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RESEARCH REPORT

UNIVERCITY:

ASSESSING CONSUMER DEMAND FOR
SUSTAINABLE DEVELOPMENT IN
GREATER VANCOUVER



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**A POLLARA Report
for
Canada Mortgage & Housing Corporation**

**UniverCity: Assessing Consumer Demand
for Sustainable Development
in Greater Vancouver**

April / May 2003

601 West Broadway, Suite 550
Vancouver, BC
V5Z 4C2
Tel: (604) 708-7930
Fax: (604) 708-7950

✧ VANCOUVER ✧ TORONTO
✧ OTTAWA ✧ BATHURST, N.B.
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This study was conducted for Canada Mortgage and Housing Corporation (CMHC) under Part IX of the National Housing Act. The analysis, interpretations and recommendations are those of the consultant and do not necessarily reflect the views of CMHC.

Résumé

Introduction

La présent texte constitue un résumé du sondage effectué pour le compte de la SCHL entre le 23 avril 2003 et le 11 mai 2003 auprès de 150 personnes habitant la Colombie-Britannique. Tous les répondants ont été présélectionnés afin de s'assurer qu'ils étaient susceptibles d'acheter une propriété dans les cinq prochaines années. La marge d'erreur associée à un échantillon de 150 personnes est de $\pm 8.0\%$, dix-neuf fois sur vingt (Nota : Les résultats fondés sur des échantillons plus petits sont moins fiables). L'étude avait pour objectif d'aider la SCHL à comprendre les décisions en matière d'habitation prises par les résidents du district régional de Vancouver relativement à des choix de logements plus sains et plus éconergétiques dans une collectivité durable.

L'UniverCity de la Simon Fraser University

L'UniverCity est une nouvelle collectivité qu'on aménage à l'heure actuelle sur le campus de la Simon Fraser University (SFU) à Burnaby, en Colombie-Britannique. On prévoit y construire une collectivité durable qui logera en définitive 10 000 résidents dans 4 500 logements, et comprendra environ 250 000 pi² d'espaces à bureau et de vente au détail. La Simon Fraser UniverCity Community Corporation est une filiale à part entière de la SFU et est le promoteur immobilier du projet.

La Société canadienne d'hypothèques et de logement (SCHL) travaille fréquemment de concert avec les intervenants locaux et autres partenaires publics et privés afin de favoriser un plus grand choix de logement, d'améliorer l'abordabilité ou de soutenir l'innovation. Le projet de partenariat avec l'UniverCity Community Corporation en constitue un exemple. De manière à soutenir l'adoption par le marché des principes de la Maison saine^{MC}, et pour encourager les promoteurs à faire leur part au chapitre des économies d'énergie, de l'amélioration de la qualité de l'air intérieur, et de l'économie de l'eau, en septembre 2002, la SCHL, le district régional de Vancouver, Ressources naturelles Canada et l'UniverCity participaient à une charrette de conception intégrée. Cette dernière a fourni l'occasion aux promoteurs et à leur équipe de conception de découvrir des façons d'intégrer les *directives visant les bâtiments écologiques* de l'UniverCity dans trois propositions d'aménagement.

Des experts ayant une solide expérience du processus de conception intégré ont servi de facilitateur et ont fourni leur soutien aux équipes de conception. Des personnes-ressources se sont greffées aux équipes de conception des promoteurs et ont apporté leur savoir-faire en matière d'arpentage, d'aménagement paysager, de durabilité, d'énergie solaire, de



réglementation municipale et de services publics.

À mesure que progressait la charrette de deux jours, plusieurs participants ont noté le manque sensible d'information portant sur la demande du marché pour le logement « plus écologique », plus sain et plus durable. Puisque certains éléments de la conception des bâtiments « écologiques » peuvent être plus coûteux en immobilisations, il est crucial de connaître le niveau d'intérêt des consommateurs et leur disposition à payer davantage pour de telles caractéristiques. À titre d'un des commanditaires de cet événement, la SCHL s'est engagée à mener une enquête afin de quantifier la demande des consommateurs pour les Maisons saines et ainsi apporter un nouvel éclairage sur le débat ayant cours sur le cheminement des consommateurs en matière de développement durable. L'étude dont il est question ici a été conçue de manière à repérer les caractéristiques qui intéressent les consommateurs, et dans quelle mesure ils seraient prêts à payer davantage pour les obtenir.

Situation de vie actuelle

Les résidents du district régional de Vancouver¹ qui songent le plus à déménager dans les cinq prochaines années sont ceux qui habitent surtout des maisons individuelles isolées (50%). C'est une maison individuelle isolée que 56 % des répondants sont le plus susceptibles d'acheter. Vingt-trois pour cent d'entre eux songent à acheter une maison en rangée. La plupart des répondants sont des locataires qui en sont à leur premier achat (33 %) ou des propriétaires intéressés par une maison plus grande (33%).

Tout comme les résultats d'autres sondage auprès de consommateurs, les résultats de ce sondage révèlent que les acheteurs ont deux éléments à l'esprit lorsqu'ils se cherchent une maison : (a) **la qualité de la construction** (en moyenne, les répondants ont coté l'importance de ce facteur à 9,3 sur 10) et (b) **le prix** (cote de 8,7 sur 10).

Demande des consommateurs à l'égard de la Maison saine^{MC}

L'attrait pour les caractéristiques des maisons saines varie. L'avantage le plus attrayant a trait à l'efficacité énergétique (89 % des répondant ont indiqué que ces avantages influeraient favorablement sur leur décision d'acheter), l'économie de l'eau (87 %), la qualité de l'air intérieur (81%) et l'utilisation efficace des ressources (81%). Il est également évident que les répondants sont prêts payer un surplus pour des caractéristiques qui engendrent des économies à long terme ou des bénéfices perceptible au chapitre de la santé. Comme on peut s'y attendre, les caractéristiques que l'on peut mettre en oeuvre sans frais ou à faible coût leur sont particulièrement attrayantes.

En comparaison, seulement 57 % d'entre eux ont répondu que la présence d'éléments d'adaptabilité les inciterait à se décider à acheter une maison. Cet attrait moins important résulte peut-être de leur coût additionnel et du manque d'économies à long

¹ Comprend les résidents de North Vancouver, de West Vancouver, de Vancouver, de Burnaby, de New Westminster, de Richmond, de Delta, de Tsawassan, de Ladner, de Maple Ridge, de Coquitlam, de Belcarra, de Port Moody, de Anmore, de Port Coquitlam, de Pitt Meadows, de Surrey, de White Rock, de Langley et d'Aldergrove.

terme. Des données directionnelles suggèrent que les acheteurs de maisons qui s'intéressent le plus aux adaptations de logement forment un créneau du marché. Les acheteurs qui semblent les plus intéressés aux adaptations de logement sont souvent les accédants à la propriété (63 %) de moins de 35 ans (69 %).

En revanche, seulement 23 % des répondants ont indiqué que les économies découlant du nombre réduit de places de stationnement souterraines les intéresseraient. De prime abord, il semble qu'un nombre de place de stationnement moins élevé puisse décourager plus d'acheteurs potentiels que d'en encourager. Manifestement, les 23 % d'acheteurs qui ne tiennent pas à une place de stationnement intérieure constituent néanmoins une bonne proportion, compte tenu de l'intérêt que portent les personnes à leur véhicule automobile.

Demande des consommateurs pour la collectivité durable de UniverCity

Comme il fallait s'y attendre, l'emplacement de l'UniverCity (sur Burnaby Mountain) limite le marché potentiel des acheteurs de maison au sein de l'aménagement « parce qu'il est éloigné des zones urbaines voisines ». Néanmoins, il semble que ce soit un emplacement relativement attrayant pour une partie importante du marché, puisque 33 % des répondants ont mentionné que cet emplacement influerait favorablement sur leur décision d'acheter (comparativement à 47 % des répondants qui ont répondu le contraire).

Compte tenu du stade préliminaire de son développement, la connaissance de l'existence de l'UniverCity par les répondants est relativement élevée avec 26 % qui ont répondu en connaître l'existence. Les caractéristiques déterminantes de l'UniverCity semblent attirantes. Une fois qu'on ait eu expliqué les caractéristiques de l'aménagement aux répondants, 32 % d'entre eux ont indiqué qu'ils seraient intéressés à acheter un logement dans la UniverCity. Les répondants qui songent à s'acheter une maison en rangée sont ceux qui y sont les plus intéressés (51%).

Projections de la demande et des revenus

La propension à s'acheter un logement dans l'UniverCity a été évaluée à l'aide d'une série de questions liées conçues pour établir le niveau de la demande en fonction d'une fourchette de prix. On voulait ainsi comprendre la répercussion des prix sur la demande, en fonction de logements en copropriété de une chambre, de deux chambres et de trois chambres.

La recherche révèle que la UniverCity pourrait possiblement prendre 4,68 % du marché immobilier de la vallée du bas Fraser si les logements étaient vendus aux prix du marché habituel de la nouvelle construction. Si on ventile les données par type de logement, l'ensemble UniverCity récolterait 1,1 % des ventes d'appartements d'une chambre, 1,78 % des deux chambres et 1,77 % des trois chambres.

En revanche, si les logements y étaient vendus à prime par rapport aux prix du marché médian, la demande tomberait considérablement. Les logements de deux chambres sont les plus sensibles aux variations de prix, suivis des appartements de trois chambres. Par exemple, si les prix étaient supérieurs de 5 % au prix du marché,

l'ensemble UniverCity irait chercher seulement 1,34 % du marché immobilier de la vallée du bas Fraser, composé d'appartements de deux chambres (0,24 %), d'appartements de trois chambres (0,56 %) et d'appartements d'une chambre (0,5 %).

En se fondant sur la relation entre la demande et les prix, les chercheurs ont pu établir le niveau de revenu pouvant être théoriquement maximisé. Les estimations de revenu sont indépendantes de l'offre de logements dans l'ensemble UniverCity. En ce qui a trait à la vente de logements d'une chambre, les revenus sont maximisés lorsque le prix de vente se situe à 6,5 % au-dessus de celui du marché de la construction neuve.

Quant aux logements de deux chambres de l'UniverCity, le point de revenu maximal se produit à un prix de 5 % supérieur à celui du marché pour un logement neuf. Enfin, pour ce qui est des logements de trois chambres, on obtient le revenu maximal lorsque les logements se vendent à un prix 4,5 % plus élevé que ceux du marché de la construction neuve. Par conséquent, les acheteurs de logements de deux chambres sont plus sensibles aux prix comparativement aux acheteurs de logements en copropriétés d'une et de trois chambres.



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Bureau national

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Telephone: (613) 748-2000

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Introduction / Executive Summary

The following is an executive summary of a CMHC consumer survey conducted between April 23, 2003 and May 11, 2003 with 150 members of the general population of British Columbia. All respondents were screened to ensure that they are likely to purchase a home in the next five years. The margin of error associated with a sample size of 150 is $\pm 8.0\%$, nineteen times out of twenty. (Note: Results based on smaller population subgroups are less reliable.) The purpose of the study was to help CMHC understand the housing decisions made by residents within Greater Vancouver as they relate to healthier, more energy efficient housing within sustainable communities.

UniverCity at Simon Fraser University

UniverCity is a new community that is being developed at Simon Fraser University (SFU) in Burnaby, BC. It is intended to be a sustainable community that will eventually house 10,000 residents in 4,500 homes and contain approximately 250,000 ft² of commercial and office space. The Simon Fraser UniverCity Community Corporation is a wholly owned subsidiary of SFU and is the land developer for this project.

CMHC frequently works with local stakeholders and other public or private partners to meet its objectives. An example of this is the current partnership with the UniverCity Community Corporation. To support the development of sustainable communities, and to encourage participating developers to 'push the envelope' in terms of greater energy efficiency, improved indoor air quality, water conservation, etc., CMHC, GVRD, Natural Resources Canada, UniverCity and the interested developers for phase one, participated in an Integrated Design Charrette in September 2002. The charrette provided the opportunity for three developers, their design teams and subject area experts from various disciplines to explore ways of incorporating UniverCity's *Green Building Guidelines* into three development proposals.

Experts with experience in the integrated design process acted as facilitators and provided support to the design teams. Resource people complemented the developers' design teams, bringing expertise as quantity surveyors, landscape specialist, sustainability consultants, solar energy advisors, municipal planners and utility representatives.

As the two-day charrette progressed, several participants noted that a key missing element was the lack of information on market demand for 'greener', healthier and more sustainable housing. Since some "green"

building design elements may incur additional up-front construction costs, it is critical to understand the level of consumer interest and willingness to pay for these features. As one of the sponsors for this event, CMHC agreed to conduct a study that would quantify consumer demand for Healthy Housing in order to demystify and bring clarity to the local debate on 'where home buyers are at' in terms of sustainable development. The study would also identify those features that consumers would be willing to pay more for.

Current Living Situation

Residents of Greater Vancouver¹ who are considering moving within the next five years tend to mostly live in single detached houses (50%). Single detached houses are also the type of residence that respondents are most likely to purchase (56%). Twenty-three percent anticipate purchasing a townhouse or rowhouse. Most respondents are renters that will be buying for the first time (33%) or repeat buyers interested in moving up to a larger home (33%).

Similar to results from other consumer surveys, results from this survey show that there are two key factors in the minds of consumers when buying a home: (a) **quality of construction** (on average, respondents rate the importance of this factor as 9.3 out of 10); and (b) **price** (rated at 8.7 out of 10).

Consumer Demand for Healthy Housing™

The appeal of the features and benefits of healthy housing varies. The most appealing benefits relate to energy efficiency (89% indicate that these benefits would encourage their purchase decision), water conservation (87%), indoor air quality (81%), and efficient use of resources (81%). It is also apparent that respondents are willing to pay for features that would deliver long-term cost savings or discernable health benefits. As would be expected, features that can be provided at little or no additional cost are particularly appealing.

In comparison, only 57% indicate that adaptability of the home would encourage their purchase decision. The lower appeal of these features might be a result of the high additional cost and lack of concrete cost-savings. However, directional evidence suggests that the adaptability of

¹ Includes residents of North Vancouver, West Vancouver, Vancouver, Burnaby, New Westminster, Richmond, Delta, Tsawassan, Ladner, Maple Ridge, Coquitlam, Belcarra, Port Moody, Anmore, Port Coquitlam, Pitt Meadows, Surrey, White Rock, Langley, and Aldergrove.

the home features have more appeal among a niche market. Homebuyers that appear to be the most interested in adaptability of the home features tend to be first time homebuyers (63%) under the age of 35 (69%).

Meanwhile, 23% of respondents indicate that the cost savings associated with reduced underground parking stalls would encourage interest. At first glance, evidence from this research suggests that reduced underground parking spaces might discourage more potential homebuyers than it encourages. However, the 23% that *are* willing to give up an underground parking stall can be considered a significant proportion given how attached people are to their vehicles.

Consumer demand for UniverCity Sustainable Community

As one might expect, the location of UniverCity (on Burnaby Mountain) limits the potential market in terms of purchasing a home within the development “because the site is away from the surrounding urban area”. Yet, it appears to be a relatively appealing location for a significant portion of the market, as 33% indicate that this location would encourage their purchase decision (compared to 47% who said it would discourage their decision).

Given the early stage of development, awareness of UniverCity is relatively high, with 26% of residents reporting to be aware of the development. The defining characteristics of UniverCity seem to be appealing. Once the characteristics of the development were explained to respondents, 32% indicated that they were interested in purchasing a UniverCity home. Respondents who anticipate purchasing a townhouse or rowhouse are the most interested in the development (51%).

Demand and Revenue Projections

Propensity to purchase a UniverCity home was tested using a series of price related questions that were designed to establish demand at different prices. The intent was to understand the relationship that price has on demand. Demand was measured for one-bedroom, two-bedroom, and three-bedroom condominium units.

The research suggests that UniverCity could likely capture 4.68% of the Lower Mainland real estate market if units sold at typical market rates for new construction. Broken down further by unit type, UniverCity would capture 1.1% through the sale of one-bedroom apartments, 1.78% for two-bedroom apartments, and 1.77% for three-bedroom apartments.

If residential units at UniverCity were sold at a premium to mid-market prices, demand would drop dramatically for the development. Two-bedroom apartments are the most price sensitive, followed by three-bedroom and then one-bedroom apartments. For example, if units were sold at 5% above market price, UniverCity would capture only 1.34% of the Lower Mainland real estate market, comprised of two-bedroom apartments (0.24%), three bedroom apartments (0.56%), and one-bedroom apartments (0.5%).

Using the relationship between demand and price, estimates were made to establish where revenue could theoretically be maximized. Revenue estimates are independent of the supply of units available at UniverCity. For the sale of one-bedroom units at UniverCity, revenue is maximized when the units are sold at 6.5% above market price for new construction.

For two-bedroom UniverCity apartments, the maximum revenue point occurs at 2.5% above market price for new construction. Finally, for three-bedroom UniverCity apartments, the maximum revenue point occurs at a cost of 4.5% above market price for new construction. Thus, buyers of two-bedroom units are the most price sensitive compared to buyers of one- and three-bedroom condominiums.

I Background and Objectives

UniverCity is a new community that is being developed at Simon Fraser University (SFU) in Burnaby, BC. It is intended to be a sustainable community that will eventually house 10,000 residents in 4,500 homes and contain approximately 250,000 ft² of commercial and office space. The Simon Fraser UniverCity Community Corporation is a wholly owned subsidiary of SFU and is the land developer for this project.

Canada Mortgage and Housing Corporation (CMHC) frequently works with local stakeholders and other public or private partners to meet its objectives. An example of this is the current partnership with the UniverCity Community Corporation. To support the development of UniverCity, and to encourage participating developers to 'push the envelope' in terms of greater energy efficiency, improved indoor air quality, water conservation, etc., CMHC, GVRD, Natural Resources Canada, UniverCity and the interested developers for phase one, participated in an Integrated Design Charrette in September 2002. The charrette provided the opportunity for three developers, their design teams and subject area experts from various disciplines to explore ways of incorporating UniverCity's *Green Building Guidelines* into three development proposals.

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As the two-day charrette progressed, several participants noted that a key missing element was the lack of information on market demand for 'greener', healthier and more sustainable housing. Since some "green" building design elements may incur additional up-front construction costs, it is critical to understand the level of consumer interest and willingness to pay for such features. As one of the sponsors for this event, CMHC

agreed to conduct a study to quantify consumer demand for Healthy Housing in order to demystify and bring clarity to the local debate on 'where home buyers are at' in terms of sustainable development. The study was designed to identify those features on which consumers placed value and how much extra (if anything) consumers would be willing to pay for those features.

CMHC has identified the need to conduct market research that will help provide direction in terms of consumer demand for this type of development. CMHC is interested in consumer demand for Healthy housing in general, and is gauging this demand by using the new UniverCity development as an example. The objectives of this survey are as follows:

- Determine the level of demand for living in a medium-density residential community (ranging from 3-storey townhomes to 12-storey apartment-style condominiums).
- Determine the level of demand and willingness to pay for urban development that incorporates CMHC's Healthy Housing™ principles.
- Determine level of demand and willingness to pay for specific Healthy Housing™ features such as environmentally appropriate building practices, healthy finishing materials, greater energy efficiency, and flexible suites.
- Identify the most effective marketing channels and collateral for these types of consumers.
- Segment the demand for a specific project (UniverCity) from the demand for living in a conventional development elsewhere in Greater Vancouver. (i.e. Does the prospect of living on Burnaby Mountain at Simon Fraser University help or hinder home buying decisions?).
- Identify the price points that will deter or encourage purchasing a home within a new sustainable community (using UniverCity as an example).
- Understand the compelling features and key drivers to purchasing decisions that consumers are looking for in a new home and surrounding neighbourhood.



II Methodology

This project has two distinct phases:

Qualitative Phase – March 2003	Quantitative Phase – April, May 2003
Focus Group Interviews	Telephone Survey
Two focus group sessions were conducted for the express purpose of improving the wording of the subsequent survey	Residents within GVRD planning to purchase a home within the next five years

In total, 150 telephone interviews were conducted with Lower Mainland residents who anticipate being in the housing market in the next five years. All interviews were conducted by POLLARA's tele-research centre in Vancouver between April 23, 2003 and May 11, 2003. Respondents were screened to ensure that they are either very or somewhat likely to purchase a home within the next five years. The **margin of error** associated with a sample size of 150 is $\pm 8.0\%$, nineteen times out of twenty.

The telephone survey is the second phase (quantitative study) of this CMHC Directed Research project. The first phase, conducted in February 2003, was qualitative and consisted of two focus groups with potential homebuyers in the Lower Mainland. The results of the qualitative research were used to develop the content of the questionnaire for the survey of the most recent quantitative research phase. The key findings of the focus groups can be found in Appendix B.

Interviews were conducted throughout the Lower Mainland. The number of interviews conducted in each area is as follows:

Area within GVRD	# of Interviews
North & West Vancouver	14
Vancouver / Burnaby / New Westminster	61
South / Southeast Suburbs ¹	55
Northeast Suburbs ²	20
Total	150

¹ South / Southeast suburbs include respondents living in Richmond, Delta, Tsawassan, Ladner, Surrey, White Rock, Langley, and Aldergrove.

² Northeast suburbs include respondents living in Maple Ridge, Coquitlam, Belcarra, Port Moody, Anmore, Port Coquitlam, and Pitt Meadows.

Survey Structure – Order of Questions

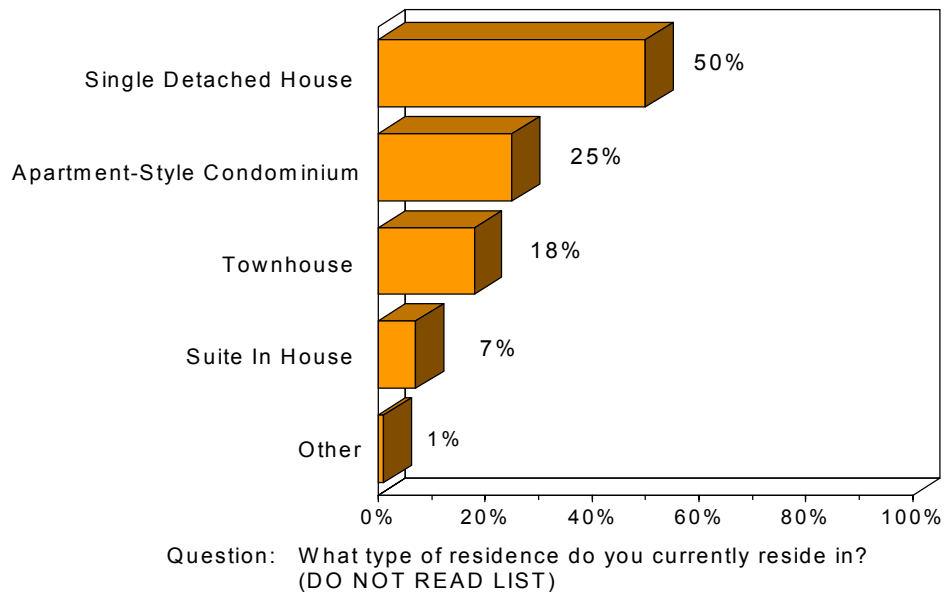
Section	Topic Area / Description	# of Questions
<i>General</i>	Qualifying questions	3
	Current living situation	1
	Important considerations for buying a home	2
<i>Healthy Housing</i>	Indoor air quality / high-efficiency ventilation	3
	Energy efficiency	4
	Water conservation	3
	Building materials / embodied energy	4
	Adaptability of the home	2
	Transportation and parking	4
<i>Specific to UniverCity</i>	Awareness / interest in UniverCity at SFU	2
	Appeal of Healthy Housing principles	2
<i>Willingness to Pay</i>	Willingness to pay 2%, 5% or 10% more for a home with Healthy Housing features	2
<i>Demographics</i>	Age, own / rent, education, marital status, household income	6
Total Questions:		38

III Current Living Situation

A. Current Type of Residence

Respondents' current type of residence was determined as part of this study. The majority (50%) currently reside in single detached houses.

Figure 1.
Current Type of Residence (n=150)



As one might expect, marital status appears to influence which type of residence respondents currently occupy. The majority of respondents who are married live in single-detached houses (60%), while most single respondents live in apartment-style condominiums (45%).

Regional analysis shows that respondents in all areas of Greater Vancouver *except* those living in Vancouver, Burnaby, or New Westminster are most likely to live in single detached houses. The majority of Vancouver, Burnaby, or New Westminster residents with intentions to purchase a home during the next 5 years are living in apartment-style condominiums (41%, compared to 30% living in single detached houses).

B. Important Housing Features

In order to understand which housing features respondents consider when buying a new home, respondents were read a list of features and asked to rate the importance of each. Ratings were made on a scale of 1 to 10 where 1 is not at all important and 10 is extremely important.

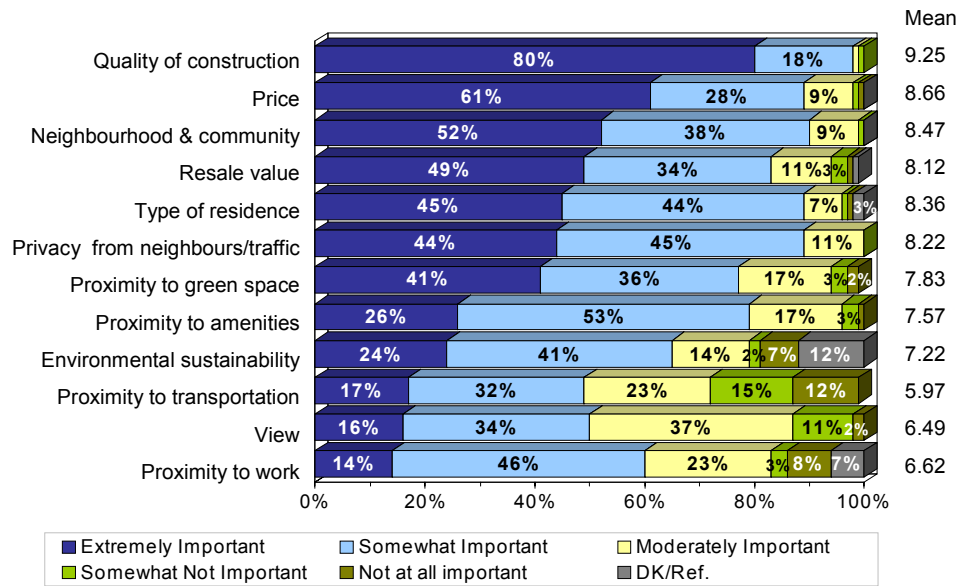
Clearly, “quality of construction” is an important feature to consider when purchasing a new home, receiving the highest average rating of 9.3 out of 10. Other highly important features include the following (in descending order of importance):

- Price (average rating of 8.7)
- Neighbourhood and community (average rating of 8.5)
- Type of residence (average rating of 8.4)
- Privacy from neighbours and traffic (average rating of 8.2)
- Resale value (average rating of 8.1)
- Proximity to green space and parks (average rating of 7.8)
- Proximity to amenities (such as schools, grocery stores, shops, etc) (average rating of 7.6)
- Environmental sustainability (average rating of 7.2)

Meanwhile, the following features are less likely to be an important consideration when purchasing a new home:

- Proximity to work (average rating of 6.6)
- View (average rating of 6.5)
- Proximity to transportation options (SkyTrain, buses, etc) (average rating of 6.0)

Figure 2.
Important Housing Features (n=150)

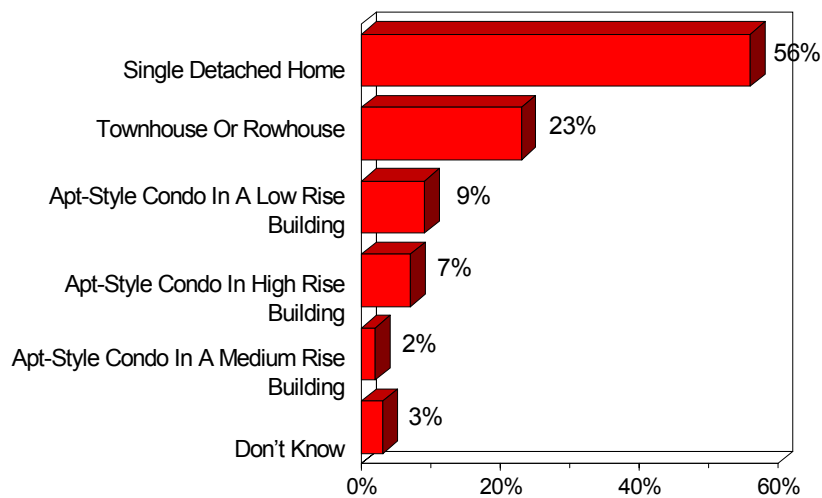


Question: Using a scale of 1 to 10 (where 1 is not at all important and 10 is extremely important), how important are the following housing features when you are considering buying a new home?
(READ AND ROTATE)

C. Type of Residence Most Likely to Purchase

Respondents were also asked which type of residence they are most likely to purchase the next time they are searching for a home. Overall, the majority of respondents (56%) anticipate buying a single detached house, followed by a townhouse or rowhouse (23%).

Figure 3.
Type of Residence Most Likely to Purchase (n=150)



Question: Which of the following types of homes do you think you would consider purchasing?
Question: Of the types you just mentioned, which one would you MOST LIKELY purchase the next time you are searching for a home?

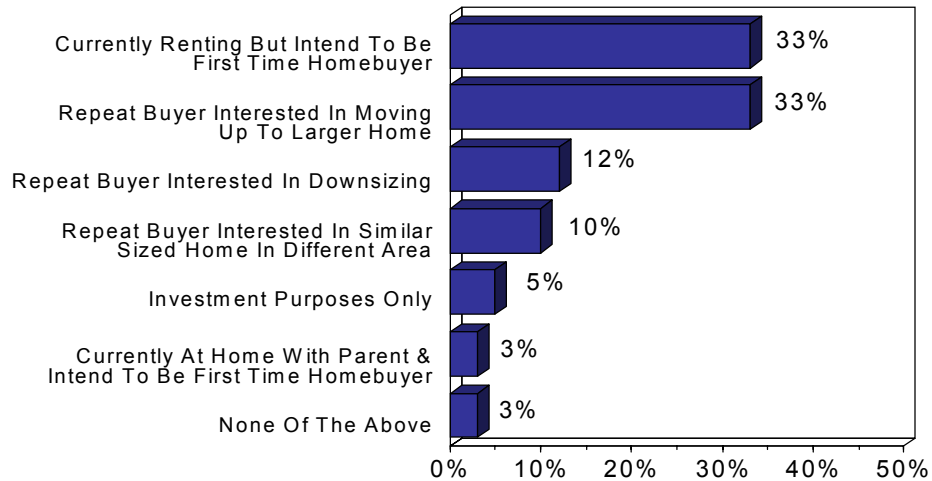
The type of residence consumers are most likely to purchase is influenced by various factors, including marital status. The majority of married respondents plan on purchasing a single detached house (63%), while single respondents are more likely to buy a townhouse/rowhouse (34%) or apartment-style condominium (38%) than a single detached house (25%).

D. Reasons for Buying a New Home

Reasons for buying a new home were also determined. Overall, 33% of respondents are currently renting and are intending to become first time homebuyers. Another 33% are repeat buyers interested in moving up to a larger home.

In total, the proportion of all repeat buyers is 55%. In comparison, the proportion of all first time homebuyers is 36%.

Figure 4.
Reasons for Buying a New Home (n=150)



Question: Which of the following statements best describes why you anticipate buying a home in the next five years... (READ AND ROTATE)?

Reasons for buying vary dependent on respondents' current type of home. For example, among respondents living in an apartment-style condominium or suite in a house, 47% are currently renting and will be first time homebuyers. However, this reason is indicated by only 23% of respondents living in a single detached house. These results are outlined in the following table.

Table 2.
Reasons for Buying by Type of Residence (n=150)

Current Type of Residence	Renting, 1 st time buyer	With parents, 1 st time buyer	Repeat buyer, larger home	Repeat buyer, downsizing	Repeat buyer, similar size, different area	Investment purposes only	None	Total
	%	%	%	%	%	%	%	%
Single detached	23	3	29	23	18	4	0	100
Townhouse	37	7	37	4	0	4	11	100
Apt-style unit / suite in home	47	0	37	0	4	7	4	100

Perhaps reflective of housing affordability and the increasing cost of housing in Greater Vancouver, the likelihood of buying a single detached house is highest among repeat buyers (i.e. those who already have a home) interested in moving up to a larger home (72%), while first time home buyers are more likely to consider townhouses, rowhouses and apartment-style condominiums.

Table 3.
Type of Residence Most Likely to Purchase by Reason for Buying (n=150)

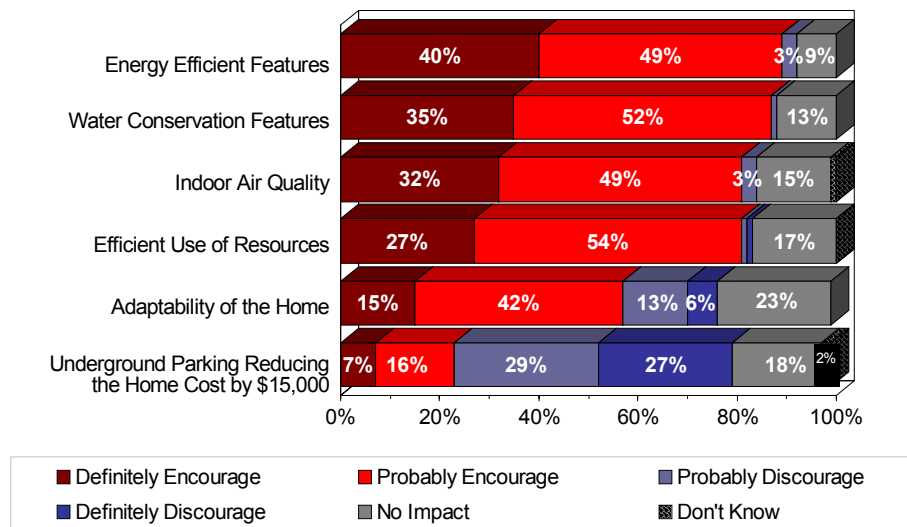
Reason for Buying	Single Detached House	Townhouse or Rowhouse	Apartment-Style Condominium	Don't Know	Total
	%	%	%	%	%
First time home buyer	42	32	21	6	100
Repeat buyer, larger home	72	18	10	0	100
Repeat buyer, downsizing or similar size in different area	54	20	23	3	100

IV Healthy Housing™

Respondents were told that some newly constructed homes have a number of features and benefits that may not be available in older homes. Respondents were also informed that these features provide benefits in the areas of indoor air quality, energy efficiency, water conservation, efficient use of resources, adaptability of the home, and transportation and reduced parking spaces. Using a scale of definitely encourage, probably encourage, probably discourage, definitely discourage, or no impact, respondents were asked to rate the appeal of various features of Healthy Housing expressed as benefits with an associated cost¹. By juxtapositioning a sustainable feature with an associated cost, the overall appeal of the benefits in these areas was determined.

A. Overall Ratings

Figure 5.
Overall Ratings of Healthy Housing Benefits (n=150)



¹ Costs were developed in collaboration with Rethinking Building Inc, green building consultants to UniverCity. They were derived from case study analysis of similar projects. Given that costs vary widely depending on building type, location, etc, costs were described on a “per feature” basis and were intended to be indicative only in order to provide context to the question. For full details on the costs quoted, please refer to the Interview Schedule and Survey in Appendix C.

Overall, energy efficiency features generate the most interest, with 89% of respondents indicating that these features would encourage their purchase decision (40% definitely encourage, 49% probably encourage). The appeal of energy efficient features likely relates to the potential long-term cost-savings that these features would provide.

Other features were also found to encourage interest in a large proportion of respondents. For example:

% saying feature would <u>encourage</u> purchase decision	Breakdown	Feature Description
87%	35% definitely 52% probably	Water conservation
81%	32% definitely 49% probably	Improved indoor air quality and ventilation
81%	27% definitely 54% probably	Efficient use of resources

Meanwhile, only 57% indicate that features related to adaptability of the home encourage the purchase decision (15% definitely encourage, 42% probably encourage). The lower appeal suggests that although these features might deliver flexibility, the high additional cost combined with no perceived concrete cost-savings or health benefits, detracts from the purchase decision. Considering that the adaptability of the home features could possibly assist with mortgage payments, the existence of these features may be attractive to a niche market rather than the general market. Directional evidence suggests that homebuyers who appear the most interested in adaptability of the home features are first time homebuyers (63% encourage, with 13% saying definitely and 50% saying probably) under the age of 35 (69% encourage, with 17% saying definitely and 52% saying probably).

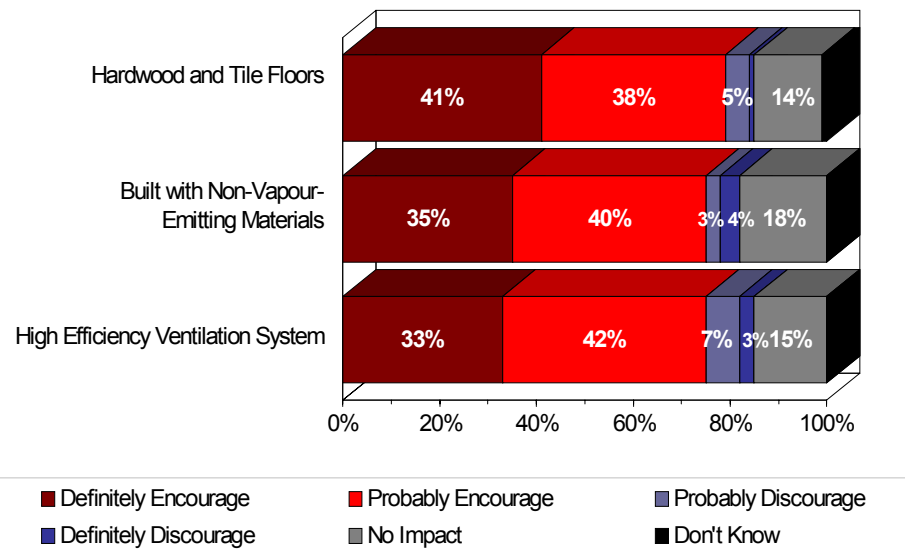
Meanwhile, 23% (7% definitely encourage, 16% probably encourage) of respondents indicate that the cost savings associated with reduced underground parking stalls would encourage interest. At first glance, evidence from this research suggests that reduced underground parking spaces might discourage more potential homebuyers than it encourages. Clearly, some respondents are attached to their vehicles, and convincing these homebuyers to give up their cars might be difficult. However, the 23% that *are* willing to give up an underground parking stall can be considered a significant proportion given how attached people are to their vehicles.

B. Indoor Air Quality

As mentioned, respondents were read a list of benefits related to improved indoor air quality and ventilation, and asked how much each feature would encourage or discourage their purchase decision. All indoor air quality features are rated relatively high in appeal, implying that homebuyers are willing to pay for features that might benefit their health.

% saying feature would <u>encourage</u> purchase decision	Breakdown	Feature Description
79%	41% definitely 38% probably	Hardwood and tile floors are easier to clean than wall-to-wall carpet and prevent build up of lung irritants and dirt
75%	35% definitely 40% probably	Non-vapour-emitting materials to reduce airborne pollutants and minimize respiratory aggravation and allergies
75%	33% definitely 42% probably	High efficiency ventilation system to ensure air entering the home is as clean as possible and evenly distributed to all rooms

Figure 6.
Impact of Indoor Air Quality Benefits on Purchase Decision (n=150)



Question: I am going to read you a series of indoor air quality features that could be available in new homes in the near future. For each one, I would like you to tell me how much it would encourage or discourage your decision to purchase a home with that feature. Please use a scale of definitely encourage, probably encourage, probably discourage, definitely discourage, or have no impact on your purchase decision....READ AND ROTATE

C. Energy Efficiency

Respondents were read a list of benefits related to improved energy efficiency in new homes. **The high appeal of these features suggests that consumers recognize the long-term cost-savings that these features can deliver.**

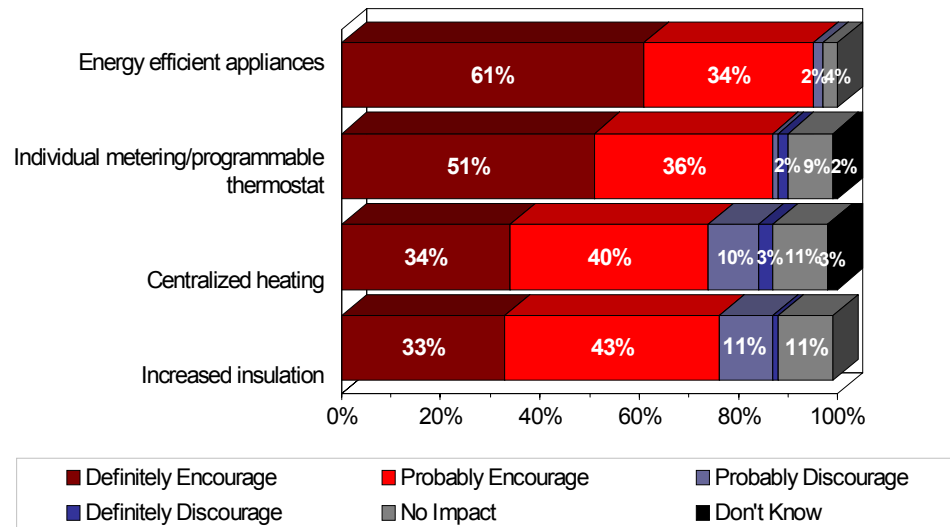
Almost all respondents (95%) indicate that a high efficiency hot water heating system and energy-efficient appliances would encourage their purchase decision (61% definitely encourage and 34% probably encourage).

Individual metering and programmable thermostats are also important. Overall, 87% (51% definitely encourage, 36% encourage) of respondents indicate that this feature would encourage their purchase decision.

Although other energy efficient features are rated lower, it is still apparent that these features would significantly impact respondents' purchase decision. For example:

% saying feature would <u>encourage</u> purchase decision	Breakdown	Feature Description
76%	33% definitely 43% probably	Increased insulation, tighter exterior walls and roof construction, and high efficiency windows and doors let less heat escape from home
74%	34% definitely 40% probably	A centralized heating system with a single gas boiler instead of electric baseboards

Figure 7.
Impact of Energy Efficiency Benefits on Purchase Decision (n=150)



Question: Next, I would like to get some feedback regarding the energy efficiency features. Again, for each one please tell me how much it would encourage or discourage you from purchasing a home with these features READ AND ROTATE

D. Water Conservation

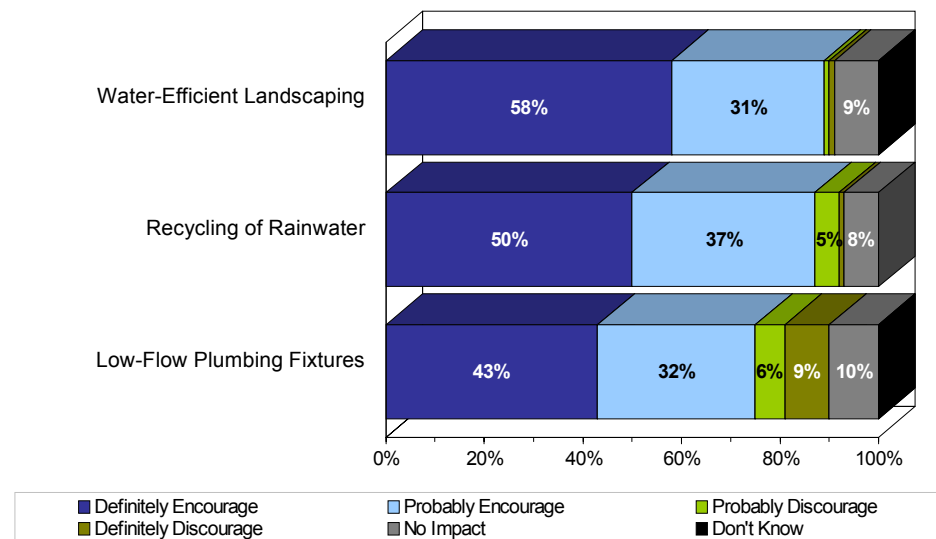
The impact of features related to water conservation was also examined. Results show that although all three features mentioned in the survey would encourage respondents' purchase decision, there are two features in particular that would have the most influence:

% saying feature would <u>encourage</u> purchase decision	Breakdown	Feature Description
89%	58% definitely 31% probably	Water-efficient landscaping to help conserve water and reduce maintenance
87%	50% definitely 37% probably	Recycling of rainwater for landscape irrigation to conserve treated drinking and reduce the cost of piping water into the sewer system

Meanwhile, the appeal of low-flow plumbing fixtures is relatively lower, with 75% of respondents indicating that this feature would encourage their purchase decision (43% definitely encourage, 32% probably encourage).

In addition to the stated benefits of these water conservation features, the relatively high ratings given to these features be due in part to the low (or no) additional cost associated with such features.

Figure 8.
Impact of Water Conservation Benefits on Purchase Decision (n=150)



Question: Now I would like to ask you some questions regarding the water conservation features. For each feature, please tell me whether it would definitely encourage, probably encourage, probably discourage, definitely discourage, or have no impact on your purchase decision....READ AND ROTATE

E. Efficient Use of Resources

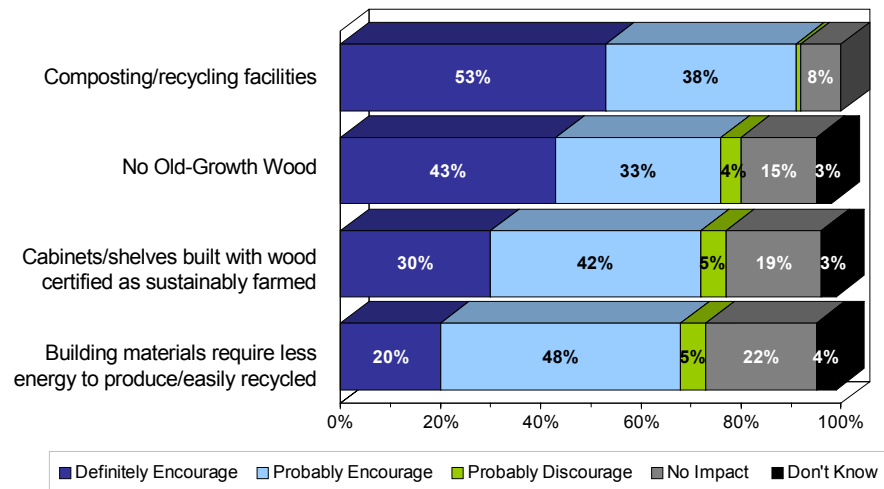
Questions were also asked concerning efficient use of material resources within the development. The most appealing of these features are the composting and recycling facilities, with 91% (53% definitely encourage, 38% probably encourage) of respondents indicating that this would encourage their purchase decision. The high appeal of this feature might in part be due to its low additional cost and widespread acceptance of recycling facilities in most cities and towns across Canada.

Other features that encourage interest the following:

% saying feature would <u>encourage</u> purchase decision	Breakdown	Feature Description
76%	43% definitely 33% probably	Homes built using no old-growth wood
72%	30% definitely 42% probably	Homes that include certified sustainably farmed wood for cabinets and shelves

Meanwhile, the fact that the home could be built using building materials that require less energy to produce or are easy to recycle is slightly less likely to encourage respondents' purchase decision (68%, 20% definitely encourage, 48% probably encourage). The benefits of this feature may also be less familiar to homebuyers.

Figure 9.
Impact of Efficient Use of Resources Benefits on Purchase Decision (n=150)



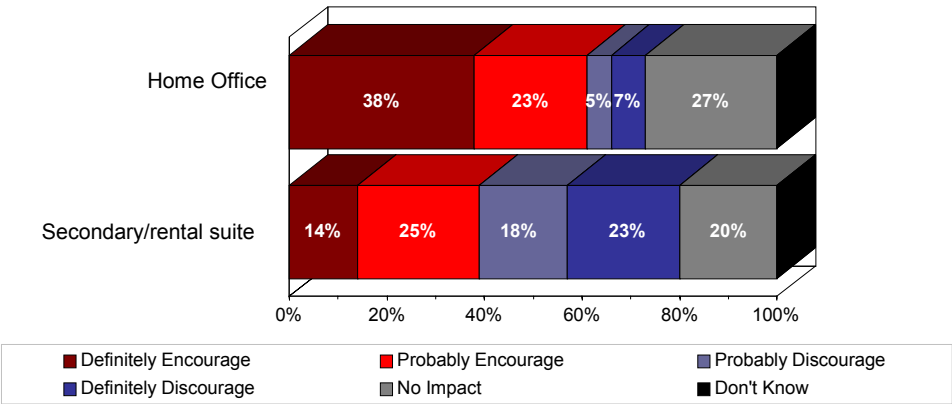
Question: Next I would like to ask you some questions regarding features related to efficient use of resources. Here, we mean employing products, technologies and materials in the construction of a home that require less energy to manufacture, are recyclable or are made up of recycled content in order to reduce waste and energy consumption. For each feature, please tell me whether it would definitely encourage, probably encourage, probably discourage, definitely discourage, or have no impact on your purchase decision....READ AND ROTATE

F. Adaptability of the Home

Respondents also rated the appeal of benefits related to adaptability of the home. It is clear that a home office is the most likely of these features to encourage respondents' purchase decision (61%), with 38% saying definitely encourage and 23% saying probably encourage. The home office would only discourage 12% of potential home buyers.

Meanwhile, the appeal of a secondary suite is much lower (39%, 14% definitely encourage and 25% probably encourage), but is high enough to suggest that this feature may have some ability to attract homebuyers. However, since this feature discourages a significant proportion of potential buyers (18% probably discourage, 23% definitely discourage), care should be taken in balancing the number of units built with this feature in a residential development¹.

Figure 10.
Impact of Adaptability of the Home Benefits on Purchase Decision (n=150)



Question: Next I would like to ask you some questions regarding the adaptability of the home. For each feature, please tell me whether it would definitely encourage, probably encourage, probably discourage, definitely discourage, or have no impact on your purchase decision....READ AND ROTATE

¹ Readers of this report are encouraged to refer to a concurrent study conducted by CMHC: *FlexHousing™ Consumer Demand and Information Needs in B.C.* When projected over the entire population of potential homebuyers and home renovators in British Columbia over the next five years, 21% are potential FlexHousing consumers. This includes 17% that would purchase a flex home, and 5% that would undertake a major renovation that included Flex features (note: there is minor overlap between these two groups).

G. Transportation and Parking

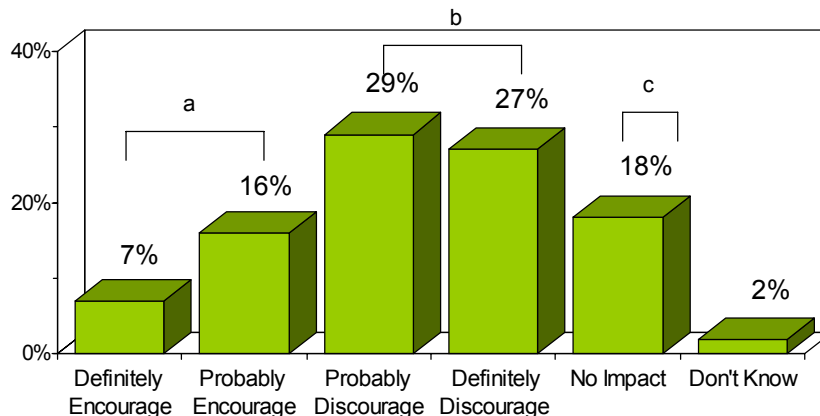
Respondents were also asked several questions regarding transportation and parking. First, it was determined that respondents need an average of 2.02 parking spaces. However, the average number of vehicles in each household is slightly lower (1.86), implying that some homeowners like to have additional parking spaces for guests.

Respondents who own vehicles were also told that if a condominium development was built without underground parking stalls, the construction price of each unit would be reduced by approximately \$15,000.

Meanwhile, 23% (7% definitely encourage and 16% probably encourage) indicate that this feature would encourage their purchase decision. This implies that although most respondents are unwilling to give up a parking space and their vehicle, despite the significant cost savings that could be gained, a significant number will be prepared to consider reduced parking capacity.

Encourage (a)	Discourage (b)	No Impact (c)
23%	56%	18%

Figure 11.
Impact of Transportation and Parking Benefits on Purchase Decision
(Among those who Own a Vehicle) (n=145)



Question: If a condominium were built without underground parking stalls, reducing the price of each unit by \$15,000, would that definitely encourage, probably encourage, probably discourage, definitely discourage, or have no impact on your purchase decision?

First-time homebuyers are slightly more likely than repeat buyers to be encouraged by reduced parking spaces. For example, 29% (6% definitely, 23% probably) of first-time homebuyers indicate that reduced parking would encourage their purchase decision, compared to 23% (8% definitely, 15% probably) of repeat buyers downsizing or moving to a similar sized home in a different area. Similarly, 20% (8% definitely, 12% probably) of repeat buyers interested in moving to a larger home are encouraged by reduced parking.

Table 4.
Impact of Reduced Parking by Reason for Buying (n=145)
(Among those who are Discouraged by Absence of Underground Parking)

Reason for Buying	Definitely Encourage %	Probably Encourage %	Probably Discourage %	Definitely Discourage %	No Impact %	Don't Know %	Total %
First time home buyer	6	23	28	20	22	2	100
Repeat buyer, larger home	8	12	34	28	15	2	100
Repeat buyer, downsizing or similar size in different area	8	15	30	29	14	3	100

The impact of reduced parking also varies by number of household cars. Interestingly, respondents with fewer cars are more likely to be encouraged by reduced underground parking than are those with a higher number of cars. This may be due to the fact that most developments provide two spaces even if they only need one. For example, although 30% (9% definitely, 21% probably) of one-vehicle households indicate that reduced parking would encourage their purchase decision, this falls to only 8% (8% definitely, 0% probably) among households with four or more vehicles.

Table 5.
Impact of Reduced Parking by Number of Vehicles (n=145)
(Among those who are Discouraged by Absence of Underground Parking)

Number of Vehicles	Definitely Encourage %	Probably Encourage %	Probably Discourage %	Definitely Discourage %	No Impact %	Don't Know %	Total %
1	9	21	27	19	19	4	100
2	7	15	26	32	19	1	100
3	0	11	45	22	22	0	100
4 or more	8	0	42	42	8	0	100

Furthermore, not all areas of Greater Vancouver are equally likely to be encouraged by a reduced number of underground parking stalls. Current residents of Vancouver, Burnaby, or New Westminster are the most likely to be encouraged by a reduced number of parking stalls (32%, 9% definitely encourage and 23% probably encourage), while respondents currently living in North or West Vancouver are the least likely to feel that reduced parking would encourage their purchase decision (14%, 14% definitely, 0% probably).

Table 6.
Impact of Reduced Parking by Area (n=145)
(Among those who are Discouraged by Absence of Underground Parking)

Area within GVRD	Definitely Encourage %	Probably Encourage %	Probably Discourage %	Definitely Discourage %	No Impact %	Don't Know %	Total %
North / West Vancouver	14	0	36	21	29	0	100
Vancouver / Burnaby / New West	9	23	21	30	14	4	100
South / Southeast suburbs	7	11	35	26	19	2	100
Northeast suburbs	0	20	30	30	20	0	100

Respondents who indicated that the absence of underground parking stalls would discourage their purchase decision were asked if there were any circumstances, features or services that would enable them to give up one parking space. Of the 56% that would be discouraged by the absence of underground parking facilities, 44% indicate that there is nothing that would encourage them to give up a parking space. However, fully 33% indicate that, if their concerns satisfied, they might consider giving up a space. Thirteen percent indicate that they *might* be willing to give up a parking space if they had access to (or a discount on) transit, while another 5% mention features related to security, such as secure bike locks and bike rails (3%) or the inclusion of a security system (2%).

The above data indicates that although approximately 25% of all vehicle owners in Greater Vancouver could not be encouraged to give up a parking space, roughly 19% could potentially be convinced to give up a parking space if concerns are met.

Table 7.
Ways to Encourage Respondents to Give Up a Parking Space - Top Mentions
(Among those who would be Discouraged if No Underground Parking) (n=82)

Response	%
No/nothing/would not give it up	44
Access to transit/discount on transit	13
More visitor/free/street parking	7
Getting rid of one vehicle	6
Secure bike locks/bike rails	3
Security system	2
Storage space	2
Don't know	12
Refused	6

H. Other Features of Interest to Target Market

All respondents were asked to identify any other features and benefits that would encourage them to purchase a home constructed according to Healthy Housing principles. Thirty-eight percent of respondents are unable to think of any other additional features. Meanwhile, 8% mention the use of solar or wind power, and 7% indicate that price would be an important factor. These results are summarized in the following table.

Table 8.
Other Features that would Encourage Purchase - Top Mentions (n=150)

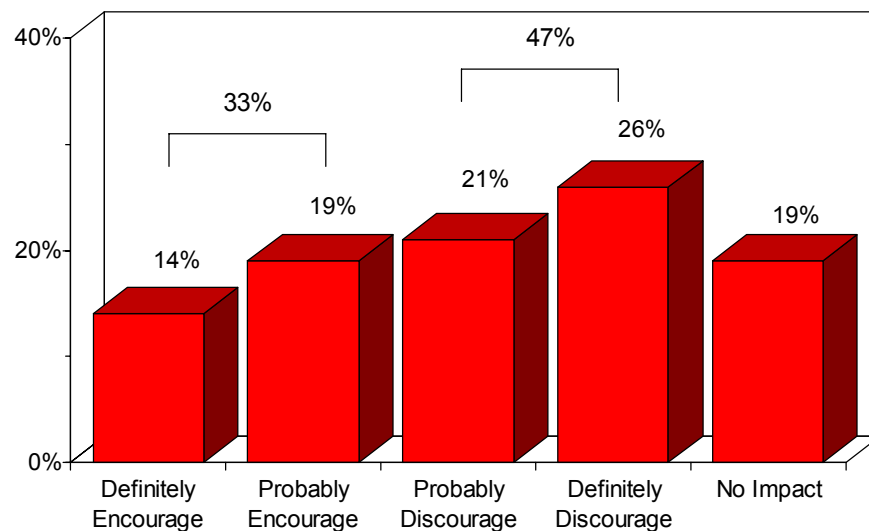
Recommendation	%
No/nothing/none	38
Solar/wind power	8
Price	7
Safe/security system	5
Green spaces	5
Size/layout	4
Windows	3
Well built	3
Better location	3
Natural gas fireplace	2
Don't know	4
Refused	11

V UniverCity at Simon Fraser University

A. Interest in Living on Burnaby Mountain

The study also determined overall level of interest in living at Simon Fraser University within the UniverCity development by asking respondents their interest in living in North Burnaby on Burnaby Mountain. Thirty-three percent of respondents indicate that this location would encourage them to purchase, with 14% saying definitely encourage and 19% saying probably encourage. Meanwhile, 47% indicate that this location would actually discourage their purchase decision (26% definitely discourage and 21% probably discourage). Another 19% say that this location would have no impact.

Figure 12.
Interest in Living on Burnaby Mountain (n=150)



Question: Switching topics slightly, how interested would you be in living in North Burnaby on Burnaby Mountain? Would you say that this location would (READ LIST) you to purchase?

The appeal of the Burnaby Mountain location appears to be influenced by current area. Overall, respondents living in the Northeast suburbs (40%¹) or Vancouver, Burnaby, or New Westminster (39%²) are the most likely to indicate that the location encourages their purchase. It is also clear that the respondents living in North or West Vancouver are less encouraged by the Burnaby Mountain location (0% are definitely encouraged by this location).

Table 9.
Interest in Burnaby Mountain Location by Area (n=150)

Area within GVRD	Definitely Encourage %	Probably Encourage %	Probably Discourage %	Definitely Discourage %	No Impact %	Don't Know %	Total %
North / West Vancouver	0	29	43	7	14	7	100
Vancouver / Burnaby / New West	16	23	15	30	16	0	100
South / Southeast suburbs	14	11	22	29	25	0	100
Northeast suburbs	15	25	25	20	15	0	100

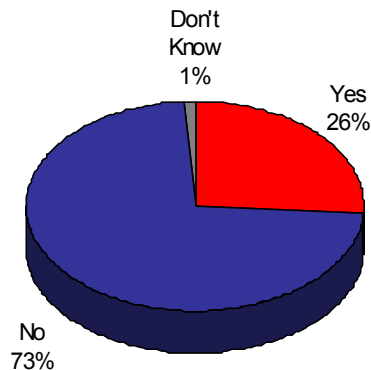
¹ Of this 40%, 15% say definitely encourage and 25% say probably encourage.

² Of this 39%, 16% say definitely encourage and 23% say probably encourage.

B. Awareness of UniverCity

Awareness of UniverCity was measured by asking respondents if they are aware of a new development that is being planned near Simon Fraser University and is based on Healthy Housing principles. Overall, 26% of respondents are aware of the UniverCity development at SFU.

Figure 13.
Awareness of UniverCity (n=150)



Question: Are you aware of a new development that is being planned near Simon Fraser University and is based on Healthy Housing principles?

Awareness for UniverCity is also found to vary by current location. Respondents living in the Northeast suburbs demonstrate the highest awareness (40%), while awareness in all other areas is lower.

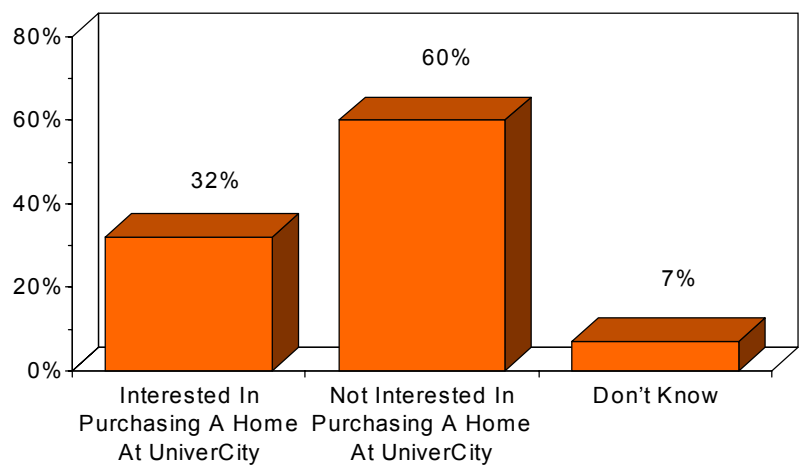
Table 10.
Awareness of UniverCity by Area (n=150)

Area within GVRD	Aware %	Unaware %	Don't know %	Total %
North / West Vancouver	29	71	0	100
Vancouver / Burnaby / New West	26	74	0	100
South / Southeast suburbs	20	77	2	100
Northeast suburbs	40	60	0	100

C. Interest in UniverCity

The concept of UniverCity was explained to all respondents. Respondents were then told to consider the location and all of the features and benefits of UniverCity, including the Healthy Housing features discussed earlier, and asked whether they would be interested in purchasing a home at UniverCity. Overall, 32% of respondents indicate that they are interested in a UniverCity home, while 60% are not. Another 7% are unsure.

Figure 14.
Interest in UniverCity (n=150)



Question: Considering all of the features and benefits of UniverCity, including the Healthy Housing features discussed earlier, and the location on Burnaby Mountain, do you think you would... be interested in purchasing a home at UniverCity or not be interested in purchasing a home at UniverCity?

Interest in UniverCity is influenced by numerous factors, including type of residence respondents are most likely to purchase. For example, it is apparent that UniverCity generates the most interest in respondents who anticipate purchasing a townhouse or rowhouse (51%).

Table 11.
Interest in UniverCity by Type of Home Most Likely to Purchase (n=150)

Type of Home Likely to Purchase	Interested %	Not Interested %	Don't Know %	Total %
Single detached house	26	64	9	100
Townhouse or rowhouse	51	43	6	100
Apartment-style condominium	29	67	4	100

Interest in UniverCity also varies dependent on respondents' reason for buying a home. First time homebuyers are the most interested in the development, with 40% expressing interest. In comparison, only 29% of repeat buyers expressed interest in UniverCity (downsizing or similar-sized home). Similarly, only 26% of repeat buyers seeking a larger home are interested in UniverCity.

Not surprisingly, interest in UniverCity is highest among respondents who like the Burnaby Mountain location. Among respondents who feel that this location would definitely encourage their purchase decision, 76% express interest in UniverCity.

Table 12.
Interest in UniverCity by Interest in Burnaby Mountain Location (n=150)

Interest in Burnaby Mountain Location	Interested %	Not Interested %	Don't Know %	Total %
Definitely encourage	76	10	14	100
Probably encourage	55	27	17	100
Probably discourage	23	77	0	100
Definitely discourage	0	100	0	100
No impact	31	59	10	100

Further analysis shows that consumer interest is influenced by age, marital status, household income, and current location. The survey shows that respondents most likely to be interested in UniverCity are:

- Between the ages of 35 and 44 (39%).
- Single (40%).

- Mid-income earners (45% of those earning \$40,000 to less than \$80,000).
- Living in Vancouver, Burnaby, or New Westminister (39%), or the Northeast suburbs (35%).

Reasons for Interest in UniverCity

Respondents who are interested in purchasing a UniverCity home were also asked why they are interested. Of the 32% that are interested in a UniverCity home, 60% generally mention the location or area, 30% like the proximity of the location to SFU, and 20% like the healthy environment and green spaces. It is noteworthy that the healthy housing features of the UniverCity development are of interest to only 10% of all potential homebuyers interested in UniverCity.

Thus, it can be determined that out of all potential homebuyers in Greater Vancouver, roughly 20% would be interested in UniverCity due to its general location, 10% like that it is close to SFU, and 7% like the healthy environment and green spaces. Approximately 3% of all homebuyers in Greater Vancouver would be interested in UniverCity because of healthy housing features.

Table 13.
Reasons Why Interested in UniverCity
(Among those Interested) (n=49)

Reason why Interested	%
Location/area	60
Close to SFU	30
Healthy environment/green spaces	20
Close to work	16
Complete package/all features	14
Good place for a family	10
Based on Healthy Housing factors	10
Price/cost	8
Investment/rental property	8
Amenities	6
Type of house/townhouse	6
Layout/strata system	2
Availability of trails on mountain	2
Good management of energy/resources	2
SkyTrain goes there	2
Other	4

Reasons Why Not Interested

Meanwhile, respondents who are not interested in UniverCity were asked to state their reasons. Of the 60% that are not interested in UniverCity, 46% generally dislike the location. Another 22% think it is too far from work, 15% want a different type of housing, and 13% would like to stay near their current location.

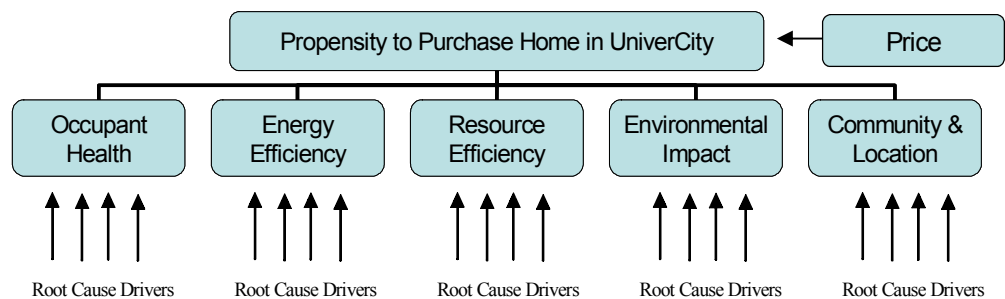
Thus, out of all potential homebuyers in Greater Vancouver, approximately 28% would not be interested in UniverCity due to its general location, 13% think that it is too far from work, 9% want a different type of housing, and 8% would prefer to stay near their current location.

Table 14.
Reasons Why Not Interested in UniverCity
(Among those Not Interested) (n=90)

Reason why Not Interested	%
Dislike location	46
Too far/too far from work	22
Want a different type of housing	15
Like current location	13
Too far from downtown	4
Not affordable/limited budget	2
Acreage property/want acreage	2
Were not supposed to build on that land	1
Heard that Chevron refinery is a problem	1
Want to move close to a high school	1
Don't have a big family	1
Too many people	1
Too much traffic	1
Because we are seniors	1
Other	3
Refused	1

D. Price Sensitivity / Demand

Propensity to purchase a UniverCity home was tested in this research using a series of price related questions that were designed to establish demand at different prices¹. Respondents were asked to respond to these questions based on the assumption that the features they found appealing in the preceding questions regarding Healthy Housing would be available in the UniverCity development. The intent was to understand the relationship that price has on demand, and measure the impact on demand if higher than market prices were charged for units at UniverCity which might offset any incremental capital cost of including Healthy Housing features. The relationships between Healthy Housing features and price on demand are illustrated in the following figure.



Respondents who were interested in UniverCity were read a list of different types of homes, and asked which one they would MOST likely consider purchasing if they had the option of purchasing a newly built home at UniverCity or a similar but older property in Burnaby. Demand was measured for one-bedroom, two-bedroom, and three-bedroom condominiums. Specifically, the list of homes read to respondents was:

- New 1-bedroom apartment at UniverCity for \$175,000;
- Older 1-bedroom apartment in North Burnaby for \$150,000 to \$165,000;
- New 2-bedroom apartment at UniverCity for \$280,000;
- Older 2-bedroom apartment in North Burnaby for \$250,000 to \$275,000;
- New 3-bedroom townhouse at UniverCity for \$364,000;

¹ A more detailed description of demand measurements can be found in Appendix A.

- Older 3-bedroom townhouse in North Burnaby for \$330,000 to \$350,000;
- Another type of home/other location in Lower Mainland; or
- None of the above.

Respondents were then asked a series of three demand-related questions (each with a different price point) and asked whether they would purchase or not purchase the unit at each price.

Measuring demand in this manner allows us to construct a model that relates the primary factors that drive demand to the proportion of consumers that would purchase a home in UniverCity. Furthermore, this approach to measuring demand enables us to determine the level of demand for living in a medium-density residential community.

It is important to note that demand estimates are based on several assumptions, including:

- 12% of the Lower Mainland population will be moving in the next five years.
- 18% of those moving in the next five years are considering buying an apartment-style condominium.
- Awareness of UniverCity among those moving in the next five years is 26%.

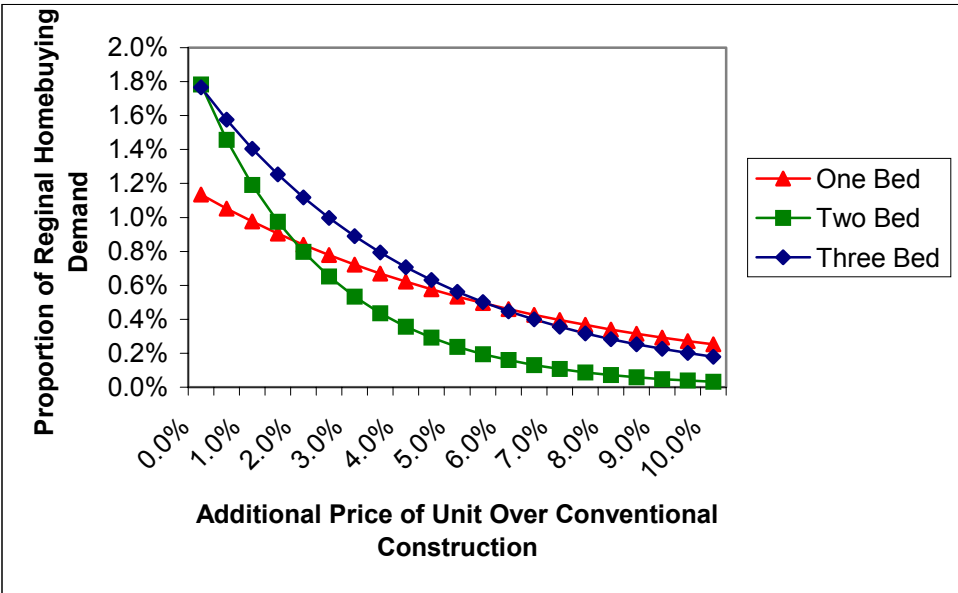
It is also noteworthy that these estimates assume that all units built at UniverCity enter the real estate market at the same time. While this may seem like an unreasonable assumption, given the size and scope of the development, predicting demand and penetration for the development over an extended period of time is slightly outside the scope of this research, and the methodology was not built to accommodate the anticipated roll-out of the units over a 10-year period. For purposes of demand modeling, this assumption is considered reasonable.

As Figure 15 illustrates, if UniverCity units are sold at market price, the one-bedroom apartments would capture approximately 1.1% of the entire Lower Mainland real estate market, while the two-bedrooms would capture 1.78% and the three-bedrooms would capture 1.77%. As such, if sold at market prices for new construction, UniverCity homes would capture a total of 4.68% of the Lower Mainland real estate market.

Not unexpectedly, demand drops as the price rises. For example, if UniverCity homes are sold at 5% above market price for new construction, the development would only capture 1.34% of the Lower Mainland real

estate market. Two-bedroom apartments are the most price sensitive, with these units only capturing 0.24% of the market if sold at 5% above market price, while the three-bedroom units would capture 0.56%, and the one-bedroom units would capture 0.5%.

Figure 15.
UniverCity: Estimates of Homebuyer Demand



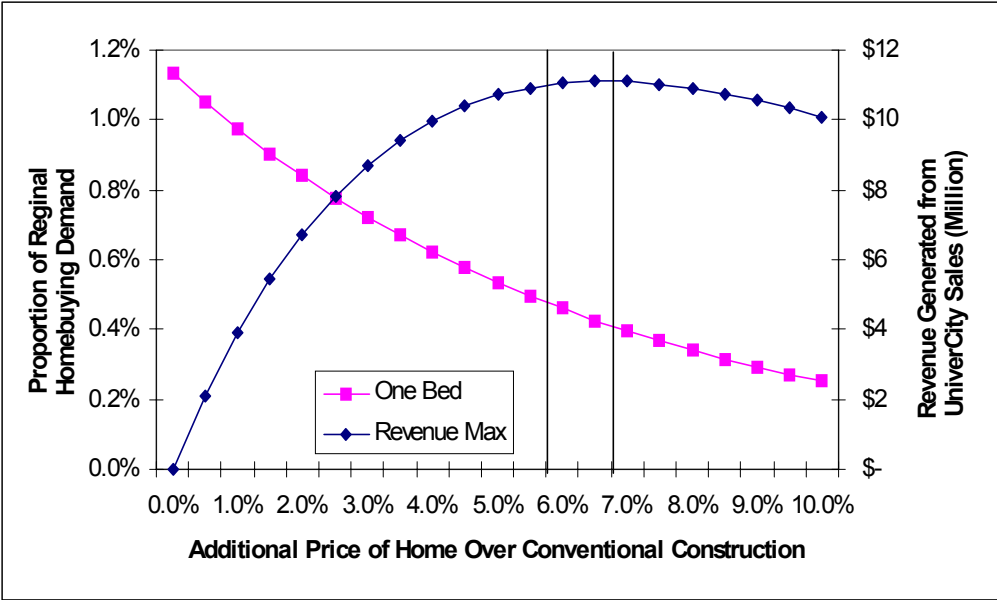
Revenue Generation Estimates

Based on the purchase prices tested in this research and the corresponding demand curves, we are able to make theoretical revenue projections for the entire development. Since the relationship between price and demand differs for the three types of housing, the theoretical maximum revenue estimates differs for each type of unit. Revenue estimates are independent of the supply of units available at UniverCity. These estimates are discussed in the following pages.

One-bedroom units

One-bedroom units are the least price sensitive. For a one-bedroom home, the maximum revenue point occurs at a cost 6.5% above market price. This is the point where theoretical revenue is maximized based on the relationship between demand and price for one-bedroom units. At this price, one-bedroom UniverCity units would capture 0.4% of the Lower Mainland real estate market.

Figure 16.
Demand and Revenue Estimates¹ (One-Bedroom Unit)

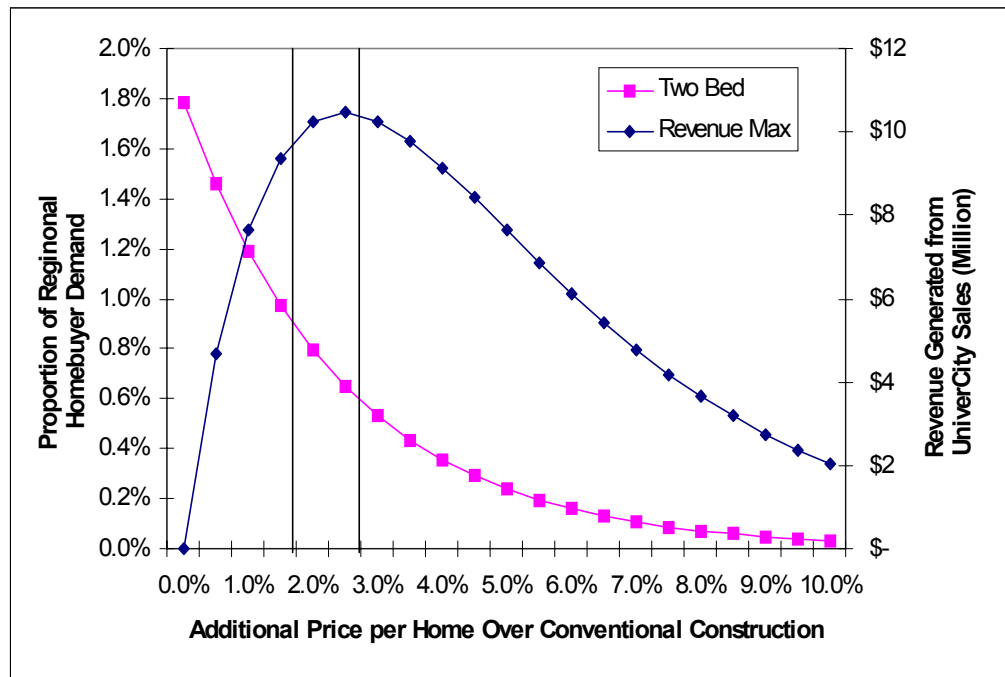


¹ Revenue estimate assumes unlimited availability of housing units.

Two-bedroom unit

As already mentioned, two-bedroom homes are the most price sensitive. In this instance, the maximum revenue point occurs at a cost of only 2.5% above market price. Again, this is the point where theoretical revenue is maximized based on the relationship between demand and price for two-bedroom units. At this price, two-bedroom UniverCity units would capture 0.7% of the Lower Mainland real estate market.

Figure 17.
Demand and Revenue Estimates¹ (Two-Bedroom Unit)

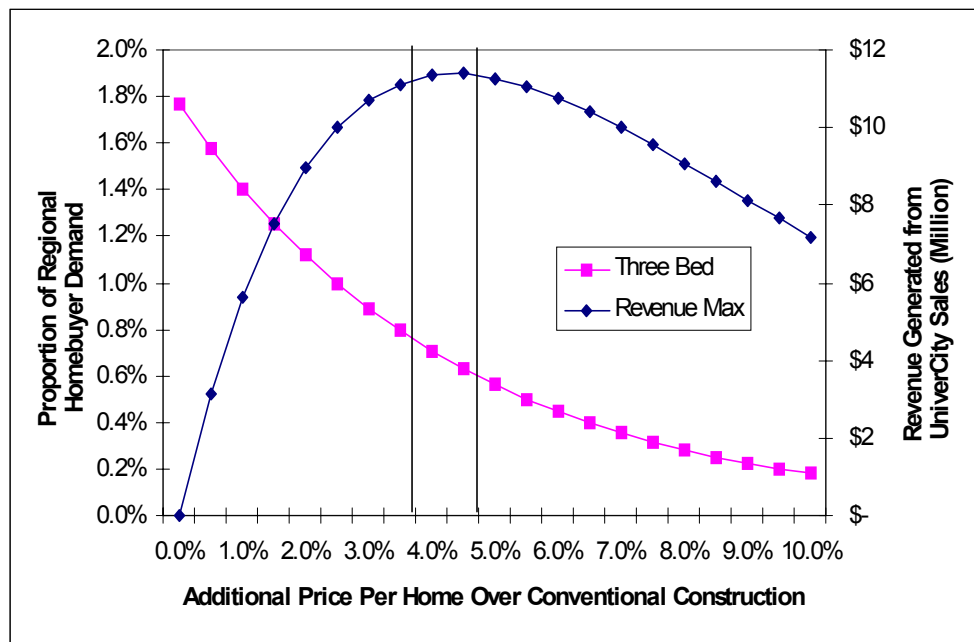


¹ Revenue estimate assumes unlimited availability of housing units.

Three-bedroom units

Three-bedroom homes are more price sensitive than one-bedroom units, but less price-sensitive than two-bedroom units. For a three-bedroom home, the maximum revenue point occurs when units are sold for 4.5% above market price. At this point, theoretical revenue is maximized based on the relationship between demand and price for three-bedroom units. At this price, three-bedroom UniverCity units would capture 0.6% of the Lower Mainland real estate market.

Figure 18.
Demand and Revenue Estimates¹ (Three-Bedroom Unit)



¹ Revenue estimate assumes unlimited availability of housing units.

Price Willing to Pay

One important objective of the survey was to understand if consumers are willing to pay more for a home with Healthy Housing features. The results suggest that a niche segment of Vancouver homebuyers interested in purchasing a multi-residential unit at UniverCity would be willing to pay 6.5% above market value for a one-bedroom unit, 2.5% more for a two-bedroom unit (due to higher price sensitivity), and 4.5% more for a three-bedroom unit. These results are summarized in the following table.

Table 15.
Price Willing to Pay
(Among Niche Segment of Vancouver Homebuyers Interested in UniverCity)

Unit	Price Above Market Price Willing to Pay
1-bedroom	6.5%
2-bedroom	2.5%
3-bedroom	4.5%

VI Conclusions & Recommendations

Healthy Housing Conclusions & Recommendations

1. Overall, potential homebuyers are supportive of Healthy Housing concepts. However, the features that generate the greatest salience are ones that have significant cost savings. For example, some of the most appealing healthy housing features include energy efficiency (89% of homebuyers indicate that energy efficiency features would encourage their purchase decision), water conservation (87%), indoor air quality (81%), and efficient use of resources (81%).

When communicating about Healthy Housing, a strong emphasis should be placed on features (such as those related to energy efficiency) that are recognized to deliver the significant cost savings.

2. In contrast, adaptability of the home (i.e. FlexHousing^{TM1}) benefits are less likely to persuade homebuyers to purchase a Healthy Housing home (57% indicate that these features would encourage their purchase decision).

In order to broaden the appeal of these features, it might be necessary to communicate to homebuyers the potential cost savings of a secondary suite, or the convenience of a home office within their new home.

3. Reduction in parking spaces for reasons of environmental responsibility generates the lowest mainstream appeal of all Healthy Housing features when compared to other features. Clearly, some respondents are attached to their vehicles, and convincing these homebuyers to give up their cars might be difficult. However, 23% are willing to give up an underground parking stall, which is a significant proportion given how attached people are to their vehicles. Furthermore, the data suggests that there is a segment of the population – particularly younger people and first time buyers currently residing in more urban locations – who may be particularly likely to consider foregoing a parking space or reducing total parking accommodation if certain concerns are satisfied.

¹ See Appendix A for definition of FlexHousingTM.

Reduced parking spaces for reasons of environmental responsibility lacks universal appeal, and might deter some homebuyers elsewhere. However, there is receptivity among younger urban buyers to reduction in parking accommodation. Although Healthy Housing developments will have to include at least some parking in order to appeal to a broad consumer market, there are construction savings available in those developments that cater to a younger urban lifestyle and which provide safe reliable alternative means of transportation. Directional evidence from the qualitative research suggests that the cost savings associated with reduced parking facilities motivates some respondents to give up a parking spot, while others are motivated by ideological reasons. It is apparent that more work needs to be done regarding people's willingness to give up a parking space.

UniverCity Conclusions & Recommendations

1. The research suggests that there are specific items that respondents clearly look for when buying a new home. It is apparent that the number one major concern of homebuyers in Greater Vancouver is 'quality' (average rating of 9.3 out of 10). Price is also another important housing feature (8.7). Features that homebuyers are much less likely to consider are proximity to work (6.6), view (6.5), and proximity to transportation options (6.0).

When promoting UniverCity, the developers should focus on important housing features such as construction quality and competitive prices. However, although the major concern for most homebuyers is 'quality', the caveat is that it is unknown what exactly consumers understand quality in construction to be (i.e., is the consumer concerned about building envelope durability or quality merely in terms of interior details and finishes?).

2. It is reasonable to conclude that the appeal of Healthy Housing features described above will be similar when considered in the context of the UniverCity development. As such, the most appealing Healthy Housing features are again related to energy efficiency, water conservation, indoor air quality, and efficient

use of resources. Less appealing features relate to adaptability of the home and reduced parking for environmental responsibility.

Given the concerns related to specific Healthy Housing features, UniverCity should market itself primarily on the more appealing Healthy Housing features. Communications and marketing material should particularly highlight the long-term cost savings, potential health benefits, and low additional cost (where applicable) of these features.

3. Thirty-two percent of respondents are interested in buying a UniverCity home. It is clear that the Burnaby Mountain location has a significant impact on interest, and either drives or deters respondents to purchase.

Promotions for UniverCity should focus on the positive aspects of the Burnaby location, such as proximity to SFU, healthy indoor and outdoor environments and proximity to green spaces, and so on.

4. It appears there is a niche market opportunity among homebuyers interested in purchasing a UniverCity home. The results suggest that a niche segment of Vancouver homebuyers interested in purchasing a multi-residential unit at UniverCity would be willing to pay 6.5% above market value for a one-bedroom unit, 2.5% more for a two-bedroom unit (due to higher price sensitivity), and 4.5% more for a three-bedroom unit.

The UniverCity development needs to consist of a good mix of one-, two-, and three-bedroom apartments. Pricing strategies could take into consideration the different price sensitivities of various sized units in order to maximize revenue. Furthermore, a focus should be placed on strategies (particularly Healthy Housing attributes) that will attract this niche market.

Appendix A – Glossary

Healthy Housing™

Healthy Housing is a trademarked term used by CMHC to describe the integration of healthy building materials and innovative housing technology that protects the health of the occupants and the environment. The four predominant themes of Healthy Housing include: improved occupant health, greater energy efficiency, using resources efficiently and reduced environmental impact.

FlexHousing™

FlexHousing is a trademarked term used by CMHC to describe housing that is designed to allow homeowners to occupy a dwelling for longer periods of time, perhaps over their entire lifetimes, while easily adapting to changing household circumstances and meeting a wide range of occupant needs. FlexHousing is an approach to designing and constructing homes so that future changes are easily made and with minimum expense.

How to Measure Demand

Demand could be measured in one of two ways: 1) by asking respondents their 'likelihood' of purchasing a home in UniverCity on a scale; or 2) by asking people a discrete choice question that asks them to choose whether they would purchase a home in UniverCity, or whether they would purchase a home elsewhere in the GVRD. Significant empirical research has shown that discrete choice research designs are considered more accurate and actionable compared to scaled likelihood designs. As such, questions on the survey were administered using discrete-choice design principles.

Appendix B – Focus Group Summary

Executive Summary

This is an executive summary of the results of two focus groups conducted by POLLARA on behalf of the Canadian Mortgage & Housing Corporation (CMHC). Two focus groups were held with potential Lower Mainland homebuyers on February 18th, 2003. One group had previously expressed interest in UniverCity, while the other group were recruited from the general population based on their intention to purchase a townhome or apartment in the next five years. The objective of the focus groups was to determine demand for a new Healthy Housing development project (UniverCity) located on Burnaby Mountain, and related factors that would drive interest in the development.

Healthy Housing and UniverCity

Awareness of Healthy Housing appears to be low even among those respondents who had previously expressed interest in UniverCity. The benefits of Healthy Housing can generally be separated into three distinct categories: 1) Benefits to Human Health, 2) Environmental Benefits, and 3) Cost Benefits.

Benefits of UniverCity include convenience of location (for some respondents), community, view, and inclusion of amenities. The overall key features that must be present in the UniverCity development are community infrastructure (grocery stores, health clinics, restaurants, gas stations, etc) and safety.

The primary reason why respondents would not purchase a Healthy Housing or UniverCity home is cost. Other barriers to purchasing a UniverCity home include location, lack of amenities, lack of community infrastructure, and lack of parking.

Features and Benefits

Overall, many of the features and benefits are appealing. The most appealing features are generally those that benefit health or result in long-term cost savings, and include high efficiency ventilation systems, non-vapour-emitting materials, increased insulation levels, and high efficiency hot water heating systems. Other features are rated lower in appeal because they do not deliver any key benefits or are considered “nice to have but not necessary”.

Once additional costs are revealed, the appeal of most features drops. Although many respondents feel that these additional costs are more than expected, they are not so large as to prevent interested buyers in purchasing a UniverCity home. Overall, features with substantial additional costs decline the most in appeal, and include the additional secondary suite, hardwood and tile floors, and rooftop gardens. Other features with lower additional costs do not decline significantly in appeal; in fact, *increases* in appeal are noted for plant selection, composting, and water efficiency landscaping. It is noteworthy that respondents are generally willing to pay slightly higher additional costs if the feature is perceived to benefit human health or result in long-term cost savings.

Ultimately, knowing the additional costs does impact which features are rated the most appealing. Among those who had expressed interest in UniverCity, the most appealing features become water efficiency landscaping and plant selection, while the group consisting of the general population remains consistent with the earlier ratings (high efficiency ventilation system continues to be the most appealing feature). It is apparent that once additional costs are revealed, the appeal of the various features drops more sharply in the UniverCity group as compared to the group comprised of the general population.

Those who had expressed interest in the UniverCity development previous to the focus group were primarily residents of the suburbs. This may explain why they were price sensitive regarding the costs of the UniverCity development and the costs of the Healthy Housing features, given the fact that housing prices for detached homes are only slightly higher than the prices for the UniverCity development. Further, these respondents exhibited fewer environmentally sensitive behaviours, which may have contributed to their lower desire to pay additional money for these features. Generally, these respondents seemed to be interested in the UniverCity development because of the location near Simon Fraser University.

In contrast, the respondents recruited from the general population were more urban residents and were more environmentally sensitive. Their opinions of the cost of the housing units at UniverCity were more positive, perhaps as a result of being conditioned for higher prices for housing units in Vancouver's urban centre. They were interested in UniverCity because of the Healthy Housing concepts, and because the development appeared to incorporate a full community that would be similar to the communities in which they currently live.

Demand

Virtually all respondents express interest in Healthy Housing, and would prefer Healthy Housing to conventional types of development if the price were the same. Demand for UniverCity is slightly less given the isolated location of the development. Overall, the primary reasons for purchasing a UniverCity home include community and location. Although the fact that it is based on Healthy Housing principles does boost interest, this is not a driving factor in respondents' overall interest in the development.

Price

Respondents not only *expect* to pay a higher price for a home built on Healthy Housing principles, but are *willing* to pay this higher price assuming that it is not unreasonable. The higher price is justified by the benefits to human health and the anticipated cost savings resulting from reduced monthly costs and higher resale value.

Given the Burnaby location of UniverCity, respondents generally were not expecting to pay \$280,000 for a two-bedroom (1000 square feet) home in the development. Interestingly, respondents who had expressed prior interest in UniverCity anticipate paying *less* for a UniverCity home than do those respondents recruited from the general population (respective price ranges of \$225,000 to \$250,000 and \$250,000 to \$295,000). As already mentioned, they appeared to interpret these costs in the context of detached home values in Vancouver's suburbs, and therefore felt that the cost of units at UniverCity were overpriced.

Conclusions and Recommendations

1. Location plays a pivotal role in respondents' purchase decision. Location is a broad term consisting of many constructs, including proximity to work / school / amenities / transportation options, neighbourhood and community, and privacy. Location will be a key factor in whether potential buyers are attracted to the UniverCity development. For some, location will be an incentive to move there, while for others it will act as a deterrent.

All marketing and communications should promote the many benefits of the Burnaby Mountain location, including proximity to SFU, community infrastructure, and view.

2. Awareness of Healthy Housing is low. However, once the concept is explained to respondents, reactions are positive. Perceived benefits of Healthy Housing include benefits to human health, environmental benefits, and cost benefits.

Promotional activities should strongly focus on why Healthy Housing is better than conventional housing developments in terms of the impact on human health, environmental sustainability, and reduced long-term costs.

3. Additional costs of the various features are shown to have a relatively large impact on which features are deemed the most appealing. Generally, features that are included at no additional cost (or a very slight cost) are rated higher in appeal, even though these features might not necessarily be the ones that are deemed the most important. However, although other features might have a higher additional cost, many respondents are willing to pay this cost if the feature is perceived to deliver important benefits to human health or if the extra costs can be recouped in long-term cost savings. Conversely, it is clear that respondents are unwilling to pay significant additional costs for specific features if the costs cannot be easily recouped or if the feature is considered “nice to have, but not necessary”. In any case, the overall feeling is that most of the additional costs would not prevent an interested homebuyer in purchasing a UniverCity home.

Carefully balance the additional cost against the perceived appeal of each feature. Respondents will not pay large additional costs for features that are perceived as simply “extras” or that do not deliver health benefits or long-term cost savings. Communications and marketing should strongly focus on features related to indoor air quality and energy efficiency and those with low additional costs. This reinforces the interest since the features can provide a return on their initial investment.

4. Low flow plumbing fixtures are a concern for some respondents who have not had good experiences with these toilets. Not only are these respondents unwilling to pay the additional cost for this feature, but they also indicate that this is something they definitely do not want included in a home they purchase.

Given the concerns about low flow plumbing, any toilets that are installed in UniverCity must meet performance standards.

5. Car cooperatives are generally not rated high in appeal. Respondents are simply unwilling to give up their cars, and voice significant concerns about availability of parking spaces in the UniverCity development. However, some respondents do become more receptive of car cooperatives once the cost savings are made evident.

Car cooperatives might not be an important feature to focus on when promoting UniverCity unless significant cost savings are highlighted. Even then, the developer must be able to address concerns related to parking.

6. Respondents who had *not* previously expressed interest in UniverCity appear to be more willing to pay the additional costs of the various features, implying that this segment might be more interested in Healthy Housing. Conversely, respondents who had expressed prior interest might be more influenced by the location of the development as opposed to the fact that it is built on Healthy Housing principles.

In order to stimulate interest in a wide range of potential homebuyers, the developer needs to develop multiple marketing strategies for UniverCity. One approach might focus on the Healthy Housing principles, while another approach might place more emphasis on the location and community. In any case, no marketing strategy should exclude the other – all aspects should be included, just a slightly different focus for each.

7. It is clear that if respondents are to purchase a UniverCity home, then the development must include an entire infrastructure, including various amenities such as grocery stores, health clinics, restaurants, schools, gas station, etc. Furthermore, it is essential that these amenities are present immediately and goods and services are priced competitively.

UniverCity must be developed so that it is a self-sufficient community. Amenities need to be present right from the start so that even the very first homebuyers have access to these services. Prices need to be competitive, which might

mean that multiple similar amenities (such as grocery stores) are included in the development.

8. Demand exists for both Healthy Housing and UniverCity. Demand for UniverCity is primarily driven by factors such as overall sense of community, location, view, and anticipated cost savings. Healthy Housing does not generally appear to be a *driving* factor in the purchase decision, although it does act to increase interest somewhat.

Promotion of UniverCity cannot merely focus on Healthy Housing. Other issues need to be addressed, including community, amenities, location, and reduced long-term costs.

9. The primary barrier to purchasing a Healthy Home (or a UniverCity home) is price. Respondents are willing to pay above market price for one of these homes, although the exact price they are willing to pay varies. Many respondents are unprepared to pay the suggested price of \$280,000 for a two-bedroom UniverCity apartment. This is particularly true for respondents who had already expressed interest in UniverCity, who are more likely to recommend a price range of \$225,000 to \$250,000 (includes all additional features). Other respondents mention a slightly higher price range of \$250,000 to \$295,000.

The UniverCity development must be priced competitively. Although respondents say they are willing to pay a price that is slightly above market price, perceptions of market price might need to be re-established before discussing the price of a UniverCity home.

Appendix C – Interview Schedule & Survey

Appendix D – Demand Estimates

Consider Apt Style	Interested in UniverCity	Awareness of UniverCity						Population	% will move in 5 years	People Per Household	Household ds	Househol ds that will move	Demand for UniverCity (No. of Units)
			Cost of House	One Bed	Two Bed	Three Bed	Total						
18%	39.7%	26%	0.0%	1.1%	1.78%	1.77%	4.68%	1,974,610	12%	2.51	786,697	91,257	4,274
18%	39.7%	26%	0.5%	1.1%	1.46%	1.58%	4.09%	1,974,610	12%	2.51	786,697	91,257	3,728
18%	39.7%	26%	1.0%	1.0%	1.19%	1.41%	3.57%	1,974,610	12%	2.51	786,697	91,257	3,261
18%	39.7%	26%	1.5%	0.9%	0.97%	1.25%	3.13%	1,974,610	12%	2.51	786,697	91,257	2,859
18%	39.7%	26%	2.0%	0.8%	0.80%	1.12%	2.75%	1,974,610	12%	2.51	786,697	91,257	2,513
18%	39.7%	26%	2.5%	0.8%	0.65%	1.00%	2.43%	1,974,610	12%	2.51	786,697	91,257	2,215
18%	39.7%	26%	3.0%	0.7%	0.53%	0.89%	2.14%	1,974,610	12%	2.51	786,697	91,257	1,957
18%	39.7%	26%	3.5%	0.7%	0.44%	0.79%	1.90%	1,974,610	12%	2.51	786,697	91,257	1,733
18%	39.7%	26%	4.0%	0.6%	0.36%	0.71%	1.68%	1,974,610	12%	2.51	786,697	91,257	1,538
18%	39.7%	26%	4.5%	0.6%	0.29%	0.63%	1.50%	1,974,610	12%	2.51	786,697	91,257	1,367
18%	39.7%	26%	5.0%	0.5%	0.24%	0.56%	1.34%	1,974,610	12%	2.51	786,697	91,257	1,219
18%	39.7%	26%	5.5%	0.5%	0.19%	0.50%	1.19%	1,974,610	12%	2.51	786,697	91,257	1,088
18%	39.7%	26%	6.0%	0.5%	0.16%	0.45%	1.07%	1,974,610	12%	2.51	786,697	91,257	973
18%	39.7%	26%	6.5%	0.4%	0.13%	0.40%	0.96%	1,974,610	12%	2.51	786,697	91,257	872
18%	39.7%	26%	7.0%	0.4%	0.11%	0.36%	0.86%	1,974,610	12%	2.51	786,697	91,257	783
18%	39.7%	26%	7.5%	0.4%	0.09%	0.32%	0.77%	1,974,610	12%	2.51	786,697	91,257	704
18%	39.7%	26%	8.0%	0.3%	0.07%	0.28%	0.69%	1,974,610	12%	2.51	786,697	91,257	634
18%	39.7%	26%	8.5%	0.3%	0.06%	0.25%	0.63%	1,974,610	12%	2.51	786,697	91,257	572
18%	39.7%	26%	9.0%	0.3%	0.05%	0.23%	0.57%	1,974,610	12%	2.51	786,697	91,257	516
18%	39.7%	26%	9.5%	0.3%	0.04%	0.20%	0.51%	1,974,610	12%	2.51	786,697	91,257	467
18%	39.7%	26%	10.0%	0.3%	0.03%	0.18%	0.46%	1,974,610	12%	2.51	786,697	91,257	422

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