial use. These cases examine the viability of building rental apartment projects on sites zoned for industrial development. This would require rezoning to allow rental apartment on these sites.

2. For each scenario, we collected the market data needed to model rental and non rental development (usually strata titled development, but is some cases single family and in some cases mixed residential and commercial development). Information on our research sources is included in Appendix 1.
3. We constructed financial models to evaluate project performance at each site in a series of steps:
   - First, we estimated the value of the property under existing use (if it was improved with an existing building).
   - Next, we estimated the land value of the site under existing zoning, assuming redevelopment with a strata residential (or mixed-use) project.
   - The higher of these two estimates represents the market value of the property and is the land acquisition price used in the subsequent rental housing development scenario.
   - We then used our rental housing development proforma (with land acquisition cost from the previous step plus a 15% developer's profit margin allowance) to estimate the deficit that a rental housing developer would incur if they proceeded with rental development on the site. This deficit is the estimated financial gap that would need to be closed to make rental housing development financially attractive.

3.2 Results of Analysis

The detailed case study financial analysis is included in Appendix 1. Exhibit 1 summarizes the results of the analysis for each site. This analysis is based on existing City of Vancouver land use and development policies and fee schedules (with the exception of the short term rental incentive program that was recently introduced).

For each of the 19 case study sites, the exhibit shows the following information and estimates:

1. Whether the case study analysis assumes that the new rental project is woodframe or concrete construction. The type of construction was selected based on the kinds of projects that are typically being built in the site's neighbourhood.
2. The estimated market value of the site under existing use as an income producing building (or its existing use if it is not an income producing building).

3. The estimated market land value of the site for redevelopment under existing zoning. For two sites (sites 3 and 4, which are the only case study sites subject to the existing rate of change policy), this value was estimated under two different scenarios:

   - A land value estimate assuming the City's rate of change policy does not apply. The rate of change policy requires that any new development in the RM and FM Districts include the replacement of rental housing that is demolished as part of a redevelopment project that includes 6 units or more. Because this study is being completed to inform the City on the kinds of policies that could make rental development financially attractive, our analysis looks at development economics in the absence of the existing rate of change policy.
   - An estimate assuming the City's existing rate of change policy remains in place.

   The rate of change policy does not apply to any of the other case studies because they do not include existing rental housing or are not in the applicable zoning districts (RM and FM).

4. The total estimated market of value of the site (the higher of the two preceding estimates) and the market value per square foot buildable. This is the cost that a developer would incur to acquire the site for rental housing development (or any other development).

5. The estimated land value supportable by the assumed rental housing development at the site (per square foot buildable). This column illustrates three important points:

   - If the land value supportable by rental housing (item 5) is lower than the estimated market value of the site (item 4), then rental housing development is not financially attractive at that site.
   - If the land value supportable by rental housing is positive, then rental housing is financially attractive if the site can be acquired at the estimated rental land value (or lower).
   - If the land value supportable by rental housing is negative, then rental housing is not financially attractive, even if the land has no cost.

6. The estimated deficit from developing a rental housing project (the financial gap), assuming the rental developer requires an industry standard developer's profit margin on the rental development and acquires the site at the estimated full market value (in most cases the land value supported by strata residential or mixed use development). This is the gap that needs to be closed in order to make rental development financially attractive.

7. The financial gap associated with new rental housing development expressed as a percentage of overall project creation costs (all project costs plus the assumed developer's profit). This figure is useful because the case study projects have different overall creation costs (total cost and per square foot cost). This figure provides a meaningful comparison between each case study and provides a sense of the magnitude of the financial gap in terms of overall project costs.

Exhibit 1: Summary of Case Study Financial Analysis

	Site	Zone	Description of Scenario	Woodframe or Concrete	Value Under Existing Use	Estimated Land Value	Estimated Property Value	Estimated Property Value ($psfb)	Estimated Land Value for Rental	Estimated Deficit ($psfb) for New Rental Project	Financial Gap as % of Rental Creation Cost
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	$19.0 million	$16.6 million	$19.0 million	$121 psfb	$14 psfb	-$124 psfb	24%
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	vacant site	$20.8 million	$20.8 million	$148 psfb	$30 psfb	-$137 psfb	25%
3	1002 West 10th Ave	RM-3	Redevelopment of Existing Older Walk up Apartment Building to Highrise Apartments	concrete	$2.9 million	$4.0 million	$4.0 million	$126 psfb	$7 psfb	-$138 psfb	27%
3ii	1003 West 10th Ave	RM-3	Redevelopment of Existing Older Walk up Apartment Building to Highrise Apartments	concrete	$2.9 million	$2.9 million[3]	$2.9 million	$92 psfb	$7 psfb	-$99 psfb	21%
4	1981 West 10th Ave	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	$2.6 million	$3.0 million	$3.0 million	$163 psfb	$52 psfb	-$129 psfb	27%
4ii	1982 West 10th Ave	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	$2.6 million	$2.3 million[4]	$2.6 million	$143 psfb	$52 psfb	-$108 psfb	24%

[3] This land value estimate takes into account the existing rate of change policy that requires the replacement of existing rental units within any new development (of 6 or more units) in RM and FM Districts. The impact of the rate of change policy is a reduction in the market value of the land due to the requirement to include rental units in the new development. The impact is site specific as it depends on the amount of existing rental housing at the site.

[4] This value takes into account the City's existing rate of change policy.

Exhibit 1 Continued: Summary of Case Study Financial Analysis

	Site	Zone	Description of Scenario	Woodframe or Concrete	Value Under Existing Use	Estimated Land Value	Estimated Property Value	Estimated Property Value ($psfb)	Estimated Land Value for Rental	Estimated Deficit ($psfb) for New Rental Project	Financial Gap as % of Rental Creation Cost
5	2301 West 3rd Ave	RM-4	Redevelopment of Existing Duplex to Lowrise Apartment @ 1.45 FSR	woodframe	$1.2 million	$3.0 million	$3.0 million	$162 psfb	$58 psfb	-$118 psfb	25%
6	1524 West 71st Ave	RM-4	Redevelopment of Existing Detached Houses to Lowrise Apartment @ 1.45 FSR	woodframe	$1.8 million	$1.8 million	$1.8 million	$106 psfb	$28 psfb	-$90 psfb	23%
7	1880 Frances St	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	woodframe	$1.5 million	$1.6 million	$1.6 million	$91 psfb	$24 psfb	-$60 psfb	16%
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	concrete	$2.9 million	$5.4 million	$5.4 million	$140 psfb	$57 psfb	-$94 psfb	21%
9	3401 Cambie St	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	woodframe	$5.8 million	$6.1 million	$6.1 million	$135 psfb	$64 psfb	-$81 psfb	18%
10	5704 Fraser St	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	woodframe	$1.1 million	$2.4 million	$2.4 million	$67 psfb	$21 psfb	-$53 psfb	15%
11	4000 Main St	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	woodframe	vacant site	$4.0 million	$4.0 million	$92 psfb	$46 psfb	-$52 psfb	13%
12	1344 Kingsway	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	woodframe	vacant site	$1.5 million	$1.5 million	$48 psfb	$17 psfb	-$39 psfb	12%

Exhibit 1 Continued: Summary of Case Study Financial Analysis

	Site	Zone	Description of Scenario	Woodframe or Concrete	Value Under Existing Use	Estimated Land Value	Estimated Property Value	Estimated Property Value ($psfb)	Estimated Land Value for Rental	Estimated Deficit ($psfb) for New Rental Project	Financial Gap as % of Rental Creation Cost
13	2054 Commercial Dr	C-2C1	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 3.0 FSR	woodframe	$2.1 million	$2.2 million	$2.2 million	$88 psfb	$41 psfb	-$53 psfb	14%
14	1206 East 22nd Ave	RM-1	Redevelopment of Old Detached Houses to Townhouse @ 1.2 FSR	woodframe	$1.3 million	$1.5 million	$1.5 million	$100 psfb	$73 psfb	-$40 psfb	11%
15	1122 East 22nd Ave	RT-10	Redevelopment of Old Detached Houses to Townhouse @ 0.75 FSR	woodframe	$2.1 million	$2.0 million	$2.1 million	$174 psfb	$76 psfb	-$109 psfb	26%
16	605 West 41st Ave	RS-1	Assumes Rezoning of RS1 site near Skytrain Station to Allow Redevelopment of Existing Houses to Lowrise Rental Apartment @ 1.45 FSR	woodframe	$2.3 million	n/a	$2.3 million	$110 psfb	$43 psfb	-$76 psfb	19%
17	4021 Kamloops	RS-1	Assumes Rezoning of RS1 site near Skytrain Station to Allow Redevelopment of Existing Houses to Lowrise Rental Apartment @ 1.45 FSR	woodframe	$1.5 million	n/a	$1.5 million	$90 psfb	$1 psfb	-$102 psfb	27%
18	Industrial Site	M2, I2 or I1	Assumes Rezoning of Industrial Site to Allow Lowrise Rental Apartment @ 1.45 FSR	woodframe	$3.3 million	n/a	$3.3 million	$52 psfb	$33 psfb	-$21 psfb	6%
19	Industrial Site	M2, I2 or I2	Assumes Rezoning of Industrial Site to Allow Concrete Rental Apartment @ 3.0 FSR	concrete	$3.3 million	n/a	$3.3 million	$25 psfb	-$9 psfb	-$39 psfb	10%

All of these case studies show that rental housing development does not support enough land value to be financially viable. In all of the cases we analyzed, the value of the property under its existing use or as at redevelopment site for strata development is more valuable than the supportable land value for rental development.

However, it should be noted that in almost every case study (18 out of 19), the supportable land value from rental housing is greater than zero. Therefore, one important conclusion from this analysis is that rental housing development would be financially attractive throughout the City if land acquisition costs were lower. This suggests that policies which create rental housing development sites or density at a low cost to a developer would make rental development financially attractive (in the absence of any other policy changes).

However, rental developers currently need to pay full market value for development sites so (as shown in the exhibit) development of rental housing results in a financial gap in comparison to strata titled development (or existing use) on all of the case study sites. In some cases, the calculated financial gap is widened because the property is not yet a redevelopment candidate as the site is more valuable under its existing use is than as a development site (sites 1 and 15 illustrate this point).

For sites that are development candidates (i.e., the land value exceeds the value of the income stream generated by the existing building), the deficit varies depending on the location of the site and the type of development (lowrise woodframe versus concrete) because the economics of development vary by location and by form of development:

1. The financial gap for highrise (west side) rental development (sites 2 and 3) ranges from about 21% to 27% of total project creation cost. Rental development supports a land value in the range of $7 to $30 per sq.ft. buildable on these sites, while market land values are in the range of about $120 to $150 per sq.ft. buildable.
2. The financial gap for mixed-use rental and retail development on C-2 sites (sites 8 to 13) ranges from about 12% to 21% of total project creation cost. Rental development supports a land value in the range of $57 to $64 per sq.ft. buildable for the west side sites and $17 to $46 per sq.ft. buildable for the east side sites, while market land values are in the range of about $65 to $140 per sq.ft. buildable.
3. The financial gap for west side woodframe lowrise rental development (sites 4 and 5) ranges from about 24% to 27% of total project creation cost. Rental development supports a land value in the range of $52 to $58 per sq.ft. buildable on these sites, while market land values are in the range of about $140 to $160 per sq.ft. buildable.
4. The financial gap for east side and Marpole woodframe lowrise rental development (sites 6 and 7) ranges from about 16% to 23% of total project creation cost. Rental development supports a land value in the range of $24 to $28 per sq.ft. buildable on these sites, while market land values are in the range of about $90 to $100 per sq.ft. buildable.

5. The financial gap for east side rental townhouse development (site 14) ranges from about to 10% to 15% of total project creation cost. Rental development supports a land value in the range of $70 to $75 per sq.ft. buildable on these sites, while market land values are in the range of about $100 to $110 per sq.ft. buildable.
6. The financial gap for lowrise rental apartment development on sites currently zoned for single family use (sites 16 and 17) ranges from about 19% to 27% of total project creation cost. Rental development supports a lower land value than the value of the existing single family lots.
7. The financial gap rental for apartment development on sites currently zoned for industrial use (sites 18 and 19) ranges from about 6% to 10% of total project creation cost. Rental development supports a lower land value than the value of industrial land.

Under current market conditions and zoning, rental housing development is not financially attractive. However, the rental development financial gap varies by structure type. The gap is smallest (on a per sq.ft. buildable basis) for woodframe projects (townhouse and apartment). The gap is the largest for highrise rental projects because concrete projects have higher costs per square foot than woodframe, but do not generate significantly higher rents. The gap for mixed use rental and retail projects varies depending on how attractive/marketable the location is for retail development and whether the project is woodframe or concrete.

3.3 Sensitivity of Results to Changes in Major Assumptions

The case study analysis in Section 3.2 examines the comparative financial viability of developing new rental housing with developing new strata housing.

The analysis is based a variety of assumptions about project revenues (rental rates and strata prices), cap rates for rental buildings, construction costs and project financing costs. Almost all of the assumptions used in the analysis are common to both the rental and strata development scenarios (all land costs, construction costs, profit allowances and financing costs) so if there are changes in the marketplace, the changes would have a similar impact on both scenarios and they would not change the major conclusions of the analysis.

However, it is possible that changes in the marketplace could impact the revenue assumptions (rental rates, cap rates and strata unit prices) in the rental and strata scenarios differently. For example:

- If strata unit prices declined significantly, then land values could decline and the financial gap associated with rental development could decline.
- If cap rates for new rental projects declined, then the value of a new rental building would increase and the financial gap associated with rental development would decline.

- If the rental rate for new rental units increases, then the value of a new rental building would increase and the financial gap associated with rental development would decline.
- The opposite is also true for each of these points.

Our revenue assumptions are based on detailed analysis of new strata unit prices, rent rates for new (or newer) apartments and cap rates for apartment buildings in the City of Vancouver as of mid-2009 (outlined in Appendix 1). Over time, if the value of new strata and new rental housing units change in opposite directions, the financial gap associated with building new rental housing will change. However, it would require major changes in the relative value of new rental housing and new strata housing in the City of Vancouver to significantly reduce the estimated financial gap. For example, rents would need to rise by about 30% to 40% or more (with no change in strata prices) to eliminate the financial gap on many of the case study sites.

4.0 Illustration of the Financial Impact of Possible Policy Options

As shown in Section 3.2, all of the case studies indicated that there is a significant financial deficit associated with developing new rental housing. In order for private market rental housing to be financially attractive for a developer, this gap needs to be closed.

Therefore, we tested the sensitivity of the financial gap to changes in variables that may be policy-amenable. Please note that we are not recommending these policies, just testing the financial impact of each option.

For this analysis, we tested the sensitivity of the estimated financial gap on six of the case study sites already examined in Section 3.2. These sites were selected as they represent a cross section of locations and zoning districts in the City and include analysis for both concrete and woodframe buildings. Exhibit 2 shows the sites selected for this sensitivity analysis and the base case estimate of the financial gap for each site in the absence of policies to improve financial performance (the base case gap ranges from $60 to $137 per sq.ft. buildable for these case studies). Because the gap ranges for different projects, the required policy changes to make development financially attractive will vary by project type and location.

Exhibit 2: Estimated Base Case Rental Housing Financial Gap

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb

There are four general options for improving the financial viability of rental housing development and closing the financial gap. This includes policies aimed at:

1. Increasing the revenue (and increasing the value) of new rental housing.
2. Reducing the operating costs (and increasing the value) of new rental housing.
3. Reducing the cost of constructing new rental housing.
4. Reducing the cost of land acquisition for new rental housing.

This section examines policies and strategies that could be considered under each of these four options.

Section 4.5 also comments on additional strategies that have been suggested to increase the supply of new rental housing, but are not associated with improving the financial performance of new rental housing projects.

Changes to income tax legislation for rental housing (such as capital gains tax, recapture, and depreciation rates) could also improve the viability of new rental development. Any changes that reduce the cost of taxes associated with owning new rental housing will increase the value of new rental housing (by reducing the cap rate that buyer would require if their taxes were reduced) and should improve the economic viability of new rental construction.

However, it is important to note that the implications of changes to income tax legislation will vary significantly for different investors. For example, some rental investors (such as pension plans) do not typically pay income taxes so this type of investor would not have any incentive to pay more for any given rental building. Other types of investors may be able to off-set taxable gains/income from losses on other properties. Tax implications also vary significantly from property to property depending on total net income and the amount of any capital gain (which will likely vary depending on the holding period). Therefore, the impact of changes to capital gains taxes, recapture and depreciation rates on the economics of new rental housing development will vary widely depending on the building and the investor so this report does not examine the impact of changes to income tax rules associated with operating and holding a new rental apartment building. The implications of income tax regulations are being considered in a separate study that the City commissioned (Study 2C by the Altus Group).

4.1 Increasing the Revenue at New Rental Projects

Increasing the potential revenue at a new rental project will increase its market value and improve it's the financial viability of new rental development. There are two ways that the potential revenue at new rental projects could increase:

1. Market rents could increase. Rents will likely increase if the supply of rental housing is constrained. In addition, rents could rise if Provincial legislation controlling rent increases was eliminated.

2. Rent supplements could be offered. We estimated the minimum rent supplement that would be required to make rental development financially attractive at six of the case study sites[5].

The results of our analysis are summarized in the following exhibit.

Exhibit 3: Estimated Required Rent Supplement to Make Rental Development Financially Viable

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Rent Supplement Needed to Eliminate Entire Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	$0.78 per sq.ft. per month or $470 per unit per month
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	$0.85 per sq.ft. per month or $510 per unit per month
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	$0.69 per sq.ft. per month or $410 per unit per month
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	$0.33 per sq.ft. per month or $200 per unit
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	$0.59 per sq.ft. per month or $355 per unit per month
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	$0.33 per sq.ft. per month or $200 per unit per month

As shown in the exhibit, rent supplements would need to range between about $200 and $510 per month (between about 15% and 35% of estimated rents) in perpetuity to make new rental apartment development financially viable. The high end of this range is for highrise concrete buildings and the lower end is for east side woodframe buildings.

[5] Our analysis assumes that the increased rent (from the supplements) does not result in higher operating costs. For example, we assume that the higher revenue does not increase the assessed value of the property and increase the property taxes. If operating costs increase, the rent supplements would need to be higher.

4.2 Reducing Operating Costs at New Rental Projects

Reducing operating costs at a new rental project will increase its market value and improve its financial viability. There are two ways that the operating costs at new rental project could be reduced:

1. The City could eliminate or reduce its portion of property taxes.
2. GST and PST could be eliminated on rental building operating costs.

We analyze the potential impact of each of these policies separately. The results of our analysis are summarized in the following sections.

4.2.1 Eliminating City of Vancouver Property Taxes

The City could eliminate or reduce the City's share of annual property taxes on a new rental project. To demonstrate the maximum potential impact, our analysis assumed that the City's portion of property taxes would be eliminated in perpetuity.

The results of our analysis are summarized in the following exhibit.

Exhibit 4: Impact of Eliminating City of Vancouver Property Taxes

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Estimated Deficit with No City of Vancouver Property Taxes	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$115 psfb	$9 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$128 psfb	$9 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$118 psfb	$11 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$50 psfb	$10 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$86 psfb	$8 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$44 psfb	$8 psfb

As shown in the exhibit, the elimination of the City's portion of property taxes would have a small positive impact on the financial viability of rental housing development, but on its own, eliminating City property taxes would not make rental development financially attractive.

4.2.2 Eliminating GST and PST on Operating Costs

Sales taxes are not paid on property tax so this would not affect the portion of operating costs made up of property tax.

PST is paid on some operating costs and GST is paid on all operating costs (excluding taxes). We do not have detailed information on the amount of PST embedded in apartment building operating costs, but our understanding is that, combined, GST and PST typically account for between 7% and 8% of total (non property tax) apartment building operating costs. Therefore, if GST and PST were both eliminated it could reduce operating costs by about 7% to 8%. For a

new rental building, we estimate that operating costs would be about 20% of gross revenues. If costs declined by 7% to 8%, operating cost would total about 18.5% of gross revenues. This would have a small positive impact on the value of a new rental building.

The results of our analysis are summarized in the following exhibit.

Exhibit 4b: Impact of Eliminating GST and PST on Operating Costs

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Estimated Deficit with No PST and GST on Operating Costs	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$119 psfb	$5 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$132 psfb	$5 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$123 psfb	$6 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$54 psfb	$6 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$89 psfb	$5 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$47 psfb	$5 psfb

As shown in the exhibit, the elimination of PST and GST on operating costs would have a small positive impact on the financial viability of rental housing development. On its own, eliminating these sales taxes would not make rental development financially attractive.

4.3 Reducing Construction Costs for New Rental Projects

Reducing construction costs at a new rental project will improve its financial viability. There are four ways that the construction costs at new rental project could be reduced:

1. The City could eliminate or reduce parking requirements.
2. The City could eliminate or reduce permit fees and levies.
3. GST and PST could be eliminated on new rental buildings.
4. An income tax credit could be provided to investors of new rental development projects.

We analyze the potential impact of each of these policies separately. The results of our analysis are summarized in the following sections.

4.3.1 Eliminating Parking Requirements

The City could eliminate or reduce parking requirements. Construction costs for underground parking are currently in the range of $35,000 to $40,000 per stall. Our sensitivity tests assumed no residential parking would be required to illustrate the maximum potential impact of this change.

The results of our analysis are summarized in the following exhibit.

Exhibit 5a: Impact of Eliminating Parking Requirements

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Deficit with No Residential Parking	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$87 psfb	$37 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$99 psfb	$38 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$81 psfb	$48 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$12 psfb	$48 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$54 psfb	$40 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$6 psfb	$46 psfb

As shown in the exhibit, the elimination of residential parking requirements could have a significant positive impact on the financial viability of rental housing development. On its own, eliminating parking would not make rental development financially attractive.

4.3.2 Eliminating City Permit Fees and DCLs

The City could eliminate or reduce permit fees and levies. Our sensitivity tests assumed elimination of application fees (building permit, development permit) and DCLs[6] for a rental

[6] At the time of our analysis, the City wide DCL was scheduled to be increased from $6.00 to $10.20 per sq.ft. (plus an inflation adjustment) as of January 2010. Our analysis assumes the DCL will be $10.20 per sq.ft. However, the City is considering a delay in the full implementation of the increased DCL so our sensitivity analysis may overstate the impact of eliminating the DCL.

building to illustrate the maximum potential impact of this change. The results of our analysis are summarized in the following exhibit.

Exhibit 5b: Impact of Eliminating City Permit Fees and DCLs

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Deficit with No DCLs or Application Fees	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$112 psfb	$12 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$125 psfb	$12 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$116 psfb	$13 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$47 psfb	$13 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$82 psfb	$12 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$39 psfb	$13 psfb

As shown in the exhibit, the elimination of City fees and DCLs would have a small positive impact on the financial viability of rental housing development. On its own, eliminating fees and DCLs would not make rental development financially attractive.

4.3.3 Eliminating GST and PST on New Rental Construction

The Federal and Provincial governments could reduce or eliminate GST and PST on new rental buildings.

- A purchaser of a new rental building is required to pay GST on the value of the building when rentals in the new building commence (if the developer holds the building, the developer pays the GST). There are no offsetting input tax credits as residential rents are GST exempt. Therefore, the overall cost to the investor from acquiring a new rental building is increased by the GST. If new buildings were exempt from GST, then the purchaser could pay a higher amount for the building (the amount of the net GST) and still realize the same return on investment. The net GST on a new apartment building is currently 3.2% (5% less the 36% rebate). If the developer holds the building for income, the overall creation cost is reduced by the net GST.
- PST is currently charged on some of the inputs to a construction project (mainly materials, and tools plus some other items). Based on a review of available information on this topic, our understanding is that PST accounts for roughly 2% to 3% of all construction costs (all costs excluding land). Our analysis assumes that if new apartment buildings were exempt from PST, then project costs (excluding land related costs) would decline by about 2.5%.

The results of our analysis are summarized in the following exhibit.

Exhibit 5c: Impact of Eliminating GST and PST on New Rental Development

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental	Deficit with Elimination of GST+PST on New Construction	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$108 psfb	$16 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$121 psfb	$16 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$114 psfb	$15 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$45 psfb	$15 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$80 psfb	$14 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$39 psfb	$13 psfb

As shown in the exhibit, the elimination of GST and PST would have a small positive impact on the financial viability of rental housing development. On its own, eliminating sales taxes would not make rental development financially attractive.

4.3.4 Rental Housing Investment Tax Credit

Tax credits are used in other countries to attract investment in new rental housing. For example, in the United States the tax credits have been a major factor in the development of affordable rental housing. In the US, the Federal government (and State governments) forego tax revenue in return for significant investments in qualifying rental housing projects. In Canada, similar programs are used to stimulate investment in mining exploration, oil and gas development and film production.

The Federal and Provincial governments could implement an income tax credit (or a tax deduction) to investors of new rental development projects. The impact that an investment tax credit would have on the viability of rental development will depend on the design of the tax credit. For example, would it be offered by both levels of government, who would be eligible, what share of costs of would be eligible, what rate would apply to the credit?

Without a specific definition and design for a rental housing tax credit, it is not possible to estimate the specific impact on the financial gap. However, for this analysis, we have made the following assumptions to illustrate the potential impact:

- The introduction of a rental housing income tax credit would help create a new pool of investment capital in the market available for financing rental housing development.
- The investors in the rental housing would realize a return on their investment from the tax credit and a share of operating income (or sales proceeds) from the rental building. Investors would not realize interest income on their investment.
- This would create a new funding source for rental development that would replace traditional borrowing so a new rental project would not incur any interest costs on project costs (construction and land costs).

Based on these assumptions, we examined the impact on the financial gap of eliminating all financing/interest costs associated with a new rental development project. It is possible that this analysis underestimates the impact if the design of the tax credit allowed other project costs (in addition to financing) to be off-set[7].

The results of our analysis are summarized in the following exhibit.

[7] This would require a mechanism that allowed the benefit of the tax credit to individual investors to flow back to the project to off-set overall project costs. For example, if the tax credit was large enough, investors may not need to recoup all of their original investment into the project from the income (or sales proceeds) generated by the project. Some of their investment could be left in the project to off-set costs.

Exhibit 5d: Impact of Providing Investment Tax Credit – Eliminating Financing Costs

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Deficit with No Financing Costs Due to Income Tax Credit	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$91 psfb	$33 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$100 psfb	$37 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$99 psfb	$30 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$39 psfb	$21 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$67 psfb	$8 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$30 psfb	$22 psfb

As shown in the exhibit, an income tax credit has the potential to make a significant positive impact on the financial viability of rental housing development. Our analysis indicates that, on its own, an investment tax credit would not make rental development financially attractive. However, this depends on the specific design and rules associated with the tax credit.

4.4 Reducing Land Acquisition Costs for New Rental Projects

Reducing land acquisition costs for a new rental project will improve the financial viability of new development. There are three ways that land acquisition costs at new rental project could be reduced:

1. The City could grant a higher density for full rental projects than can be obtained by strata projects at the same site.

2. The City could grant a rental density bonus (in addition the already permitted strata density).
3. The City could allow rental apartment development on sites currently zoned for single family or industrial development.
4. The City could provide City owned land to rental developers at the market land value that is supportable by rental development.

We analyzed the potential impact of each of these policies separately. The results of our analysis are summarized in the following sections.

4.4.1 Increasing Density for Rental-only Projects

The City could have two different permitted densities for a multifamily project at the same site. For example, a strata project could be built under the permitted density in the existing zoning district, but a full rental project could be granted a higher permitted density. With the aim of determining whether or not increasing the permitted density for a rental project will close the estimated financial gap significantly, our sensitivity tests assumed:

- An additional 2.0 FSR would be permitted on highrise zoned sites, meaning a site zoned for 3.0 FSR would be permitted to achieve a total of 5.0 FSR if it was all rental housing.
- An additional 0.5 FSR would be permitted on lowrise zoned sites (RM-4 in our case studies), meaning an increase from about 1.45 FSR to 1.95 FSR for a full rental project. This extra 0.5 FSR could probably be achieved by allowing these sites to go to 4 storeys (or perhaps 6 storeys as permitted in woodframe under the recent changes to the BC Building Code). It should be noted that on small sites, this bonus may be too small to create a marketable number of rental units to sell to an investor.
- An additional 1.0 FSR would be permitted on C-2 zoned case study sites, meaning a site zoned for 2.5 FSR would be permitted to achieve a total of 3.0 FSR if it was all rental housing. This would likely require an increase in permitted height from 4 storeys to 6 storeys or more.

For each site we also estimated the density that would be required to eliminate the financial gap (assume the entire building is rental housing). The results of our analysis are summarized in the following exhibit.

Exhibit 6a: Impact of Increasing Permitted Density for Rental-only Projects

	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	Deficit with Increased Density: All Rental Building	Estimated FSR Needed for Rental to be Viable: All Rental Building	Estimated Reduction in Financial Gap
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$71 psfb with a 2.0 FSR Increase	30+FSR	$53 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$80 psfb with a 2.0 FSR Increase	30+FSR	$57 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$74 psfb with a 0.5 FSR Increase	not possible in wood (over 3.0 FSR)	$55 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	Woodframe	-$60 psfb	-$32 psfb with a 0.5 FSR Bonus	not possible in wood (over 3.0 FSR)	$28 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	Concrete	-$94 psfb	-$49 psfb with a 1.0 FSR Increase	6.0 FSR	$45 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	Woodframe	-$52 psfb	-$25 psfb with a 1.0 FSR Increase	6.0 FSR	$27 psfb

As shown in the exhibit, increasing the permitted density at a rental project can make a significant positive impact on the financial viability of rental housing development. On its own, increasing the permitted density at a rental project will not make rental development financially attractive (in the absence of very large increases in permitted FSR, which are probably not physically achievable or acceptable).

4.4.2 Granting Bonus Rental Housing Density

The City could keep the densities permitted under existing multifamily zoning in place, but include an additional density bonus for strata projects that also include rental. For example, a strata developer could build up to the existing permitted density. However, a higher density could be obtained if the all of the additional density was used for rental housing.

As shown in Exhibit 1 in Section 3.2, rental development supports a positive land value on almost all of the sites that we analyzed. Therefore, rental housing development is viable if land has a low cost. If density bonuses are granted (in addition to the existing permitted strata density), development will be financially viable even if the entire bonus is required to be rental.

Therefore, this strategy can make rental development (in a mixed strata and rental project) financially attractive on its own in the absence of other policies and initiatives.

It should be noted that financial viability on its own will not ensure that a mixed strata and rental project will be attractive to developers. There are likely other issues that need to be resolved in a mixed strata and rental building, such as: the marketability of the rental component to investors (given that it could be small), the allocation of operating and maintenance costs between the strata and rental units, and any potential impacts on the marketability of strata units in a mixed strata and rental building.

Mixing rental and strata units will likely work best in larger projects.

4.4.3 Rental Development on Single Family and Industrial Sites

The City could allow rental apartment development on sites currently zoned for single family or industrial development. These sites would have a lower land acquisition cost than sites already zoned for strata residential use. The lower land acquisition cost would improve the viability of rental housing development.

Case studies 17 to 19 in Exhibit 1 in Section 3.2, examined the financial viability of development rental apartment projects on sites currently zoned for single family and industrial use. These case studies assumed that a rental project would be permitted at each site, but strata residential would not so the properties could be acquired by the rental developer based on each property's value under existing zoning, rather than the higher value that would be supported by strata development.

Each of these case studies indicated that rental housing is not financially attractive on single family sites or industrial sites (although the viability is closer than at sites already zoned for strata residential) in the absence of other policy initiatives to improve the performance of rental housing.

4.4.4 Making City Owned Land Available for Rental Development

The City could provide City owned land to rental developers at a price that is supportable by rental development.

As shown in Exhibit 1 in Section 3.2, rental development supports a positive land value on almost all of the sites that we analyzed. Therefore, rental housing development is viable if land has a low cost. If the City made land available to rental housing developers at a price that is supportable be rental development, rental development would be financially viable.

Therefore, this strategy can make rental development financially attractive on its own in the absence of other policies and initiatives.

If City owned land is made available at the value supported by rental development, the estimated financial gap associated with rental housing development will be eliminated.

It should be noted that, although this will make rental development financially attractive, this approach effectively results in the City subsidizing new rental development.

4.5 Requiring Rental Housing in New Strata Projects

One option that the City asked us to comment on is whether or not a requirement to include rental housing units as part of a project is financially viable.

Rental housing supports a lower land value than strata so any requirement to include rental (through zoning) as part of a new strata project will reduce the land value that a developer can afford to pay for a site (and still earn the required developer's profit). If a requirement is introduced to include rental housing in new strata projects, the primary impact will be to reduce the value of development sites. If sites can be acquired at an appropriate (lower land value), then new mixed strata and rental projects will be financially viable. However, if the rental requirement is high, development site values could be significantly reduced (as illustrated by the existing rate of change policy) which could change the highest and best use of a property from a multifamily residential development site to the existing use (or an alternative permitted use, such as retail, single family or duplex). Therefore, the overall impact of a requirement to include rental housing in new strata projects could be to reduce the number of strata projects that proceed due to a lack of sites that are financially attractive for redevelopment.

4.6 Summary of Analysis

The exhibit in Appendix 2 summarizes the analysis of each of the different policy options that we analyzed from a financial perspective. This section identifies the notable points.

There are some policy initiatives and strategies that could be considered which, on their own, have the potential to eliminate (or almost eliminate) the financial gap associated with rental housing development. Policies which appear to have the ability to eliminate the financial gap include:

1. Providing rent supplements to rental building owners. To make rental apartment development financially attractive, rent supplements in the range of $200 to $510 per unit per month (about 15% to 35% of estimated rent) would be required in perpetuity.
2. Providing bonus rental density (in addition to the already permitted strata density) to multifamily residential developers. This will make the development of mixed rental and strata projects financially attractive.
3. Making City owned land available to rental housing developers at the market value supported by rental development. Rental housing is viable if land acquisition costs are low enough so this strategy will make rental development viable (although it represents a significant subsidy from the City to rental developers).

There is a wide variety of initiatives and policies that could be considered by the City or other levels of government which would reduce the financial gap associated with rental housing development, but on their own, will not eliminate the gap. Therefore, a collection of these strategies would be required to make a new rental project financially attractive. A combination of the following options has the ability to eliminate the financial gap and make rental housing development viable:

1. Introducing an investment tax credit for new rental housing has the potential to make a significant positive impact on the financial viability of rental housing development. However, the magnitude of the impact depends on the specific design and rules associated with the tax credit (it may be possible to design a tax credit that eliminates the estimated financial gap).
2. Reducing the parking requirement for rental buildings can significantly reduce the rental housing development financial gap.
3. Eliminating City permit fees and DCLs will have a modest impact on reducing the estimated financial gap.
4. Increasing the permitted density for a new rental project can significantly reduce the rental housing development financial gap. However, to eliminate the gap, density increases would need to be so large that they are either not physically achievable (for woodframe projects) or are not likely be acceptable to the community.
5. Eliminating the City of Vancouver portion of property taxes also has a material positive impact on the viability of rental housing development, although the magnitude of the benefit is less than reduced parking and increased permitted density.

6. Eliminating GST and PST on new rental construction will have a modest impact on reducing the estimated financial gap.
7. Eliminating GST and PST on rental operating costs will have a modest impact on reducing the estimated financial gap.
8. Allowing rental housing development (but no strata development) on sites currently zoned for single family or industrial use will have a significant impact on reducing the estimated financial gap.

The City could also consider a requirement for new multifamily residential projects to include some rental housing. However, depending on the amount of rental housing required, this policy could reduce the number of multifamily projects that proceed due to a lack of sites that are financially attractive for redevelopment (as the rental requirement will change the highest and best use of development sites).

5.0 Conclusions

The City has three general policy directions that can be considered to ensure there is an ongoing inventory of rental housing. The City can:

1. Focus on policies that encourage the creation of new rental housing.
2. Focus on policies that protect the existing stock.
3. Do both.

This report focuses on identifying policies that could help create new rental housing stock (item 1 above). Policies that can encourage the retention of the existing rental stock are outlined in Study 2A "Inventory and Risk Analysis".

The main conclusions from our analysis are as follows:

1. Rental housing development is only financially viable under existing policies and regulations if land acquisition costs are low. Given competition from strata housing developers for the same types of development sites, there are limited (or no) opportunities for developers to acquire residentially zoned sites at prices that make rental housing viable.

2. The financial gap between strata and rental housing development is significant, but it varies depending on location and form of construction. Generally, the gap ranges from about 15% to 25% of total rental housing creation cost[8], indicating that the cost of creating new rental housing needs to be reduced by about 15% to 25% to make it financially attractive (or the completed value needs to increase by a similar amount).

3. There are few single policy changes that, on their own, have the potential to make new rental housing development financially viable. The policy options that appear to (on their own) have the most potential to encourage new rental housing development are as follows:

    - Providing bonus rental density (in addition to the already permitted strata density) to multifamily residential developers. This will make the development of mixed rental and strata projects financially attractive.
    - Introducing a rental housing investment tax credit. The effectiveness of a tax credit will depend on its design.
    - Making City owned land available to rental housing developers at the market value supported by rental development. Rental housing is viable if land acquisition costs are low enough so this strategy will make rental development viable.
    - Providing rent supplements to rental building owners. To make rental apartment development financially attractive, minimum rent supplements in the range of $200 to

[8] Rental housing creation cost is defined as the sum of land costs plus all project construction costs (including professional fees, permits, financing, marketing, management) plus an industry standard profit margin for the rental housing developer.

$510 per unit per month (about 15% to 35% of estimated market rents) would be required in perpetuity.

- Requiring new multifamily residential projects to include some rental housing. However, depending on the amount of rental housing required, this policy could reduce the number of multifamily projects that proceed due to a lack of sites that are financially attractive for redevelopment (as the rental requirement will change the highest and best use of development sites).
- Upzoning existing rental properties that are redevelopment candidates to allow the replacement of existing rental units in addition to strata units.
- Identifying existing rental properties where new infill development can occur (through an addition to an existing building or creation of new building) with relaxations to existing height limits or setback requirements to avoid demolition of an existing rental building (but without increasing permitted density).
- Allowing any unused existing development potential or rental bonus density to be transferable to another development site (similar to transferable density for heritage revitalization projects) because some sites will not be able to use all existing permitted density or accommodate a floorspace bonus (due to physical reasons, design issues, or neighbourhood concerns).

4. On their own, no other policy options appear to have the potential to make rental housing development financially attractive. However, there is a wide variety of initiatives and policies that could be considered by the City or other levels of government which would reduce the financial gap, so a collection of these strategies would need to be used to make new rental development financially attractive. A combination of the following options has the ability to eliminate the financial gap and make rental housing development viable:

    - Reducing the parking requirement for rental buildings can significantly reduce the rental housing development financial gap.
    - Eliminating City permit fees and DCLs will have a modest impact on reducing the estimated financial gap.
    - Increasing the permitted density for a new rental-only project will significantly reduce the rental housing development financial gap. However, to eliminate the gap, density increases would need to be so large that they are either not physically achievable (for woodframe projects) or are not likely be acceptable to the community.
    - Eliminating the City of Vancouver portion of property taxes will have a modest impact on reducing the estimated financial gap.
    - Eliminating GST and PST on new rental construction will have a modest impact on reducing the estimated financial gap.
    - Eliminating GST and PST on rental operating costs will have a modest impact on reducing the estimated financial gap.

- Allowing rental housing development (but no strata development) on sites currently zoned for single family or industrial use will have a significant impact on reducing the estimated financial gap.

6.0 Appendix 1 – Case Study Financial Analysis

Approach

This appendix includes financial analysis for 17 different case study sites in different locations and zoning districts in the City of Vancouver. For each site, we completed financial analysis for a variety of different scenarios so each case study sites includes more than one financial scenario:

- First, we estimated the value of the property under existing use (if it was improved with an existing building).
- Next, we estimated the value of the site under existing zoning assuming development as a strata titled residential (or mixed-use) project.
- The higher of these two estimates represents the market value of the property and is the land acquisition price assumed in the subsequent rental housing development scenario.
- We then used our rental housing development proforma (with land acquisition cost estimated from the previous step plus a 15% developer's profit margin allowance) to estimate the deficit that a rental housing developer would incur if they proceeded with rental development on the site. This deficit is the estimated financial gap that would need to be closed to make rental housing development financially attractive at each site.

For each scenario, we collected the market data needed to model rental and non rental development (usually strata titled development, but is some case single family and in some cases mixed residential and commercial development). All of our market data and construction cost data is based on market conditions as of mid-2009. Our research included the following sources:

1. For our new rental building revenue and operating assumptions, we relied on a combination of published rental market data (from CMHC and major commercial realty companies), actual operating data from a sample of newer and older rental housing projects, actual rental data from a wide sample of new investor owned condominium units, and discussions with developers about the likely achievable rents and operating costs for a new rental building.
2. Capitalization rate assumptions for the new rental building analysis are based on a review of cap rates for a large sample of recent apartment building sales (including some new rental projects in the Lower Mainland) and discussions with commercial realtors and developers who are (or have been) active in the rental housing market. More information on cap rate analysis and selection is contained in the following sections.
3. For our strata residential analysis, we relied on data from MPC Intelligence about sales prices at new condominium projects currently marketing in Vancouver, detailed MLS sales information for condominium sales prices at new projects in Vancouver, and discussions with multifamily residential developers about achievable sales prices for new product in Vancouver.
4. Construction costs assumptions for all scenarios are based on a combination of discussions with multifamily developers who are active in the Vancouver market and published information from different cost consultants (BDC Development Consultants, BTY Group and Altus Group). Our analysis also includes other creation cost assumptions (such as soft costs, City

fees/DCLs, property taxes, marketing, financing, regional government levies, site servicing/landscaping) that are based on typical costs for new development projects and on the City's rates as of June 2009.

Major Assumptions

The detailed assumptions for all of our analysis are included in each of the proformas contained in this appendix. Some assumptions vary on a property by property basis (to reflect building form, and neighbourhood market conditions).

The major assumptions for our strata titled development financial analysis are as follows:

1. Average sales price assumptions vary by location and form of construction. The following table summarizes the range in average unit sales price assumptions.

	Concrete apartment	Woodframe apartment	Townhouse
West side	$675 per sq.ft.	$525 to $625 per sq.ft.	n/a
East side	n/a	$425 to $495 per sq.ft.	$400 per sq.ft.

2. Marketing and commissions are assumed to be 5% of sale revenue.
3. A demolition cost allowance is included. For most properties this allowance ranges from about $25,000 to $50,000 depending on the size of the existing building. This is not based on a detailed estimate of demolition costs, it is an allowance. If actual demolition costs vary slightly from this range, it will not have a significant impact on the results of the analysis. For a few buildings, the cost allowance is higher because the existing building is very large.
4. Hard residential construction costs are assumed to range from about $160 to $180 for woodframe apartment and townhouse projects and $240 to $250 per sq.ft. for concrete apartment projects. These costs include parking. For our sensitivity analysis that assumed a reduction in parking, we assumed that underground parking costs range from $35,000 to $40,000 per stall. The construction costs are based on information published by BDC Development Consultants, Altus Group, BTY Group and on discussions we had with developers who are active in the Vancouver multifamily residential market.
5. Soft costs (for project management, engineering, design, legal, survey, new home warranties and other professional fees) are 10% of hard costs.
6. A contingency allowance of 5% of hard and soft costs is included.
7. Interim financing is charged on all costs at 7% per year.
8. The City wide DCL is assumed to be $3.00 per sq.ft. for projects of 1.2 FSR or less and $10.20 per sq.ft. for other projects. These are the rates scheduled to be implemented in 2010 (although this is under review).
9. The GVRD DCC is included.
10. Property taxes are based on 2009 mill rates and our own estimate of the assessed value during development.

11. Developer's profit is set at 15% of project value, which is a typical profit margin target for new multifamily development in Vancouver.

The major assumptions for our new rental housing development financial analysis are as follows:

1. Average monthly rental rates for new projects vary by location and structure type (which leads to a significant variation in the value of a new rental building by location and construction type). The following table summarizes the range in average monthly rental rate assumptions.

	Concrete apartment	Woodframe apartment	Townhouse
West side	$2.50 per sq.ft.	$2.15 to 2.40 per sq.ft.	n/a
East side	n/a	$2.00 to $2.25 per sq.ft.	$1.85 per sq.ft.

2. Operating costs (excluding property taxes) are assumed to equal 15% to 20% of revenues. This is based on a detailed analysis of actual operating costs at a wide variety of existing rental buildings (including some newer buildings). This generally works out to between $3400 and $3800 per rental apartment unit (plus taxes).
3. Property taxes are based on 2009 mill rates and our estimates of the value of the building upon completion.
4. To estimate overall project value, the net operating income is capitalized at 5.5%. This rate is based on a detailed analysis of capitalization rates for recent apartment building sales in Vancouver and on discussions with developers about cap rates for some of the newest rental buildings in the Lower Mainland. A more detailed explanation about cap rate selection is provided in the next section of this appendix.
5. All construction and demolition costs are the same as in the strata analysis, except hard costs are assumed to be $20 per sq.ft. lower than the strata residential costs. This accounts for an assumed lower cost for finishing and fixtures in a rental building versus a strata building.
6. Developer's profit is set at 15% of project value.
7. Land acquisition cost is based on our estimate of the property's value under highest and best use.

Selecting Capitalization Rates for the Rental Analysis

To estimate the overall market value of the existing rental buildings in each case study, we capitalized the estimated net operating income. The assumed cap rates used in the case studies are based on a detailed analysis of capitalization rates for recent apartment building sales in Vancouver, taking into account that we have used market rents in the operating assumptions (so there is limited opportunity to increase rents).

We collected information about cap rates for rental building sales in Vancouver from 2006 to 2009, including the only recent sales of new apartment buildings in the region (one in North Vancouver and one in Coquitlam). The following table summarizes the sales of rental buildings in Vancouver and nearby municipalities for which cap rate information was available.

Year	Address	Municipality	Sale Price	Suites	$ / Suite	Reported Cap Rate	Comments
2009	6712 Mckay Ave	Burnaby	$4,275,000	28	$152,679	4.30%	
2009	7428 6th Street	Burnaby	$2,775,000	20	$138,750	6.10%	
2009	6433 McKay Ave	Burnaby	$4,700,000	36	$130,556	3.80%	
2009	6822 Arcola Street	Burnaby	$1,180,000	10	$118,000	4.90%	
2009	1110 Howie	Coquitlam	$3,351,750	36	$93,104	5.60%	
2009	1200 Howie	Coquitlam	$6,950,000	66	$105,303	5.50%	
2009	535-555 Shaw Avenue	Coquitlam	$11,950,000	111	$107,658	5.30%	
2009	3091 Lincoln	Coquitlam	$10,450,000	66	$158,333	5.75%	new building
2009	436 Ash Street	New Westminster	$1,315,000	14	$93,929	5.40%	
2009	135 E. 19th	North Vancouver	$3,338,000	23	$145,130	5.50%	
2009	1630 Chesterfield	North Vancouver	$1,925,000	11	$175,000	4.60%	
2009	1169 E. 27th	North Vancouver	$8,397,442	32	$281,250	5.75%	new building
2009	1510 East 4th	Vancouver	$2,600,000	16	$162,500	5.30%	rents higher than typical market rent
2009	8655 Laurel Street	Vancouver	$2,385,000	18	$132,500	4.80%	
2009	1015 W. 13th	Vancouver	$2,860,000	11	$260,000	5.30%	was asking 4.8% cap rate
2009	825 SW Marine	Vancouver	$2,288,000	17	$134,588	4.50%	
2009	1578 W. 11th	Vancouver	$2,885,000	16	$180,313	3.70%	rents below market
2009	2275 W. 39th	Vancouver	$2,530,000	10	$253,000	4.30%	
2009	2355 W. 1st	Vancouver	$4,000,000	17	$235,294	4.30%	
2009	1766 West 11th Avenue	Vancouver	$1,830,000	7	$261,429	3.80%	
2009	2033 Beach Avenue	Vancouver	$11,368,000	36	$315,778	3.40%	rents below market
2009	2054 Comox Street	Vancouver	$3,696,700	23	$160,726	4.50%	
2007	2250 Dundas	Vancouver	$1,700,000	18	$94,444	4.20%	rents below market
2008	2067 Pandora	Vancouver	$1,525,000	8	$190,625	5.20%	
2008	5550 Yew Street	Vancouver	$4,400,000	22	$200,000	3.20%	rents well below market
2007	3010 Ontario	Vancouver	$1,600,000	8	$200,000	4.50%	strata building so potential to convert
ate 200	520 N Nanaimo	Vancouver	$2,475,000	20	$123,750	5.00%	
2006	336 East 7th Ave	Vancouver	$2,200,000	18	$122,222	4.70%	
2006	3777 Cambie Street	Vancouver	$3,675,000	25	$147,000	4.60%	
2007	1876 West Broadway	Vancouver	$3,000,000	21	$142,857	4.70%	extensively renovated
2007	1626 West 12th Avenue	Vancouver	$2,390,000	11	$217,273	5.50%	
2007	8678 Osler	Vancouver	$1,800,000	15	$120,000	4.00%	rents significantly below market
2007	1225 West 13th Avenue	Vancouver	$2,150,000	14	$153,571	4.10%	rents significantly below market
2008	3122 Quebec	Vancouver	$2,305,000	13	$177,308	4.00%	well maintained - rents below market
2007	132 West 71st Avenue	Vancouver	$7,475,000	54	$138,426	4.60%	well maintained building
2008	234 East 14th	Vancouver	$3,215,000	22	$146,136	3.80%	
2006	1016 East 8th	Vancouver	$4,180,000	35	$119,429	4.60%	well maintained - numerous upgrades
2006	2255 Cypress	Vancouver	$7,500,000	47	$159,574	4.20%	well maintained - numerous upgrades
ate 200	1026 West 13th Avenue	Vancouver	$1,768,000	10	$176,800	4.90%	some units below market rents
2007	1171 West 12th Avenue	Vancouver	$4,795,000	22	$217,955	5.40%	renovated - rents at market

The following table summarizes information about cap rates for Vancouver rental buildings currently listed for sale.

List Date	Address	Municipality	List Price	Suites	$ / Suite	List Cap Rate	Comments
2009	2143 Kingsway	Vancouver	$4,600,000	14 + 4 CRUs		4.80%	5.3% cap rate on projected rents
2009	4141 Oak Street	Vancouver	$2,100,000	12	$175,000	4.30%	5.0% on projected rents
2009	1250 Nicola	Vancouver	$3,480,000	14	$248,571	3.80%	4.6% on projected rents
2009	222 East 15th	Vancouver	$1,750,000	12	$145,833	3.80%	5.2% on projected rents
2009	1440 West 71st Ave	Vancouver	$1,500,000	10	$150,000	2.70%	5.3% on projected rents
2009	935 Jervis	Vancouver	$5,695,000	19	$299,737	4.80%	cap rate based on projected rents
2009	1775 Pendrell	Vancouver	$4,449,000	19	$234,158	4.30%	

The cap rates for the older Vancouver buildings range from a low of about 3.2% to a high of about 5.5%. However, it is important to note that the cap rates are heavily influenced by a variety of factors, such as:

1. If a property has favourable financing in placed that can be assumed by the purchaser, it has a downward influence on the cap rate.
2. If there is potential to increase the existing rents in a building (i.e. rents are below market), it has a downward influence o the cap rate.
3. If a site has the potential for redevelopment in the future, it has a downward influence on the cap rate.
4. If a property is well maintained (and if it is concrete), there can be a downward influence on the cap rate.
5. If there is an opportunity to reduce operating costs, there can be a downward influence on the cap rate.

Controlling for these factors, our analysis indicates that cap rates for older buildings in Vancouver tend to range between about 4.6% and 5.3%.

Another important observation from our analysis is that cap rates have little variation by location. However, rental building values do have significant variation by location due differences in achievable rent by location.

Overall, we anticipate that a typical cap rate for an older rental building in Vancouver (controlling for the factors outlined above) would currently be about 5.0%.

We are aware of two recent sales of new rental apartment buildings Lower Mainland (both built by Polygon as part of rezoning agreements). Both of these reportedly traded at cap rates of 5.75% (on projected net income). We contacted Polygon to discuss the cap rate achieved at each building, the factors affecting the cap rates, and the potential implications for a new rental building in Vancouver. Vancouver likely has greater investor interest then the municipalities where these two buildings are located so these buildings likely represent an upper bound on the cap rate for a new building in Vancouver.

To select a capitalization rate to apply to our case studies for the new rental apartment buildings, we considered the following:

1. Owners of new rental apartment buildings face significant competition from the stock of investor owned strata units in new condominium projects in Vancouver. Investor condominiums target similar price points as a new rental project would target. The investor condo rental market is a large and growing segment of the rental market so a new rental project will likely face increasing competition from similar priced rental units over time. This has the potential to create higher vacant in new rental apartments (in comparison to older lower priced rental apartments) over time and constrain potential rental rate growth. This creates upward pressure on the cap rate that a new apartment building requires (in comparison to an older rental building).

2. Because new rental units target the highest price points in the rental market, there probably less ability to increase rents over time in a new building than in an older building. This creates upward pressure on the cap rate that a new apartment building requires (in comparison to an older rental building).
3. The acquisition price for a new rental building (particularly a large building) is high. Therefore, there are fewer potential purchasers of a large new apartment building than an older less valuable rental building. Given the smaller pool of potential purchasers, developers/vendors of new apartment buildings have less ability to increase the sales price of the building (and reduce the cap rate) during negotiations than vendors of an older less expensive building. This has an upward influence on cap rates for new buildings.
4. An investor who acquires a new rental building (that has not yet been occupied) from a developer/builder is required to pay GST on market value of the building. Because there GST is not charged on residential rents, there are no offsetting input tax credits that can be applied over time to recover the GST paid. Therefore, an investor who acquires a new building from a developer/builder prior to occupancy of the building incurs GST and will require a higher cap than an investor who acquires an older building.
5. Developers that we contacted who are active in the Vancouver multifamily market and are planning to build (or who have built) new rental apartment buildings indicated the cap rate for new buildings should be higher than cap rates for older rental buildings.

Overall, we think that a cap rate for a new rental building in Vancouver would be significantly higher than the cap rates indicated by the sales of the older buildings (about 5.0%) and less than the cap rate indicted by the sales of the two new apartment buildings located outside of Vancouver.

Therefore, our analysis assumes that the cap rate for a new rental building in Vancouver would be about 5.5%.

Case Study 1: 130 West Broadway

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Commercial Building Under Existing Use and Zoning						
Case Study Number	1A					
Property Address	1130 West Broadway					
Description	Moutain Equipment Co-op Building					
Assumptions						
Existing Zoning	C3A					
Permitted Maximum FSR	3.0	FSR				
Site Size	52,324	sq.ft. or	412	by	127	
Existing Building						
Number of Storeys	1					
Existing Built FSR	1.10	FSR				
Total Gross Floorspace	57,800	sq.ft.				
Gross Office Floorspace	8,000	sq.ft.				
Gross Retail Floorspace	49,800	sq.ft.				
Net Rentable Office Floorspace	8,000	or	100%	of gross office floorspace		
Net Rentable Retail Floorspace	49,800	or	100%	of gross retail floorspace		
Office Lease Rate	$22.00	per sq.ft. per year net				
Retail Lease Rate	$22.00	per sq.ft. per year net				
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Business/Other Assessment	$12,734,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$252,420					
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$1,986,420					
Commercial Vacancy	$99,321					
Commercial Property Taxes	$252,420					
Commercial Operating Costs (excluding tax)	$398,400					
Commercial Net Operating Income	$1,236,279					
Capitalization Rate on Commercial Space	6.5%					
Capitalized Value of Commercial Space	$19,019,677					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$19,019,677					
Value per Gross Square Foot of Space	$329.06					
Value per Gross Square Foot of Site Area	$363.50					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	1B					
Property Address	1130 West Broadway					
Description	Moutain Equipment Co-op Building					
Site and Building Size						
Existing Zoning	C3A					
Permitted Maximum FSR	3.0	FSR				
Site Size	52,324	sq.ft. or	412	by	127	
Assumed Density	3.00	FSR				
Total Gross Floorspace	156,972	sq.ft.				
Retail Space	25,000	sq.ft.				
Gross Residential Floorspace	131,972	sq.ft.				
Net Residential Floorspace	114,816	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	153.0	units				
Number of Parking Stalls	1	per multifamily unit plus		153		
	2.0	per 1000 sq.ft. of retail space or		50		
				203	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$650.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$500.77	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$200,000					
Permit Fees	$239,000					
Site Servicing	$314,024	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$200					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$249	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$12,734,000					
Taxes during Year 1 - see existing building analysis	$252,420					
Assessed Value Year 2	$37,315,083	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.670974%					
Taxes during Year 2	$250,375					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$74,630,166					
Capitalized Value of Retail Space	$12,519,231					
Total Sales Revenue	$87,149,397					
Less Marketing and Commissions	$3,981,893					
Net Sales Revenue	$83,167,504					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$200,000					
Permit Fees	$239,000					
Site Servicing	$314,024					
Landscaping	$0					
Hard Construction Costs	$39,014,400					
Soft Costs	$3,932,842					
Contingency on Hard and Soft Costs	$2,185,013					
GVRD Sewer Levy - Residential	$90,270					
GVRD Sewer Levy - Commercial	$11,075					
City Wide DCL's	$1,601,114					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$502,795					
Interim Financing	$2,524,753					
Total Construction Costs	$50,615,288					
Total Construction Costs per sq.ft.	$322					
Developer's Profit Margin Allowance	$13,072,410					
Residual to Land and Land Carry	**$19,479,807**					
Less interim financing on land for 24 months (7%)	$2,479,248					
Less property purchase tax	$338,011					
Residual Land Value	**$16,662,547**					
Residual Value per sq.ft. of site	**$318.45**					
Residual Value per sq.ft. buildable	**$106.15**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	1C					
Property Address	130 West Broadway					
Description	Moutain Equipment Co-op Building					
Site and Building Size						
Existing Zoning	C3A					
Permitted Maximum FSR	3.0	FSR				
Site Size	52,324	sq.ft. or	412	by	127	
Assumed Density	3.00	FSR				
Total Gross Floorspace	156,972	sq.ft.				
Retail Space	25,000	sq.ft.				
Gross Residential Floorspace	131,972	sq.ft.				
Net Residential Floorspace	114,816	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	191.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		172		
	2.0	per 1000 sq.ft. of retail space or		50		
				222	in total	
Construction Costs						
Demolition Costs	$200,000					
Permit Fees	$239,000					
Site Servicing	$314,024	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$185					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$241	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$12,734,000					
Taxes during Year 1 - see existing building analysis	$252,420					
Assessed Value Year 2	$31,458,519	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.670974%					
Taxes during Year 2	$211,079					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.50	per sq.ft. per month or		$1,500	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$100.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$45,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$190,158					
Business/Other Assessment	$11,000,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$218,048					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$1,293,048					
Commercial Vacancy	$64,652					
Commercial Property Taxes	$218,048					
Commercial Operating Costs	$200,000					
Commercial Net Operating Income	$810,348					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$12,466,886					
Apartment Gross Potential Rent	$3,444,469					
Parking Revenue	$206,400					
Laundry Revenue	$0					
Total Gross Potential Revenue	$3,650,869					
Apartment Vacancy	$36,509					
Effective Gross Apartment Revenue	$3,614,361					
Residential Property Taxes	$190,158					
Residential Operating Expenses	$722,872					
Net Operating Income	$2,701,331					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$49,115,101					
Total Capitalized Value of Building	$61,581,987					
Less Sales Commissions	$615,820					
Net Value	$60,966,167					
Land Costs						
Acquisition Costs	$19,019,677					
PTT	$378,394					
Holding During Approvals and Construction	$2,715,730					
Total Land Costs	$22,113,800					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$200,000					
Permit Fees	$239,000					
Site Servicing	$314,024					
Landscaping	$0					
Hard Construction Costs	$37,794,820					
Soft Costs	$3,810,884					
Contingency	$2,117,936					
GVRD Sewer Levy - Residential	$112,690					
GVRD Sewer Levy - Commercial	$11,075					
City Wide DCL's	$1,601,114					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$463,499					
Interim Financing	$2,449,915					
Total Construction Costs	$49,114,959					
Total Construction Costs per sq.ft.	$313					
Developer's Profit Margin Allowance	$9,237,298					
Total Creation Cost	**$80,466,057**					
Deficit = Net Value less Total Creation Cost	**-$19,499,889**					
Deficit per Square Foot of Gross Residential Space	**-$148**					
Deficit per Square Foot of Total Gross Space	-$124					

Case Study 2: 2080 West Broadway

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	2A					
Property Address	2080 West Broadway					
Description	IGA Parking Lot - Broadway and Maple					
Site and Building Size						
Existing Zoning	C3A					
Permitted Maximum FSR	3.0	FSR				
Site Size	46,875	sq.ft. or	375	by	125	
Assumed Density	3.00	FSR				
Total Gross Floorspace	140,625	sq.ft.				
Retail Space	21,486	sq.ft.				
Gross Residential Floorspace	119,139	sq.ft.				
Net Residential Floorspace	103,651	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	770	sq.ft.				
Number of Units	135.0	units				
Number of Parking Stalls	1	per multifamily unit plus		135		
	2.0	per 1000 sq.ft. of retail space or		43		
				178	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$700.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$45.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$643.85	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$0					
Permit Fees	$220,000					
Site Servicing	$285,823	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$200					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$248	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$19,200,000					
Taxes during Year 1 - see existing building analysis	$380,593					
Assessed Value Year 2	$36,277,826	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.660876%					
Taxes during Year 2	$239,751					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$72,555,651					
Capitalized Value of Retail Space	$13,833,678					
Total Sales Revenue	$86,389,329					
Less Marketing and Commissions	$3,904,456					
Net Sales Revenue	$82,484,873					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$0					
Permit Fees	$220,000					
Site Servicing	$285,823					
Landscaping	$0					
Hard Construction Costs	$34,815,280					
Soft Costs	$3,510,110					
Contingency on Hard and Soft Costs	$1,941,561					
GVRD Sewer Levy - Residential	$79,650					
GVRD Sewer Levy - Commercial	$9,518					
City Wide DCL's	$1,434,375					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$620,345					
Interim Financing	$2,253,125					
Total Construction Costs	$45,169,787					
Total Construction Costs per sq.ft.	$321					
Developer's Profit Margin Allowance	$12,958,399					
Residual to Land and Land Carry	**$24,356,687**					
Less interim financing on land for 24 months (7%)	$3,099,942					
Less property purchase tax	$423,135					
Residual Land Value	**$20,833,610**					
Residual Value per sq.ft. of site	**$444.45**					
Residual Value per sq.ft. buildable	**$148.15**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	2B					
Property Address	2080 West Broadway					
Description	IGA Parking Lot - Broadway and Maple					
Site and Building Size						
Existing Zoning	C3A					
Permitted Maximum FSR	3.0	FSR				
Site Size	46,875	sq.ft. or	375	by	125	
Assumed Density	3.00	FSR				
Total Gross Floorspace	140,625	sq.ft.				
Retail Space	21,486	sq.ft.				
Gross Residential Floorspace	119,139	sq.ft.				
Net Residential Floorspace	103,651	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	173.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		156		
	2.0	per 1000 sq.ft. of retail space or		43		
				199	in total	
Construction Costs						
Demolition Costs	$0					
Permit Fees	$220,000					
Site Servicing	$285,823	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$185					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$241	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$19,200,000					
Taxes during Year 1 - see existing building analysis	$380,593					
Assessed Value Year 2	$28,155,809	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.660876%					
Taxes during Year 2	$186,075					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$45.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.50	per sq.ft. per month or		$1,500	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$100.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$40,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$169,029					
Business/Other Assessment	$11,000,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$218,048					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$1,356,806
Commercial Vacancy	$67,840
Commercial Property Taxes	$218,048
Commercial Operating Costs	$171,888
Commercial Net Operating Income	$899,030
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$13,831,226
Apartment Gross Potential Rent	$3,109,528
Parking Revenue	$187,200
Laundry Revenue	$0
Total Gross Potential Revenue	$3,296,728
Apartment Vacancy	$32,967
Effective Gross Apartment Revenue	$3,263,761
Residential Property Taxes	$169,029
Residential Operating Expenses	$652,752
Net Operating Income	$2,441,979
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$44,399,624
Total Capitalized Value of Building	$58,230,850
Less Sales Commissions	$582,308
Net Value	$57,648,541
Land Costs	
Acquisition Costs	$20,833,610
PTT	$414,672
Holding During Approvals and Construction	$2,974,760
Total Land Costs	$24,223,042
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$0
Permit Fees	$220,000
Site Servicing	$285,823
Landscaping	$0
Hard Construction Costs	$33,868,195
Soft Costs	$3,415,402
Contingency	$1,889,471
GVRD Sewer Levy - Residential	$102,070
GVRD Sewer Levy - Commercial	$9,518
City Wide DCL's	$1,434,375
Area Specific DCL's	$0
Property Taxes during approvals and construction	$566,668
Interim Financing	$2,194,055
Total Construction Costs	$43,985,577
Total Construction Costs per sq.ft.	$313
Developer's Profit Margin Allowance	$8,734,627
Total Creation Cost	**$76,943,247**
Deficit = Net Value less Total Creation Cost	**-$19,294,706**
Deficit per Square Foot of Gross Residential Space	**-$162**
Deficit per Square Foot of Gross Floorspace	-$137

Case Study 3: 1002 West 10th Avenue

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Rental Building Under Existing Use and Zoning						
Case Study Number	3a					
Property Address	1002 West 10th Avenue					
Description	Existing old rental apartment building					
Assumptions						
Existing Zoning	RM3					
Permitted Maximum FSR	1.8	FSR				
Site Size	18,750	sq.ft. or	150	by	125	
Existing Building						
Number of Storeys	3					
Existing Built FSR	0.64	FSR				
Total Gross Floorspace	11,922	sq.ft.				
Gross Residential Floorspace	11,922	sq.ft.				
Gross Commercial Floorspace	0	sq.ft.				
Net Rentable Residential Floorspace	10,134	or	85%	of gross residential floorspace		
Net Rentable Commercial Floorspace	0	or	100%	of gross commercial floorspace		
Total Number of Residential Units	13	units				
Average Net Residential Unit Size	917	sq.ft. net				
Number of Residential Parking Stalls	10	stalls				
Market Rental Rates						
Residential Units (average)	$1.75	per sq.ft. per month or		$1,605	per unit per month	
Laundry Revenue	$15.00	per unit per month				
Parking Revenue	$50.00	per stall per month				
Commercial Space	$0.00	per sq.ft. per year net				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	0.0%					
Property Tax Allowance						
Residential Assessment	$4,501,400					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$19,022					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs (see notes)	25.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs (excluding tax)	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Space	5.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$212,808					
Parking Revenue	$6,000					
Laundry Revenue	$2,340					
Total Gross Potential Revenue	$221,148					
Apartment Vacancy	$2,211					
Effective Gross Apartment Revenue	$218,936					
Residential Operating Expenses and Property Taxes						
Residential Property Taxes	$19,022					
Residential Operating Expenses	$54,734					
Total Operating Expenses and Property Taxes	$73,756					
Net Operating Income on Residential	$145,180					
Capitalization Rate on Residential	5.0%					
Capitalized Value of Residential Space	$2,903,609					
Total Capitalized Value	$2,903,609					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$2,903,609					
Value per Gross Square Foot of Space	$243.55					
Value per Unit	$223,355					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	3b					
Property Address	1002 West 10th Avenue					
Description	Existing old rental apartment building					
	Assumed redevelopment to 12 Storey Apartment					
Site and Building Size						
Existing Zoning	RM3					
Permitted Maximum FSR	1.80	FSR				
Site Size	18,750	sq.ft. or	150	by	125	
Assumed Density	1.70	FSR				
Total Gross Floorspace	31,875	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	31,875	sq.ft.				
Net Residential Floorspace	27,731	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	37.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		37		
	2.0	per 1000 sq.ft. of retail space or		0		
				37	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$675.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$66,000	includes demo permit				
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$200					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$246	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$11,000	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,501,400					
Taxes during Year 1 - see existing building analysis	$19,022					
Assessed Value Year 2	$9,359,297	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$39,550					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$18,718,594					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$18,718,594					
Less Marketing and Commissions	$935,930					
Net Sales Revenue	$17,782,664					
Construction Costs						
Tenant Relocation Costs	$11,000					
Demolition Costs	$20,000					
Permit Fees	$66,000					
Site Servicing	$114,329					
Landscaping	$46,875					
Hard Construction Costs	$7,855,000					
Soft Costs	$801,620					
Contingency on Hard and Soft Costs	$445,741					
GVRD Sewer Levy - Residential	$21,830					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$325,125					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$58,572					
Interim Financing	$512,720					
Total Construction Costs	$10,278,812					
Total Construction Costs per sq.ft.	$322					
Developer's Profit Margin Allowance	$2,807,789					
Residual to Land and Land Carry	**$4,696,063**					
Less interim financing on land for 24 months (7%)	$597,681					
Less property purchase tax	$79,968					
Residual Land Value	**$4,018,414**					
Residual Value per sq.ft. of site	**$214.32**					
Residual Value per sq.ft. buildable	**$126.07**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	3c					
Property Address	1002 West 10th Avenue					
Description	Existing old rental apartment building					
	Assumed redevelopment to 12 Storey Apartment					
Site and Building Size						
Existing Zoning	RM3					
Permitted Maximum FSR	1.80	FSR				
Site Size	18,750	sq.ft. or	150	by	125	
Assumed Density	1.70	FSR				
Total Gross Floorspace	31,875	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	31,875	sq.ft.				
Net Residential Floorspace	27,731	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	46.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		41		
	2.0	per 1000 sq.ft. of retail space or		0		
				41	in total	
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$66,000	includes demo permit				
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$180					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$231	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$11,000.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,501,400					
Taxes during Year 1 - see existing building analysis	$19,022					
Assessed Value Year 2	$4,852,969	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$20,507					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.50	per sq.ft. per month or		$1,500	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$100.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$11,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$46,483					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$831,938					
Parking Revenue	$49,200					
Laundry Revenue	$0					
Total Gross Potential Revenue	$881,138					
Apartment Vacancy	$8,811					
Effective Gross Apartment Revenue	$872,326					
Residential Property Taxes	$46,483					
Residential Operating Expenses	$174,465					
Net Operating Income	$651,378					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$11,843,234					
Total Capitalized Value of Building	$11,843,234					
Less Sales Commissions	$118,432					
Net Value	$11,724,802					
Land Costs						
Acquisition Costs	$4,018,414					
PTT	$78,368					
Holding During Approvals and Construction	$573,550					
Total Land Costs	$4,670,332					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$11,000					
Demolition Costs	$20,000					
Permit Fees	$66,000					
Site Servicing	$114,329					
Landscaping	$46,875					
Hard Construction Costs	$7,377,500					
Soft Costs	$753,870					
Contingency	$419,479					
GVRD Sewer Levy - Residential	$27,140					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$325,125					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$39,529					
Interim Financing	$483,044					
Total Construction Costs	$9,683,892					
Total Construction Costs per sq.ft.	$304					
Developer's Profit Margin Allowance	$1,776,485					
Total Creation Cost	**$16,130,709**					
Defect = Net Value less Total Creation Cost	**-$4,405,908**					
Defect per Square Foot of Gross Residential Space	**-$138**					

Case Study 3ii: 1002 West 10th Avenue – with Rate of Change

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	3ii					
Property Address	1002 West 10th Avenue					
Description	Existing old rental apartment building					
	Assumed redevelopment to 12 Storey Apartment					
Site and Building Size						
Existing Zoning	RM3					
Permitted Maximum FSR	1.80	FSR				
Site Size	18,750	sq.ft. or	150	by	125	
Assumed Density	1.70	FSR				
Total Gross Floorspace	31,875	sq.ft.				
Replacement Rental Units	13					
Gross Rental Unit Size	690	sq.ft. or	600	sq.ft. net		
Gross Rental Floorspace	8,970	sq.ft.				
Net Rental Residential Florospace	7,804	sq.ft.				
Gross Strata Residential Floorspace	22,905	sq.ft.				
Net Strata Residential Floorspace	19,927	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	850	sq.ft.				
Number of Units	23.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		23		
	0.9	per rental unit		12		
				35	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$675.00	per sq.ft. of net saleable residential space				
Average Rental Rate for New Rental Units	$2.50	per sq.ft. per month				
Vacancy and Non Recoverable Allowance	1.00%					
Operating costs and taxes for New Rental Units	25.00%					
Capitalization Rate for Rental Apartment Space	5.50%					
Value of Rental Units Upon Completion	$403.64	per sq.ft. of net rental area				
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$66,000	includes demo permit				
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Strata Residential	$200					
Building Construction Costs - Rental	$180					
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$238	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of rental value				
Tenant Relocation Costs	$13,000	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,501,400					
Taxes during Year 1 - see existing building analysis	$13,705					
Assessed Value Year 2	$8,300,450	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.304464%					
Taxes during Year 2	$25,272					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	3iib					
Property Address	1002 West 10th Avenue					
Description	Existing old rental apartment building					
	Assumed redevelopment to 12 Storey Apartment					
Site and Building Size						
Existing Zoning	RM3					
Permitted Maximum FSR	1.80	FSR				
Site Size	18,750	sq.ft. or	150	by	125	
Assumed Density	1.70	FSR				
Total Gross Floorspace	31,875	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	31,875	sq.ft.				
Net Residential Floorspace	27,731	sq.ft. saleable		87%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	46.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		41		
	2.0	per 1000 sq.ft. of retail space or		0		
				41	in total	
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$66,000	includes demo permit				
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$180					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$231	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$11,000.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,501,400					
Taxes during Year 1 - see existing building analysis	$19,022					
Assessed Value Year 2	$4,852,969	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$20,507					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.50	per sq.ft. per month or		$1,500	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$100.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$11,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$46,483					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$831,938
Parking Revenue	$49,200
Laundry Revenue	$0
Total Gross Potential Revenue	$881,138
Apartment Vacancy	$8,811
Effective Gross Apartment Revenue	$872,326
Residential Property Taxes	$46,483
Residential Operating Expenses	$174,465
Net Operating Income	$651,378
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$11,843,234
Total Capitalized Value of Building	$11,843,234
Less Sales Commissions	$118,432
Net Value	$11,724,802
Land Costs	
Acquisition Costs	$2,948,725
PTT	$56,974
Holding During Approvals and Construction	$420,798
Total Land Costs	$3,426,497
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$11,000
Demolition Costs	$20,000
Permit Fees	$66,000
Site Servicing	$114,329
Landscaping	$46,875
Hard Construction Costs	$7,377,500
Soft Costs	$753,870
Contingency	$419,479
GVRD Sewer Levy - Residential	$27,140
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$325,125
Area Specific DCL's	$0
Property Taxes during approvals and construction	$39,529
Interim Financing	$483,044
Total Construction Costs	$9,683,892
Total Construction Costs per sq.ft.	$304
Developer's Profit Margin Allowance	$1,776,485
Total Creation Cost	**$14,886,874**
Defecit = Net Value less Total Creation Cost	**-$3,162,073**
Defecit per Square Foot of Gross Residential Space	**-$99**

Case Study 4: 1981 West 10th Avenue

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Rental Building Under Existing Use and Zoning						
Case Study Number	4A					
Property Address	1981 West 10th Avenue					
Description	Old Rental Apartment Building					
Assumptions						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	12,500	sq.ft. or	100	by	125	
Existing Building						
Number of Storeys	2					
Existing Built FSR	0.79	FSR				
Total Gross Floorspace	9,841	sq.ft.				
Gross Residential Floorspace	9,841	sq.ft.				
Gross Commercial Floorspace	0	sq.ft.				
Net Rentable Residential Floorspace	8,365	or	85%	of gross residential floorspace		
Net Rentable Commercial Floorspace	0	or	100%	of gross commercial floorspace		
Total Number of Residential Units	12	units				
Average Net Residential Unit Size	820	sq.ft. net				
Number of Residential Parking Stalls	7	stalls				
Market Rental Rates						
Residential Units (average)	$1.75	per sq.ft. per month or		$1,435	per unit per month	
Laundry Revenue	$15.00	per unit per month				
Parking Revenue	$50.00	per stall per month				
Commercial Space	$0.00	per sq.ft. per year net				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$2,943,100					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$12,437					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs (excluding tax)	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Space	6.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$175,662					
Parking Revenue	$4,200					
Laundry Revenue	$2,160					
Total Gross Potential Revenue	$182,022					
Apartment Vacancy	$1,820					
Effective Gross Apartment Revenue	$180,202					
Residential Operating Expenses and Property Taxes						
Residential Property Taxes	$12,437					
Residential Operating Expenses	$36,040					
Total Operating Expenses and Property Taxes	$48,477					
Net Operating Income on Residential	$131,725					
Capitalization Rate on Residential	5.0%					
Capitalized Value of Residential Space	$2,634,491					
Total Capitalized Value	$2,634,491					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$2,634,491					
Value per Gross Square Foot of Space	$267.71					
Value per Unit	$219,541					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	4B					
Property Address	1981 West 10th Avenue					
Description	Old Rental Apartment Building					
	Assumes Redevelopment to 3 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	12,500	sq.ft. or	100	by	125	
Assumed Density	1.45	FSR				
Total Gross Floorspace	18,125	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	18,125	sq.ft.				
Net Residential Floorspace	15,406	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	21.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		21		
	2.0	per 1000 sq.ft. of retail space or		0		
				21	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$625.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$42,000	includes demo permit				
Site Servicing	$76,220	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$176	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$12,000	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,943,100					
Taxes during Year 1 - see existing building analysis	$12,437					
Assessed Value Year 2	$4,814,453	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$20,345					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$9,628,906					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$9,628,906					
Less Marketing and Commissions	$481,445					
Net Sales Revenue	$9,147,461					
Construction Costs						
Tenant Relocation Costs	$12,000					
Demolition Costs	$20,000					
Permit Fees	$42,000					
Site Servicing	$76,220					
Landscaping	$31,250					
Hard Construction Costs	$3,196,250					
Soft Costs	$330,372					
Contingency on Hard and Soft Costs	$185,405					
GVRD Sewer Levy - Residential	$12,390					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$184,875					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$32,781					
Interim Financing	$180,405					
Total Construction Costs	$4,303,947					
Total Construction Costs per sq.ft.	$237					
Developer's Profit Margin Allowance	$1,444,336					
Residual to Land and Land Carry	**$3,399,178**					
Less interim financing on land for 21 months (7%)	$378,545					
Less property purchase tax	$58,413					
Residual Land Value	**$2,962,220**					
Residual Value per sq.ft. of site	**$236.98**					
Residual Value per sq.ft. buildable	**$163.43**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	4C					
Property Address	1981 West 10th Avenue					
Description	Old Rental Apartment Building					
	Assumes Redevelopment to 3 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	12,500	sq.ft. or	100	by	125	
Assumed Density	1.45	FSR				
Total Gross Floorspace	18,125	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	18,125	sq.ft.				
Net Residential Floorspace	15,406	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	26.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		23		
	2.0	per 1000 sq.ft. of retail space or		0		
				23	in total	
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$42,000	includes demo permit				
Site Servicing	$76,220	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$171	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$12,000.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,943,100					
Taxes during Year 1 - see existing building analysis	$12,437					
Assessed Value Year 2	$2,696,094	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$11,393					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.40	per sq.ft. per month or		$1,440	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$6,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$25,354					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$443,700
Parking Revenue	$20,700
Laundry Revenue	$0
Total Gross Potential Revenue	$464,400
Apartment Vacancy	$4,644
Effective Gross Apartment Revenue	$459,756
Residential Property Taxes	$25,354
Residential Operating Expenses	$91,951
Net Operating Income	$342,450
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$6,226,371
Total Capitalized Value of Building	$6,226,371
Less Sales Commissions	$62,264
Net Value	$6,164,108
Land Costs	
Acquisition Costs	$2,962,220
PTT	$57,244
Holding During Approvals and Construction	$369,884
Total Land Costs	$3,389,349
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$12,000
Demolition Costs	$20,000
Permit Fees	$42,000
Site Servicing	$76,220
Landscaping	$31,250
Hard Construction Costs	$3,095,000
Soft Costs	$320,247
Contingency	$179,836
GVRD Sewer Levy - Residential	$15,340
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$184,875
Area Specific DCL's	$0
Property Taxes during approvals and construction	$23,830
Interim Financing	$175,026
Total Construction Costs	$4,175,623
Total Construction Costs per sq.ft.	$230
Developer's Profit Margin Allowance	$933,956
Total Creation Cost	**$8,498,928**
Deficit = Net Value less Total Creation Cost	**-$2,334,820**
Defecit per Square Foot of Gross Residential Space	**-$129**

Case Study 4ii: 1981 West 10th Avenue – with Rate of Change

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	4ii					
Property Address	1981 West 10th Avenue					
Description	Old Rental Apartment Building					
	Assumes Redevelopment to 3 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	12,500	sq.ft. or	100	by	125	
Assumed Density	1.45	FSR				
Total Gross Floorspace	18,125	sq.ft.				
Replacement Rental Units	8	units				
Gross Rental Unit Size	700	sq.ft. or	595	sq.ft. net		
Gross Rental Floorspace	5,600	sq.ft.				
Net Rental Residential Florospace	4,760	sq.ft.				
Gross Strata Residential Floorspace	12,525	sq.ft.				
Net Strata Residential Floorspace	10,646	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	850	sq.ft.				
Number of Units	13.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		13		
	0.9	per rental unit		7		
				20	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$625.00	per sq.ft. of net saleable residential space				
Average Rental Rate for New Rental Units	$2.40	per sq.ft. per month				
Vacancy and Non Recoverable Allowance	1.00%					
Operating costs and taxes for New Rental Units	25.00%					
Capitalization Rate for Rental Apartment Space	5.50%					
Value of Rental Units Upon Completion	$387.49	per sq.ft. of net rental area				
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$42,000	includes demo permit				
Site Servicing	$76,220	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Strata Residential	$130					
Building Construction Costs - Rental	$120					
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$171	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of rental value				
Tenant Relocation Costs	$8,000	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,943,100					
Taxes during Year 1 - see existing building analysis	$8,620					
Assessed Value Year 2	$4,249,181	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.292887%					
Taxes during Year 2	$12,445					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$6,653,906					
Capitalized Value of Rental Units	$1,844,457					
Total Sales Revenue	$8,498,363					
Less Marketing and Commissions	$369,584					
Net Sales Revenue	$8,128,779					
Construction Costs						
Tenant Relocation Costs	$8,000					
Demolition Costs	$20,000					
Permit Fees	$42,000					
Site Servicing	$76,220					
Landscaping	$31,250					
Hard Construction Costs	$3,108,250					
Soft Costs	$321,572					
Contingency on Hard and Soft Costs	$180,365					
GVRD Sewer Levy - Residential	$7,670					
GVRD Sewer Levy - Commercial	$4,720					
City Wide DCL's	$184,875					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$21,065					
Interim Financing	$175,262					
Total Construction Costs	$4,181,248					
Total Construction Costs per sq.ft.	$231					
Developer's Profit Margin Allowance	$1,274,754					
Residual to Land and Land Carry	**$2,672,776**					
Less interim financing on land for 21 months (7%)	$297,650					
Less property purchase tax	$45,503					
Residual Land Value	**$2,329,623**					
Residual Value per sq.ft. of site	**$186.37**					
Residual Value per sq.ft. buildable	**$128.53**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	4iib					
Property Address	1981 West 10th Avenue					
Description	Old Rental Apartment Building					
	Assumes Redevelopment to 3 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	12,500	sq.ft. or	100	by	125	
Assumed Density	1.45	FSR				
Total Gross Floorspace	18,125	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	18,125	sq.ft.				
Net Residential Floorspace	15,406	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	26.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		23		
	2.0	per 1000 sq.ft. of retail space or		0		
				23	in total	
Construction Costs						
Demolition Costs	$20,000					
Permit Fees	$42,000	includes demo permit				
Site Servicing	$76,220	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$171	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$12,000.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,943,100					
Taxes during Year 1 - see existing building analysis	$12,437					
Assessed Value Year 2	$2,696,094	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$11,393					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.40	per sq.ft. per month or		$1,440	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$6,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$25,354					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$443,700
Parking Revenue	$20,700
Laundry Revenue	$0
Total Gross Potential Revenue	$464,400
Apartment Vacancy	$4,644
Effective Gross Apartment Revenue	$459,756
Residential Property Taxes	$25,354
Residential Operating Expenses	$91,951
Net Operating Income	$342,450
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$6,226,371
Total Capitalized Value of Building	$6,226,371
Less Sales Commissions	$62,264
Net Value	$6,164,108
Land Costs	
Acquisition Costs	$2,634,491
PTT	$50,690
Holding During Approvals and Construction	$328,935
Total Land Costs	$3,014,116
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$12,000
Demolition Costs	$20,000
Permit Fees	$42,000
Site Servicing	$76,220
Landscaping	$31,250
Hard Construction Costs	$3,095,000
Soft Costs	$320,247
Contingency	$179,836
GVRD Sewer Levy - Residential	$15,340
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$184,875
Area Specific DCL's	$0
Property Taxes during approvals and construction	$23,830
Interim Financing	$175,026
Total Construction Costs	$4,175,623
Total Construction Costs per sq.ft.	$230
Developer's Profit Margin Allowance	$933,956
Total Creation Cost	**$8,123,694**
Deficit = Net Value less Total Creation Cost	**-$1,959,587**
Defecit per Square Foot of Gross Residential Space	**-$108**

Case Study 5: 2301 West 3rd Avenue

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	5a					
Property Address	2301 West 3rd Avenue					
Description	Older duplex units					
	Assumes Redevelopment to 4 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	7,080	sq.ft. or	59	by	120	
Assumed Density	1.20	FSR (can only do about 1.2 FSR due to set backs)				
Total Gross Floorspace	8,496	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	8,496	sq.ft.				
Net Residential Floorspace	7,222	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	10.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		10		
	2.0	per 1000 sq.ft. of retail space or		0		
				10	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$625.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$44,970	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$177	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,943,000					
Taxes during Year 1 - see existing building analysis	$8,211					
Assessed Value Year 2	$2,256,750	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$9,536					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$4,513,500					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$4,513,500					
Less Marketing and Commissions	$225,675					
Net Sales Revenue	$4,287,825					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$44,970					
Landscaping	$17,700					
Hard Construction Costs	$1,504,480					
Soft Costs	$156,715					
Contingency on Hard and Soft Costs	$87,693					
GVRD Sewer Levy - Residential	$5,900					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$86,659					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$17,747					
Interim Financing	$85,394					
Total Construction Costs	$2,037,258					
Total Construction Costs per sq.ft.	$240					
Developer's Profit Margin Allowance	$677,025					
Residual to Land and Land Carry	**$1,573,542**					
Less interim financing on land for 21 months (7%)	$175,235					
Less property purchase tax	$25,966					
Residual Land Value	**$1,372,341**					
Residual Value per sq.ft. of site	**$193.83**					
Residual Value per sq.ft. buildable	**$161.53**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	5b					
Property Address	2301 West 3rd Avenue					
Description	Older duplex units					
	Assumes Redevelopment to 4 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	7,080	sq.ft. or	59	by	120	
Assumed Density	1.20	FSR (can only achieve 1.2 due to setback requirements)				
Total Gross Floorspace	8,496	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	8,496	sq.ft.				
Net Residential Floorspace	7,222	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	12.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		11		
	2.0	per 1000 sq.ft. of retail space or		0		
				11	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$44,970	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$172	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,943,000					
Taxes during Year 1 - see existing building analysis	$8,211					
Assessed Value Year 2	$1,263,780	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$5,340					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.50	per sq.ft. per month or		$1,500	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$3,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$12,677					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$216,648					
Parking Revenue	$9,900					
Laundry Revenue	$0					
Total Gross Potential Revenue	$226,548					
Apartment Vacancy	$2,265					
Effective Gross Apartment Revenue	$224,283					
Residential Property Taxes	$12,677					
Residential Operating Expenses	$44,857					
Net Operating Income	$166,749					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$3,031,797					
Total Capitalized Value of Building	$3,031,797					
Less Sales Commissions	$30,318					
Net Value	$3,001,479					
Land Costs						
Acquisition Costs	$1,372,341					
PTT	$25,447					
Holding During Approvals and Construction	$171,229					
Total Land Costs	$1,569,016					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$44,970					
Landscaping	$17,700					
Hard Construction Costs	$1,459,520					
Soft Costs	$152,219					
Contingency	$85,220					
GVRD Sewer Levy - Residential	$7,080					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$86,659					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$13,551					
Interim Financing	$82,990					
Total Construction Costs	$1,979,909					
Total Construction Costs per sq.ft.	$233					
Developer's Profit Margin Allowance	$454,770					
Total Creation Cost	**$4,003,695**					
Defect = Net Value less Total Creation Cost	**-$1,002,216**					
Defect per Square Foot of Gross Residential Space	**-$118**					

Case Study 6: 1524 West 71st Avenue

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	6a					
Property Address	1524 to 1540 West 71st Avenue (plus 8704 SW Marine)					
Description	Older single detached houses					
	Assumes Redevelopment to 4 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	11,880	sq.ft. or	99	by	120	
Assumed Density	1.45	FSR				
Total Gross Floorspace	17,226	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	17,226	sq.ft.				
Net Residential Floorspace	14,642	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	20.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		20		
	2.0	per 1000 sq.ft. of retail space or		0		
				20	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$525.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$176	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,013,000					
Taxes during Year 1 - see existing building analysis	$8,506					
Assessed Value Year 2	$3,843,551	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$16,242					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$7,687,103					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$7,687,103					
Less Marketing and Commissions	$384,355					
Net Sales Revenue	$7,302,747					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$75,457					
Landscaping	$29,700					
Hard Construction Costs	$3,039,380					
Soft Costs	$314,454					
Contingency on Hard and Soft Costs	$174,450					
GVRD Sewer Levy - Residential	$11,800					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$175,705					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$24,748					
Interim Financing	$169,562					
Total Construction Costs	$4,045,256					
Total Construction Costs per sq.ft.	$235					
Developer's Profit Margin Allowance	$1,153,065					
Residual to Land and Land Carry	**$2,104,426**					
Less interim financing on land for 21 months (7%)	$234,357					
Less property purchase tax	$35,401					
Residual Land Value	**$1,834,668**					
Residual Value per sq.ft. of site	**$154.43**					
Residual Value per sq.ft. buildable	**$106.51**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	6b					
Property Address	1524 to 1540 West 71st Avenue (plus 8704 SW Marine)					
Description	Older single detached houses					
	Assumes Redevelopment to 4 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	11,880	sq.ft. or	99	by	120	
Assumed Density	1.45	FSR				
Total Gross Floorspace	17,226	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	17,226	sq.ft.				
Net Residential Floorspace	14,642	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	24.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		22		
	2.0	per 1000 sq.ft. of retail space or		0		
				22	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$171	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,013,000					
Taxes during Year 1 - see existing building analysis	$8,506					
Assessed Value Year 2	$2,562,368	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$10,828					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.15	per sq.ft. per month or		$1,290	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$5,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$21,129					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$377,766					
Parking Revenue	$19,800					
Laundry Revenue	$0					
Total Gross Potential Revenue	$397,566					
Apartment Vacancy	$3,976					
Effective Gross Apartment Revenue	$393,591					
Residential Property Taxes	$21,129					
Residential Operating Expenses	$78,718					
Net Operating Income	$293,744					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$5,340,796					
Total Capitalized Value of Building	$5,340,796					
Less Sales Commissions	$53,408					
Net Value	$5,287,388					
Land Costs						
Acquisition Costs	$1,834,668					
PTT	$34,693					
Holding During Approvals and Construction	$228,997					
Total Land Costs	$2,098,359					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$75,457					
Landscaping	$29,700					
Hard Construction Costs	$2,947,120					
Soft Costs	$305,228					
Contingency	$169,375					
GVRD Sewer Levy - Residential	$14,160					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$175,705					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$19,334					
Interim Financing	$164,766					
Total Construction Costs	$3,930,846					
Total Construction Costs per sq.ft.	$228					
Developer's Profit Margin Allowance	$801,119					
Total Creation Cost	**$6,830,324**					
Defecit = Net Value less Total Creation Cost	**-$1,542,936**					
Defecit per Square Foot of Gross Residential Space	**-$90**					

Case Study 7: 1880 Frances Street

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	7A					
Property Address	1880 Frances and 603 Victoria Drive					
Description	Old Duplex plus vacant lot					
	Assumes Redevelopment to 4 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	11,834	sq.ft. or	97	by	122	
Assumed Density	1.45	FSR				
Total Gross Floorspace	17,159	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	17,159	sq.ft.				
Net Residential Floorspace	14,585	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	19.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		19		
	2.0	per 1000 sq.ft. of retail space or		0		
				19	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$495.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$5,000					
Permit Fees	$30,000					
Site Servicing	$73,933	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$174	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,658,500					
Taxes during Year 1 - see existing building analysis	$7,008					
Assessed Value Year 2	$3,609,888	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$15,254					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$7,219,775					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$7,219,775					
Less Marketing and Commissions	$360,989					
Net Sales Revenue	$6,858,787					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$5,000					
Permit Fees	$30,000					
Site Servicing	$73,933					
Landscaping	$29,585					
Hard Construction Costs	$2,990,709					
Soft Costs	$309,423					
Contingency on Hard and Soft Costs	$171,932					
GVRD Sewer Levy - Residential	$11,210					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$175,025					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$22,263					
Interim Financing	$167,085					
Total Construction Costs	$3,986,164					
Total Construction Costs per sq.ft.	$232					
Developer's Profit Margin Allowance	$1,082,966					
Residual to Land and Land Carry	**$1,789,656**					
Less interim financing on land for 21 months (7%)	$199,303					
Less property purchase tax	$29,807					
Residual Land Value	**$1,560,546**					
Residual Value per sq.ft. of site	**$131.87**					
Residual Value per sq.ft. buildable	**$90.94**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	7B					
Property Address	1880 Frances and 603 Victoria Drive					
Description	Old Duplex plus vacant lot					
	Assumes Redevelopment to 4 Storey woodframe apartment					
Site and Building Size						
Existing Zoning	RM4					
Permitted Maximum FSR	1.45	FSR				
Site Size	11,834	sq.ft. or	97	by	122	
Assumed Density	1.45	FSR				
Total Gross Floorspace	17,159	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	17,159	sq.ft.				
Net Residential Floorspace	14,585	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	24.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		22		
	2.0	per 1000 sq.ft. of retail space or		0		
				22	in total	
Construction Costs						
Demolition Costs	$5,000					
Permit Fees	$30,000					
Site Servicing	$73,933	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$171	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,658,500					
Taxes during Year 1 - see existing building analysis	$7,008					
Assessed Value Year 2	$2,552,446	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$10,786					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.25	per sq.ft. per month or		$1,350	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$5,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$21,129					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$393,806
Parking Revenue	$19,800
Laundry Revenue	$0
Total Gross Potential Revenue	$413,606
Apartment Vacancy	$4,136
Effective Gross Apartment Revenue	$409,470
Residential Property Taxes	$21,129
Residential Operating Expenses	$81,894
Net Operating Income	$306,447
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$5,571,768
Total Capitalized Value of Building	$5,571,768
Less Sales Commissions	$55,718
Net Value	$5,516,051
Land Costs	
Acquisition Costs	$1,560,546
PTT	$29,211
Holding During Approvals and Construction	$194,745
Total Land Costs	$1,784,502
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$5,000
Permit Fees	$30,000
Site Servicing	$73,933
Landscaping	$29,585
Hard Construction Costs	$2,939,116
Soft Costs	$304,263
Contingency	$169,095
GVRD Sewer Levy - Residential	$14,160
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$175,025
Area Specific DCL's	$0
Property Taxes during approvals and construction	$17,794
Interim Financing	$164,411
Total Construction Costs	$3,922,383
Total Construction Costs per sq.ft.	$229
Developer's Profit Margin Allowance	$835,765
Total Creation Cost	**$6,542,650**
Deficit = Net Value less Total Creation Cost	**-$1,026,600**
Deficit per Square Foot of Gross Residential Space	**-$60**

Case Study 8: 4464 Dunbar

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Commercial Building Under Existing Use and Zoning						
Case Study Number	8a					
Property Address	4464 Dunbar					
Description	single storey commercial building with surface parking					
Assumptions						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	15,400	sq.ft. or	140	by	110	
Existing Building						
Number of Storeys	1					
Existing Built FSR	0.45	FSR				
Total Gross Floorspace	6,926	sq.ft.				
Gross Office Floorspace	0	sq.ft.				
Gross Retail Floorspace	6,926	sq.ft.				
Net Rentable Office Floorspace	0	or	100%	of gross office floorspace		
Net Rentable Retail Floorspace	6,926	or	100%	of gross retail floorspace		
Office Lease Rate	$0.00	per sq.ft. per year net				
Retail Lease Rate	$30.00	per sq.ft. per year net				
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Business/Other Assessment	$4,986,800					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$98,851					
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$362,039					
Commercial Vacancy	$18,102					
Commercial Property Taxes	$98,851					
Commercial Operating Costs (excluding tax)	$55,408					
Commercial Net Operating Income	$189,678					
Capitalization Rate on Commercial Space	6.5%					
Capitalized Value of Commercial Space	$2,918,124					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$2,918,124					
Value per Gross Square Foot of Space	$421.33					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	8b					
Property Address	4464 Dunbar					
Description	single storey commercial building with surface parking					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	15,400	sq.ft. or	140	by	110	
Assumed Density	2.50	FSR				
Total Gross Floorspace	38,500	sq.ft.				
Retail Space	5,400	sq.ft.				
Gross Residential Floorspace	33,100	sq.ft.				
Net Residential Floorspace	28,135	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	38.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		38		
	2.0	per 1000 sq.ft. of retail space or		11		
				49	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$600.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$500.77	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$50,000					
Permit Fees	$65,000					
Site Servicing	$106,707	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$188	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,986,800					
Taxes during Year 1 - see existing building analysis	$98,851					
Assessed Value Year 2	$8,440,500	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.641334%					
Taxes during Year 2	$54,132					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$16,881,000					
Capitalized Value of Retail Space	$2,704,154					
Total Sales Revenue	$19,585,154					
Less Marketing and Commissions	$898,133					
Net Sales Revenue	$18,687,021					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$50,000					
Permit Fees	$65,000					
Site Servicing	$106,707					
Landscaping	$0					
Hard Construction Costs	$7,235,000					
Soft Costs	$734,171					
Contingency on Hard and Soft Costs	$409,544					
GVRD Sewer Levy - Residential	$22,420					
GVRD Sewer Levy - Commercial	$2,392					
City Wide DCL's	$392,700					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$152,983					
Interim Financing	$401,228					
Total Construction Costs	$9,572,145					
Total Construction Costs per sq.ft.	$249					
Developer's Profit Margin Allowance	$2,937,773					
Residual to Land and Land Carry	**$6,177,103**					
Less interim financing on land for 21 months (7%)	$687,905					
Less property purchase tax	$107,784					
Residual Land Value	**$5,381,414**					
Residual Value per sq.ft. of site	**$349.44**					
Residual Value per sq.ft. buildable	**$139.78**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	8c					
Property Address	4464 Dunbar					
Description	single storey commercial building with surface parking					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	15,400	sq.ft. or	140	by	110	
Assumed Density	2.50	FSR				
Total Gross Floorspace	38,500	sq.ft.				
Retail Space	5,400	sq.ft.				
Gross Residential Floorspace	33,100	sq.ft.				
Net Residential Floorspace	28,135	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	47.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		42		
	2.0	per 1000 sq.ft. of retail space or		11		
				53	in total	
Construction Costs						
Demolition Costs	$50,000					
Permit Fees	$65,000					
Site Servicing	$106,707	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$183	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,986,800					
Taxes during Year 1 - see existing building analysis	$98,851					
Assessed Value Year 2	$5,868,625	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.641334%					
Taxes during Year 2	$37,637					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.40	per sq.ft. per month or		$1,440	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$10,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$42,257					
Business/Other Assessment	$2,000,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$39,645					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$271,845					
Commercial Vacancy	$13,592					
Commercial Property Taxes	$39,645					
Commercial Operating Costs	$43,200					
Commercial Net Operating Income	$175,408					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$2,698,581					
Apartment Gross Potential Rent	$810,288					
Parking Revenue	$37,800					
Laundry Revenue	$0					
Total Gross Potential Revenue	$848,088					
Apartment Vacancy	$8,481					
Effective Gross Apartment Revenue	$839,607					
Residential Property Taxes	$42,257					
Residential Operating Expenses	$167,921					
Net Operating Income	$629,428					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$11,444,153					
Total Capitalized Value of Building	$14,142,733					
Less Sales Commissions	$141,427					
Net Value	$14,001,306					
Land Costs						
Acquisition Costs	$5,381,414					
PTT	$105,628					
Holding During Approvals and Construction	$672,163					
Total Land Costs	$6,159,205					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$50,000					
Permit Fees	$65,000					
Site Servicing	$106,707					
Landscaping	$0					
Hard Construction Costs	$7,064,000					
Soft Costs	$717,071					
Contingency	$400,139					
GVRD Sewer Levy - Residential	$27,730					
GVRD Sewer Levy - Commercial	$2,392					
City Wide DCL's	$392,700					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$136,489					
Interim Financing	$392,097					
Total Construction Costs	$9,354,325					
Total Construction Costs per sq.ft.	$243					
Developer's Profit Margin Allowance	$2,121,410					
Total Creation Cost	**$17,634,941**					
Deficit = Net Value less Total Creation Cost	**-$3,633,635**					
Deficit per Square Foot of Gross Residential Space	**-$110**					
Deficit per Square Foot of Gross Floor Space	**-$94**					

Case Study 9: 3401 Cambie Street

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Commercial Building Under Existing Use and Zoning						
Case Study Number	9a					
Property Address	3401 Cambie					
Description	Single Storey Royal Bank Building with Surface Parking					
Assumptions						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	18,000	sq.ft. or	150	by	120	
Existing Building						
Number of Storeys	1					
Existing Built FSR	0.65	FSR				
Total Gross Floorspace	11,700	sq.ft.				
Gross Office Floorspace	0	sq.ft.				
Gross Retail Floorspace	11,700	sq.ft.				
Net Rentable Office Floorspace	0	or	100%	of gross office floorspace		
Net Rentable Retail Floorspace	11,700	or	100%	of gross retail floorspace		
Office Lease Rate	$0.00	per sq.ft. per year net				
Retail Lease Rate	$35.00	per sq.ft. per year net				
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Business/Other Assessment	$5,432,200					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$107,680					
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$610,780					
Commercial Vacancy	$30,539					
Commercial Property Taxes	$107,680					
Commercial Operating Costs (excluding tax)	$93,600					
Commercial Net Operating Income	$378,961					
Capitalization Rate on Commercial Space	6.5%					
Capitalized Value of Commercial Space	$5,830,169					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$5,830,169					
Value per Gross Square Foot of Space	$498.31					
Value per Gross Square Foot of Site Area	$323.90					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	9b					
Property Address	3401 Cambie					
Description	Single Storey Royal Bank Building with Surface Parking					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	18,000	sq.ft. or	150	by	120	
Assumed Density	2.50	FSR				
Total Gross Floorspace	45,000	sq.ft.				
Retail Space	6,300	sq.ft.				
Gross Residential Floorspace	38,700	sq.ft.				
Net Residential Floorspace	32,895	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	44.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		44		
	2.0	per 1000 sq.ft. of retail space or		13		
				57	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$575.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$40.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$572.31	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$50,000					
Permit Fees	$75,000					
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$188	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$5,432,200					
Taxes during Year 1 - see existing building analysis	$107,680					
Assessed Value Year 2	$9,457,313	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.640929%					
Taxes during Year 2	$60,615					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$18,914,625					
Capitalized Value of Retail Space	$3,605,538					
Total Sales Revenue	$22,520,163					
Less Marketing and Commissions	$1,017,842					
Net Sales Revenue	$21,502,321					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$50,000					
Permit Fees	$75,000					
Site Servicing	$114,329					
Landscaping	$0					
Hard Construction Costs	$8,445,000					
Soft Costs	$855,933					
Contingency on Hard and Soft Costs	$477,013					
GVRD Sewer Levy - Residential	$25,960					
GVRD Sewer Levy - Commercial	$2,791					
City Wide DCL's	$459,000					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$168,295					
Interim Financing	$466,958					
Total Construction Costs	$11,140,279					
Total Construction Costs per sq.ft.	$248					
Developer's Profit Margin Allowance	$3,378,025					
Residual to Land and Land Carry	**$6,984,018**					
Less interim financing on land for 21 months (7%)	$777,766					
Less property purchase tax	$122,125					
Residual Land Value	**$6,084,127**					
Residual Value per sq.ft. of site	**$338.01**					
Residual Value per sq.ft. buildable	**$135.20**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	9c					
Property Address	3401 Cambie					
Description	Single Storey Royal Bank Building with Surface Parking					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	18,000	sq.ft. or	150	by	120	
Assumed Density	2.50	FSR				
Total Gross Floorspace	45,000	sq.ft.				
Retail Space	6,300	sq.ft.				
Gross Residential Floorspace	38,700	sq.ft.				
Net Residential Floorspace	32,895	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	55.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		50		
	2.0	per 1000 sq.ft. of retail space or		13		
				63	in total	
Construction Costs						
Demolition Costs	$50,000					
Permit Fees	$75,000					
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$184	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$5,432,200					
Taxes during Year 1 - see existing building analysis	$107,680					
Assessed Value Year 2	$6,859,125	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.640929%					
Taxes during Year 2	$43,962					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$40.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.40	per sq.ft. per month or		$1,440	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$75.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$12,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$50,709					
Business/Other Assessment	$3,000,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$59,468					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$361,868					
Commercial Vacancy	$18,093					
Commercial Property Taxes	$59,468					
Commercial Operating Costs	$50,400					
Commercial Net Operating Income	$233,907					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$3,598,563					
Apartment Gross Potential Rent	$947,376					
Parking Revenue	$45,000					
Laundry Revenue	$0					
Total Gross Potential Revenue	$992,376					
Apartment Vacancy	$9,924					
Effective Gross Apartment Revenue	$982,452					
Residential Property Taxes	$50,709					
Residential Operating Expenses	$196,490					
Net Operating Income	$735,253					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$13,368,237					
Total Capitalized Value of Building	$16,966,800					
Less Sales Commissions	$169,668					
Net Value	$16,797,132					
Land Costs						
Acquisition Costs	$6,084,127					
PTT	$119,683					
Holding During Approvals and Construction	$759,967					
Total Land Costs	$6,963,777					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$50,000					
Permit Fees	$75,000					
Site Servicing	$114,329					
Landscaping	$0					
Hard Construction Costs	$8,298,000					
Soft Costs	$841,233					
Contingency	$468,928					
GVRD Sewer Levy - Residential	$32,450					
GVRD Sewer Levy - Commercial	$2,791					
City Wide DCL's	$459,000					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$151,642					
Interim Financing	$459,085					
Total Construction Costs	$10,952,458					
Total Construction Costs per sq.ft.	$243					
Developer's Profit Margin Allowance	$2,545,020					
Total Creation Cost	**$20,461,255**					
Deficit = Net Value less Total Creation Cost	**-$3,664,123**					
Deficit per Square Foot of Gross Residential Space	**-$95**					
Deficit per Square Foot of Gross Floor Space	**-$81**					

Case Study 10: 5704 Fraser Street

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Commercial Building Under Existing Use and Zoning						
Case Study Number	10a					
Property Address	5704 Fraser					
Description	Older Restaurant - Church's Chicken Site					
Assumptions						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	14,400	sq.ft. or	120	by	120	
Existing Building						
Number of Storeys	1					
Existing Built FSR	0.17	FSR				
Total Gross Floorspace	2,500	sq.ft.				
Gross Office Floorspace	0	sq.ft.				
Gross Retail Floorspace	2,500	sq.ft.				
Net Rentable Office Floorspace	0	or	100%	of gross office floorspace		
Net Rentable Retail Floorspace	2,500	or	100%	of gross retail floorspace		
Office Lease Rate	$0.00	per sq.ft. per year net				
Retail Lease Rate	$30.00	per sq.ft. per year net				
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Business/Other Assessment	$2,765,600					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$54,821					
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$149,821					
Commercial Vacancy	$7,491					
Commercial Property Taxes	$54,821					
Commercial Operating Costs (excluding tax)	$20,000					
Commercial Net Operating Income	$67,509					
Capitalization Rate on Commercial Space	6.5%					
Capitalized Value of Commercial Space	$1,038,599					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$1,038,599					
Value per Gross Square Foot of Space	$415.44					
Value per Gross Square Foot of Site Area	$72.12					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	10b					
Property Address	5704 Fraser					
Description	Older Restaurant - Church's Chicken Site					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	14,400	sq.ft. or	120	by	120	
Assumed Density	2.50	FSR				
Total Gross Floorspace	36,000	sq.ft.				
Retail Space	5,100	sq.ft.				
Gross Residential Floorspace	30,900	sq.ft.				
Net Residential Floorspace	26,265	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	35.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		35		
	2.0	per 1000 sq.ft. of retail space or		10		
				45	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$450.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$500.77	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$60,000					
Site Servicing	$91,463	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$187	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,765,600					
Taxes during Year 1 - see existing building analysis	$54,821					
Assessed Value Year 2	$5,909,625	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.643528%					
Taxes during Year 2	$38,030					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$11,819,250					
Capitalized Value of Retail Space	$2,553,923					
Total Sales Revenue	$14,373,173					
Less Marketing and Commissions	$642,041					
Net Sales Revenue	$13,731,132					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$60,000					
Site Servicing	$91,463					
Landscaping	$0					
Hard Construction Costs	$6,735,000					
Soft Costs	$682,646					
Contingency on Hard and Soft Costs	$378,955					
GVRD Sewer Levy - Residential	$20,650					
GVRD Sewer Levy - Commercial	$2,259					
City Wide DCL's	$367,200					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$92,851					
Interim Financing	$369,295					
Total Construction Costs	$8,810,321					
Total Construction Costs per sq.ft.	$245					
Developer's Profit Margin Allowance	$2,155,976					
Residual to Land and Land Carry	**$2,764,835**					
Less interim financing on land for 21 months (7%)	$307,902					
Less property purchase tax	$47,139					
Residual Land Value	**$2,409,795**					
Residual Value per sq.ft. of site	**$167.35**					
Residual Value per sq.ft. buildable	**$66.94**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	10c					
Property Address	5704 Fraser					
Description	Older Restaurant - Church's Chicken Site					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	14,400	sq.ft. or	120	by	120	
Assumed Density	2.50	FSR				
Total Gross Floorspace	36,000	sq.ft.				
Retail Space	5,100	sq.ft.				
Gross Residential Floorspace	30,900	sq.ft.				
Net Residential Floorspace	26,265	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	44.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		40		
	2.0	per 1000 sq.ft. of retail space or		10		
				50	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$60,000					
Site Servicing	$91,463	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$184	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,765,600					
Taxes during Year 1 - see existing building analysis	$54,821					
Assessed Value Year 2	$5,488,875	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.643528%					
Taxes during Year 2	$35,322					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.00	per sq.ft. per month or		$1,200	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$50.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$8,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$33,806					
Business/Other Assessment	$2,000,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$39,645					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$258,945
Commercial Vacancy	$12,947
Commercial Property Taxes	$39,645
Commercial Operating Costs	$40,800
Commercial Net Operating Income	$165,553
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$2,546,965
Apartment Gross Potential Rent	$630,360
Parking Revenue	$24,000
Laundry Revenue	$0
Total Gross Potential Revenue	$654,360
Apartment Vacancy	$6,544
Effective Gross Apartment Revenue	$647,816
Residential Property Taxes	$33,806
Residential Operating Expenses	$129,563
Net Operating Income	$484,447
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$8,808,132
Total Capitalized Value of Building	$11,355,098
Less Sales Commissions	$113,551
Net Value	$11,241,547
Land Costs	
Acquisition Costs	$2,409,795
PTT	$46,196
Holding During Approvals and Construction	$300,859
Total Land Costs	$2,756,849
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$10,000
Permit Fees	$60,000
Site Servicing	$91,463
Landscaping	$0
Hard Construction Costs	$6,626,000
Soft Costs	$671,746
Contingency	$372,960
GVRD Sewer Levy - Residential	$25,960
GVRD Sewer Levy - Commercial	$2,259
City Wide DCL's	$367,200
Area Specific DCL's	$0
Property Taxes during approvals and construction	$90,144
Interim Financing	$363,901
Total Construction Costs	$8,681,634
Total Construction Costs per sq.ft.	$241
Developer's Profit Margin Allowance	$1,703,265
Total Creation Cost	**$13,141,748**
Deficit = Net Value less Total Creation Cost	**-$1,900,201**
Deficit per Square Foot of Gross Residential Space	**-$61**
Deficit per Square Foot of Gross Floor Space	**-$53**

Case Study 11: 4000 Main Street

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	11A					
Property Address	4000 Main					
Description	Vacant Site - former gas station					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	17,666	sq.ft. or	146	by	121	
Assumed Density	2.50	FSR				
Total Gross Floorspace	44,165	sq.ft.				
Retail Space	6,200	sq.ft.				
Gross Residential Floorspace	37,965	sq.ft.				
Net Residential Floorspace	32,270	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	43.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		43		
	2.0	per 1000 sq.ft. of retail space or		12		
				55	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$485.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$40.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$572.31	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$0					
Permit Fees	$75,000					
Site Servicing	$111,280	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$187	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,538,000					
Taxes during Year 1 - see existing building analysis	$89,955					
Assessed Value Year 2	$7,825,536	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.641525%					
Taxes during Year 2	$50,203					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$15,651,071					
Capitalized Value of Retail Space	$3,548,308					
Total Sales Revenue	$19,199,379					
Less Marketing and Commissions	$853,520					
Net Sales Revenue	$18,345,859					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$0					
Permit Fees	$75,000					
Site Servicing	$111,280					
Landscaping	$0					
Hard Construction Costs	$8,251,450					
Soft Costs	$836,273					
Contingency on Hard and Soft Costs	$463,700					
GVRD Sewer Levy - Residential	$25,370					
GVRD Sewer Levy - Commercial	$2,747					
City Wide DCL's	$450,483					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$140,158					
Interim Financing	$453,095					
Total Construction Costs	$10,809,556					
Total Construction Costs per sq.ft.	$245					
Developer's Profit Margin Allowance	$2,879,907					
Residual to Land and Land Carry	**$4,656,396**					
Less interim financing on land for 21 months (7%)	$518,553					
Less property purchase tax	$80,757					
Residual Land Value	**$4,057,086**					
Residual Value per sq.ft. of site	**$229.66**					
Residual Value per sq.ft. buildable	**$91.86**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	11B					
Property Address	4000 Main					
Description	Vacant Site - former gas station					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	17,666	sq.ft. or	146	by	121	
Assumed Density	2.50	FSR				
Total Gross Floorspace	44,165	sq.ft.				
Retail Space	6,200	sq.ft.				
Gross Residential Floorspace	37,965	sq.ft.				
Net Residential Floorspace	32,270	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	54.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		49		
	2.0	per 1000 sq.ft. of retail space or		12		
				61	in total	
Construction Costs						
Demolition Costs	$0					
Permit Fees	$75,000					
Site Servicing	$111,280	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$184	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$4,538,000					
Taxes during Year 1 - see existing building analysis	$89,955					
Assessed Value Year 2	$6,732,294	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.641525%					
Taxes during Year 2	$43,189					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$40.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.20	per sq.ft. per month or		$1,320	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$50.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$10,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$42,257					
Business/Other Assessment	$2,500,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$49,556					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$347,156
Commercial Vacancy	$17,358
Commercial Property Taxes	$49,556
Commercial Operating Costs	$49,600
Commercial Net Operating Income	$230,642
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$3,548,341
Apartment Gross Potential Rent	$851,935
Parking Revenue	$29,400
Laundry Revenue	$0
Total Gross Potential Revenue	$881,335
Apartment Vacancy	$8,813
Effective Gross Apartment Revenue	$872,521
Residential Property Taxes	$42,257
Residential Operating Expenses	$174,504
Net Operating Income	$655,760
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$11,922,904
Total Capitalized Value of Building	$15,471,245
Less Sales Commissions	$154,712
Net Value	$15,316,532
Land Costs	
Acquisition Costs	$4,057,086
PTT	$79,142
Holding During Approvals and Construction	$506,688
Total Land Costs	$4,642,916
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$0
Permit Fees	$75,000
Site Servicing	$111,280
Landscaping	$0
Hard Construction Costs	$8,111,800
Soft Costs	$822,308
Contingency	$456,019
GVRD Sewer Levy - Residential	$31,860
GVRD Sewer Levy - Commercial	$2,747
City Wide DCL's	$450,483
Area Specific DCL's	$0
Property Taxes during approvals and construction	$133,144
Interim Financing	$446,016
Total Construction Costs	$10,640,657
Total Construction Costs per sq.ft.	$241
Developer's Profit Margin Allowance	$2,320,687
Total Creation Cost	**$17,604,260**
Deficit = Net Value less Total Creation Cost	**-$2,287,727**
Deficit per Square Foot of Gross Residential Space	**-$60**
Deficit per Square Foot of Gross Floor Space	**-$52**

Case Study 12: 1344 Kingsway

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	12a					
Property Address	1344 to 1350 Kingsway					
Description	Vacant Site					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	12,078	sq.ft. or	99	by	122	
Assumed Density	2.50	FSR				
Total Gross Floorspace	30,195	sq.ft.				
Retail Space	4,200	sq.ft.				
Gross Residential Floorspace	25,995	sq.ft.				
Net Residential Floorspace	22,096	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	29.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		29		
	2.0	per 1000 sq.ft. of retail space or		8		
				37	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$425.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$30.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$429.23	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$0					
Permit Fees	$50,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$186	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,964,000					
Taxes during Year 1 - see existing building analysis	$38,932					
Assessed Value Year 2	$4,695,347	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.639518%					
Taxes during Year 2	$30,028					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$9,390,694					
Capitalized Value of Retail Space	$1,802,769					
Total Sales Revenue	$11,193,463					
Less Marketing and Commissions	$505,590					
Net Sales Revenue	$10,687,873					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$0					
Permit Fees	$50,000					
Site Servicing	$75,457					
Landscaping	$0					
Hard Construction Costs	$5,615,350					
Soft Costs	$569,081					
Contingency on Hard and Soft Costs	$315,494					
GVRD Sewer Levy - Residential	$17,110					
GVRD Sewer Levy - Commercial	$1,861					
City Wide DCL's	$307,989					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$68,959					
Interim Financing	$307,182					
Total Construction Costs	$7,328,483					
Total Construction Costs per sq.ft.	$243					
Developer's Profit Margin Allowance	$1,679,019					
Residual to Land and Land Carry	**$1,680,370**					
Less interim financing on land for 21 months (7%)	$187,132					
Less property purchase tax	$27,865					
Residual Land Value	**$1,465,373**					
Residual Value per sq.ft. of site	**$121.33**					
Residual Value per sq.ft. buildable	**$48.53**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	12b					
Property Address	1344 to 1350 Kingsway					
Description	Vacant Site					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2					
Permitted Maximum FSR	2.5	FSR				
Site Size	12,078	sq.ft. or	99	by	122	
Assumed Density	2.50	FSR				
Total Gross Floorspace	30,195	sq.ft.				
Retail Space	4,200	sq.ft.				
Gross Residential Floorspace	25,995	sq.ft.				
Net Residential Floorspace	22,096	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	37.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		33		
	2.0	per 1000 sq.ft. of retail space or		8		
				41	in total	
Construction Costs						
Demolition Costs	$0					
Permit Fees	$75,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$183	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for	1.25	years		
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,964,000					
Taxes during Year 1 - see existing building analysis	$38,932					
Assessed Value Year 2	$4,601,756	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.639518%					
Taxes during Year 2	$29,429					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$30.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.00	per sq.ft. per month or		$1,200	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$50.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$6,500,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$27,467					
Business/Other Assessment	$1,500,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$29,734					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$189,334					
Commercial Vacancy	$9,467					
Commercial Property Taxes	$29,734					
Commercial Operating Costs	$33,600					
Commercial Net Operating Income	$116,533					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$1,792,820					
Apartment Gross Potential Rent	$530,298					
Parking Revenue	$19,800					
Laundry Revenue	$0					
Total Gross Potential Revenue	$550,098					
Apartment Vacancy	$5,501					
Effective Gross Apartment Revenue	$544,597					
Residential Property Taxes	$27,467					
Residential Operating Expenses	$108,919					
Net Operating Income	$408,210					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$7,422,007					
Total Capitalized Value of Building	$9,214,827					
Less Sales Commissions	$92,148					
Net Value	$9,122,679					
Land Costs						
Acquisition Costs	$1,465,373					
PTT	$27,307					
Holding During Approvals and Construction	$182,853					
Total Land Costs	$1,675,534					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$0					
Permit Fees	$75,000					
Site Servicing	$75,457					
Landscaping	$0					
Hard Construction Costs	$5,515,400					
Soft Costs	$559,086					
Contingency	$311,247					
GVRD Sewer Levy - Residential	$21,830					
GVRD Sewer Levy - Commercial	$1,861					
City Wide DCL's	$307,989					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$68,361					
Interim Financing	$303,460					
Total Construction Costs	$7,239,690					
Total Construction Costs per sq.ft.	$240					
Developer's Profit Margin Allowance	$1,382,224					
Total Creation Cost	**$10,297,449**					
Deficit = Net Value less Total Creation Cost	**-$1,174,770**					
Deficit per Square Foot of Gross Residential Space	**-$45**					
Deficit per Square Foot of Gross Floor Space	**-$39**					

Case Study 13: 2054 Commercial Drive

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Value of Commercial Building Under Existing Use and Zoning						
Case Study Number	13A					
Property Address	2054 Commercial Drive					
Description	Single Storey Retail					
Assumptions						
Existing Zoning	C2C1					
Permitted Maximum FSR	3.0	FSR				
Site Size	8,500	sq.ft. or	100	by	85	
Existing Building						
Number of Storeys	1					
Existing Built FSR	0.60	FSR				
Total Gross Floorspace	5,083	sq.ft.				
Gross Office Floorspace	0	sq.ft.				
Gross Retail Floorspace	5,083	sq.ft.				
Net Rentable Office Floorspace	0	or	100%	of gross office floorspace		
Net Rentable Retail Floorspace	5,083	or	100%	of gross retail floorspace		
Office Lease Rate	$0.00	per sq.ft. per year net				
Retail Lease Rate	$30.00	per sq.ft. per year net				
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Business/Other Assessment	$2,765,600					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$54,821					
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				
Analysis						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$247,975					
Commercial Vacancy	$12,399					
Commercial Property Taxes	$54,821					
Commercial Operating Costs (excluding tax)	$40,664					
Commercial Net Operating Income	$140,091					
Capitalization Rate on Commercial Space	6.5%					
Capitalized Value of Commercial Space	$2,155,250					
Less Allowance for Deferred Maintenance	$0					
Estimated Market Value	$2,155,250					
Value per Gross Square Foot of Space	$424.01					
Value per Gross Square Foot of Site Area	$253.56					

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	13B					
Property Address	2054 Commercial Drive					
Description	Single Storey Retail					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2C1					
Permitted Maximum FSR	3.0	FSR				
Site Size	8,500	sq.ft. or	100	by	85	
Assumed Density	3.00	FSR				
Total Gross Floorspace	25,500	sq.ft.				
Retail Space	3,000	sq.ft.				
Gross Residential Floorspace	22,500	sq.ft.				
Net Residential Floorspace	19,125	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	750	sq.ft.				
Number of Units	26.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		26		
	2.0	per 1000 sq.ft. of retail space or		6		
				32	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$495.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	7%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$500.77	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$50,000					
Site Servicing	$76,220	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$186	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,765,600					
Taxes during Year 1 - see existing building analysis	$54,821					
Assessed Value Year 2	$4,733,438	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.606065%					
Taxes during Year 2	$28,688					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$9,466,875					
Capitalized Value of Retail Space	$1,502,308					
Total Sales Revenue	$10,969,183					
Less Marketing and Commissions	$503,390					
Net Sales Revenue	$10,465,793					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$50,000					
Site Servicing	$76,220					
Landscaping	$0					
Hard Construction Costs	$4,745,000					
Soft Costs	$482,122					
Contingency on Hard and Soft Costs	$268,167					
GVRD Sewer Levy - Residential	$15,340					
GVRD Sewer Levy - Commercial	$1,329					
City Wide DCL's	$260,100					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$83,509					
Interim Financing	$262,141					
Total Construction Costs	$6,253,927					
Total Construction Costs per sq.ft.	$245					
Developer's Profit Margin Allowance	$1,645,377					
Residual to Land and Land Carry	**$2,566,488**					
Less interim financing on land for 21 months (7%)	$285,813					
Less property purchase tax	$43,613					
Residual Land Value	**$2,237,061**					
Residual Value per sq.ft. of site	**$263.18**					
Residual Value per sq.ft. buildable	**$87.73**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	13C					
Property Address	2054 Commercial Drive					
Description	Single Storey Retail					
	Assumes Redevelopment to 4 Storey mixed use woodframe residential					
Site and Building Size						
Existing Zoning	C2C1					
Permitted Maximum FSR	3.0	FSR				
Site Size	8,500	sq.ft. or	100	by	85	
Assumed Density	3.00	FSR				
Total Gross Floorspace	25,500	sq.ft.				
Retail Space	3,000	sq.ft.				
Gross Residential Floorspace	22,500	sq.ft.				
Net Residential Floorspace	19,125	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	32.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		29		
	2.0	per 1000 sq.ft. of retail space or		6		
				35	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$50,000					
Site Servicing	$76,220	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$182	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,765,600					
Taxes during Year 1 - see existing building analysis	$54,821					
Assessed Value Year 2	$3,871,875	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.606065%					
Taxes during Year 2	$23,466					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$35.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.25	per sq.ft. per month or		$1,350	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$50.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$6,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$25,354					
Business/Other Assessment	$1,000,000					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$19,823					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$8.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$148,823
Commercial Vacancy	$7,441
Commercial Property Taxes	$19,823
Commercial Operating Costs	$24,000
Commercial Net Operating Income	$97,559
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$1,500,906
Apartment Gross Potential Rent	$516,375
Parking Revenue	$17,400
Laundry Revenue	$0
Total Gross Potential Revenue	$533,775
Apartment Vacancy	$5,338
Effective Gross Apartment Revenue	$528,437
Residential Property Taxes	$25,354
Residential Operating Expenses	$105,687
Net Operating Income	$397,395
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$7,225,371
Total Capitalized Value of Building	$8,726,277
Less Sales Commissions	$87,263
Net Value	$8,639,014
Land Costs	
Acquisition Costs	$2,237,061
PTT	$42,741
Holding During Approvals and Construction	$279,276
Total Land Costs	$2,559,078
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$10,000
Permit Fees	$50,000
Site Servicing	$76,220
Landscaping	$0
Hard Construction Costs	$4,640,000
Soft Costs	$471,622
Contingency	$262,392
GVRD Sewer Levy - Residential	$18,880
GVRD Sewer Levy - Commercial	$1,329
City Wide DCL's	$260,100
Area Specific DCL's	$0
Property Taxes during approvals and construction	$78,287
Interim Financing	$256,761
Total Construction Costs	$6,125,591
Total Construction Costs per sq.ft.	$240
Developer's Profit Margin Allowance	$1,308,942
Total Creation Cost	**$9,993,611**
Deficit = Net Value less Total Creation Cost	**-$1,354,597**
Deficit per Square Foot of Gross Residential Space	**-$60**
Deficit per Square Foot of Gross Residential Space	-$53

Case Study 14: 1206 East 22nd Avenue

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	13A					
Property Address	1206 to 1216 East 22nd Avenue					
Description	Existing Houses					
	Assume Redevelopment to Row Housing with Underground Parking					
Site and Building Size						
Existing Zoning	RM1					
Permitted Maximum FSR	1.2	FSR				
Site Size	12,078	sq.ft. or	99	by	122	
Assumed Density	1.20	FSR				
Total Gross Floorspace	14,494	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	14,494	sq.ft.				
Net Residential Floorspace	14,494	sq.ft. saleable		100%	of gross area	
Average Net Unit Size	1,250	sq.ft.				
Number of Units	12.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		12		
	2.0	per 1000 sq.ft. of retail space or		0		
				12	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$400.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	0%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$25,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$35,000	per stall				
Total Hard Construction Costs	$159	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$826.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$3.00	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,479,000					
Taxes during Year 1 - see existing building analysis	$6,250					
Assessed Value Year 2	$2,898,720	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$12,249					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$5,797,440					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$5,797,440					
Less Marketing and Commissions	$289,872					
Net Sales Revenue	$5,507,568					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$25,000					
Site Servicing	$75,457					
Landscaping	$30,195					
Hard Construction Costs	$2,304,168					
Soft Costs	$240,982					
Contingency on Hard and Soft Costs	$134,290					
GVRD Sewer Levy - Residential	$9,912					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$43,481					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$18,499					
Interim Financing	$101,219					
Total Construction Costs	$2,993,204					
Total Construction Costs per sq.ft.	$207					
Developer's Profit Margin Allowance	$869,616					
Residual to Land and Land Carry	**$1,644,748**					
Less interim financing on land for 18 months (7%)	$156,999					
Less property purchase tax	$27,755					
Residual Land Value	**$1,459,995**					
Residual Value per sq.ft. of site	**$120.88**					
Residual Value per sq.ft. buildable	**$100.73**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	13B					
Property Address	1206 to 1216 East 22nd Avenue					
Description	Existing Houses					
	Assume Redevelopment to Row Housing with Underground Parking					
Site and Building Size						
Existing Zoning	RM1					
Permitted Maximum FSR	1.2	FSR				
Site Size	12,078	sq.ft. or	99	by	122	
Assumed Density	1.20	FSR				
Total Gross Floorspace	14,494	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	14,494	sq.ft.				
Net Residential Floorspace	14,494	sq.ft. saleable		100%	of gross area	
Average Net Unit Size	1,250	sq.ft.				
Number of Units	12.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		12		
	2.0	per 1000 sq.ft. of retail space or		0		
				12	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$25,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$35,000	per stall				
Total Hard Construction Costs	$149	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$826.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$3.00	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,479,000					
Taxes during Year 1 - see existing building analysis	$6,250					
Assessed Value Year 2	$1,811,700	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$7,656					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$1.85	per sq.ft. per month or		$2,313	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$0.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$4,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$16,903					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	15.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$0.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$321,758					
Parking Revenue	$0					
Laundry Revenue	$0					
Total Gross Potential Revenue	$321,758					
Apartment Vacancy	$3,218					
Effective Gross Apartment Revenue	$318,540					
Residential Property Taxes	$16,903					
Residential Operating Expenses	$47,781					
Net Operating Income	$253,856					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$4,615,570					
Total Capitalized Value of Building	$4,615,570					
Less Sales Commissions	$46,156					
Net Value	$4,569,415					
Land Costs						
Acquisition Costs	$1,459,995					
PTT	$27,200					
Holding During Approvals and Construction	$156,155					
Total Land Costs	$1,643,350					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$25,000					
Site Servicing	$75,457					
Landscaping	$30,195					
Hard Construction Costs	$2,159,232					
Soft Costs	$226,488					
Contingency	$126,319					
GVRD Sewer Levy - Residential	$9,912					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$43,481					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$13,906					
Interim Financing	$95,200					
Total Construction Costs	$2,815,189					
Total Construction Costs per sq.ft.	$194					
Developer's Profit Margin Allowance	$692,336					
Total Creation Cost	**$5,150,875**					
Deficit = Net Value less Total Creation Cost	**-$581,460**					
Deficit per Square Foot of Gross Residential Space	**-$40**					

Case Study 15: 1122 East 22nd Avenue

Financial Analysis for Vancouver Rental Housing Study				
Estimate of the Market Value of Site Under Existing Use				
Case Study Number	15A			
Property Address	1122 to 1144 East 22nd Avenue			
Description	Existing Houses			
Value of Existing single family houses - Value for old SFDs				
	Lot size	Value per sq.ft.	Market Value	
1122 East 22nd	4,026	$130	$523,380	
1128 East 22nd	4,026	$130	$523,380	
1136 East 22nd	4,026	$130	$523,380	
1144 East 22nd	4,026	$130	$523,380	
Total			$2,093,520	

Financial Analysis for Vancouver Rental Housing Study						
Estimate of the Market Land Value of Site Under Existing Zoning						
Case Study Number	15B					
Property Address	1122 to 1144 East 22nd Avenue					
Description	Existing Houses					
	Assume Redevelopment to Attached Units					
Site and Building Size						
Existing Zoning	RT10					
Permitted Maximum FSR	0.75	FSR				
Site Size	16,104	sq.ft. or	132	by	122	
Assumed Density	0.75	FSR				
Total Gross Floorspace	12,078	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	12,078	sq.ft.				
Net Residential Floorspace	12,078	sq.ft. saleable		100%	of gross area	
Average Net Unit Size	1,200	sq.ft.				
Number of Units	10.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		10		
	2.0	per 1000 sq.ft. of retail space or		0		
				10	in total	
Revenue and Value						
Average Sales Price Per Sq. Ft. of Multifamily Residential Space	$400.00	per sq.ft. of net saleable residential space				
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Vacancy and Nonrecoverable Allowance on Commercial Space	0%					
Capitalization Rate for Retail Space	6.50%					
Value of Retail Space Upon Lease-up	$0.00	per sq.ft. of leasable area				
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$100,610	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$130					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$15,000	per stall				
Total Hard Construction Costs	$142	per gross sq.ft. assuming garage parking				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$826.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$3.00	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1	years	
Other Costs and Allowances						
Marketing and Commissions	5.0%	of gross residential revenue				
	2.0%	of commercial value				
Tenant Relocation Costs	$0	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,358,000					
Taxes during Year 1 - see existing building analysis	$9,964					
Assessed Value Year 2	$2,415,600	(50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$10,208					
Developer's Profit Margin Allowance	15%	of gross revenue				

Analysis						
Revenue						
Gross Multifamily Sales Revenue	$4,831,200					
Capitalized Value of Retail Space	$0					
Total Sales Revenue	$4,831,200					
Less Marketing and Commissions	$241,560					
Net Sales Revenue	$4,589,640					
Construction Costs						
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$100,610					
Landscaping	$40,260					
Hard Construction Costs	$1,720,140					
Soft Costs	$186,101					
Contingency on Hard and Soft Costs	$103,856					
GVRD Sewer Levy - Residential	$8,260					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$36,234					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$20,172					
Interim Financing	$78,597					
Total Construction Costs	$2,324,229					
Total Construction Costs per sq.ft.	$192					
Developer's Profit Margin Allowance	$724,680					
Residual to Land and Land Carry	**$1,540,731**					
Less interim financing on land for 18 months (7%)	$147,070					
Less property purchase tax	$25,873					
Residual Land Value	**$1,367,788**					
Residual Value per sq.ft. of site	**$84.93**					
Residual Value per sq.ft. buildable	**$113.25**					

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	15C					
Property Address	1122 to 1144 East 22nd Avenue					
Description	Existing Houses					
	Assume Redevelopment to Attached Units					
Site and Building Size						
Existing Zoning	RM1					
Permitted Maximum FSR	0.75	FSR				
Site Size	16,104	sq.ft. or	132	by	122	
Assumed Density	0.75	FSR				
Total Gross Floorspace	12,078	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	12,078	sq.ft.				
Net Residential Floorspace	12,078	sq.ft. saleable		100%	of gross area	
Average Net Unit Size	1,200	sq.ft.				
Number of Units	10.0	units				
Number of Parking Stalls	1.0	per multifamily unit plus		10		
	2.0	per 1000 sq.ft. of retail space or		0		
				10	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$100,610	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$15,000	per stall				
Total Hard Construction Costs	$132	per gross sq.ft. assuming garage parking				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$826.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$3.00	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$2,358,000					
Taxes during Year 1 - see existing building analysis	$9,964					
Assessed Value Year 2	$1,509,750	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$6,380					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$1.85	per sq.ft. per month or		$2,220	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$0.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$3,500,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$14,790					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	15.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$0.00	per sq.ft. per year				

Analysis						
Net Operating Income and Value						
Revenues						
Commercial Gross Potential Rent (includes taxes)	$0					
Commercial Vacancy	$0					
Commercial Property Taxes	$0					
Commercial Operating Costs	$0					
Commercial Net Operating Income	$0					
Capitalization Rate on Commercial Income	6.5%					
Capitalized Value of Commercial Space	$0					
Apartment Gross Potential Rent	$268,132					
Parking Revenue	$0					
Laundry Revenue	$0					
Total Gross Potential Revenue	$268,132					
Apartment Vacancy	$2,681					
Effective Gross Apartment Revenue	$265,450					
Residential Property Taxes	$14,790					
Residential Operating Expenses	$39,818					
Net Operating Income	$210,843					
Capitalization Rate on Residential Space	5.5%					
Capitalized Value of Residential Space	$3,833,503					
Total Capitalized Value of Building	$3,833,503					
Less Sales Commissions	$38,335					
Net Value	$3,795,168					
Land Costs						
Acquisition Costs	$2,093,520					
PTT	$39,870					
Holding During Approvals and Construction	$224,006					
Total Land Costs	$2,357,396					
Construction Costs						
Initial Lease Up Costs	$0					
Tenant Relocation Costs	$0					
Demolition Costs	$10,000					
Permit Fees	$20,000					
Site Servicing	$100,610					
Landscaping	$40,260					
Hard Construction Costs	$1,599,360					
Soft Costs	$174,023					
Contingency	$97,213					
GVRD Sewer Levy - Residential	$8,260					
GVRD Sewer Levy - Commercial	$0					
City Wide DCL's	$36,234					
Area Specific DCL's	$0					
Property Taxes during approvals and construction	$16,344					
Interim Financing	$73,581					
Total Construction Costs	$2,175,884					
Total Construction Costs per sq.ft.	$180					
Developer's Profit Margin Allowance	$575,026					
Total Creation Cost	**$5,108,306**					
Deficit = Net Value less Total Creation Cost	**-$1,313,138**					
Deficit per Square Foot of Gross Residential Space	**-$109**					

Case Study 16: 605 West 41st Avenue

Financial Analysis for Vancouver Rental Housing Study				
Estimated Value Under Existing Use				
Case Study Number	16A			
Property Address	605 to 615 West 41st Avenue			
Description	Existing Houses			
Value of Existing single family houses - Value for old SFDs				
	Lot size	Value per sq.ft.	Market Value	
605 West 41st	7,200	$160	$1,152,000	
615 West 41st	7,080	$160	$1,132,800	
Total			$2,284,800	

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis	16B					
Case Study Number						
Property Address	605 to 615 West 41st Avenue					
Description	Existing Houses					
	Assume Redevelopment to Lowrise Apartment					
Site and Building Size						
Existing Zoning	RS1					
Permitted Maximum FSR	0.6	FSR				
Site Size	14,280	sq.ft. or	119	by	120	
Assumed Density	1.45	FSR				
Total Gross Floorspace	20,706	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	20,706	sq.ft.				
Net Residential Floorspace	17,600	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	29.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		26		
	2.0	per 1000 sq.ft. of retail space or		0		
				26	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$35,000					
Site Servicing	$90,701	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$170	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,794,100					
Taxes during Year 1 - see existing building analysis	$7,581					
Assessed Value Year 2	$3,080,018	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$13,015					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.40	per sq.ft. per month or		$1,440	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$0.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$6,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$25,354					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$0.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$506,883
Parking Revenue	$0
Laundry Revenue	$0
Total Gross Potential Revenue	$506,883
Apartment Vacancy	$5,069
Effective Gross Apartment Revenue	$501,814
Residential Property Taxes	$25,354
Residential Operating Expenses	$100,363
Net Operating Income	$376,097
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$6,838,125
Total Capitalized Value of Building	$6,838,125
Less Sales Commissions	$68,381
Net Value	$6,769,743
Land Costs	
Acquisition Costs	$2,284,800
PTT	$43,696
Holding During Approvals and Construction	$285,241
Total Land Costs	$2,613,737
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$10,000
Permit Fees	$35,000
Site Servicing	$90,701
Landscaping	$35,700
Hard Construction Costs	$3,524,720
Soft Costs	$365,112
Contingency	$203,062
GVRD Sewer Levy - Residential	$17,110
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$211,201
Area Specific DCL's	$0
Property Taxes during approvals and construction	$20,597
Interim Financing	$197,453
Total Construction Costs	$4,710,656
Total Construction Costs per sq.ft.	$228
Developer's Profit Margin Allowance	$1,025,719
Total Creation Cost	**$8,350,111**
Deficit = Net Value less Total Creation Cost	**-$1,580,368**
Deficit per Square Foot of Gross Residential Space	**-$76**

Case Study 17: 4021 Kamloops

Financial Analysis for Vancouver Rental Housing Study				
Base Case Rental Apartment Analysis				
Case Study Number	17A			
Property Address	4021 to 4035 Kamloops			
Description	Existing Houses			
Value of Existing single family houses - Value for old SFDs				
	Lot size	Value per sq.ft.	Market Value	
4021 Kamloops	3,828	$130	$497,640	
4029 Kamloops	3,828	$130	$497,640	
4035 Kamloops	3,828	$130	$497,640	
Total			$1,492,920	

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	17B					
Property Address	4021 to 4035 Kamloops					
Description	Existing Houses					
	Assume Redevelopment to Lowrise Apartment					
Site and Building Size						
Existing Zoning	RS1					
Permitted Maximum FSR	0.6	FSR				
Site Size	11,484	sq.ft. or	99	by	116	
Assumed Density	1.45	FSR				
Total Gross Floorspace	16,652	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	16,652	sq.ft.				
Net Residential Floorspace	14,154	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	24.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		22		
	2.0	per 1000 sq.ft. of retail space or		0		
				22	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$30,000					
Site Servicing	$75,457	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$173	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$1,794,100					
Taxes during Year 1 - see existing building analysis	$7,581					
Assessed Value Year 2	$2,476,955	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$10,467					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.00	per sq.ft. per month or		$1,200	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$0.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$4,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$16,903					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$0.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$339,697
Parking Revenue	$0
Laundry Revenue	$0
Total Gross Potential Revenue	$339,697
Apartment Vacancy	$3,397
Effective Gross Apartment Revenue	$336,300
Residential Property Taxes	$16,903
Residential Operating Expenses	$67,260
Net Operating Income	$252,137
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$4,584,307
Total Capitalized Value of Building	$4,584,307
Less Sales Commissions	$45,843
Net Value	$4,538,464
Land Costs	
Acquisition Costs	$1,492,920
PTT	$27,858
Holding During Approvals and Construction	$186,295
Total Land Costs	$1,707,074
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$10,000
Permit Fees	$30,000
Site Servicing	$75,457
Landscaping	$28,710
Hard Construction Costs	$2,878,216
Soft Costs	$298,238
Contingency	$166,031
GVRD Sewer Levy - Residential	$14,160
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$169,848
Area Specific DCL's	$0
Property Taxes during approvals and construction	$18,048
Interim Financing	$161,381
Total Construction Costs	$3,850,090
Total Construction Costs per sq.ft.	$231
Developer's Profit Margin Allowance	$687,646
Total Creation Cost	**$6,244,810**
Deficit = Net Value less Total Creation Cost	**-$1,706,346**
Deficit per Square Foot of Gross Residential Space	**-$102**

Case Study 18: Hypothetical Industrial Site

Financial Analysis for Vancouver Rental Housing Study				
Base Case Rental Apartment Analysis				
Case Study Number	18A			
Property Address	Hypothetical Industrial Site in I2, I1 or M2 District			
Description	Vacant or Low Value Existing Improvements			
Value of Site Under Existing Industrial Zoning				
	Lot size	Value per sq.ft.	Market Value	
Industrial Site	43,560	$75	$3,267,000	
Total			$3,267,000	

Financial Analysis for Vancouver Rental Housing Study						
Base Case Rental Apartment Analysis						
Case Study Number	18B					
Property Address	Hypothetical Industrial Site					
Description	Vacant site or low value existing improvements					
	Assumes Redevelopment to Woodframe Lowrise Apartment					
Site and Building Size						
Existing Zoning	I1, I2 or M2					
Permitted Maximum FSR	n/a	FSR				
Site Size	43,560	sq.ft. or	150	by	290	
Assumed Density	1.45	FSR				
Total Gross Floorspace	63,162	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	63,162	sq.ft.				
Net Residential Floorspace	53,688	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	89.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		80		
	2.0	per 1000 sq.ft. of retail space or		0		
				80	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$65,000					
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	50.0%	of site		
Building Construction Costs - Residential	$120					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$171	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.25	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$3,000,000					
Taxes during Year 1 - see existing building analysis	$12,677					
Assessed Value Year 2	$9,395,348	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$39,702					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.20	per sq.ft. per month or		$1,320	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$50.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$18,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$76,063					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$0.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$1,417,355
Parking Revenue	$48,000
Laundry Revenue	$0
Total Gross Potential Revenue	$1,465,355
Apartment Vacancy	$14,654
Effective Gross Apartment Revenue	$1,450,702
Residential Property Taxes	$76,063
Residential Operating Expenses	$290,140
Net Operating Income	$1,084,498
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$19,718,150
Total Capitalized Value of Building	$19,718,150
Less Sales Commissions	$197,181
Net Value	$19,520,968
Land Costs	
Acquisition Costs	$3,267,000
PTT	$63,340
Holding During Approvals and Construction	$407,967
Total Land Costs	$3,738,307
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$10,000
Permit Fees	$65,000
Site Servicing	$114,329
Landscaping	$108,900
Hard Construction Costs	$10,779,440
Soft Costs	$1,100,267
Contingency	$608,897
GVRD Sewer Levy - Residential	$52,510
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$644,252
Area Specific DCL's	$0
Property Taxes during approvals and construction	$52,379
Interim Financing	$592,199
Total Construction Costs	$14,128,174
Total Construction Costs per sq.ft.	$224
Developer's Profit Margin Allowance	$2,957,722
Total Creation Cost	**$20,824,203**
Deficit = Net Value less Total Creation Cost	**-$1,303,234**
Deficit per Square Foot of Gross Residential Space	**-$21**

Case Study 19: Hypothetical Industrial Site – Concrete Development (same site as Case Study 18)

Base Case Rental Apartment Analysis						
Case Study Number	19					
Property Address	Hypothetical Industrial Site					
Description	Vacant site or low value existing improvements					
	Assume Redevelopment to Midrise Concrete Apartment					
Site and Building Size						
Existing Zoning	I1, I2 or M2					
Permitted Maximum FSR	n/a	FSR				
Site Size	43,560	sq.ft. or	150	by	290	
Assumed Density	3.00	FSR				
Total Gross Floorspace	130,680	sq.ft.				
Retail Space	0	sq.ft.				
Gross Residential Floorspace	130,680	sq.ft.				
Net Residential Floorspace	111,078	sq.ft. saleable		85%	of gross area	
Average Net Unit Size	600	sq.ft.				
Number of Units	185.0	units				
Number of Parking Stalls	0.9	per multifamily unit plus		167		
	2.0	per 1000 sq.ft. of retail space or		0		
				167	in total	
Construction Costs						
Demolition Costs	$10,000					
Permit Fees	$130,000					
Site Servicing	$114,329	assuming	$2,500	per lineal metre of frontage		
Landscaping	$5.00	per sq.ft. of site area on	0.0%	of site		
Building Construction Costs - Residential	$180					
Building Construction Costs - Retail/Commercial	$180	assuming shell space				
Parking Construction Costs	$40,000	per stall				
Total Hard Construction Costs	$231	per gross sq.ft. assuming underground parking and retail at grade				
Soft Costs	10%	of hard costs and parking				
Contingency on Costs	5%					
GVRD Sewer Levy	$590.00	per apartment unit				
	$0.443	per sq.ft. of retail space				
City Wide DCL's	$10.20	per sq.ft. of building area				
Area Specific DCL's	$0.00	per sq.ft. of building area				
Interim Financing on construction costs	7.0%	on 50% of construction costs for		1.5	years	
Other Creation Costs and Allowances						
Initial Lease Up Costs	$0.00					
Tenant Relocation Costs	$0.00	assuming one month of rent per existing unit				
Assessed Value Year 1 - existing assessment	$3,000,000					
Taxes during Year 1 - see existing building analysis	$12,677					
Assessed Value Year 2	$19,438,650	(roughly 50% of completed value)				
Property Tax Rate (blended residential and business)	0.422573%					
Taxes during Year 2	$82,142					
Developer's Profit Margin Allowance	15%	of value				
Commission on Sale of Building	1%	of value				
Operating Revenue, Cost and Value Assumptions						
Average Lease Rate for Retail Space	$0.00	per sq.ft. net for shell space, no TI's				
Market Rental Rates						
Residential Units (average)	$2.40	per sq.ft. per month or		$1,440	per unit per month	
Laundry Revenue	$0.00	per unit per month (in-suite)				
Parking Revenue	$50.00	per stall per month				
Residential Vacancy Allowance	1.0%					
Commercial Vacancy Allowance	5.0%					
Property Tax Allowance						
Residential Assessment	$40,000,000					
Residential Tax Rate	0.422573%					
Residential Property Taxes	$169,029					
Business/Other Assessment	$0					
Business/Other Tax Rate	1.982256%					
Commercial Property Taxes	$0					
Residential Operating Costs - excluding taxes (see notes)	20.0%	of effective gross residential income				
Commercial Operating Costs (excluding tax)	$0.00	per sq.ft. per year				

Analysis	
Net Operating Income and Value	
Revenues	
Commercial Gross Potential Rent (includes taxes)	$0
Commercial Vacancy	$0
Commercial Property Taxes	$0
Commercial Operating Costs	$0
Commercial Net Operating Income	$0
Capitalization Rate on Commercial Income	6.5%
Capitalized Value of Commercial Space	$0
Apartment Gross Potential Rent	$3,199,046
Parking Revenue	$100,200
Laundry Revenue	$0
Total Gross Potential Revenue	$3,299,246
Apartment Vacancy	$32,992
Effective Gross Apartment Revenue	$3,266,254
Residential Property Taxes	$169,029
Residential Operating Expenses	$653,251
Net Operating Income	$2,443,974
Capitalization Rate on Residential Space	5.5%
Capitalized Value of Residential Space	$44,435,890
Total Capitalized Value of Building	$44,435,890
Less Sales Commissions	$444,359
Net Value	$43,991,531
Land Costs	
Acquisition Costs	$3,267,000
PTT	$63,340
Holding During Approvals and Construction	$407,967
Total Land Costs	$3,738,307
Construction Costs	
Initial Lease Up Costs	$0
Tenant Relocation Costs	$0
Demolition Costs	$10,000
Permit Fees	$130,000
Site Servicing	$114,329
Landscaping	$0
Hard Construction Costs	$30,202,400
Soft Costs	$3,031,673
Contingency	$1,674,420
GVRD Sewer Levy - Residential	$109,150
GVRD Sewer Levy - Commercial	$0
City Wide DCL's	$1,332,936
Area Specific DCL's	$0
Property Taxes during approvals and construction	$94,820
Interim Financing	$1,926,736
Total Construction Costs	$38,626,464
Total Construction Costs per sq.ft.	$296
Developer's Profit Margin Allowance	$6,665,383
Total Creation Cost	**$49,030,154**
Deficit = Net Value less Total Creation Cost	**-$5,038,623**
Deficit per Square Foot of Gross Residential Space	**-$39**

7.0 Appendix 2 - Summary of the Financial Impact of Policy Alternatives

The exhibit on the following page summarizes our analysis of the impact on the estimated financial gap associated with rental housing development that we completed as input to the evaluation of policy options included in Section 4.0 of this report.

Base Case Analysis of Case Study Site						Estimated Rental Housing Deficit ($psfb) Under Specified Change to Policies/Regulation									
	Site	Zoning	Description of Scenario	Woodframe or concrete development	Base Case Estimated Deficit ($psfb) for New Rental Project	No Parking	Bonus - All Rental Building	Estimated FSR Needed for Rental to be Viable	No City of Vancouver Property Taxes	No DCLs or Application Fees	Strata at Existing FSR with Rental Bonus	Rent Supplement Needed to Make Rental Viable	Eliminate GST+PST on New Construction	Eliminate GST+PST on Operating Costs	Income Tax Credit Eliminating Financing Costs
1	130 West Broadway	C-3A	Redevelopment of Existing Low Density Commercial Building to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$124 psfb	-$87 psfb	-$71 psfb with a 2.0 FSR Bonus	30+FSR	-$115 psfb	-$112 psfb	viable	$0.78 per sq.ft. per month or $470 per unit	-$108 psfb	-$119 psfb	-$91 psfb
2	2080 West Broadway	C-3A	Redevelopment of Existing Parking Lot to Highrise Mixed Use Residential and Retail @ 3.0 FSR	concrete	-$137 psfb	-$99 psfb	-$80 psfb with a 2.0 FSR Bonus	30+FSR	-$128 psfb	-$125 psfb	viable	$0.85 per sq.ft. per month or $510 per unit	-$121 psfb	-$132 psfb	-$100 psfb
4	1981 West 10th Avenue	RM-4	Redevelopment of Existing Older Walk up Apartment Building to Lowrise Apartment @ 1.45 FSR	woodframe	-$129 psfb	-$81 psfb	-$74 psfb with a 0.5 FSR Bonus	not possible in woodframe	-$118 psfb	-$116 psfb	viable	$0.69 per sq.ft. per month or $410 per unit	-$114 psfb	-$123 psfb	-$99 psfb
7	1880 Frances Street	RM-4	Redevelopment of Existing House and Vacant Lot to Lowrise Apartment @ 1.45 FSR	woodframe	-$60 psfb	-$12 psfb	-$32 psfb with a 0.5 FSR Bonus	not possible in woodframe	-$50 psfb	-$47 psfb	viable	$0.33 per sq.ft. per month or $200 per unit	-$45 psfb	-$54 psfb	-$39 psfb
8	4464 Dunbar	C-2	Redevelopment of Existing Low Density Commercial Building to Mixed Use Residential and Retail @ 2.5 FSR	concrete	-$94 psfb	-$54 psfb	-$49 psfb with a 1.0 FSR Bonus	6.0 FSR	-$86 psfb	-$82 psfb	viable	$0.59 per sq.ft. per month or $355 per unit	-$80 psfb	-$89 psfb	-$67 psfb
11	4000 Main Street	C-2	Redevelopment of Vacant Site to Mixed Use Residential and Retail @ 2.5 FSR	woodframe	-$52 psfb	-$6 psfb	-$25 psfb with a 1.0 FSR Bonus	6.0 FSR	-$44 psfb	-$39 psfb	viable	$0.33 per sq.ft. per month or $200 per unit	-$39 psfb	-$47 psfb	-$30 psfb