

**Understanding development patterns around the 22nd
Street and New Westminster SkyTrain Stations**

by

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B.A., Simon Fraser University, 2002

Research Project Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Urban Studies

in the

Urban Studies Program

Faculty of Arts and Social Sciences

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SIMON FRASER UNIVERSITY

Fall 2014

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Abstract

The introduction of SkyTrain into the Greater Vancouver Area has had a significant impact on the land use patterns in the region. However, development patterns have been uneven and have varied from station to station. Some neighbourhoods have intensified and diversified their land uses, while others have only changed minimally since the introduction of rapid transit. This project examines the factors that have influenced the development patterns around the 22nd Street and New Westminster SkyTrain Stations. The intent of the research project is to determine why some places in the Greater Vancouver area have intensified and diversified their lands uses since the introduction of rapid transit while others have not. Nine factors (Land Use Planning, Catalyst Developer, Availability of Developable Land, Community Prioritization, Neighbourhood Perception, Neighbourhood Characteristics, Public Investment, Public Resistance to Land Use Change and Road Infrastructure) have been identified in this research project that have influenced and shaped the development patterns around the New Westminster and 22nd Street SkyTrain Stations. Understanding these factors and the relationships between them will help assist municipal planner and leaders to better understand the processes that influence land use changes around rapid transit stations.

Keywords: Transit-oriented development; rapid transit; land use planning; SkyTrain; New Westminster Station; 22nd Street Station

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Chapter 1. Introduction

On December 11th, 1985, SkyTrain, Greater Vancouver's first modern rapid transit system opened. The original SkyTrain line went from the Waterfront Station in Downtown Vancouver to the New Westminster Station. The introduction of SkyTrain into the Greater Vancouver area has had a significant impact on the land use patterns in the region (Foth, 2010, p.50). Of significance is that changes in land use that have occurred have varied from station to station as development patterns have been uneven across the region. Consequently, some neighbourhoods have intensified and diversified their land uses, while others have only changed minimally since the introduction of rapid transit.

The intent of the research project is to determine why some places in the Greater Vancouver area have intensified and diversified their land uses since the introduction of rapid transit while others have not. To gain an understanding of the uneven land use changes that have occurred since the introduction of SkyTrain, the research project will focus on the two SkyTrain stations on the eastern end of the original Expo SkyTrain line, the 22nd Street and New Westminster Stations.

1.1. Reasons for case study locations

The areas surrounding the New Westminster and 22nd Street SkyTrain Stations are currently two very different places in 2014. The area surrounding the New Westminster Station today consists of high density mixed use development, while the

land surrounding the 22nd Street Station is dominated by low density residential uses. This distinct contrast is clearly visible the moment one exits either of these two stations and makes these two station areas interesting subject locations for this research project.

It is also important that both of these SkyTrain stations opened at the same time in 1985. The rapid transportation system has existed in both of these neighbourhoods for over 25 years, which has provided sufficient time to evaluate the impact that rapid transit has had on land uses in these locations. Another important factor is that both of these stations are a similar distance from the central business district in Vancouver and the stations are only one station apart from each other along the original Expo SkyTrain line. While proximity to a central business district may be an important factor that influences patterns of development, it is not the focus of this research project. However, the fact that these stations are adjacent to each other will ensure that this factor does not influence the research findings. A final consideration is that both of these two case study locations are located in the same municipality. The original SkyTrain line traversed three municipalities, Vancouver, Burnaby and New Westminister. Each of these municipalities have different planning processes, which would have made it difficult to accurately compare and contrast the factors that were influencing development in the study locations. Both the New Westminister and 22nd Street Stations are located in the City of New Westminister and thus have evolved under the same municipal planning processes and regulations.

1.2. Research Question

The purpose this project is rooted in a comparative case study that will examine the neighbourhoods around the 22nd Street and New Westminister SkyTrain Stations.

The research question will attempt to understand why these locations have evolved in the way that they have by asking, **why has the neighbourhood around the New Westminster SkyTrain Station intensified and diversified its land uses and why has the neighbourhood around the 22nd Street Station seen only minimal land use changes since the introduction of rapid transit?**

The answers to this research question will assist municipal planners and local leaders to better understand the processes and factors that influence land use changes around rapid transit stations. The Greater Vancouver region has some significant goals to increase its public transit mode share and the number of people living within walking distance of the region's Frequent Transit Network (Translink, 2008, p.27). These goals have been developed as the region attempts to address larger environmental and economic challenges. To achieve these goals it will require more citizens in the region to have good access to and live and work within close proximity to the SkyTrain system. To maximize this access while still being mindful of the financial restraints that exist, the region will need to understand how best to intensify and diversify the land uses around existing SkyTrain stations and ensure that the expansion of rapid transit is done in locations that have the capacity and the willingness to achieve appropriate forms of densification. This is not to say that the land use around every station needs to maximise its density. The more important point is that land uses need to be compatible with rapid transit and have some elements of intensification and diversification. Past research has shown that urban intensity needs to be greater than 35 residents or jobs per hectare to reduce the physical constraints of distance and time that contribute to automobile dependency (Newman & Kenworthy, 2006, p.35). The development of rapid transit is a very costly undertaking and it is important that regional leaders and decision makers understand how to maximise the utilization and efficiency of these transportation

investments. Having a deeper understanding on why some areas around the original SkyTrain line have changed while others have not will provide some valuable insights into this process.

Chapter 2. Literature Review

The following literature review examines the concepts and principles behind Transit Oriented Developments (TOD). It will review the various definitions that have been applied to this concept and examine the effects TOD's have on a community. It will conclude by exploring the different factors that influence development on lands that are within close proximity to rapid transit.

The literature review is separated into three sections. The first section deals with defining TOD's. Given that the concept of TOD's is closely related to the intensification and diversification of land uses near rapid transit stations, it is important that this term is properly defined and explained in the context of the research. The second section deals with the impacts that TOD's have on communities. This research project is based on an underlying assumption that developing land near rapid transit stations using TOD principals is a positive attribute. The purpose of this section is to explore the academic work that has been done on this subject to objectively illustrate the impact TOD principals have on their surrounding communities. The final section examines the impacts rapid transit has on land use patterns. The research in this section is closely related to the research question, as it explores the factors that have influenced development near rapid transit in other North American cities.

2.1. Defining Transit Oriented Developments

The phrase Transit Oriented Development was first introduced by Peter Calthorpe and became widely known after the publication of his book “The New American Metropolis” in 1993. Although the terminology was new, similar concepts have been around for years. Other urban planning concepts such as Pedestrian Pockets, Traditional Neighbourhood Developments, and New Urbanism had all been used before to help describe the important linkage between land use and transportation planning (Calthorpe, 1989) (Katz, 1993) . The concept of TOD’s simply provided the opportunity to bring all of these idea’s together under the same conceptual umbrella. From its very beginning TOD’s have been linked to the principles of New Urbanism by calling for liveable and compact communities along rail transit corridors that are pedestrian-friendly and encourage alternatives to low-density growth patterns (Calthorpe, 1993). Although the main principals behind TOD’s have remained the same, there have been nuances that have contributed to refining this theory since it was introduced.

One individual who has spent some considerable time studying TOD’s is Hank Dittmar. He co-authored the book “The New Transit Town”. In the chapter, “Defining Transit-Oriented Development: The New Regional Building Block”, Hank Dittmar and Shelley Poticha build upon the early definitions of TOD’s. They argued for the need to develop a stronger and more resilient definition given that they believed much of the existing TOD projects have fallen short of delivering on the concepts full potential (Dittmar & Poticha, 2004). Dittmar and Poticha focus on a performance based definition for TOD’s that are supported by five main goals:

- Location Efficiency - This goal speaks to the importance of placing homes in close proximity to the transit system. It requires a sufficient amount of density and transit accessibility to run efficiently.
- Rich Mix of Choices – This goal refers to the importance of having a variety of land uses within the neighbourhood. When neighbourhoods have a mix of uses they become more convenient and travel options increase as distances to destinations become shorter.
- Value Capture – This goal relates to the need to take advantage of the potential value created by TOD's to both individual households and the community as a whole. Reducing household transportation costs or increasing community property values are an example of this.
- Place Making – This goal speaks to the importance of creating environments that are attractive pedestrian friendly places. High quality urban design should be present in TOD's.
- Resolution of the tension between node and place – This goal refers to the importance of ensuring that rapid transit stations are both access points for people arriving and leaving and also fulfil their roles as vibrant liveable hubs in the community.

Dittmar and Poticha argued that understanding these five main goals will facilitate understanding of TOD's. They concluded by stating that,

“Transit oriented development is about creating and exploiting synergies: between the community and the region, between levels of density and levels of transit service, between people and vibrant community life and among different generations, income levels and people.” (Dittmar & Poticha, 2004, p.37).

Another academic who has explored the concepts behind TOD's is John Renne. He argued that TOD's cannot be viewed as a simple yes or no proposition, but instead need to be viewed as a point along a spectrum. Renne argued that all communities within close proximity of a rapid transit station fall somewhere between a Transit Adjacent Development (TAD) and a TOD. Renne defined this when he stated,

“Transit Oriented Development describes a station area precinct that is compact, mixed use and facilitates transit connectivity through urban design; Transit Adjacent Development is physically near transit but fails to capitalize upon this proximity. It lacks any functional connectivity to transit whether in terms of land use composition, means of station access or site design” (Renne, 2009, p.1)

Renne constructed his TAD-TOD spectrum using opposing characteristics that should be found on each end of the spectrum. Characteristics that would be found on the TAD end of the spectrum include:

- Suburban street pattern
- Low Densities
- Dominance of surface parking
- Limited or no pedestrian access
- Limited or no bicycle access/parking
- Single family homes
- Industrial land uses
- Segregated land uses

By contrast, characteristics that would be found on the TOD end of the spectrum include:

- Grid street pattern
- High densities
- Mostly underground or structured parking
- Pedestrian-focused design
- Bicycle access/parking
- Multi-family homes
- Office and retail land uses (Renne, 2004, p. 3)

These definitions are critical in placing my research topic into the correct context. Renne’s TOD/TAD spectrum is particularly useful in that it provides a framework in which the two case study locations can be evaluated. Ultimately the research question in

this project is asking why, after the introduction of rapid transit, some locations move on the TOD/TAD spectrum to become more of a TOD and others do not.

2.2. Benefits of Transit Oriented Developments

Since the introduction of the concept of TOD's, many researchers have attempted to study the impacts of its implementation. The benefits that have often been accredited to TOD's are wide ranging and have included impacts such as changes in transportation behaviour, improved physical activity and increased property values.

2.2.1. *Impacts on travel behaviour*

One of the central theories behind TOD's is that the built environment influences travel behaviour. It has been argued that communities that fit the definition of TOD's will likely attract greater levels of sustainable transportation (walking, cycling and public transit). This concept was studied by Cervero (2002) who examined household travel surveys in Montgomery County, Maryland, to determine the relationship between transit ridership and the built environment. He found that land use factors played a significant role in influencing transportation mode choice (Cervero, 2002). This was particularly true for higher density and land use mixture which both showed a correlation with increased transit mode share (Cervero, 2002). Although the correlation was not as strong, there was also a relationship between urban design factors and transit mode share (Cervero, 2002). In another study completed by Cervero (2007), he examined travel survey results from residents who had moved into TOD neighbourhoods in California. By comparing their travel behaviours before and after the move, he was able to discover that the travel behaviours of these residents changed significantly after moving into a TOD (Cervero,

2007). His results showed that Vehicle Miles Travelled (VMT) went down by 42% and their daily commuting costs went from \$15.50 per day to \$11.15 (Cervero, 2007, p.11).

The relationship between the built environment and land use was also the feature of a study completed by John Renne (2009). He examined the neighbourhoods around three rapid transit stations in the Bay Area. The station areas that he examined were very different from each other and fell on different points of his TOD-TAD spectrum. The results of his study showed that there was a significant difference between the study area that he classified as TOD and the one that was classified as a TAD. The TOD study area (Berkeley Station) had the highest transit mode share at 24% and highest percentage of households with one or fewer vehicles at 74% (Renne, 2009, p. 10). On the other hand, the TAD study area (Fremont Station) had the lowest transit mode share at 12% and the lowest percentage of households with one or fewer vehicles at 45.7% (Renne, 2009, p.10). The third study area in Renne's study was in the middle of the TOD/TAD spectrum. The Hayward station was in the middle when it came to transit mode share at 24% and percentage of households with one or fewer vehicles at 57% (Renne, 2009, p.10). These findings suggest that not only is proximity to transit important, but that the build environment combined with transit access work together to shape travel behaviour. In particular density, diversity of uses and urban design are critical elements that play a large role in determining how a community makes its transportation decisions.

2.2.2. Health Impacts

An area of study that has recently been gaining a lot of attention is the influence that built environments have on the health of the population. Physical inactivity has become a major health problem with several chronic diseases including coronary heart disease, hypertension, diabetes, obesity and depression all being linked to increased levels of physical inactivity (Frank & Engelke, 2001). The role of the urban form on physical activity is now starting to receive some attention with research showing that more compact urban environments with mixed land uses being linked with higher levels of physical activity and lower levels of obesity. Samimi, Mohammadian, & Madanizadeh (2009) completed a study of surveys completed by the National Centre for Chronic Disease and Prevention Health Promotion and found an association between automobile use, transit use and block size with health related variables. They found that a 1% reduction in automobile use resulted in a 0.4% reduction in obesity rates (Samimi et al, 2009, p.70). These findings are also supported by Frank, Saelens, Powell, & Chapman (2007) who completed a study of transportation survey data collected in Atlanta. They found that,

“Participants in the most walkable versus least walkable areas of the Atlanta region had higher likelihood of taking a walking trip for any purpose... as well as lower obesity prevalence” (Frank et al, 2007, p.1911)

Although the research is still relatively limited on this topic, there does appear to be connections that are being made in terms of the relationship between the built environment and the activity level and obesity rates of the population. By shaping travel behaviour, TOD's also have the potential to improve the overall health of a community by increasing physical activity.

2.2.3. *Impacts on Housing Prices*

One of the attributes that TOD communities often get credited with is their ability to improve the accessibility of a location and provide travel cost savings to its residents. An area of study that is getting some attention is whether these advantages are being capitalized into the housing market. Duncan (2009) completed a study of condo sales in San Diego along the trolley lines. He found that station areas that had good pedestrian environments saw a 15% price premium while station areas that had poor pedestrian access had an 11% discount (Duncan, 2009, p. 121). He concluded that “TOD does seem to have a synergistic value greater than the sum of its parts” (Duncan, 2009, p.122). Bartholomew and Ewing (2011) have also studied the impact TOD’s have had on the housing market. By studying hedonic price literature from 18 different American cities, they concluded that,

“consumers seem willing to pay a premium to locate in New Urbanist developments that feature higher than average densities, a mix of housing types, commercial centres, interconnected streets and prominent public spaces” (Bartholomew and Ewing, 2011, p. 27)

The premiums found in these reports suggest that the built environment in station areas does have an impact on housing prices and that there is a healthy demand for TOD housing. Although this research potentially raises the issue of the impact TOD’s have on housing affordability, it speaks to the larger issue of value being captured by the creation of these neighbourhoods. Traditional evaluations of affordability have focused solely on housing prices alone, but there is growing recognition that transportation costs need to be factored into this equation. Research has shown that when transportation costs are taken into consideration, urban communities perform better when it comes to affordability (Centre for Neighbourhood Technology, 2010, p.7). So despite the fact that TOD neighbourhoods appear to increase the value of house prices, the location

efficiency that is created by the development of these neighbourhoods creates real value to the residents who chose to live in these locations.

2.3. Evaluating the impact of rapid transit on land development

Whenever a rapid transit line gets built, a number of benefits and outcomes are always used to justify the investment in the new transit infrastructure. One benefit that is often cited as a justification for building rapid transit is that land development will flourish once rapid transit is built. Although there are many examples of where this has occurred, there are also numerous examples where rapid transportation has had little or no impact on land development. The reality is that the land development process is complex and involves numerous factors.

Knight and Trygg (1977) were one of the earliest academics to study the impacts rapid transit has on land development. Their work focused primarily on Toronto, San Francisco and Philadelphia. Their study of the City of Toronto revealed that several pro development public policies were implemented to encourage development along their newly constructed rapid transportation lines. These policies included, marketing of air rights, allowance of liberal floor area ratios, density bonuses and zoning changes to permit higher intensity use. These changes combined with a pent up market demand for apartments led to a huge surge in development along the rapid transit lines. The authors concluded that,

“The above evidence suggests that local government policies are important factors affecting development, with transit being an important but not sufficient condition for development” (Knight and Trygg, 1977, p.237)

The authors continued their study by looking at the City of Philadelphia. They did not find the same level of development in Philadelphia something they attributed to low economic growth and negative social conditions in the city (Knight and Trygg, 1977). They also found that the availability of land was another important factor. They argued that the availability of suitable land for development was a necessary pre-requisite for development (Knight and Trygg, 1977). They found that there were four factors that had the greatest influence on land development around rapid transportation,

1. Local government policies encouraging development
2. Regional development trends
3. Availability of developable land
4. Physical constraints of the site

The authors found that nearly all four of these factors needed to be favourable for development to occur (Knight and Trygg, 1977). They concluded their study by stating, "Rapid transit will not automatically revitalize and reshape our cities, but it can do much if we can learn to understand that role and the others which accompany it" (Knight and Trygg, 1977, pg. 246).

Another study that examined the impacts of rapid transportation on land development was completed by Cervero and Landis (1997). They conducted a study of the Bay Area where they examined the land use changes that had occurred in the 20 years following the development of the Bay Area Rapid Transit System (BART). They found that there had been a significant amount of development in office and multi-family units since the introduction of rapid transportation. However this development was highly localized and uneven across the region (Cervero & Landis, 1997). They found that the majority of new office space was focused near the downtown stations and that BART had helped downtown San Francisco maintain its position as the office centre for the region. Outside the downtown, Pleasant Hills was one of the areas that witnessed a

significant amount of development after the introduction of BART. The authors accredited this success to the early implementation of a land use plan and the fact that the area had a very proactive redevelopment authority (Cervero & Landis, 1997). The authors argued that public policy played an important factor and,

“The essential role of local governments in promoting station area development is clearly underscored by BART’s experience. BART has created opportunities for attracting new development and reinvigorating stagnant areas that some communities have successfully capitalized upon” (Cervero & Landis, 1997, p.332).

The study also revealed that other areas had experienced only minimal changes since the introduction of BART. The Richmond corridor was one of these areas. The authors concluded that the Richmond corridors depressed local economy, urban blight and higher crime levels all contributed to suppressing development in this area. Another area that had not seen many changes since the introduction of BART was the Daly City corridor. This neighbourhood was substantially built out and established before the arrival of BART and therefore had very little vacant land. In addition, the established single family neighbourhoods in this corridor were also very successful in opposing any further densification in the neighbourhood. The result was that very little development had occurred and the city had even downzoned some of the lands near the station.

Cervero and Landis (1997) found that there were a number of factors that seemed to influence where development had occurred in the 20 years following the introduction of rapid transportation in the Bay Area. They found that receptive zoning, community acceptance, pre-existing mix of uses, vacant land and the location of the station all influenced the development patterns in an area.

The factors that have been identified in this section of the literature review were used as a framework in this research project. Although many of the factors listed in these studies are relevant to the case study locations, the project has resulted in some additional new factors being discovered. This research project has also been able to uncover some deeper nuances behind the factors that have been previously studied. As will be demonstrated in the chapters that follow factors such as land use planning will be further emphasised and new factors such as catalyst developers and public investment will be explored. The results below both complement and enhance the previous work that has been done on understanding the relationship between land use and rapid transit.

Chapter 3. Methodology

The methodology utilized in this research project has been a multi-method approach using direct observation, secondary data, document analysis, surveys and qualitative interviews to conduct the research. It has been essential to use several research methods to develop a deeper understanding of the factors that have influenced development patterns around the 22nd Street and New Westminster Stations in the 28 years since the introduction of rapid transit. The research methods used in the project were completed in a sequence that allowed the researcher to build upon the data collected during prior phases of the research.

3.1. Field Observations

Before the research project was able to answer why the land use in the study areas have evolved in the way that they have, it first needed to understand the changes that have occurred. To do this the researcher needed to have a good understanding of the study areas and how they have evolved since the introduction of rapid transit. Observation visits of the two study areas were conducted on one occasion on March 20th, 2014. The researcher spent approximately 45 minutes visiting each of the two study areas to observe the physical environment in and around the station areas. The site visit was conducted on foot and involved all areas that were approximately a 5 minute walking distance from the two transit stations. The intent of the site visits was to document the study locations current land uses in terms of their intensification, diversification and function. Attention was also given to the age of the building stock in

the study areas to provide some preliminary observations on how the neighbourhoods have evolved since the introduction of rapid transit. Building style and upkeep of the buildings were used to help provide estimation on the age of the buildings. The researcher also utilized John Renne's TOD/TAD spectrum as a framework to evaluate each of the study locations compatibility with either a TOD or TAD location. Each criterion was given a rating based on the visual observations of the location. The criteria were evaluated using the rating system below:

- **Present:** criterion located throughout the study location.
- **Mainly Present:** criterion located throughout the study location with a few exceptions.
- **Mainly Not Present:** criterion not located throughout the study location with a few exceptions
- **Not Present:** criterion not located throughout the study location

3.2. Secondary Data

To further understand how the study areas have evolved since the introduction of rapid transit, the researcher examined two secondary data sources. The first was the Canadian Census. The census was used to examine how the population densities of the two study areas have evolved since 1986, when SkyTrain first opened. The second data source that was utilized was the City of New Westminster's property data base. Property information such as building age and square footage was extracted for all properties within a 400 meter radius of the New Westminster and 22nd Street SkyTrain Stations. The 400 meter radius was chosen as this roughly equates to a 5 minute walking distance which is widely accepted as the distance that most people will tolerate walking to transit (Walker, 2012, p.61). This information was used to better understand the scale and scope of development that has occurred in the study locations since the introduction

of rapid transit. These data sources, along with the researcher's observations have helped develop an accurate picture on how the study areas have changed since the introduction of rapid transit.

3.3. Content Analysis

The analysis of planning documents related to the neighbourhoods adjacent to the New Westminster and 22nd Street SkyTrain Stations played a significant role in understanding the planning context in which the two case study locations have evolved. Documents were primarily collected from the New Westminster Library, Metro Vancouver Library and the City of New Westminster's website. The focus of the content analysis involved examining both regional and municipal plans that address land use around the 22nd Street and New Westminster Stations. In total, 15 plans were examined that were developed by the City of New Westminster and Metro Vancouver. See Appendix A for the complete list of planning documents that were examined.

3.4. Qualitative Interviews

One of the most productive research methods that were utilized in this research project was semi structured interviews. This research method formed a significant part of the research project's ability to contextualize and understand why the land uses have evolved in the way that they have in the study areas. Semi structured interviews are people oriented and allow interviewees to construct their own account of their experiences (Valentine, 2005, p.111). Some elements of the Delphi technique were used to help develop the framework for the semi structured interviews. This technique involves interviewing subject matter experts individually and using the data collected to

understand the decision making process involving complex problems (Chai-Chien & Sandford, 2007). Three categories of interview subjects were chosen: senior planners, local politicians and developers. The subjects were chosen based on their knowledge and influence regarding land use decisions in the study areas. Although other groups, such as local residents may have had an impact on land use decisions, their impact would have been felt through their abilities to influence the three subject groups and thus have been captured in the interview groups that have been used. In total, 8 interview subjects participated in this research project (Appendix B). The subjects were identified because of their high level of involvement both in terms of activity and responsibility in the land use processes in my study areas. Significant consideration was also given to ensure that the participants had experience covering the span of my study period between 1986 to the present. Interviews for the research project were conducted between January 2014 and March 2014. All of the interview subjects were asked a similar set of questions, but the discussions were open ended and designed to allow the participants to elaborate on their experiences and thoughts on the development patterns in the study areas.

3.5. Survey

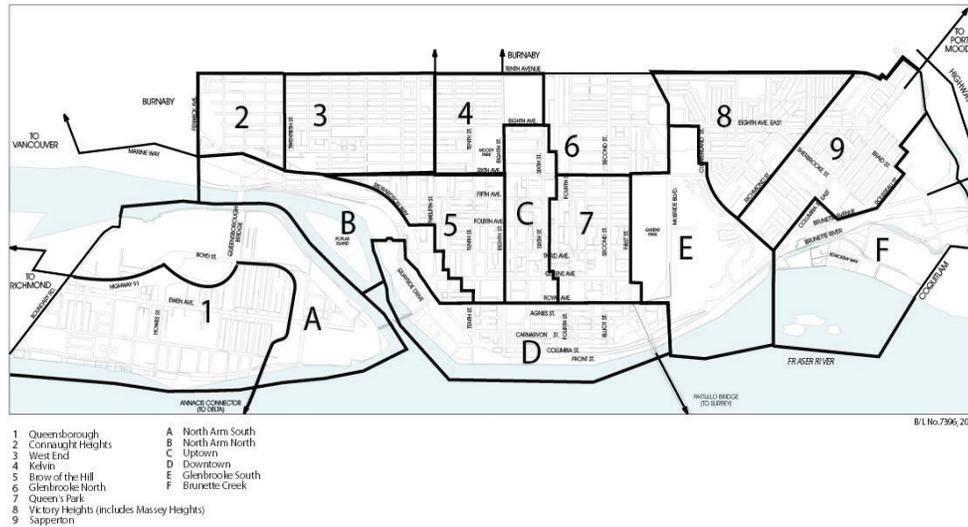
The final research method that was utilized in this project was a survey. After the interviews were completed and analyzed, a follow up survey was send to all eight interview participants (See Appendix C). The researcher was able to identify nine common factors that influenced land use in the study locations through the interviews. The follow up survey that was sent to all eight of the interview participants asked them to rank from 1 to 9 the factors that had been identified in the interview process. The participants were asked to create two ranking lists, one for the area around the 22nd

Street Station and one for the area around the New Westminster Station. The purpose of the survey was to identify which of the nine factors had the greatest impacts on land use change in the study locations and which ones had the least impact. All eight of the interview participants completed and returned the ranking survey.

Chapter 4. Local Context

The neighbourhoods surrounding the 22nd Street and New Westminster SkyTrain Stations are both located in the City of New Westminster. Located in the geographical centre of Metro Vancouver, New Westminster is situated on the banks of the Fraser River and is adjacent to the municipalities of Burnaby and Coquitlam. Founded in 1859, New Westminster is the oldest city in Western Canada and was the former capital of the Province of British Columbia. In 2011, the City of New Westminster had a population of 65,976 which represented just below 3% of the total population of the Metro Vancouver area (Statistics Canada, 2011). The land area of New Westminster is 15.63 square kilometers and the city has a population density of 4,222 persons per square kilometers (Statistics Canada, 2011). This makes the city the 2nd most densely populated municipality in Metro Vancouver next to the City of Vancouver. The City of New Westminster is made up of 11 different neighbourhoods. The 22nd Street SkyTrain Station is located in the Connaught Heights neighbourhood (Illustrated as #2 in neighbourhood map below) and the New Westminster SkyTrain Station is located in Downtown New Westminster (Illustrated as D in the neighbourhood map below).

Figure 1. New Westminster Neighbourhood Map (Source: City of New Westminster http://www.newwestcity.ca/database/rte/files/NW4%20-%20New%20Westminster%20Neighbourhood%20Planning%20Areas_Added_BL7396_2010.pdf)



4.1. Downtown New Westminster

Downtown New Westminster is one of the original neighbourhoods in the city. In the city's early days, this neighbourhood was very strategically located on the banks of the Fraser River and attracted early settlers, merchants, lumberman and traders. Industries such as lumber and fishing played an important economic role in the neighbourhood's early history. In 1898 a devastating fire known as the "Great Fire" destroyed most of the buildings in Downtown New Westminster. Although the fire was devastating to the neighbourhood, it led to a building boom as the neighbourhood quickly rebuilt.

The first half of the 20th century was a period of growth and success for Downtown New Westminster. The neighbourhood became a vital commercial centre and an economic hub for the region. By the 1950's Columbia Street, the main commercial

street in Downtown New Westminster was known as the “Miracle Mile” for commercial activity (City of New Westminster, 2011, p.16).

The second half of the 20th century was not as kind to this neighbourhood as Downtown New Westminster went into decline. The decline faced in Downtown New Westminster during this period was very similar to declines that occurred to many other urban centres in North America. The use of the private automobile increased during this period and commercial activity began to shift to accommodate this emerging transportation paradigm (City of New Westminster, 2011, p.17). Downtown New Westminster’s traditional urban form was not able to compete in this new economic environment and businesses and residents began to leave the area.

In the 1980’s a series of government led initiatives were implemented in an attempt to bring life back into this struggling downtown area. These initiatives included the building of the New Westminster Courthouse, Douglas College and the Quay. The introduction of SkyTrain into the neighbourhood in 1985 is another development that would help reshape this neighbourhood. Just as transportation played a big role in the decline of Downtown New Westminster in the 1960’s, it also appears to have played an equally big role in the neighbourhood’s recent revival. Since the introduction of SkyTrain the population of Downtown New Westminster has grown significantly and rapid transportation is viewed as an important asset in the neighbourhood.

4.2. Connaught Heights

The history of the Connaught Heights neighbourhood began with its creation by the Royal Engineers in 1859 that originally called the area District Lot 172. The district lot was not originally part of the City of New Westminster and was governed as crown

land by the Province of British Columbia (City of New Westminster, 1983, p.5). The first significant development in the area was the construction of a bypass route for the Interurban Railway in 1912 (City of New Westminster, 1983, p.3). Development proceeded very slowly in the area with its first residential home being constructed in 1910. By the 1940's there were about 200 houses in the area. These homes were mainly small bungalows ranging in size between 400 to 600 square feet (City of New Westminster, 1983 p.5). At this time the area was still being administered by the Province and there were growing concerns in the neighbourhood regarding the lack of civic services.

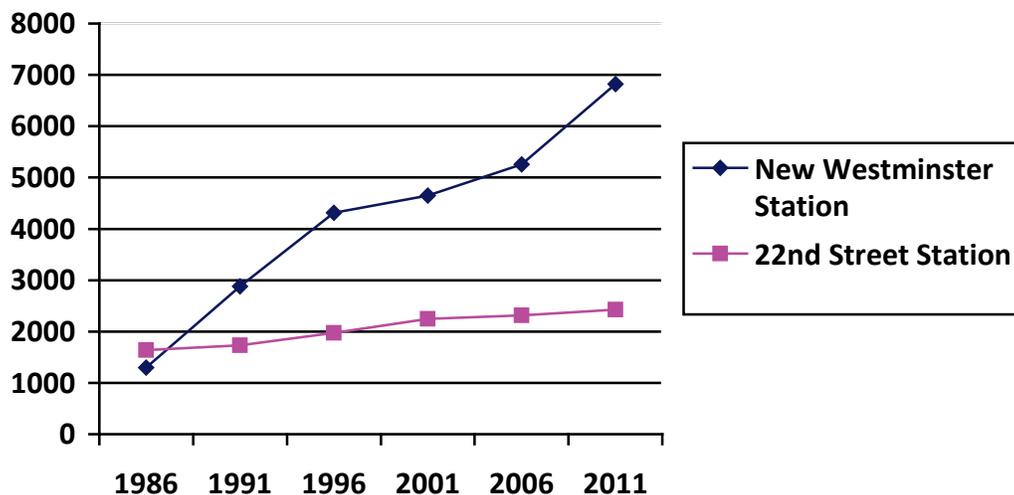
In the 1950's discussion began regarding the amalgamation of Connaught Heights into the City of New Westminster. A plebiscite was held in 1961 regarding the amalgamation but it did not receive the required 60% support. A subsequent plebiscite was held in 1964 and 90% of the residents supported the amalgamation and in 1965 Connaught Heights officially became a part of the City of New Westminster (City of New Westminster, 1983, p.5). Although civic services started to improve in the area after the amalgamation, the area is still developed to a lower standard than the rest of New Westminster. An example of this is the lack of sidewalks in the neighbourhood. Throughout its history the Connaught heights neighbourhood has maintained a built form of mainly single family dwelling on suburban lots. This built form has not changed significantly since the introduction of SkyTrain into the neighbourhood in 1985.

4.3. Downtown New Westminster and Connaught Heights since the introduction of rapid transit

Since the introduction of SkyTrain in 1985, the neighbourhoods surrounding the New Westminster and 22nd Street stations have evolved in two very different ways. It is

important to recognize that these neighbourhoods were two very different places when SkyTrain first arrived. In 1985, Downtown New Westminster could probably be best described as a declining urban centre, while Connaught Heights was an established and stable single family neighbourhood. In 1986 the population density in the census tract in which the 22nd Street Station is located was greater than that of the New Westminster Station. However the following 25 years have resulted in a significant population increase near the New Westminster Station compared to more moderate growth around the 22nd Street Station. Between 1986 and 2011 the population in the census tract in which the New Westminster Station is located increased 424%, while the population around the 22nd Street Station increased by 48% (Statistic Canada, 1986 & 2011, Census Tracts 9330202.00 & 9330201.00). This change is illustrated graphically in Figure 2 below.

Figure 2. Population Density per square km around New Westminster and 22nd Street Skytrain Stations (Source: Statistic Canada, 1986, 1991, 1996, 2001, 2006, 2011, Census Tract 9330202.00 & 9330201.00)



The rate of change that has occurred in these neighbourhoods is also evident by visiting these sites. On Thursday March 20th, 2014 a site visit was conducted of the neighbourhoods surrounding the 22nd Street and New Westminster SkyTrain Stations. Listed below are the observations that were made during these site visits.

New Westminster Station: The neighbourhood around the New Westminster Station had a mix of uses including residential, retail, commercial and institutional. The age of the properties appeared to vary significantly with some properties appearing to be very old, while others appeared to have recently been developed. The densities of the buildings also appeared to be very high, particularly in the newer looking buildings. The built form of the neighbourhood consisted of mainly high-rise and mid-rise buildings.

Figure 3. Downtown New Westminster, July 4th, 2014 (Source: J. Cote)



Using the characteristics listed in John Renne's TOD/TAD spectrum and based on the visual observations of the neighbourhood made during the site visit, the

researcher concluded that the neighbourhood appears to have undergone some significant changes since the introduction of rapid transit and that the area was developing in a manner that was consistent with Transit Oriented Developments.

22nd Street Station: The area surrounding the 22nd Street SkyTrain station consists predominantly of single family homes with a small pocket of retail along 20th Street. The older single family homes in the neighbourhood appear to be very modest in size and only take up a small portion of the lots in which they are situated. The newer single family homes in the neighbourhood are much larger and the housing structures appear to utilize more of the property space. The density of the area appears to be low based on the dominance of single family homes and there appears to be a minimal mixture of uses.

Figure 4. Connaught Heights, July 4th, 2014 (Source: J. Cote)



Using the characteristics listed in John Renne's TOD/TAD spectrum and based on the visual observations of the neighbourhood made during the site visit, the

researcher concluded that the neighbourhood has not significantly changed since the introduction of rapid transit and that area would likely be classified as a TAD on the TOD/TAD spectrum. Listed below are the characteristics included in Renne's TOD/TAD spectrum and the researcher's assessment of the 22nd Street and New Westminster's Station area based on the visual observations made on the site visit:

Figure 5. TOD/TAD Characteristics (Source J. Cote)

TOD Characteristics	New Westminster Station	22 nd Street Station
Multi Family Homes	Present	Not Present
High Densities	Present	Not Present
Underground Parking	Mainly Present	Not Present
Office Uses	Present	Not Present
Grid Street Patterns	Present	Present
Retail Land Uses	Present	Present
Pedestrian Focused	Present	Present

TAD Characteristics	New Westminster Station	22 nd Street Station
Suburban Street Pattern	Not Present	Not Present
Low Densities	Not Present	Present
Surface Parking	Mainly Not Present	Present
Single Family Homes	Not Present	Present
Industrial Land Uses	Not Present	Not Present
Segregated Land Uses	Not Present	Present

It is also possible to develop a good understanding of how the neighbourhoods around the 22nd Street and New Westminster Station have evolved since the introduction of rapid transit by analysing the property information available for the neighbourhoods. By examining data on all of the properties within a 400 meter distance of each of the two SkyTrain Stations it is possible to extract the year the building was built and the square footage of each building located in the study areas.

The first observation that can be made from this data is that the intensity of land use is far greater in the area surrounding the New Westminster Station as compared with the 22nd Street Station. In 2013, the building square footage in the area surrounding

the New Westminster Station was 4,176,462 sq ft compared to 505,150 sq ft in the area around the 22nd Street Station an 8:1 ratio. Although building square footage is not a complete indicator of a Transit Oriented Communities, it clearly illustrates that the land around the New Westminster Station is being used more intensely.

The second observation that can be made is that the area around the New Westminster Station has seen a lot more new development since the introduction of rapid transit. The square footage of the existing buildings built after 1986 was 2,435,676 sq ft in the area around the New Westminster Station compared to only 114,860 sq ft around the 22nd Street Station. This would indicate that the area around the New Westminster Station has experienced a significant amount of land use change since the introduction of rapid transit, while the area surrounding the 22nd Street Station has not. It is also interesting to examine the square footage and building age around the stations in five year interval between 1984 and 2013. The chart below shows the breakdown of this analysis.

Figure 6. Building Sq footage of buildings build between 1984 – 2013 (Source for data collection: City of New Westminster Property Information Database <http://arcgis.newwestcity.ca/CityViewsPublic.html>)

	New Westminster Station	22nd Street Station
2009-2013	260,409	5,773
2004-2008	610,531	27,971
1999-2003	87,037	22,518
1994-1998	219,982	23,639
1989-1993	584,202	34,959
1984-1988	804,300	0

This chart shows that development around each of the two Skytrain stations took a very different path since the introduction of rapid transit. The area around the 22nd Street Station has had a slow and consistent amount of re-development. This development most likely represents the replacement of single family homes. On the other hand the area around the New Westminster Station had a significant amount of re-development right after the SkyTrain was introduced. Although this redevelopment appeared to have slowed down in the 1990's, it picked up again in the 2000's. The observations of all of this data clearly shows that the land uses around the New Westminster and 22nd Street station have been evolved very differently since the introduction of rapid transit.

Chapter 5. Land Use Plans

To understand why the land uses around the 22nd Street and New Westminster station have evolved in the way that they have, it is important to first understand the planning context that guided the development of these two neighbourhoods. There are numerous planning documents that have been created regarding the two case study locations. These documents can be broken into three different categories, Regional, City and Neighbourhood. These three levels of planning documents have provided the framework for land use change in the two case study locations.

5.1. Regional Land Use Planning

Although municipalities have significant control over their own land use, all of the municipalities in the Greater Vancouver area participate in regional planning through the regional level of government, Metro Vancouver. The objectives of Metro Vancouver's regional plans are to develop and implement long range land use plans and guide population growth in the region. The origins of the current regional land use plan can be traced back to the 1970's, when the region developed the original Livable Region plan (Tomalty, 2002, p.6). This plan was developed in response to the region's growing population, sprawling land use patterns and growing automobile dependence. It was at this time that the concept of Regional Town Centres was developed. This concept was described in The Livable Region 1976-1986,

“To change present trends, we propose to create Regional Town Centres by concentrating a substantial portion of the future office and other types of

employment, major new cultural, entertainment and educational facilities in a few centres which can serve the major growth areas of the region” (GVRD, 1975, p.10)

The plan further discusses this concept by stating,

“Developing Regional Town centres in suburban locations will bring jobs, shopping and cultural opportunities close to where people live. Decentralizing to these centres of some of the office growth that will otherwise locate in downtown Vancouver will greatly reduce transportation problems. The aim, therefore, is to erect lively and diverse urban places which are attractive alternative to downtown” (GVRD, 1975, p.10)

It was felt that a series of Regional Town Centres was needed to help balance jobs and population growth, protect regional open space and support a transit oriented transportation system.

The first two locations that were chosen by the Greater Vancouver Regional District to become Regional Town Centre’s were Downtown New Westminister and Burnaby Metrotown. Downtown New Westminister was chosen because it was centrally located, it already had an economic base, and because it had a large population base in nearby municipalities. (City of New Westminister & GVRD, 1976). It was also felt that Downtown New Westminister had some significant opportunities to redevelop its existing urban core and create some new land uses on its waterfront. Once Downtown New Westminister was chosen as one of the original Regional Town Centres, work was initiated between the City of New Westminister and the Greater Vancouver Regional District (now Metro Vancouver) to implement its new regional designation. In 1977 the Greater Vancouver Regional District and the City of New Westminister produced the planning document *A Regional Town Centre for New Westminister*. This plan made a number of recommendations to include certain land uses and amenities into Downtown New Westminister. These recommendations included (1) Locating federal government offices into the area (2) Re-locating Douglas College into Downtown New Westminister

from its previous location off McBride Blvd in New Westminster (3) Opening a Performing Arts Centre and (4) Re-developing former industrial sites on the waterfront (GVRD, 1977, p.10). Although these early plans didn't all come to fruition, a number of actions were taken to support Downtown New Westminster designation as a Regional Town Centre. Douglas College and the provincial law courts both moved into Downtown New Westminster in the early 1980's. The British Columbia Development Corporation also became very active during this period with the creation of the First Capital City Development Company Ltd. This company was set up to become a development vehicle to promote large scale developments along New Westminster's waterfront. It assembled both private and public lands and led to significant residential development along New Westminster former industrial waterfront.

The region's commitment to the Regional Town Centre model continued into the development of the 1996 Livable Region Strategic Plan. The support for this model was discussed in the plan, "the foundation for more complete communities is the Livable Region Strategic Plan's network of regional and municipal town centres which are intended to be primary concentrations of jobs, housing, culture and recreational activities" (GVRD, 1996, p.11). One of the main differences between the plan developed in the 1970's and the ones in the 1990's, was that greater emphasis was placed on concentrating residential development in the Regional Town Centres. By this time, the region had now designated 8 Regional Town Centres and 13 Municipal Town Centres. Both of these designations were very similar, but the plan outlined a greater role for the concentration of higher density commercial and residential growth in the Regional Town Centres (GVRD, 1996, p.11). Downtown New Westminster had maintained its position as a Regional Town Centre and was one of many locations designated for increased concentration of employment and residential uses.

The latest regional land use plan was completed in 2010, titled *Metro Vancouver 2040 Shaping Our Future*. This plan did not deviate significantly from the region's previous regional land use plans. The plan was guided by five overarching goals (1) Create a Compact Urban Area (2) Support Sustainable Economy (3) Protect the Environment and Respond to Climate Change Impacts (4) Develop Complete Communities (5) Support Sustainable Transportation Choices (Metro Vancouver, 2010, p.7). Embedded in these goals is still a strong support for the Regional Town Centre model. No new Regional Town Centres were designated in this plan, but several new Municipal Town Centres were added. A new designation was also added in this plan called Frequent Transit Development Areas. This designation included areas that were located in close proximity to Translink's Frequent Transit Network and called for medium and higher density housing and a mix of land uses.

Since the adoption and implementation of the original Livable Region Plan in 1975, Downtown New Westminster has played a significant role as a Regional Town Centre. From a regional perspective it has been a location that has been designated for higher density residential, employment and recreational land uses. In contrast, the lands around the 22nd Street station have not received any attention or mention in the region's land use plans. Although the number of Regional Town Centres and Municipal Town Centres has grown in numbers over the decades, the area around the 22nd Street station has never been considered for such a designation. It is only recently when the region created the Frequent Transit Development Area's that the area around the 22nd Street station would be considered for intensification from a regional planning perspective.

5.2. City Plans

One of the most important guiding planning documents that exist in a municipality is its Official Community Plan. The City of New Westminster has a long history of municipal planning but there have only been two Official Community Plans in its history. The first plan was completed in 1982 and the second plan was finished in 1998. These plans have guided and shaped development in New Westminster since the introduction of rapid transit into the community in 1985.

New Westminster's original Official Community plan was formally adopted in 1982. The need to develop this plan was identified at the very beginning of the plan when it stated,

“We are entering an exciting era of development in which the City could change dramatically because of the major projects that are scheduled for completion over the next few years – the waterfront development, the downtown revitalization and rapid transportation” (City of New Westminster, 1982, p.1)

New Westminster's first official community plan was developed in the backdrop of the recently completed Livable Region Plan. The Official Community Plan appears to be very supportive and to be guided by the regional planning initiative as it stated,

“The principles and objective of the Greater Vancouver Regional Districts Livable Region Program 1976/1986, particularly the strategy for growth management in the New Westminster region should be supported” (City of New Westminster, 1982, p. 19)

In terms of its growth management strategies, the plan discusses where it envisions growth in City when it stated, “Medium and high density housing should be encouraged in the existing designated apartment areas; close to future transit terminals, along the waterfront and near the City Centre areas” (City of New Westminster, 1982, p.21). Downtown New Westminster would have fit all four of these criteria, while the Connaught Heights neighbourhood would have only met the criteria of being located close to a

future transit station. When the plan discusses which areas should be considered for a mixture of land uses it stated, “Some integration of residential, commercial and office uses should be accommodated in selected areas such as the waterfront and City Centre areas” (City of New Westminster, 1982, p.24). When it comes to the diversification of land uses, it appears that Downtown New Westminster and the Uptown neighbourhood were the only areas considered for potential mixed use neighbourhoods. Overall New Westminster’s first Official Community Plan from a planning perspective lays the ground work for the intensification and diversification of land use in Downtown New Westminster. The plan does not seem to contemplate any significant changes in land use in the Connaught Heights neighbourhood.

Fourteen years after the City of New Westminster completed its first Official Community Plan, the city embarked on developing a new Official Community Plan which was adopted in 1998. Unlike New Westminster’s first Official Community Plan, this subsequent plan was developed after the introduction of SkyTrain into New Westminster. Both the New Westminster and 22nd Street SkyTrain stations had been in place for twelve years at the time this Official Community Plan was completed. The impact of rapid transit is very evident in this document as the plan focuses a great deal of its growth management discussions around transportation infrastructure. When discussing where growth should occur in the city, the plan stated,

“Encourage residential intensification at strategic locations throughout the City, such as the New Westminster 22nd Street Station and the Eight Street SkyTrain Station and along commercial corridors and arterials to be close to transportation options, services and employment opportunities” (City of New Westminster, 1998, p.9)

The plan further discusses growth around the New Westminster and 22nd Street SkyTrain station when it stated,

“The following opportunities for the location of new growth were suggested: In the Downtown, Around 22nd Street SkyTrain Station with the appropriate design features that ensure livability and a village like setting” (City of New Westminster, 1998, p.28)

Despite the 22nd Street station being listed as a potential location for future growth, there also appears to be some hesitation in the plan regarding changing the nature of single family neighbourhoods. The plan stated, “The majority of future growth should be encouraged away from established single detached residential neighbourhoods” (City of New Westminster, 1998, p. 28). It continues by stating, “The 22nd Street SkyTrain Station currently serves a low density residential area. Intensification would serve to create a mixed use neighbourhood centre for this area in the future” (City of New Westminster, 1998, p. 108). At time the plan seems conflicted with respect to the neighbourhood around the 22nd Street Station. In one place it indicates that rezoning’s should be entertained by the city regarding increasing density in this neighbourhood, while in another indicates that growth management options for the area will likely not occur until the period between 2009 and 2021 (City of New Westminster, 1998, p.30). This conflicted position was likely the result of the fact that the area was identified for growth potential because of its close proximity to rapid transit, but the city was unwilling at that time to engage in some potentially challenging community discussions regarding land use changes.

The Official Community Plan provides a significantly clearer vision for the future of Downtown New Westminster. The vision for the area is captured in the following statement,

“Promote Downtown as the historic commercial and residential hub of the City as well as a Regional Town Centre by encouraging a wide range of commercial, residential, cultural, educational, recreational and institutional uses in the area” (City of New Westminster, 1998, p.33)

It is also clear that the 1998 Official Community Plan strongly aligns with the regions planning initiatives and continues to support the Regional Town Centre Model. This is illustrated by the following excerpt, “Continue to encourage the development of Downtown as a Regional Town Centre in terms of a better balance in distribution of jobs and housing” (City of New Westminster, 1998, p.9). Overall New Westminster’s second Official Community Plan appears to strengthen and provide greater details on how it envisions its downtown to intensify and diversify its land uses. Although there is not the same clarity when it comes to the neighbourhood around the 22nd Street station, the plan begins to entertain the idea of changing the land uses in this neighbourhood to better reflect the existence of rapid transportation into the neighbourhood.

5.3. Neighbourhood Plans

The final level of planning reports that has influenced the two study locations is the neighbourhood plans. These types of plans are typically very specific and only touch on an individual neighbourhood. Since the 1980’s, there have been four major neighbourhood plans that have examined Downtown New Westminster and two plans that have looked at the Connaught Heights neighbourhood. The Downtown New Westminster plans were completed in 1987, 1996, 2005 and 2011. The Connaught Heights neighbourhood plans were completed in 1983 and 2005. Each of these were initiated and developed under the guidance and direction of the City of New Westminster.

5.3.1. *Connaught Heights Neighbourhood Plans*

In 1983 the City of New Westminster completed the Connaught Heights Neighbourhood Study. This study was initiated because the City wanted to prepare for

the introductions of rapid transit and the Alex Fraser Bridge. The plan stated, “the major transportation projects already underway in the area must be coordinated into the urban land use planning for the area” (City of New Westminster, 1983, p.35). The plan continues by stating, “once the full effects of the projects are known, they will definitely influence the land uses in the neighbourhood as well as the character and the liveability of the community” (City of New Westminster, 1983, p.39).

This plan was completed two years before the introduction of SkyTrain into the neighbourhood, but it appears that the city was preparing for pressures to see land use changes in the area. This is illustrated when it stated, “Already the idea of the ALRT is bringing redevelopment pressures to the 22nd Street Station area and property owners are talking of industrial, commercial redevelopment and other forms of housing” (City of New Westminster, 1983, p.99). The plan takes a cautious approach to proposing land use changes, but does recommend that the city begin a consultation process to begin engaging with the community on the issue. It recommended, “That City Council authorizes the planning department to begin public discussion with the residents of the Connaught Heights area on the possible land use changes resulting from the ALRT” (City of New Westminster, 1983, p.12). Still it appears that the City Council of the day wanted to move slowly on this issue as the plan stated,

“In 1983 November, the New Westminster Planning Department forwarded a draft document to City Council in Committee of the Whole warning of possible land use changes and significant impacts which might occur from the construction of the ALRT and the Annicis Highways projects. After some discussion it was decided that the City should await further development in Vancouver and Burnaby” (City of New Westminster, 1983, p.41)

The Connaught Heights Neighbourhood study was completed just before the introduction of rapid transit into the area. The study does not recommend any specific land use change regarding density or the mixture of land uses, but it does raise the issue

of potential land use changes in neighbourhood. This plan could have been a starting point for the redevelopment of the area around the 22nd street station, but planning work on this neighbourhood did not continue again until 2005.

The next planning document to examine the neighbourhood around the 22nd street SkyTrain Station was part of New Westminister's LRT study. In 2005, the City of New Westminister conducted neighbourhood studies in the lands around all of its SkyTrain Stations. The LRT Study on the 22nd Street station was very supportive of pursuing land use changes in the neighbourhood. The study stated,

“22nd Street Station in New Westminister presents a significant opportunity to capitalize on existing rapid transit infrastructure in redevelopment projects. Concentrating new residential developments within walking distance of the existing LRT Station will address several primary strategic objective for the City: Revitalize an underutilized area, Optimize use of existing transportation infrastructure, Reduce vehicle trips by improving pedestrian environments” (City of New Westminister, 2005, p.13).

It lists a number of constraints that may restrict the redevelopment of the area. These include traffic issues near the Queensborough Bridge, view blockage, existing patterns of ownership and economic hurdles to development (City of New Westminister, 2005, p.18). In spite of this it states that, “Market analysis of the 22nd Street Station area points to significant potential to increase density and thus optimize the existing rapid transportation infrastructure” (City of New Westminister, 2005, p.33). The plan concludes by recommending that future development in the area include higher density areas and allow for the conversion of single family blocks into multi-family dwellings (City of New Westminister, 2005, p.20). Despite its clear recommendations regarding land use in the area around the 22nd Street Station, the plan has not led to any amendments to New Westminister Official Community Plan and the recommendations have not been acted

upon. It does not appear that there was the political will or interest to advance the finding of this neighbourhood land use study.

5.3.2. Downtown New Westminster Neighbourhood Plans

Since the introduction of rapid transit into Downtown New Westminster, four different neighbourhood plans have been developed by the City of New Westminster. The first one was completed in 1987, titled *Community Plan for Downtown New Westminster*. The neighbourhood's designation as a Regional Town Centre is an important guiding principal in this plan. The plan stated,

“Regional Town Centres are expected to play an important role in the realization of the other parts of the Livable Region Strategy by serving as key links in the transit system and improving the balance between jobs and labour force in all parts of the region....The GVRD with the approval of the City of New Westminster, selected New Westminster as its first priority in the development of its “Regional Town Centre” concept” (City of New Westminster, 1987, p.3).

The plan continues by outlining a vision for increased density and diversity in its land uses for the neighbourhood and it identifies five types of sites that should be encouraged for re-development. These include (1) sites underdeveloped or occupied by low density development (2) sites located close to the major anchors (3) sites located on the waterfront (4) sites located in the vicinity of SkyTrain Stations (5) sites assembled into sufficiently large parcels (City of New Westminster, 1987, p.19). The plan also calls for a more streamlined and faster process for development applications. It is clear that this plan is attempting to encourage and increase the pace of redevelopment in Downtown New Westminster.

The next neighbourhood plan to be developed for Downtown New Westminster was completed in 1996. The *Downtown New Westminster Action Plan* was created to kick start the revitalization efforts in the neighbourhood. Between 1994 and 2003,

development activity had slowed down and the neighbourhood was facing a number of social issues (See Figure 6). The overall vision for the neighbourhood remained the same in the plan as it stated,

“This neighbourhood will be based on the commerce of the Downtown economy and complemented by the growth of the residential sector. This vision foresees additional residents creating a customer base that sustains many of the Downtown businesses.” (The Downtown Action Team, 1996, p.3 1996)

The plan called for a number of actions, including improving the rezoning and building code regulations and exploring financial incentive tools to facilitate redevelopment in the downtown (The Downtown Action Team, 1996, p.54). It also raised the issue of fragmented property ownership when it stated, “A challenge for this area is to deal with the high number of absentee landlords and small property holders that hinder assembly and redevelopment opportunities” (The Downtown Action Team, 1996, p.71). The plan concluded that the City needed to take a more proactive role in identifying redevelopment opportunities.

In 2005, Downtown New Westminster along with all of the neighbourhoods that were located in close proximity to SkyTrain was examined as a part of New Westminster’s LRT Study. This study concluded that Downtown New Westminster had significant development potential and the capacity to absorb growth (City of New Westminster, 2005, p.41). The study found that the neighbourhood had four attributes that the City should take advantage of. These were its heritage, transit access, views and its waterfront location. Neighbourhood constraints were also examined and traffic issues and view blockage were identified as challenges that could restrict the redevelopment of the area. The following recommendations were made:

- Encouraging growth of Institution and Education uses
- Improving connections between the waterfront and Columbia Street

- Encouraging higher density residential development
- Protection of river views at the street ends
- Encouraging greater commercial office uses (City of New Westminster, 2005, p.11)

These recommendations were consistent with and build upon the work that had been completed by previous plans and the plan continued to support and provide direction encouraging Downtown New Westminster to intensify and diversify its land uses. The work of the LRT study on Downtown New Westminster became a starting point for the development of the Downtown Community Plan a process initiated in 2009.

In the years preceding this plan, the neighbourhood was beginning to attract a tremendous amount of residential development and the city wanted to ensure it had the policy work in place to respond to this activity (City of New Westminster, 2011,p.12). After two years of public consultation and engagement the plan was finally completed in 2011. The broader vision for the neighbourhood is captured in its vision statement,

“The Downtown is a unique neighbourhood within the City. It functions as the economic, cultural, historical and residential hub of New Westminster. Its natural amenities along the riverfront and historic streetscapes enhance its tourism, entertainment and retail appeal. Its high density residential and commercial buildings in close proximity to transit provide a showcase for the attributes of sustainability and responsible growth in the Metro Vancouver region” (City of New Westminster, 2011, p. 2)

The plan acknowledges previous planning works and how they have influenced the neighbourhood. In particular it references the importance of the Regional Town Centre model stating,

“One of the major driving force behind the growth and transformation of Downtown was the 1976 GVRD (now Metro Vancouver) Livable Region Strategic Plan. The plan designated Downtown New Westminster as a Regional Town Centre with the expectation it would accommodate a large share of the regions employment and residential growth” (City of New Westminster, 2011, p.23)

In its development key issues that were creating some conflicts in the neighbourhoods ability reach its goals as a Regional Town Centre were identified. These included:

- Severance issues between Downtown and the waterfront due to regional truck traffic, railway corridors and high volumes of through traffic
- Reconciling the need for public parking to support the health of the retail sector, without promoting an automobile dependant community.
- Continuing Downtown's role in accommodating the majority of future City growth, while also maintaining its quintessential small town charm.
- Balancing the interests of heritage conservation within the Downtown's designation as a high density neighbourhood (City of New Westminster, 2011, p. 12)

To address these issues more than 100 strategies relating to the Environment, Economy, Housing, Heritage, Transportation, Parks and Recreation, Arts and Culture, Public Realm and Community Infrastructure have been outlined. It attempts to set the conditions in which the neighbourhood can achieve its goals of becoming a mixed use, high density urban centre and also created specific land use designations for each parcel of land in the neighbourhood. Following adoption these designations were added into the City of New Westminster Official Community Plan.

5.4. Analysis of Land Use Plans

An analysis of the Regional, City and Neighbourhood planning documents makes it clear that the areas around the 22nd Street and New Westminster Stations were handled much differently from a planning perspective. Regionally, a great deal of attention was given to the development of Downtown New Westminster as a Regional Town Centre. Conversely the area around the 22nd Street Station has not been addressed in any of the regional plans. At the city level, the area around the 22nd street station did receive some planning attention in the 1998 Official Community Plan, but it was limited and did not compare to the level of attention that was given to the Downtown neighbourhood in both the 1982 and 1996 Official Community Plans. On the

Neighbourhood Plan level, Downtown New Westminster has received several planning initiatives that have attempted to encourage the intensification and diversification of the land uses in that neighbourhood. These have been very detailed and provided specific actions and recommendations to achieve neighbourhood and land use changes. With respect to the lands around the 22nd Street Station, the 1982 neighbourhood plan begins the discussion around changing land uses in that area, but it was vague and ultimately did not lead to any concrete planning actions.

It is clear that land use planning has played a role in how the neighbourhoods around the 22nd Street and New Westminster Stations have changed since the introduction of rapid transit. The area around the 22nd Street Station has not had a significant amount of planning support for land use change and during the study period there have only been minimal land use changes that have occurred. Conversely, significant planning attention has been paid to the development of Downtown New Westminster, a neighbourhood which has seen more dramatic land use changes during the study period.

Clearly land use planning has played an important role in the development patterns in the two study locations. However, the reasons behind these changes are much more complex. While Downtown New Westminster has seen some significant land use changes since the introduction of rapid transit, these changes have not been constant and the area has undergone periods of very limited development. Other factors were at play that influenced the evolution of land use in the study locations. In determining these, a key consideration is the role by local politicians, city planners and the development community who developed, influenced and guided the plans. Understanding the factors that influenced the decision makers in these groups is

important in developing a deeper understanding of why planning has occurred in the way that it has and why the neighbourhoods have evolved the way that they have since the introduction of rapid transit.

Chapter 6. Identifying the Factors

The factors that influenced the evolution of land use in the two study locations were varied and complex. To understand this process the researcher interviewed eight individuals who played an active role and had a unique insight into the evolution of land uses in the study locations. The interviews focused on two major themes. First, the interview subjects were questioned about their role in the land use decisions that had occurred in the two study areas. The subjects were then asked to explain why they felt the two study locations had evolved in the way that they have since the introduction of rapid transit. Out of this process many factors were identified. Although some of the factors that were identified were only mentioned by a few of the participants, nine major themes were identified that received comment from the majority of the participants. Two of these themes were mentioned by all eight of the interview subjects. The nine themes consistently mentioned by the interview participants were:

1. **Land use planning** – the role that municipal planning has played in shaping the evolution of land use in the case study locations.
2. **Availability of developable land** – the role that the availability of developable land has had in either encouraging or discouraging new development in the two study locations.
3. **Public reaction/resistance to land use changes** – the role that public reaction or perceived public reaction has influenced land use in the case study locations.
4. **Catalyst developer** – the influence of having a lead developer take a risk in a neighbourhood and be the first to invest in a particular location.
5. **Community prioritization** – This speaks to the fact that municipalities only have so many resources and that certain neighbourhoods may be a higher priority for a community change over others.
6. **Public investment** – the role of public investment (eg. Park or Community Centre) in facilitating neighbourhood change.
7. **Neighbourhood perception** – the role that pre-conceived impressions of a neighbourhood have on influencing development patterns.

8. **Road infrastructure** – how the neighbourhood’s road network and accessibility influence development patterns.
9. **Neighbourhood Characteristics** – the role that a neighbourhood’s history and pre-existing land use help guides its future.

Based on the interviews, it appears that these nine factors worked together to shape the land use patterns in the two study locations. How they interacted with each other appears to have played a significant and determining role in whether the lands around the rapid transit station intensified and diversified or not. Some of the factors contributed to increasing the likelihood of land use change, while others appear to have inhibited neighbourhood change.

6.1. Land Use Planning

Land use planning appears to have played a major role in the evolution of the land uses around the New Westminster and 22nd Street SkyTrain stations. The analysis of planning documents in the previous section illustrates that the two study locations evolved from two very different planning contexts, with a significant amount of planning being undertaken for the neighbourhoods surrounding the New Westminster Station and only a small amount of planning work being completed for the lands around the 22nd Street Station. This factor was mentioned by six of the eight participants as a significant reason for land use evolution. The general sentiment raised in the interviews was that land use change cannot occur unless you plan for it.

The planning documents clearly laid the groundwork for the intensification of land uses around the New Westminster station. Regional planning had designated Downtown New Westminster as a Regional Town Centre and both local and regional plans consistently called for the intensification and diversification of land in the neighbourhood.

One of the interview participants stated, “The density that has occurred on the old Expo Line and the Millennium Line, most were around city centres or town centres. Those areas are easy to develop; they were expected to have high density. There was context there”. In contrast, the neighbourhood around the 22nd Street station saw very little attention in terms of land use planning. Although a few of the plans made reference to the need to explore intensification of the area in the future, there were no adopted plans that specifically targeted a change in land use. One of the interview participants emphasised this lack of planning by stating, “22nd Street station is a perfect example of what happens when we do transit infrastructure with no land use powers”. This absence in planning appears to have led to the perception that there was a plan in the neighbourhood to prevent change. One participant stated, “I would compare it to 29th Avenue and Nanaimo in Vancouver where there was a policy decision not to have those become nodes”.

Land use planning also appears to be a significant factor in whether developers chose to work in an area or not. The development risks involved in the rezoning process can be significant and neighbourhoods that already have a planning context for densification are deemed to be less risky. One of the interview participants stated,

“It all starts in my mind in the cities’ policy contexts for neighbourhood change. The developer needs assurance before they put in their time and their money...I would say that a clear policy structure with rules in place, how big a development can occur at this station. Once you have that you need to define the vision. If you have that you have given the development industry certainty that they know what they can afford to buy the properties for, they know in some sense what the development risk will be and the political risk. It is difficult to pioneer especially if you are taking a shot in the dark.”

The planning processes allow the community to engage in land use discussion before they are faced with a specific proposal from a developer. Another interview participant emphasized the importance of having this community engagement as a prerequisite for

development when they noted, “If the city has given forethought to what their objectives are, then that forethought has been vetted through the electorate and it has become a document, then there is a structure that sets the stage for redevelopment”. Community plans provide a policy context that reduce development risk and allow for early community engagement in the land use process. The importance of land use planning was most succinctly summarized by one of the participants when they stated, “I think neighbourhood plans are key if you want to see a change in an area”.

6.2. Developable Land

The most common theme running through the interview process was the importance of the availability of developable land. This theme was mentioned by all of the interview participants. The theme was raised as a hindrance to re-development in both of the case study locations. Given that the intensification and diversification of land use often requires large consolidated properties, there was a general consensus that changes in the study locations were either slowed down or stopped entirely because of the lack of easily developable land.

The first challenge that was often cited in the interviews was the fact that lots that had relatively small property sizes surrounded both case study locations. In the neighbourhood around the 22nd Street station the properties are mainly single family lots. One participant explained why that would be problematic from a potential developer’s point of view by stating, “When you look at 22nd Street Station we consider it single family homes, fracture ownership, we would need to pay a premium to assemble the parcels”. The difficulty of consolidating single family lots appears to be further complicated by the high value that is attached to these lots. Another participant stated,

“The problem is single family homes outbid every other land use that there is full stock in the region. That’s the issue. It’s difficult to do an assembly when the existing land use is outbidding on a land value perspective, so you lose the impetus.” A similar issue appears to have also existed in Downtown New Westminster. Despite the pre-existing urban character of the neighbourhood the lots sizes are still relatively small and difficult to consolidate. One participant stated,

“The problem with Columbia Street is by and large the sites are 66 by 132 they are glorified single family lots. They have outright zoning of 5.2 on paper, no one in their right mind gets anywhere near that zoning because of how we build now. So on paper it’s got a valuation of the highest and best use being worth less and reality it is worth blank to assemble is next to impossible, so the dynamics were broken.”

Another issue facing the Downtown neighbourhood was that many of the properties owners were reluctant to sell their property. This issue was raised by many of the participants, but a variety of different reasons were suggested as an explanation as to why this was occurring. One participant stated, “I think property ownership was always a challenge, that there were some offshore owners and there were some owners that weren’t really all that interested in re development and so they had none”. Another issue that was raised was that many properties had been holding properties in families for generations and were difficult to assemble. Another participant stated, “The problem with the downtown is particularly very small lots, many owned by families who have had them for generations, so there was a reluctance to sell and really difficult to assemble.”

Another challenge facing the Downtown was its collection of heritage buildings. Based on the interviews, it appears that the rules and regulations that surrounded heritage building were not well understood by property owners or developers. One participant stated, “Perception that the heritage rules were stronger than they really are. That mythology reinforced that you couldn’t build on Columbia.” It was also noted that

developments that included heritage sites often had more challenges and were avoided by most developers. One participant stated, “Heritage components always make it more challenging, number one is straight cost, the cost to physically do what you come up with even prior to that the complexity to resolve what needs to happen take time”.

Another similarity between both the study locations was that they were both located in built out neighbourhoods. Unlike other locations along the SkyTrain line, there was very little vacant land that existed around the New Westminster or 22nd Street Station. Built out neighbourhoods presented more challenges to developers were often overlooked for projects. One participant stated, “It is not obvious, it is not vacant, whereas some land in Burnaby were vacant and looked easy.”

6.3. Public Reaction to land use change

One factor that appears to have had an influence on all three of the decision making groups that were interviewed for this project was public reaction to land use change. This theme was mentioned by seven of the eight participants. The factor speaks to the role that residents had in influencing land use patterns in the two case study locations. Both of the case study areas were located in built-out neighbourhoods at the time when rapid transit arrived, which meant that any land use change needed to have dialogue with an existing neighbourhood of residents and businesses. One participant stated,

“You always have concerns from residential neighbourhoods about change, and so the pre-existing land use and the existing locations of neighbourhood centres if they are not aligned quite closely with the rapid transit station that is a change issue and so you can get push back from neighbourhoods”.

The general sentiment raised in the interviews was that neighbourhood resistance to change was perceived to be more prevalent in the neighbourhood around the 22nd street as opposed to area around the New Westminster Station. The fact that the neighbourhood was primarily dominated by single family homes appears to have influenced the decision makers. One participant stated, "I think that nobody has really pushed it because of the kerfuffle that would have come from dispositioning the single family homes. It is a strong single family area". Another participant echoed a similar sentiment when they stated, "I would say it is always more of a challenge when you are near a single family neighbourhood because they are more likely to come out against development". When the issue of densification came up during the 1998 Official Community Plan process one participant noted that public resistance really limited the discussion around the 22nd Street Station. They stated,

"when we were working the OCP to look at densification around 22nd Street and there is a lot of community concern in and around that area that people live there so we couldn't even get traction to have a conversation, couple that with a political resistance you can't even get to an open house, we couldn't even get to that"

The issue of public resistance to land use change did not seem to be as big of an issue with the neighbourhood around the New Westminster Station. One participant stated, "there really wasn't much of a residential population in downtown, there were not a lot of people to object and those that were weren't particularly powerful people anyways". The neighbourhood around the New Westminster Station at the time of the arrival of rapid transit was mainly apartment units, with many of the residents being renters. The above comment really speaks to the reduced influence that this residential population had on the decision-making groups. There also appears to have been more community acceptance in the neighbourhood to change, as another participant argued it was, "probably an easier change issue with residents and businesses. There wasn't as

much concern about changing neighbourhoods. There was a strong desire by most to see some change there". Ultimately neighbourhood land use change does not occur without new development and one participant stated, "the developer needs to know that the project will be accepted in the community".

6.4. Catalyst Developer

The importance of having a lead developer take a chance on an untested neighbourhood was a common theme that was raised during the interviews. This factor was mentioned by all eight of the interview participants. When rapid transit arrived in New Westminster the area around both the 22nd Street and New Westminster Stations would have been considered unchartered territory for the development industry. Many of the comments made related to how the majority of the development industry tended to follow a select group of catalyst developers. One participant stated, "there is a lot more following than leading, they get moving in a direction there is a bunch of inertia". This sentiment was repeated by another participant when they stated, "I think developers have a bit of a herd instinct".

The general sentiment raised in the interviews was that when rapid transit arrived in New Westminster, the city lacked a developer willing to be a catalyst and take a risk in either of its new Skytrain locations. This lack of a catalyst developer appears to have slowed down the process of neighbourhood change as the development industry was not getting signals from industry leaders to proceed in these locations. One participant when discussing the development industry stated, "they are not terribly visionary and the ones that aren't visionary look to the two or three that are but if the two or three aren't touching an area, it isn't going to happen". Another participant stated, "you needed to

find someone who will take that leap of faith”. Although there was a feeling that there was no catalyst developer when rapid transit first arrived in New Westminster, several participants stated that there had been some developers that had gone into Downtown New Westminster in the last 15 years that appeared to be attracting broader attention to the area from the larger development community. In the area around the 22nd Street Station it was felt that no developer had emerged as a catalyst developer. One participant observed, “no one wants to be the first to build higher density in a single family neighbourhood”.

6.5. Community Prioritization

During the interview process the theme of community prioritization came up as a consistent reason as to why the two study areas had developed in different ways. This theme was mentioned by seven of the eight interview participants. As was referenced in the section on land use planning there was more planning attention given to Downtown New Westminster compared to the neighbourhood around the 22nd Street Station. It was clear in the interview process that this was a conscious decision made by those involved in land use. Downtown New Westminster was given a higher priority for development and revitalization than the 22nd Street Station area. One participant stated, “I have to say the New West Station was number one”. The general sentiment of the interviews was that prioritization of the lands around the New Westminster’s Station was a major factor in why land use change occurred more rapidly than the 22nd Street Station.

Several reasons were suggested in the interview process as to why a greater priority was given to the redevelopment of Downtown New Westminster. There was a general sentiment that there was greater benefit to the city as a whole if its historic

Downtown was revitalized. One participant stated, “There was a bunch of reasons why the downtown was a high priority beyond just simply land use, it was around economic development for the whole city and it took a long long time”. This sentiment was echoed by another participant when they stated, “the priority has been to build the downtown core. The need to revitalize the downtown was a specific city wide policy”.

Given that the revitalization of its downtown was a high priority for the City of New Westminster there was general feeling that resources and effort needed to be focused on that neighbourhood as opposed to other areas in the city. One participant stated, “I think you have only so much time and talent to be able to put into different parts of it. I think you have to build a central point and we are not finished with the downtown”. There was also a feeling that New Westminster was only going to attract a certain amount of development and that this development would be more effective if it was focused as opposed to being spread out in different parts of the city. One participant spoke about the importance of developing a critical mass of development in the downtown when they stated,

“the goals are strengthening the downtown you may not want to draw away from that if you have a limited rate of uptake for residential development. Do you want to put 1000 people at 22nd Street or would you rather put the next 1000 people in the downtown core. I think it might be logical and a good thing that 22nd Street hasn’t taken off because it might have taken away from development in the downtown”

Based on the interviews it is clear that the City of New Westminster placed a higher priority on the redevelopment of the area around the New Westminster Station as opposed to the lands around the 22nd Street Station. There was a general feeling that this prioritization had an impact on development and guided the land use decision makers to focus their efforts and their attention to Downtown New Westminster.

6.6. Public Infrastructure Investment

The role of public investment in a neighbourhood was mentioned frequently in the interview process as an important factor that assisted neighbourhood change. This theme was mentioned by seven of the eight interview participants. Public investment in a neighbourhood could take many forms, but there was a feeling that when governments invested in infrastructure like parks, municipal facilities or other forms of neighbourhood improvements that this provided a catalyst for neighbourhood change.

Since the introduction of rapid transit into Downtown New Westminster there have been numerous public infrastructure projects that have been developed. Several were mentioned in the interview process including the Law Courts, Douglas College, the New Westminster Police Building, Westminster Pier Park and the Anvil Centre. The provincial government initiated the first two projects and the final three projects were led by the City of New Westminster. The fact that the City was investing its own resources into a neighbourhood appears to have provided a positive signal that the neighbourhood was ready for change and that the City supported this change. One participant stated, “knowing the area is one where the city has a strong objective to see something happen and they are also putting their own investment and their own resources in order to take it to where they want it to be.” Another participant shared a similar feeling in reference to the development of the New Westminster Police station when they stated, “the police building was important because it was basically the city putting its money where its mouth was... it showed we are interested in being proactive to encourage development downtown”. Public investment also showed that there was political support behind the changes that were occurring in the downtown. One participant stated, “it indicates that city council has been able to come together and make an investment in their downtown.

That is a very important manifestation of city council's mindset, so I think that would have an influence."

There was also a feeling that when governments invested in a neighbourhood that these areas became better places to live and work. The improvement of a neighbourhood created greater residential demand in the neighbourhood and attracted the attention of developers. One participant stated, "The cities own civic projects have gotten the attention of a lot of people in the city. The civic infrastructure in the downtown has been a recent catalyst for the neighbourhood". This same participant also referenced a story in the interview about how the Westminster Pier Park helped convince a developer to build in Downtown New Westminster,

"He wasn't sure about an upcoming project. I told him about the Westminster Pier Park. He took his kids down there and feeling the neighbourhood out and he said hey you know what? I am going to take this project on; it is not far from the park. That was a game changer for him"

On the other hand there has not been the same level of public investment into the neighbourhood around the 22nd Street Station. None of the interview participants mentioned any public investment projects that had occurred in this neighbourhood. One participant stated, "there is still no amenities around there even as far as parks and rec there is nothing there". This lack of public investment appears to have given the signal that this neighbourhood is not a high priority for land use change. Based on the interviews it appears that the presence or non-presence of civic investment in a neighbourhood is a contributing factor in whether a neighbourhood sees changes or not after the introduction of rapid transit.

6.7. Community Perception

Whether a neighbourhood has a positive or negative public perception appears to have played a role in how the land use in the two case study locations have evolved. This theme was mentioned by seven out of the eight interview participants. Based on the interviews community perception seemed to play a role in encouraging or discouraging both residential demand and ultimately developer interest in a neighbourhood.

This theme was mentioned most frequently in reference to the neighbourhood around the New Westminster Station. Although that neighbourhood has seen some significant change since the introduction of rapid transit, this change has been slow and has taken a lot longer than many expected. Negative community perception appears to have played a significant role in slowing down the redevelopment of Downtown New Westminster. When SkyTrain arrived into the neighbourhood there were a number of social issues that were plaguing the neighbourhood. One participant stated, "What was clustered at the 8th Street Station was the hard core drug activity, the crack selling, it just became this really ugly dysfunction cluster." This description of the neighbourhood was repeated by another participant when they stated, "If you think of 20 years ago and 8th Street Station was a place to deal drugs. It was a place to get drugs. Nobody wanted to get off at that station". The social issues that the neighbourhood was facing also appear to have attracted the wrong kind of attention for a neighbourhood that was trying to revitalize itself. One participant lamented,

"it was so much in the press at the time, that was many years ago, I mean being in the press the tv camera's would go down show the urine and the bridal shops would lock their doors and they would have to get up every day and clean out their entry it was pretty bad at the time you know needles all over the place".

All of the negative issues that surrounded the neighbourhood resulted in a negative perception connected to the neighbourhood. One participant stated, "I think the

downtown has stigma within New Westminster, I believe New Westminster may still also have a stigma in the lower mainland". This negative perception appears to have played a role in dampening the demand for redevelopment in the area. The impact of this perception on residential demand is described by one of the participants,

"So if an area is perceived as unsafe and unsafe is either drug ridden or prostitute driven or open drug dealing there are two groups that you will not get. You will not get families and seniors. You want seniors because they have high disposable income usually; you want families because they provide roots in a community. Those are the two groups most fickle at crime in particular".

This participant later describes how this in turn affected the development industries perception of the neighbourhood, "you are not getting development because no one is going to park their money where people don't feel safe, no one is going to park their money in a place that looks like hell, no one is going to park their money if a place looks sleazy".

Community perception of a neighbourhood appears to be one of many factors that help shape whether a neighbourhood is able to attract redevelopment or not. This is especially true for the area around the New Westminster Station, where it appears that negative community perception had a dampening effect on neighbourhood change. Although the area around the 22nd Street station has not seen a significant amount of land use change, negative community perception does not appear to have been a significant factor at that location. None of the interview participants mentioned negative community perception as a reason for the lack of development interest in that location.

6.8. Road Infrastructure

The type of road infrastructure that surrounds a neighbourhood appears to have the ability to affect whether a neighbourhood can attract redevelopment or not. This

theme was mentioned by five out of the eight interview participants. Both of the case study areas are located in close proximity to some major road networks. Downtown New Westminster is surrounded by Royal Avenue and Front Street, which are classified as City Arterials and carry a significant amount of traffic (City of New Westminster, 2014, p.42). The Connaught Heights neighbourhood is located next to the foot of the Queensborough Bridge which is classified as part of the provincial highways system and 20th Street which is designated as a city collector (City of New Westminster, 2014, p.42). Although both neighbourhoods are located in close proximity to some major road networks, the interview participants typically referenced this issue as a challenge for the area around the 22nd Street Station.

The issue of road infrastructure was brought up in the interviews mainly in the context of community livability. There was general sentiment that certain road infrastructure created neighbourhoods that were less attractive places to live. One participant stated,

“The issue with 22nd Street is also where it is. Going back to 22nd Street, it is so close to that interchange and the Queensborough Bridge so that is not that attractive. It feels like it is next to a highway... And since the change to the head of the Queensborough bridge, who would want to live next to a highway interchange.”

Another participant indicated that this neighbourhood’s location near a major road system had an impact on developers. This participant stated,

“It’s a developer’s perception of the stigmas in the area or perception about being at that junction point which is a significant transportation hub spaghetti mess in that zone and if 22nd Street as a residential area gets painted with that kind of highway activity then it makes it difficult to get over that hurdle”.

Another factor raised that related to the road infrastructure around the 22nd Street Station was the inability for people to access the neighbourhood. Major roads surround

the area around the 22nd Street Station and during periods of congestion this neighbourhood can be difficult to access. One participant stated, “I think that access to that station is too little. One road directly and one indirectly, this would need to be addressed from an access point. Hemmed in is a good way to describe that neighbourhood around that station”. This point was raised by another participant when they stated, “its girdled literally by a highway system that is part of it to a point. Road access has been impeded”.

Based on the interview it appears that road infrastructure has the ability to negatively impact the ability of a neighbourhood to see land use change. The major issue identified was the impact that road infrastructure has on community livability. It was also referenced as a challenge for access to these neighbourhoods. The comments that were made in the interviews solely focused on the area around the 22nd Street Station, with none of the participants raising this issue in relation to the area around the New Westminster Station.

6.9. Neighbourhood Characteristics

One factor that appears to have played a major role in effecting the evolution of land use in both study locations is Neighbourhood characteristics. This theme was mentioned by seven out of the eight interview participants. The neighbourhoods around the 22nd Street Station and New Westminster Station existed long before the arrival of rapid transit and both neighbourhoods already had entrenched neighbourhood characteristics. These pre-existing neighbourhood characteristics or DNA appear to have played a major role in guiding the development of these areas. One participant explained this process when they stated,

“I think one of the key issues is sort of history and tradition in a city and its land. And so sometimes we talk about it being the DNA of the city and the skeletal backbone, but in New Westminster, you have well over 100 years of behaviour and patterns... the fact that you drop a SkyTrain line and SkyTrain station into a location doesn't erase all of that behaviour, that pattern that exists in the neighbourhood”

When the Skytrain arrived in the Connaught Heights neighbourhood, this area was already an established single family neighbourhood. The general feeling in the interviews was that the lack of urban characteristics in this neighbourhood prevented people from looking at this location as a potential place for densification or diversification of land uses. One participant stated, “I think around 22nd Street it is a beautiful area, but it doesn't have the urban feeling, it has a spirit of place as a residential neighbourhood, but not as one where there is a commercial centre that you can cluster around”. The fact that the area around the 22nd Street Station was dominated by a single land use and that it did not have many community amenities was mentioned as a detractor for the neighbourhood. One participant stated, “the area needs to have a bit more of a neighbourhood centre aspect to it because there isn't much commercial around there. No services around there”.

The neighbourhood characteristics of the area around the New Westminster Station were felt to have been more conducive to neighbourhood change. This neighbourhood was an established urban location long before the arrival of rapid transit. Although the neighbourhood had gone through a period of decline, it still possessed many urban attributes. One participant described the importance of this pre-existing urban character very simply, “I like the fact that it is an authentic historic downtown”. Another participant explained that demand for this type of authentic downtown neighbourhood was now increasing and that these places were becoming sought after. In the interview they stated, “In the downtown why has it evolved like that, finally its time

has come, people like compact, people like heritage as long as it conforms with our notion of heritage, it's got enough finally of the grit that it becoming urban cool". It was also mentioned in the interviews that the development industry was focusing in urban centres and looking for these types of locations. One participant stated, "the pattern of growth in the last 10 years in the lower mainland has been to start to consolidate in urban centres, so where there is commercial activity, development tends to focus in those zones".

The characteristics of the neighbourhoods around the New Westminster and 22nd Street SkyTrain Station appears to have played a significant role in shaping the two study locations. In many respects, the neighbourhood's history has helped guide and shape its future. The area around the 22nd Street and New Westminster Station were both very different places when SkyTrain first arrived and based on the interview the pre-existing land uses in the neighbourhoods appear to have played a major role in determining the future shape and form of these places.

Chapter 7. Ranking the Factors

The qualitative interviews conducted in this project have been instrumental in identifying the major themes and factors that have influenced the land use patterns around the New Westminster and 22nd Street SkyTrain Stations. The analysis of the transcribed interviews captured how often individual factors were mentioned in the interviews. Themes that were mentioned by the majority of the interview participants were considered to be more significant and have been included and explained in the chapter above. However the researcher notes that it was not possible through the analysis of the transcribed interviews to accurately rank and prioritize the themes that were mentioned. Although it is argued that all of the themes that have been identified helped influence the land use changes in the study locations, it is not possible to state which factors may have been more important and influential in the evolution of land uses based on the interviews. To help address this issue a follow up survey was sent to all eight of the interview participants. This survey described all nine of the factors and requested each participant to rank them from 1-9 (with 1 being the factor that had the greatest impact and 9 being the factor that had the least impact on land use) for each of the two study locations (See Appendix C). All eight of the interview participant responded to the survey. The results of the surveys were then tabulated for each of the two study locations.

The results from this survey showed that the interview participants had some consistent view points on which factors were more important than others. Although there were differences in the responses that were given, a significant gap is evident between

the ranking for the top factors and the ones that scored at the bottom of the list. There are also a lot of similarities between the results for the area around the 22nd Street and New Westminster SkyTrain Stations. However there were a few factors that scored very differently between the two station areas.

7.1. Survey Results

The chart below illustrates the overall survey results for the area around the 22nd Street and New Westminster Skytrain Station. The results from the individual surveys were tabulated together to create a score for each factor. The lowest possible score that could have been received in this tabulation would have been 8 and the highest score would have been 72. A lower score in this tabulation represents that the interview participants viewed this factor to be more important while a higher score indicates that this factors was not considered as important.

Figure 7. Ranking Survey Results (Source J. Cote)

Factor	New Westminster Skytrain Station	22 nd Street Station	Score Difference
Land Use Planning	21	24	3
Catalyst Developer	27	34	7
Developable Land	31	27	4
Community Prioritization	37	50	13
Neighbourhood Perception	38	42	4
Neighbourhood Characteristics	42	43	1
Public Investment	50	58	8
Public resistance to land use change	54	37	17
Road Infrastructure	59	45	14

7.2. Analysing the survey results

The results from the ranking survey illustrate that there were some common factors that appear to have played a big role in influencing the land use around both of the study locations. The factors of Land Use Planning, Availability of Developable Land and the importance of having a Catalyst Developer scored in the top three in both surveys. This is particularly interesting given that each of the two study locations are both very different locations with their own unique neighbourhood characteristics. The fact that these three factors scored consistently high in both surveys is interpreted to mean that they would be important factors irrespective of the location.

On the other hand there were three factors were noticeably different between the two surveys. The most significant of these concerned public resistance to land use change. There was a 17 point difference between the two surveys with this factor being considered more important in the area around the 22nd Street Station. This is likely the result of the fact that public reaction to land use change was viewed very differently in the two case study locations. Based on these results it appears that established single family neighbourhoods are more likely to be resistant to land use change than any other neighbourhood types. The other two factors that also had a significant difference between the surveys were Road Infrastructure and Community Prioritization. Road infrastructure was determined to have a greater impact in the area around the 22nd Street Station. As described previously, the area around the 22nd Street Station is located in close proximity to the Queensborough Bridge and its surrounding road network is likely what is driving the importance of this factor in that neighbourhood. Community Prioritization was noted as having a greater impact around the New Westminster Station. This is likely the result of the fact that growth in Downtown New

Westminster was heavily supported and promoted by the City of New Westminster and thus played a more significant role in that neighbourhood's development. These differences likely reflect that fact that these factors are very location specific and have resulted because of some unique conditions in the case study locations.

Overall the survey results provided a good indication of which of the nine identified factors were more influential when it came to land use change. The factors of Land Use Planning, Catalyst Developers and Availability of Developable land scored very high for both stations and are likely universally influential. Other factors such as Road Infrastructure and Public Resistance to land use change appears to be more site specific.

Chapter 8. Conclusions and Policy Recommendations

Just over 28 years ago rapid transit was introduced into the Greater Vancouver area. This transportation infrastructure has had a significant impact on the region and its land use patterns. However its impacts on land use have varied from station to station as development patterns have been uneven across the region. This research project has pursued an understanding of this disparity and sought to explain the reasons why some SkyTrain areas have intensified and diversified their land uses while others have only changed minimally since the introduction of rapid transit. Research was conducted on two case study locations in the City of New Westminster to understand this process. Although the two study locations do not necessarily reflect all of the areas near rapid transit in the Greater Vancouver area, having a deeper understanding of the factors that have influenced land use in these locations contributes to a greater understanding of land use change in areas in close proximity to rapid transit both in the region and beyond.

8.1. Why has the land uses around the New Westminster SkyTrain Station intensified and diversified since the introduction of rapid transit?

The area around the New Westminster SkyTrain Station has changed significantly since the introduction of rapid transit. The neighbourhood has witnessed a substantial population growth and its land uses have become more diversified since the

arrival of SkyTrain. However, the change in land use has not evolved at a steady rate over this period and has only become really pronounced in the last 15 years. The reasons for this are complex and involve a combination of factors that have worked together to shape this neighbourhood.

Land use planning appears to have played one of the most important factors that has influenced the development of this neighbourhood. Significant planning work has been completed for Downtown New Westminster and both the City and the region have planned for the intensification and diversification of land uses in the area for over 30 years. This factor was brought up regularly during the interview process and ranked highest of all in the follow up survey. There appears to be a strong connection between the prolonged planning efforts in this neighbourhood and the land use changes that have occurred since the introduction of rapid transit. This factor is also largely connected to the factor of community prioritization. The interview process has clearly illustrated that the City of New Westminster and also the Metro regional government placed a very high priority on the development of Downtown New Westminster and much effort was placed on initiatives to promote neighbourhood change in this location. Development was clearly prioritized in this neighbourhood over other areas and it appears that this played a factor in how the neighbourhood has evolved. Neighbourhood prioritization was ranked as the 4th most important in the follow up survey. Beyond planning efforts it was also evident from the interviews that the City of New Westminster had made significant investments in public infrastructure in the downtown neighbourhood and this had a positive impact on the areas redevelopment. Amenities such as the Police Building and Westminster Pier Park were cited as positive catalyst for neighbourhood change.

Despite the changes that have occurred around the New Westminster station a number of factors were raised in the interviews that may have impeded the redevelopment of this neighbourhood. The availability of developable land was a factor that was raised consistently during the interviews. In addition issues surrounding small lot sizes, fractured ownership and heritage constraints were all referenced as impeding the neighbourhood's ability to change. The availability of developable land ranked third in the follow up survey. Another factor that was cited as slowing down the redevelopment of the area was negative neighbourhood perception. Concerns over the neighbourhood's social issues and crime appear to have reduced residential demand and ultimately deterred developers from pursuing this area. This factor was ranked fifth in the follow up survey. Both of these factors appear to have played a role in reducing developer interest in the area which is closely related to the factor of catalyst developers. As noted previously, attracting a catalyst developer is an important factor in initiating neighbourhood change. It appears that Downtown New Westminster struggled initially in attracting a lead developer which slowed down the redevelopment process. Over time though, the neighbourhood was able to attract developer interest which was likely the result of improved neighbourhood perception, consistent land use planning and public investment into the neighbourhood. The factor of catalyst developer ranked second in the follow up survey.

8.2. Why has the land uses around the 22nd Street Station seen only minimal intensification and diversification since the introduction of rapid transit?

The area around the 22nd Street Station has not seen a significant amount of land use change since the introduction of rapid transit. The neighbourhood is still mainly

dominated by low density residential homes and has a minimal mixture of land uses. The fact that this area has not become more of a TOD since the introduction of rapid transit results from a number of factors that have worked together to suppress land use changes.

Like the area around the New Westminster Station, Land Use Planning was listed as the number one factor that influenced land use patterns in the area. Unlike the New Westminster Station, this factor was listed in reference to the lack of planning. Compared to the area around the New Westminster Station, the neighbourhood around the 22nd Street Station had only received a minimal amount of planning work and the work that had been completed did not give any clear direction on future land use changes. It is this lack of direction and commitment by the City of New Westminster that appears to have been a major reason why this neighbourhood has not seen very much change since the introduction of rapid transit.

Factors that also contributed to suppressing land use change in the neighbourhood were related to the neighbourhood's characteristics before rapid transit arrived. Before the arrival of SkyTrain the area around the 22nd Street Station was surrounded by an established single family neighbourhood. This meant that the availability of developable land was minimal in this location. Land ownership was very fragmented, lots sizes were extremely small and land values were high. Together these issues made it very difficult for land assembly to occur. This factor ranked second in the follow up survey. The pre-existing single family nature of the neighbourhood also appears to have created an environment where public resistance to land use change would flourish. The three different groups of decision makers interviewed for this research project all indicated that public resistance to land use change was more pronounced in this neighbourhood because of its single family nature. This factor ranked

fourth in the follow up survey. Both of these factors are linked closely to the factor of Neighbourhood Characteristics. The neighbourhood around the 22nd Street Station had some long standing characteristics that existed well before the arrival of rapid transit. Pre-existing neighbourhood patterns were well established in this neighbourhood and changing the urban fabric of an established neighbourhood is not done easily or quickly. This factor ranked sixth in the follow up survey. The neighbourhood around the 22nd Street Station has also had to content with some challenging road infrastructure. The area is located in close proximity to the Queensborough Bridge and the provincial road network that connects to this structure. The interview process revealed that the road network in the area reduced the attractiveness and access to the neighbourhood which discouraged the redevelopment of the area. This factor ranked 7th in the follow-up survey, which indicates that this factor is potentially a barrier that can be overcome.

8.3. Comparing Results to Published Findings on Rapid Transit and Land Use

Understanding the process involved in land use change for neighbourhoods in close proximity to rapid transit will help assist municipal planners and leaders to manage rapid transit infrastructure more effectively. Developing these locations using TOD principles will likely yield greater use of the public transit system and create more livable and healthy communities. This research project has built upon the base of previous works that have examined the factors influencing land use change in locations near rapid transit and has reaffirmed some of the findings found in the work completed by Knight and Trygg(1977) and Cevero and Landis (1997). Knight and Trygg's work in this area found that municipal policies, development trends and the availability of developable land were critical to redevelopment. This research project found that these

three factors remain relevant today and that they are influencing the land use patterns around rapid transit stations in Metro Vancouver. Cevero and Landis found that land use plans, pre-existing land uses, urban blight, availability of developable land and community acceptance were important elements impacting how land development was occurring. The results from this research project have confirmed these factors also play a large role in affecting land use change.

New factors have been identified in this research project that were not addressed in the previous academic works discussed above. Catalyst Developers, Community Prioritization, Public Investment and Road Infrastructure were all important factors that influenced land use redevelopment in the research projects two case study locations. These factors were not identified as important factors in the studies completed by Knight and Trygg(1977) and Cevero and Landis (1997). The factor of road infrastructure is very site specific, which may explain why that factor had not been identified previously. The factors of Catalyst Developer, Community Prioritization and Public Investment did not appear to be specific to the case study locations and it is likely that these factors also play a role in development patterns across the Metro Vancouver region and beyond.

8.4. Policy Recommendations

Like many other major cities around the world, Metro Vancouver will face challenging transportation issues in the future. Metro Vancouver is anticipated to grow by approximately 1.2 million residents by the year 2041 and how the transportation system is structured to deal with this growth will have a substantial impact on liveability in the region (Metro Vancouver, 2009, p.1). To help address these issues the region has developed a number of goals in Translink's long range transportation plan, Transport

2040. One of the goals is to have most trips in the region made by walking, cycling and public transit. Another goal set out in Transport 2040 is to have the majority of jobs and housing in the region located along the Frequent Transit Network (Translink, 2008, p.27). To maximize this access while still being mindful of the financial restraints that exist, the regions municipal planners and leaders will need to understand how best to intensify the land uses around existing SkyTrain stations and ensure that the expansion of rapid transit is done in locations that have the ability to achieve appropriate forms of densification and diversification of land uses.

This research project has outlined nine factors that affect the land use processes in areas around the New Westminster and 22nd Street SkyTrain Stations. Although the results of this project are specific to the locations that have been studied, it is likely that that these factors would also be relevant in other locations in Metro Vancouver. Based on the identified factors in this research project, three general policy recommendations are being proposed to assist neighbourhoods in close proximity to the regions rapid transit system to adopt more land use characteristics found in TOD's.

1. **Ensure up to date and appropriate land use planning is in place in every neighbourhood in close proximity to existing or future rapid transit stations:** The results from this research project have clearly identified the importance of land use planning in the process of land use change in locations near rapid transit. Land use plans appear to be an important prerequisite to neighbourhood change. The process involved in developing land use plans are necessary to foster community acceptance to land use changes and provide clarity to the development industry on what can be developed in a particular location.

2. **When future rapid transit locations are being considered, areas need to be evaluated on their future land use potential:** The results of this research project demonstrate that a locations pre-existing neighbourhood form and character have a big influence on whether a neighbourhood has the ability to see land use change. Therefore, when proposals for new locations for rapid transit stations are being reviewed, it is important that the future development potential for the location also be evaluated. Lot sizes and the ability to assemble development sites need to be a consideration in these discussions. An additional research finding is that established single-family neighbourhoods are more resistant to land use change and increased density. This should be considered, as they may not be the most ideal locations for rapid transit expansion.
3. **Neighbourhood change needs to be supported:** Although land use planning is an important prerequisite for neighbourhood change, a municipality's involvement should not stop at this point. To help guide and facilitate neighbourhood change cities need to actively support these station areas to become attractive locations for land use change. Developing public amenities such as parks or addressing local crime issues are examples of how municipalities can play a role in improving the perception of a neighbourhood and support the process of neighbourhood change.

Using a case study approach this research project has identified nine factors that help explain why some neighbourhoods near rapid transit have intensified and diversified their land uses and others have not. Understanding the factors that influence land use change in neighbourhoods in close proximity to rapid transit is critical if cities want to achieve appropriate forms of densification and diversification of land uses in these locations. This understanding will allow municipal planners,

local politicians and the development industry the ability to develop more effective strategies to ensure land uses around existing and future rapid transit locations take advantage of the transportation infrastructure and investments that have been made.

The land use patterns in Metro Vancouver have changed significantly since the introduction of rapid transit. These changes have been uneven and inconsistent across the region. Although this research project focused on the two original Skytrain Stations in New Westminster, the same differences in development patterns can be seen in other neighbourhoods next to rapid transit stations. One only needs to ride the Skytrain to see these differences. Some station areas have seen significant intensification of land uses such as Joyce and Metrotown, while other station areas like Nanaimo and 29th Avenue do not appear to have undergone any significant land use changes since the introduction of rapid transit. As this research project has demonstrated, each neighbourhood will have its own unique story as to why its land uses have evolved the way it has. However, there are likely many common underlying factors that guide and shape the development patterns in these locations. Recognizing and understanding the factors identified in this research project are critical if we want to plan and shape the development patterns in our region to better align with our regions long term transportation goals and aspirations.

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Appendix A: List of Planning Documents Examined for Content Analysis

- Downtown Community Plan (2011, City of New Westminster)
- The Community Plan for the City of New Westminster (1982, City of New Westminster)
- Connaught Heights Neighbourhood Study (1983, City of New Westminster)
- Envision New Westminster: The Official Community Plan for the City of New Westminster (1998, City of New Westminster)
- Downtown New Westminster Action Plan (1996, The Downtown Action Team)
- Community Plan for Downtown New Westminster (1978, City of New Westminster)
- Community Plan for Downtown New Westminster (1987, City of New Westminster)
- Regional Town Centres (1975, Greater Vancouver Regional District)
- A Regional Town Centre for New West (1977, Greater Vancouver Regional District)
- The Livable Region 1976-1986 (1975, Greater Vancouver Regional District)
- New Westminster: An Action Planning Process (1976, City of New Westminster & Greater Vancouver Regional District)
- Livable Region Strategic Plan (1996, Greater Vancouver Regional District)
- Regional Growth Strategy (2010, Metro Vancouver)
- LRT Station Areas: Land Use and Vision Study Volume 1: The Downtown (2004, City of New Westminster)
- LRT Station Areas: Land Use and Vision Study Volume 2: 22nd Street Station (2004, City of New Westminster)

Appendix B: List of interview subjects

- **Lisa Spitale:** Lisa is currently working in the role of City Administrator at New Westminster. Prior to working in this position Lisa was the Director of Planning in New Westminster between 2007-2013. Lisa started working at City of New Westminster in 1992, with the majority of this time being spent in the planning department.
- **Mary Pynenburg:** Mary worked at the City of New Westminster as the Director of Planning between 1992 and 2004.
- **Ken Cameron:** Ken worked at the City of New Westminster as the Director of Planning between 1985 and 1988. Ken also worked for the Greater Vancouver Regional District (GVRD) in their planning department between 1978 and 1985 and between 1988 and 2004. During his time at the GVRD he played a senior role in the planning department and was very involved in the development of the Livable Region Strategy.
- **Wayne Wright:** Wayne is currently serving his fourth term (2002 to present) as the Mayor of New Westminster. Before being elected, Wayne was a business owner in Downtown New Westminster and very involved in the Downtown BIA.
- **Jerry Dobrovlny:** Jerry is currently working in the role of Director of Transportation in the City of Vancouver. Jerry served on New Westminster City Council between 1996 and 2005.
- **Helen Sparks:** Helen served as Mayor of the City of New Westminster between 1996 and 2002. Before being elected Mayor, Helen served on New Westminster City Council between 1987 and 1996.
- **Gary Pooni:** Gary is the President of Brook Pooni Associates (urban planning and land development consultancy). Gary's firm has been involved in numerous development projects in the City of New Westminster. Gary also works as an instructor for the Urban Development Institute School of Development.
- **Robert Fung:** Robert is the President of the Salient Group, a real estate development company focusing urban renewal and mixed use projects. The Salient Group has had one development project in Downtown New Westminster, the Trapp Holbrook project

Appendix C: Follow Up Survey

Dear Participant,

Thank you very much for participating in my research project. To assist with my research project, I would like to request your participation in answering one final ranking question. Answering this question should take less than 5 minutes of your time. Your participation in this additional question is completely voluntary, but would be very valuable for my research project.

The interview process has yielded some very common themes explaining how the land use and the neighbourhoods around the 22nd Street and New Westminster Skytrain Stations have evolved since the introduction of rapid transportation.

In total 9 themes were consistently identified through the interview process that help explain the evolution of land uses in my study locations. To further assist my research project, I was hoping that you could rank the 9 themes that have been identified from 1 to 9 (with 1 being the factor that had the greatest impact on land use and 9 being the factor that had the least impact on land use) for both the New Westminster and 22nd Street Skytrain Stations. It is clear that all 9 of these factors have worked together to shape the land use in my study locations, but I want to get an idea of which factors may have been more influential. Please mark a number 1 to 9 next to the corresponding factor listed below.

Please don't hesitate to ask any questions if you need clarification.

Regards,

Jonathan Cote

Land Use Planning – This factor speaks to the role that municipal planning has played in shaping the evolution of land use in the case study locations. (eg. Downtown New Westminster’s designation as a Regional Town Centre)

Availability of Developable Land - This factor speaks to the role that the availability of developable land had had in either encouraging or discouraging new development in the case study locations. (eg. Small lot sizes)

Public reaction/resistance to land use changes – This factor speaks to the role that public reaction or perceived public reaction has influenced land use in the case study locations.

Catalyst Developer - This factor speaks to the influence of having a lead developer take a risk in an neighbourhood and be the first to invest in a particular location.

Community Prioritization - This factor speaks to the fact that municipalities only have so many resources and that Downtown New Westminster was given a higher priority for development than the lands around the 22nd Street Station.

Public Investment – This factor speaks the role of public investment. (eg. Parks and Community Centres) play in facilitating neighbourhood change.

Neighbourhood Perception – This factor speaks to the role that preconceived impressions of a neighbourhood have on influencing development patterns. (eg. Downtown New Westminster’s negative social issues)

Road Infrastructure- This factor speaks to the role of how a neighbourhood’s road network and accessibility influence development patterns. (eg. Limited road access to Connaught Heights Neighbourhood)

Neighbourhood DNA – This factor speaks to the role that a neighbourhoods history and pre-existing land uses help guide its future.