Analyzing the Impacts of Transit Investments

Examining Change in Two Toronto Transit Neighbourhoods

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A report submitted to the School of Urban and Regional Planning in conformity with the requirements of the degree of Master of Urban and Regional Planning (M.PL.)

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I would like to thank my supervisor, Dr. Ajay Agarwal, for all of his time and his help throughout the report writing process.

To all of my friends and family, thank you for your love and support over the past two years. I could not imagine my time at Queen’s without you.
**Executive Summary**

Major investments in public transit infrastructure have the potential to significantly impact development in the areas surrounding transit stations. In theory, these impacts include higher land values for properties located in close proximity to transit stations as a reflection of the high value placed on access to public transit by both people and firms. The empirical evidence, in this regard, tends to be inconclusive. This report addresses the following research question:

*How does the opening of a new transit node affect development in its neighbourhood?*

To address the research question, this report examined the influence of the opening of the Sheppard Subway Line, in 2002, on the housing, demographic, and transportation profiles of the two transit neighbourhoods surrounding Bayview and Don Mills Subway Stations, respectively. As the most recently constructed subway line in Toronto, the experiences of these case studies demonstrated the highest generalizability to future transit neighbourhoods in Toronto.

Qualitative methods were employed to conduct a multiple case study analysis of the two transit neighbourhoods. Census data was used to identify changes in the housing, demographic, and transportation profiles of the Bayview and Don Mills transit neighbourhoods over three Census periods (1996, 2001, and 2006). Observed changes were then compared against City-wide trends to establish significance. Newspaper articles and policy documents were used to supplement Census data observations.
The analysis showed that the opening of the Sheppard Subway Line did have a significant impact on the housing, demographic, and transportation profiles of the Bayview and Don Mills transit neighbourhoods. While the opening of the subway line was successful in stimulating development, attracting household diversity, and increasing transit ridership in the Bayview transit neighbourhood, its impact in the Don Mills transit neighbourhood was far more effective in supporting commercial development and attracting employment. In large part, observed changes in the housing, demographic, and transportation profiles of the transit neighbourhoods surrounding the Bayview and Don Mills transit stations were attributed to the direction provided by the Sheppard Subway Corridor Secondary Plan, which established area-specific policies to guide transit supportive development along the Sheppard Subway Corridor (City of North York, 1997).

Based on the findings of the analysis, five recommendations are offered to the City of Toronto and to Metrolinx to improve guidance for future transit-oriented development in Toronto.

- Encourage condominium development to create affordable housing options.
- Increase dwelling unit sizes to accommodate growing household diversity.
- Zone for mixed-uses to maximize local ridership.
- Create Secondary Plans to address the specific needs of TOD.
- Tailor TOD Secondary Plans to be Context-Specific
# Table of Contents

**Acknowledgements** ................................................................................................................. 2  
**Executive Summary** .................................................................................................................... 4  
List of Tables and Figures .............................................................................................................. 8  
1.0 Introduction ............................................................................................................................... 9  
   1.1 Overview ................................................................................................................................. 9  
   1.2 Research Question ............................................................................................................... 11  
   1.3 Report Structure .................................................................................................................. 11  
2.0 Methodology ............................................................................................................................. 12  
   2.1 Overview ............................................................................................................................... 12  
   2.2 Review of Relevant Literature ............................................................................................ 12  
   2.3 Case Study Rationale .......................................................................................................... 13  
   2.4 Analysis ............................................................................................................................... 14  
   2.5 Limitations .......................................................................................................................... 16  
3.0 Literature Review ...................................................................................................................... 18  
   3.1 Why Invest in Transit? ........................................................................................................ 18  
   3.2 The Accessibility Benefit ................................................................................................... 20  
   3.3 Potential for Improvement ............................................................................................... 25  
4.0 Case Studies ............................................................................................................................. 29  
   4.1 The Sheppard Subway Line ................................................................................................. 29  
   4.2 History of the Sheppard Subway Line ................................................................................ 29  
   4.3 The Sheppard East Subway Corridor Secondary Plan .................................................... 33  
   4.4 Bayview Transit Neighbourhood ....................................................................................... 34  
   4.5 Don Mills Transit Neighbourhood ..................................................................................... 36  
5.0 Analysis .................................................................................................................................... 38  
   5.1 Housing ............................................................................................................................... 38  
      5.1.1 Bayview Transit Neighbourhood .................................................................................. 38  
      5.1.2 Don Mills Transit Neighbourhood ............................................................................. 42  
   5.2 Demographics ...................................................................................................................... 45  
      5.2.1 Bayview Transit Neighbourhood ................................................................................ 45  
      5.2.2 Don Mills Transit Neighbourhood ............................................................................. 48  
   5.3 Transportation ....................................................................................................................... 51  
      5.3.1 Bayview Transit Neighbourhood ................................................................................ 51  
      5.3.2 Don Mills Transit Neighbourhood ............................................................................. 52
5.4 Summary .................................................................................................................................................. 54

6.0 Recommendations .................................................................................................................................... 55

6.1 Encourage Condominium Development to Create Affordable Housing Options .................. 55

6.2 Increase Dwelling Unit Sizes to Accommodate Growing Household Diversity .................. 55

6.3 Zone for Mixed-Uses to Maximize Local Ridership ............................................................................ 56

6.4 Create Secondary Plans to address the Specific needs of transit oriented development .......... 58

6.5 Tailor TOD Secondary Plans to be Context Specific .......................................................................... 59

7.0 Conclusions ............................................................................................................................................. 60

References .................................................................................................................................................... 61
LIST OF TABLES AND FIGURES

Figure 1.1 One of the entrances to the Bayview Subway Station.........................................................9
Figure 1.2 One of the entrances to the Don Mills Subway Station.......................................................9
Figure 1.1 A map illustrating the locations of the two transit neighbourhoods selected as case studies for this report........................................................................................................13
Figure 2.2 A map outlining the Bayview transit neighbourhood............................................................15
Figure 2.3 A map outlining the Don Mills transit neighbourhood.........................................................15
Table 3.1 Summary of ten studies evaluating the price premium effects of the accessibility benefit.................................................................................................................................21
Figure 4.1 A map of the Toronto Subway System..................................................................................30
Figure 4.2 A map of Network 2011, plans for future transit in Toronto................................................31
Figure 4.3 Arc condos located at 2885 Bayview Ave........................................................................35
Figure 4.4 Bayview condos located at 23 Rean Dr............................................................................35
Figure 4.5 Condominiums, apartments, and townhomes in the Don Mills transit neighbourhood.......36
Table 5.1 Housing in the Bayview transit neighbourhood.................................................................39
Table 5.2 Housing in the Don Mills transit neighbourhood..............................................................43
Table 5.3 Demographics in the Bayview transit neighbourhood......................................................46
Table 5.4 Demographics in the Don Mills transit neighbourhood..................................................50
Table 5.5 Mode share in the Bayview transit neighbourhood........................................................52
Table 5.6 Mode share in the Don Mills transit neighbourhood........................................................53
1.0 INTRODUCTION

1.1 OVERVIEW

The purpose of this report is to provide recommendations to the City of Toronto and to Metrolinx to better guide future transit-oriented development (TOD) in Toronto. As such, this report examines the impacts of the opening of the Sheppard Subway Line, a major public transit infrastructure investment, on the housing, demographic, and transportation profiles of two transit neighbourhoods in Toronto. The recommendations of this report are informed by a detailed literature review and case studies – the two transit neighbourhoods surrounding Bayview and Don Mills stations.

According to existing transit investment literature, the influence of major public transit investments on the areas surrounding transit stations has in past been assessed using land values. The theory that supports this literature suggests that properties located closest to transit stations have higher values than those located farther away. This theory is rooted in
the assumption that increased land values of properties in close proximity to transit stations are reflective of the value placed on access to public transit by both people and firms. Despite mixed evidence in support of this theory, the literature is useful in establishing the importance of the relationship between increased accessibility provided by public transit, and the intensification of lands surrounding transit stations. Building on the existing literature, this report examines the experiences of two transit neighbourhoods to determine how major public transit investments influence development in the areas surrounding transit stations.

To evaluate the impacts of the opening of the Sheppard Subway Line in 2002, on the Bayview and Don Mills transit neighbourhoods, Census data was analyzed over three Census periods (1996, 2001, and 2006). Census data was used to examine changes in the housing, demographic, and transportation profiles of each of the transit neighbourhoods that occurred as a result of the opening of the subway. Observations were compared against Toronto-wide trends, and supplemented with information retrieved from newspaper articles and policy documents.

The findings contributed to five policy recommendations that are described at the end of this report. These recommendations are offered to the City of Toronto and to Metrolinx to inform policies that will better guide the development of future transit-oriented development in Toronto.
1.2 Research Question

This report, in focusing on the impacts of major transit infrastructure investments on transit neighbourhoods, addresses the following research question:

*How does the opening of a new transit node affect development in its neighbourhood?*

1.3 Report Structure

The remainder of this report has been divided into 6 chapters. Chapter 2 outlines the methodology and the data used to address the research question. Chapter 3 presents a detailed review of transit investment literature. Chapter 4 presents a history of the Sheppard Subway Line and provides context for the evolution of the transit neighbourhoods surrounding Bayview and Don Mills Subway Stations in Toronto. Chapter 5 outlines the data analysis component of this report and reviews findings relevant to the two case studies of the transit neighbourhoods surrounding Bayview and Don Mills Subway Stations. Chapter 6 provides policy recommendations that the City of Toronto and Metrolinx may adopt to guide the future development of transit neighbourhoods in Toronto and in the rest of the GTA, to maximize the benefits of transit investments. Finally, Chapter 7 presents a summary of the conclusions of this research.
2.0 Methodology

2.1 Overview

This report used qualitative methods to conduct a multiple case study analysis. A descriptive analysis of Census data was used to examine case study changes in the housing, demographic, and transportation profiles of the two neighbourhoods between the years 1996 and 2006. A multiple case study design was rationalized on the basis of replication, or the purposes of finding similar results in two separate instances (Yin, 2009). The use of two case studies was determined based on the level of detailed analysis that could be conducted in the time allotted for the completion of this report.

2.2 Review of Relevant Literature

This report was informed by a detailed review of relevant literature pertaining to the impacts of transit investments on surrounding neighbourhoods, cities, and regions. Academic journals and print resources were obtained through the Queen’s University Library while other documents of interest were gathered from online sources.

The purpose of conducting a literature review was to construct a primary foundation of knowledge to which the research for this report could be related and in which it could be contextualized. The literature review sets out precedent studies that have previously attempted to determine and quantify the impacts of transit infrastructure investments at various scales and through a variety of measures. This review was essential to understanding the role that increased accessibility, as a resulting benefit of investment in transit infrastructure, plays in determining these impacts, particularly in how it can influence development, growth, and other changes in transit neighbourhoods.
2.3 Case Study Rationale

The two case studies chosen for this report were used to demonstrate the impacts of transit investments on transit neighbourhoods in terms of changes in housing, demographic, and transportation characteristics. The two transit neighbourhoods surrounding Bayview and Don Mills Subway Stations, located on the Sheppard Subway Line in Toronto, Ontario, were the two case studies selected for this report.

The two neighbourhoods were chosen as case studies for this research for three reasons. First, the “neighbourhood” is a widely preferred unit of analysis in transit research (Hodge & Gordon, 2008). Transit neighbourhoods were defined by a 400 metre radius (as the crow flies) surrounding each of the two stations. Second, the Sheppard Subway Line is the most...
recently built subway in Toronto, and thus has the highest potential generalizability to the experiences of future transit neighbourhoods. Third, these neighbourhoods have received considerable media attention in recent years in comparison to other transit neighbourhoods on the Sheppard Subway Line.

2.4 Analysis

The analysis was conducted in two phases. The first phase compared Census data from each of the two case studies chosen across the three time periods (1996, 2001, and 2006) and against city-wide trends. The purpose of this analysis was to compare housing, demographic, and transportation changes observed in each transit neighbourhood over time, with changes observed across Toronto. This was useful in determining what changes occurred in each transit neighbourhood around the time of the opening of the Sheppard Subway Line, and whether or not these changes reflected trends experienced across the rest of the city. Census data for this analysis was collected using the demographic analysis software PCensus Mappoint, which was accessed through library computers at Queen's University.

Following Census data collection, data for each Census period (1996, 2001, and 2006) was exported into Microsoft Excel. The data was then organized into six Census profiles, one for each transit neighbourhood comparing housing, demographic, and transportation data across 1996, 2001, and 2006. Variations in data counts reported in each period were used to indicate change over time. Data for the City of Toronto was then extracted and organized in the same manner, and compared against each of the transit neighbourhood’s respective
Figure 2.2 A map outlining the Bayview transit neighbourhood. (PCensus, 2012)

Figure 2.3 A map outlining the Don Mills transit neighbourhood. (PCensus, 2012)
housing, demographic, and transportation profiles. Housing and demographic characteristics were chosen as important indicators of transit neighbourhood change for this study because of their strong influence on travel behaviour, and their consequent relationship to transit investments, as outlined by the TCRP Report 128 (Cervero, 2008, pg. 29).

The second phase of analysis utilized archival research to supplement changes captured by the Census data. Newspaper articles from the Toronto Star and the Globe and Mail, along with The Sheppard East Subway Corridor Secondary Plan (City of North York, 1997), were used to support the extent to which the changes observed in the housing, demographic, and transportation profiles of each of the two transit neighbourhoods could be attributed to the opening of the Sheppard Subway Line. Political, residential, and professional recognition of the impacts of the Sheppard Subway Line on the housing, demographic, and transportation profiles of the two transit neighbourhoods, were used to complement initial findings.

2.5 LIMITATIONS

Despite best efforts to mitigate bias and improve validity, reliability, and generalizability, this report must acknowledge several limitations. First, the use of Census data has inherent limitations. Census data is only available every five years, and 2011 data has yet to be made available on PCensus software. As such, the data used for this study was limited to three periods – 1996, 2001, and 2006 – with the most recent data being seven years old. Second, Census data is restrictive in terms of the level of detail provided in the questionnaire on certain topics such as transportation. This limited the level of analysis that could be undertaken given the available data. Third, only two case studies in Toronto were
considered, both of which are on the same subway line in relatively close proximity. As such, these case studies may produce area specific results and may not be fully generalizable to the experiences of transit neighbourhoods in other locations. Finally, there may be other exogenous factors of change which are not readily covered in this analysis.
3.0 LITERATURE REVIEW

In theory, it is expected that people and firms who value access to public transit will choose to locate near transit stations, resulting in intensification and increased land values near transit stations (Giuliano & Agarwal, 2010, pg.208-215). However, empirical results in this respect are mixed. Regardless, the following review of transit investment literature is useful in demonstrating the importance of the influence of increased accessibility, as provided by transit investments, on land intensification, and the creation of TOD.

3.1 WHY INVEST IN TRANSIT?

Investment in transit infrastructure has long been recognized as an important priority for cities across North America, and around the world (Polzin, 1999; Vessali, 1996; Gatzlaff & Smith, 1993). These investments are celebrated for their role in contributing to energy conservation, air quality improvement, congestion reduction, and lifestyle and health benefits (Polzin, 1999; Handy, et al., 2002; Frank & Engelke, 2001; Frank 2004; Ewing, et al. 2003). It is, however, for their role in influencing land development and urban form that transit infrastructure investments have attracted the interest of scholars worldwide.

Fuelled by a well-documented history of the relationship between transportation and land use, scholars have presented strong evidence to support the view that investment in transit infrastructure is a catalyst for urban development (Polzin, 1999). Scholars such as Cervero (1984), Berechman and Paaswell (1983), and Landis, et al. (1995) have recognized transit investments - as relatively permanent fixtures - for their ability to influence urban growth, affect land uses, and promote redevelopment in declining areas. Transit investments are believed to have the ability to attract new growth around station sites and revive declining
areas by increasing the value and profit potential of lands adjacent to transit stations (Cervero, 1984).

The conceptual foundation that supports this view is based on a body of theoretical models that comprise “location theory” (Vessali, 1996; Duncan, 2011; Huang, 2006; Hess & Almedia, 2007). Location theory, which is made up of a combination of a traditional model of residential location and at least three business location models, serves as an important basic tool for understanding the relationship between land use and transportation (Vessali, 1996). These theories operate under the following assumptions: first, the traditional model of residential location is premised on the belief that transportation improvements decrease relative commute costs along a particular corridor, thus increasing the demand for and value of land along this corridor; and second, the three business location models assume that transit investments, in decreasing transportation costs, increase employment levels in a particular area and decrease rents in surrounding residential areas – allowing firms to hire more employees at lower wages and expand production at lower costs (Vessali, 1996). Though inherently flawed for its somewhat contradictory assumptions - such as the fact that decreased commute costs may actually provide incentives for workers to move farther from employment centres, thus detracting from a firm’s ability to pay lower wages to employees – location theory provides an important starting point from which to understand the impacts of transit improvements on land use and urban form (Vessali, 1996).
3.2 The Accessibility Benefit

One area of research that has built upon the underlying premise of location theory, and has become inherently tied to the discussion of understanding the role of transit investment in influencing land development, considers the role of accessibility. Accessibility, according to Grengs, et al. (2010) is defined by “the ease of reaching places” (pg. 427), while mobility is defined as the “ease of movement” (pg. 427). Under these definitions, scholars have examined the role of accessibility in providing an incentive for individuals, households, and companies to locate in areas serviced by public transit (Giuliano & Agarwal, 2010; Dube, et al., 2010; Smith & Gihring, 2006).

Transportation literature notes that accessibility can be measured in several ways. Handy and Clifton (2001) suggest three types of classifications of accessibility measures: cumulative opportunities measures, gravity-based measures, and random utility theory (pg. 68-69). Grengs, et al. (2010) identify accessibility measures using travel behavioural studies and residential surveys. Giuliano and Agarwal (2010) note two additional indicators - changes in land values and land uses, represented by increases in housing prices and densities - to indicate accessibility change (pg. 217). While each of these methods provide useful indicators of accessibility, scholars focus particular attention on the examination of land values to evaluate the impacts of transit investments.

Several studies, using hedonic price models (Rosen, 1974), have attempted to demonstrate the influence of transit investments on land development by confirming the existence of a price premium capitalized into increased property values. These studies suggest that an
Table 3.1 Summary of ten studies evaluating the price premium effects of the accessibility benefit.

### Positive Premium Effects

<table>
<thead>
<tr>
<th>Author/ System</th>
<th>Dependent Variable</th>
<th>Station Opening</th>
<th>Transit Accessibility Measure</th>
<th>Premium Effect</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duncan (2011)/ San Diego Trolley</td>
<td>Transaction prices for condominium units sold between 1997 and 2001</td>
<td>1980</td>
<td>Network distance of 1 mile to nearest rail station</td>
<td>Positive increase for a condominium located in a good pedestrian neighbourhood may reach up to $20,000 or exceed 15%.</td>
<td>Proximity to a transit station has a significantly stronger impact on condominium prices when coupled with a pedestrian-oriented environment. The findings of this study imply a heavy demand for transit-oriented housing.</td>
</tr>
<tr>
<td>Hess &amp; Almeida (2007)/ LRT Buffalo, New York</td>
<td>Assessed value for residential properties in 2002</td>
<td>1985</td>
<td>Straight line distance of ½ mile to nearest transit station</td>
<td>Positive increase of $2.31 per foot closer to a transit station.</td>
<td>Homes located within a one-quarter mile of a light rail station can earn a 2-5% (or $1300-3000) premium on the city’s median home value.</td>
</tr>
<tr>
<td>McMillen &amp; McDonald (2004)/ Midway Rapid Transit Line</td>
<td>Single-family house transaction prices between 1983 and 1999</td>
<td>1993</td>
<td>Distance of 1 ½ miles to nearest transit station</td>
<td>Positive Increase of 4.02% for homes located within 1.5 miles of a transit station.</td>
<td>Home prices increased substantially in response to the new transit line. The findings of this study imply that neighbouring homeowners highly value the new transit line.</td>
</tr>
</tbody>
</table>

### Negative or Insignificant Premium Effects

<table>
<thead>
<tr>
<th>Author/ System</th>
<th>Dependent Variable</th>
<th>Station Opening</th>
<th>Transit Accessibility Measure</th>
<th>Premium Effect</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Du &amp; Mulley (2007)/ Tyne and Wear Metro (UK)</td>
<td>Transaction prices for properties sold in August 1999, April 2002, and March 2003</td>
<td>2002</td>
<td>Straight line distance in 500 meter radius surrounding nearest transit station</td>
<td>No significant difference in property prices due to transit station proximity.</td>
<td>Findings imply that other factors, such as the regional economic environment and quality of a property have a stronger influence than accessibility to transit on property prices in Sunderland. These results suggest that proximity to transit does not capitalize into a price premium.</td>
</tr>
<tr>
<td>Forrest, et al. (1996)/ Metrolink (UK)</td>
<td>Transaction prices for properties sold in 1990</td>
<td>1990</td>
<td>Straight line distance of 1km, 1-2km, and more than 3km to nearest transit station</td>
<td>Negative effect found as proximity to stations lowers property values by 2.1-8.1% relative to properties with no nearby stations.</td>
<td>The findings of this study suggest that low ridership in Greater Manchester has translated into limited demand for housing with rail access. This effect may also be explained by the negative externalities associated with transit such as noise pollution and increased traffic. Negative externalities associated with proximity to transit have been associated with decreased home values in past studies.</td>
</tr>
<tr>
<td>Gatzlaff &amp; Smith (1993)/ Miami Metrorail</td>
<td>Single-detached selling prices for properties selling between 1971 and 1990</td>
<td>1984</td>
<td>Straight line distance to nearest transit station in 1 square mile.</td>
<td>No significant increase found, price elasticity.</td>
<td>There is weak evidence that the announcement of the Miami Metrorail stations majorly affected residential property values. Higher-priced residential neighbourhoods experienced greater increases in property values near stations while declining neighbourhoods did not.</td>
</tr>
<tr>
<td>Study</td>
<td>Type of Property</td>
<td>Time Period</td>
<td>Distance Measure</td>
<td>Price Effect</td>
<td>Notes</td>
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<tr>
<td>Bowes &amp; Ihlanfeldt (2001)/ MARTA</td>
<td>Mixed</td>
<td>1979</td>
<td>Straight line distance of ½ mile, 1-½ mile, 1-2 miles, and 2-3 miles to nearest transit station</td>
<td>Positive increase significant for homes between a 1 and 3 mile radius from the nearest station. Negative effect for homes within one-quarter mile from the nearest station.</td>
<td>Homeowners are willing to pay more for a house within a mile of a rail station. However, the effects of station proximity on property value may depend on the median income of the neighbourhood, distance from the CBD, and station parking. As such, neighbourhoods with lower incomes enjoy premium effects associated with proximity to transit stations, while higher income neighbourhoods which value access to transit much less, and rather see the negative externalities associated with proximity to transit, do not.</td>
</tr>
<tr>
<td>Cervero &amp; Duncan (2002)/Coaster Commuter Train &amp; San Diego Trolley</td>
<td>Mixed</td>
<td>1995 &amp; 1981</td>
<td>Distance of ½ mile to nearest transit station</td>
<td>Positive increases associated with the Coaster only: -Multi-family parcels = 10-17% -Single-family homes = 17% -Condominiums = 46% -Commercial = 91%</td>
<td>Rail transit services in the San Diego region overall realize appreciable land-value benefits, though premiums are highest for commercial properties. In comparison however, proximity to the San Diego Trolley realizes a much less, insignificant, or even negative premium effect.</td>
</tr>
<tr>
<td>Damm, et al. (1980)/ Washington Metro</td>
<td>Mixed</td>
<td>1976</td>
<td>Straight line distance of 0.1-2.0 miles to nearest transit station</td>
<td>Price elasticity depending on distance.</td>
<td>In all cases, distance of a parcel to the nearest Metro station was statistically significant to determining the transaction price of that parcel. However, despite statistical significance, not all price effects are substantial enough to realize a price premium. These effects vary largely according to type of urban parcel. The results of this study indicate that retail uses are the most sensitive to proximity to transit.</td>
</tr>
<tr>
<td>Landis et al. (1995)/ BART, CalTrain, San Diego Trolley, Sacramento Light Rail, and San Jose Light Rail</td>
<td>Mixed</td>
<td>1972, 1987, 1981, 1987, 1987</td>
<td>Roadway distance from each home to nearest rapid transit station, roadway distance from each home to nearest freeway interchange, adjacency to nearest rapid transit line, adjacency to nearest freeway</td>
<td>Positive increase found with proximity to rail mass transit capitalized into home prices for BART= $1.96-2.39/meter. No significant increase in home values surrounding the San Diego Trolley, Sacramento Light Rail, or the San Jose Light Rail systems.</td>
<td>The capitalization effect is not universal. Rather, it depends on many things, including quality of transit service. Systems providing limited service, service to a limited market, those that operate at slower speeds, or do not help reduce freeway congestion, are unlikely to generate significant capitalization benefits. Such systems include CalTrain, Sacramento Light Rail, and San Jose Light Rail.</td>
</tr>
</tbody>
</table>
increase in property value is reflective of the value placed on increased access to public transit by both people and firms, as provided by transit investments. Table 3.1 summarizes the findings of ten select studies that use a hedonic price model approach to analyze the existence of an accessibility price premium.

Despite some evidence that a price premium does exist in areas surrounding transit, its connection to increased accessibility has yet to be confirmed (Giuliano & Agarwal, 2010, pg. 228). Giuliano and Agarwal (2010) present a similar summary of the most recent literature that explores the relationship between transit neighbourhood real estate and the accessibility benefit. Findings, though backed by standard economic theory, are inconclusive. Theoretically, it is believed that land with the highest accessibility should be the most densely developed and the highest in value because it reduces travel costs (Giuliano & Agarwal, 2010, pg. 207). However, based on Giuliano and Agarwal's (2010) review of multiple North American case studies, individual and household preferences appear to play a more influential role in household location decisions - and thus predicting housing prices - than distance to employment locations (pg. 249). Accordingly, confirmation of an accessibility price premium has yet to be determined.

It is important that this review also acknowledges an additional body of literature that challenges the view that transit investments influence land development. The studies of Knight and Trygg (1977), Knight (1980), Huang (1996), Handy (2005), and Loukaitou-Sideris and Banerjee (2000) present compelling evidence linking transit investments to favourable policy environments.
As one of the first scholars to present ‘a change of perspective’ Knight and Trygg (1977) and Knight (1980) disputed evidence supporting a causal relationship between rail transit and changes in land use and development patterns (pg. 3). Rather, Knight and Trygg (1997) and Knight (1980) dismissed apparent changes in land use and land development as coincidental for coinciding with transit investment, attributing these changes instead to favourable policy environments.

Similarly, Huang (1996) reviewed research regarding the impacts of urban rail transit systems on real estate development in North America, concluding that the effects of transit investments on development are “not readily identified” (pg. 17). Huang (2006) in speculating whether encouraging zoning and policies are more inherently tied to favourable outcomes than transit investment alone, supports Knight’s (1980) case.

Further to this point, Handy (2005) challenged the assumption that transit investments heavily influence land development on the basis that evidence to support such claims is lacking. Handy (2005), in identifying four specific propositions made by proponents of smart growth with respect to the relationship between transportation and land use, found these propositions unresolved. As such, Handy (2005) argued that the United States has wrongly adopted the view that transit investments influence land development as the backbone of smart growth strategies.

To illustrate this case, Loukaitou-Sideris and Banerjee (2000) examined a case study of the Blue Line corridor, a twenty-two mile rail route located in Los Angeles County. The Blue Line corridor was first conceived through the perception that investment in light rail would serve as a much-needed stimulus for economic development and physical and civic
improvement in the depressed and neglected neighbourhoods surrounding the line (Loukaitou-Sideris & Banerjee, 2000). Following an analysis of ten years of operation, the Blue Line, though successful in appreciating transit ridership, was deemed an utter failure in its goal to improve the economic environment of communities located along the corridor (Loukaitou-Sideris & Banerjee, 2000). Rather, the line contributed only marginally to new development around inner city stations, and is thus, evidence that transit investments do not necessarily guarantee changes in land development and urban growth.

Overall, the conclusions of this review place doubt in the ability for transit investments alone to exert a strong influence over land development and to doubly achieve the other benefits associated with such large-scale projects. Rather, this section suggests that in order to successfully influence land development and attract growth through transit investments, municipalities must focus their efforts on providing favourable policy environments and supportive policy frameworks in which such projects may thrive.

### 3.3 Potential for Improvement

Several scholars have identified ways to maximize investments in transit infrastructure to realize additional benefits not reflected in land values (Knight, 1980; Cervero, 1994; Huang, 1996; Diaz, 1999; Polzin, 1999; Levine, et al. 2005). These benefits include: increasing transit-user perceptions of accessibility and connectivity, creating high-density mixed-use development near stations, reducing the negative impacts of transit investments, and improving the potential for new and joint development around transit stations. Such benefits may be achieved by enhancing the pedestrian realm around transit stations,
According to Diaz (1999), one way to improve the ability for transit investments to bring about positive land use change is to increase accessibility and connectivity in areas surrounding transit. Diaz (1999) recommends that transit investments consider plans for regional accessibility by increasing running speeds to reduce travel times on separate right-of-ways, in addition to skipping certain stops depending on the time of day. Enhancing the pedestrian realm of walking distances of a one-quarter mile radius around the station and improving safety, lighting, and other amenities may additionally contribute to transit-users perceptions of increased accessibility and connectivity (Diaz, 1999).

Levine, et al. (2005) and Huang (1996) further recommend that a supportive policy environment is necessary to achieving ‘successful’ change through transit investments, which should be addressed through zoning bylaws, Official Plans, and pro-development policies. These scholars additionally call for the elimination of policy barriers, which include restrictive single-use zoning, subdivision regulations, roadway designs, and parking standards created for auto-centric development (Levine, et al., 2005). Recommendations to improve the success of transit investments support higher-density, more accessible, and more mixed-use forms of development, as proposed by pro-development policies (Levine, et al., 2005; Huang, 1996). Such policies may include, aggressive marketing of air rights and available excess land parcels, liberal floor/area ratios and density bonuses in station areas, coordinated station design efforts with
developers desiring direct station access, and city zoning classification changes to permit higher intensity development near stations (Huang, 1996).

Other scholars stress the need to reduce or minimize the negative impacts of transit investments such as noise and visual obstruction to maximize the benefits of transit investments (Diaz, 1999). This recommendation addresses literature that finds that transit investments impose a negative effect on property values (Diaz, 1999). In order to mitigate such negative impacts, scholars, such as Diaz (1999), promote planning for transit-compatible uses around transit lines, as well as provisions for buffer zones to create distance between public transit and nearby development.

Finally, there is strong scholarly support for improving the potential for new and joint development around transit investments. Development should be encouraged through several practices to enhance an already existing local economy (Cervero & Landis, 1993), including the assembly of large development sites deemed surplus at the completion of a new transit line, as well as the introduction of financial incentives and decreased regulations to attract developers to transit adjacent sites (Diaz, 1999). Such incentives may consider low-cost financing, mortgage guarantees, waivers, or reductions in impact fees (Diaz, 1999). In addition, joint developments, those created through a partnership between a transit agency and private developers, can also be used to successfully increase the attractiveness and functionality of a station area (Diaz, 1999; Cervero, 1994).

Moreover, transit investment literature is experiencing a shift from location theory and empirical evidence of price premiums as a reflection of the value of the ‘accessibility benefit’, toward an understanding of the influence of accessibility on urban land
development and growth. The recommendations of scholars provide an important starting point from which to understand the role of policy in influencing the effects of these investments on TOD. This review finds that there is a growing need to develop recommendations to better inform future transit investment decisions to maximize the full potential of these investments in influencing surrounding development.
4.0 Case Studies

The two case studies selected for this report were the two transit neighbourhoods surrounding Bayview and Don Mills stations on the Sheppard Subway Line. The following sections review the history of the Sheppard Subway Line and provide background information regarding the evolution of the Bayview and Don Mills transit neighbourhoods.

4.1 The Sheppard Subway Line

The Sheppard Subway Line is comprised of five stations. Heading eastbound, these stations include: Sheppard-Yonge, Bayview, Bessarion, Leslie, and Don Mills. The Sheppard Subway Line is 5.5 kilometres in length, and runs in an east-west direction along Sheppard Avenue East (Toronto Transit Commission, 2012). The line is connected to the Yonge-University-Spadina Subway Line at Sheppard-Yonge Station and runs through to Don Mills Road. Originally, the project was designed to relieve some of the pressure on the Yonge street line. It was assumed that better transit would help to spread development throughout the City, to benefit both suburban residents in need of amenities and employment centers, and urban residents over-crowded by increasing density (Morrow, 2012). The Sheppard Subway Line opened in 2002 at a total cost of $933.9 million to the City of Toronto, and remains the most recently built subway line in Toronto since 1966 (City of Toronto, 2002).

4.2 History of the Sheppard Subway Line

The Sheppard Subway Line spawned from 1960’s proposals to create an east-west rapid transit line along the northern edge of the former Metro Toronto (Adel & Bow, 2012). James Service, the mayor of North York during the late 1960’s (1967-1969), was an early
champion of the crosstown subway. Service pushed to create a link between Etobicoke and Scarborough with a connection to an extension running north from the Bloor-Danforth Subway (Adel & Bow, 2012). Although the proposed line would connect the majority of suburban residents through rapid transit, the plan was dismissed on the basis that densities along the line would fail to support it financially (Adel & Bow, 2012).

Plans to create the northern subway extension and the crosstown line were later revisited in reaction to changes in development and travel patterns observed along the Yonge and Bloor Subway Lines. Downtown revitalization spurred by the Yonge and Bloor Subway Lines created an interest in constructing additional subways, while the growing need to
better service suburb-to-suburb commutes over traditional suburb-to-downtown commutes drew additional support (Adel & Bow, 2012). In 1982, the proposal for the Sheppard Subway Line was adopted with plans to extend a subway from the intersection of Yonge and Sheppard, east on Brimley Road, and then south to the Scarborough Town Centre, as well as west, to the Spadina Subway Line (Transit Toronto, 2006). Plans for the Sheppard Subway Line became a central part of Metro Toronto's official transit plans for the next twenty-five years, which became known as *Network 2011* (Transit Toronto, 2006).

![Figure 4.2 A map of Network 2011, plans for future transit in Toronto. (Transit Toronto, 2006).](image)

*Network 2011* was never built (Transit Toronto, 2006). The Conservative government fell in 1985 bringing the Liberals into power. The Liberals reconsidered the proposal, and introduced a scaled-back plan in 1990. The defeat of the Liberals by the NDP and Bob Rae however, caused the subway to be further delayed. In 1994, construction on the Sheppard Subway Line finally began, though the recession created limitations for the project,
including significant shortening the line (Adel & Bow, 2012). Using a phased approach, the City intended to create two short subway lines instead of one long one – the first, would extend east from Yonge Street to Don Mills Road; and the second, the Eglinton West project, would extend west from Spadina to Black Creek Drive. In 1995 however, Mike Harris and the Conservative government resumed power, cancelling the Eglinton West project all together, and dropping all capital funding for public transit. (Adel & Bow, 2012)

Despite plans to cancel the Sheppard Subway, the line was saved by Mel Lastman, who lobbied political support for the project. Lastman, the Mayor of North York between 1973 and 1997, supported the Sheppard Subway Line in hopes that it would spur development and create an ‘urban core’ in a very suburban North York (Morrow, 2012). Lastman was recognized for pursuing the project to increase accessibility for pedestrians and transit users in North York by breaking from traditional auto centric development norms (Adel & Bow, 2012). In spite of significant political criticism of the project as a “subway to nowhere” (Tossell, 2007), Lastman prevailed, and the Sheppard Subway Line was opened on November 22nd, 2002.

Although the project encountered no further delays during its construction, and has since experienced smooth operation, the Sheppard Subway Line has not proven entirely successful (Adel & Bow, 2012). During its first year of operation, the TTC released a report on the performance of the Sheppard Subway Line, indicating its failure to reach a targeted 15 million riders. Rather, the line reached only 11 million riders in its first year, falling short of expectations (Adel & Bow, 2012). Since, the project has been openly criticized for its cost, in wasting public funds in a cash-strapped City; and has been accused of sacrificing
‘good planning’ for the sake of driving up real estate prices (Morrow, 2012). Today, the project remains highly controversial. While several politicians dismiss the line as a failure, others call for its completion – an extension to Scarborough.

4.3 The Sheppard East Subway Corridor Secondary Plan

The construction of the Sheppard Subway Line prompted the City of Toronto to create The Sheppard East Subway Corridor Secondary Plan as an overall strategy to “manage, direct, and ensure quality development in support of this significant public investment in rapid transit”(City of North York, 1997, pg. D15-1). Introduced in 1997, the primary goal of the Secondary Plan was for the City of Toronto to promote and encourage “appropriate, high quality development in the Sheppard East Subway Corridor”(City of North York, 1997, pg. D15-2). This goal was to be achieved through nine supporting objectives, including the reurbanization of the Sheppard East Subway Corridor.

To reurbanize the Sheppard East Subway Corridor, ‘key development nodes’ were identified at the Bayview, Bessarion, Leslie, and Don Mills Subway Stations (City of North York, 1997, pg. D15-6). In addition to conforming to general land use policies detailed in the Secondary Plan, these nodes were to be guided by area specific policies. General land use policies sought to achieve an overall mix of land uses at varying densities to ensure the creation of both employment areas and residential communities in the Sheppard East Subway Corridor. Specific policies applied to ‘key development areas’ were identified under the designations of Mixed Use, Arterial Corridor Area, and Commercial, to “establish a planning context for long term growth”(City of North York, 1997, pg. D15-1).
According to the Secondary Plan, the Bayview node was identified as a “residential node providing opportunities for new residential uses with a mix and range of housing types” (City of North York, 1997, pg. D15-6). Under this designation, new development was to be focused primarily on residential intensification with some commercial uses to enhance shopping and employment opportunities at the Bayview Village Shopping Center (City of North York, 1997, pg. D15-6). As such, specific policies were created to encourage residential and some mixed-use development on the Bayview Village Shopping Center Block (the block bounded by Sheppard Avenue, Bayview Avenue, Bayview Mers Lane, Hawksbury Drive), and the Kenaston Gardens and Sheppard Square Areas.

The Don Mills node was identified in the Secondary Plan as “an interchange Subway Station reflecting its connections for Highway No. 404 and destination shopping at the Fairview Mall, and the substantially developed surrounding residential communities”(City of North York, 1997, pg. D15-10). Under this designation, new development in the Don Mills neighbourhood was encouraged to focus on Commercial lands and other subway-related facilities such as a commuter parking structure (City of North York, 1997, pg. D15-10). As such, specific policies were outlined in the Secondary Plan to direct development to occur around Fairview Mall in an effort to “maximize its Commercial designation and zoning”(City of North York, 1997, pg. D15-10).

### 4.4 Bayview Transit Neighbourhood

Selected as the first case study, the Bayview transit neighbourhood is defined by the area of a circle with a 400 meter radius surrounding Bayview Subway Station, the second station heading eastbound on the Sheppard Subway Line. The area is centered on the intersection
of Bayview and Sheppard Avenues, and is comprised of portions of three neighbourhoods, including Willowdale East, Bayview Village, and St. Andrew-Windfields (City of Toronto, 2012b). The Bayview transit neighbourhood is anchored by the upscale shopping mall Bayview Village Shopping Center, which was introduced to the area in the 1960’s (City of Toronto, 2012b; www.bayviewvillageshops.com).

Formerly known for its suburban style development and large single-detached homes, the Bayview transit neighbourhood experienced dramatic change following the opening of the Sheppard Subway Line (Gillespie, 2002). As of 2006, the neighbourhood had 2,253 occupied dwellings of which 78% were in the form of apartments of more than five storeys tall (including condominium developments), and 64% were owner-occupied. By 2006, the population of the area had grown to 4,249, split into 1,196 families, and 2,254 households - with an average household income of $63,984. The population also evolved - comprised of 65% immigrants and 70% visible minority status in 2006, with Chinese as the dominant ethnicity. These characteristics are explored in more detail in the next chapter.

Figure 4.3 Arc condos located at 2885 Bayview Ave. (Northyorkcondos.ca, 2013)  
Figure 4.4 Bayview condos located at 23 Rean Dr. (Armstrong, 2012).
4.5 DON MILLS TRANSIT NEIGHBOURHOOD

The second case study, the Don Mills transit neighbourhood, is defined by the area of a circle of a 400 meter radius surrounding Don Mills station, the fifth and last station heading eastbound on the Sheppard Subway Line. The Don Mills transit neighbourhood is centered on the intersection of Don Mills Road and Sheppard Avenue, located just west of the Don Valley Parkway, and is made up of portions of two neighbourhoods - Don Valley Village, and Henry Farm (City of Toronto, 2012b). Although historically, the neighbourhood was primarily residential, in recent years, it has transformed into an employment center. Today, the area is anchored by Fairview Mall, one of the largest shopping centers in Toronto, and is well-known for its other large commercial landmarks, including the North York IKEA (Cadillac Fairview Corporation, 2011).

Figure 4.5 Condominiums, apartments, and townhomes in the Don Mills transit neighbourhood. (vBulletin Solutions, 2013)
The transition of the Don Mills transit neighbourhood, from a residential area to an employment center, was reshaped by the opening of the Sheppard Subway Line. By 2006, the neighbourhood had 1,657 occupied dwellings, was comprised of 85% apartments of more than five storeys tall (including condominiums), and had only 15% owner-occupation. At this time, the population had reached 4,360 people - comprised of 1,267 families, and 1,664 households - with an average household income of $56,510. The population composition also shifted to 74% immigrants, and 68% visible minorities, with East and Southeast Asian as the dominant ethnicity. These characteristics are explored in more detail in the next chapter.
5.0 **Analysis**

Using Census data from 1996, 2001, and 2006, changes in the housing, demographic, and transportation characteristics of the two selected transit neighbourhoods and the entire City of Toronto were calculated. Data for each case study were compared against City of Toronto data to examine similarities and differences. Quantitative results were supplemented with qualitative data extracted from newspaper archives to determine the extent to which these changes could be compared to the opening of the Sheppard Subway Line in 2002.

5.1 **Housing**

The housing profiles of the transit neighbourhoods surrounding Bayview and Don Mills stations experienced substantial changes between 1996 and 2006. Tables 5.1 and 5.2 demonstrate the changes observed in the number of occupied units, housing tenure, dwelling types, and densities in the transit neighbourhoods. In addition to the opening of the transit stations, the Sheppard Subway Corridor Secondary Plan played a key role in influencing development in the two transit neighbourhoods (City of North York, 1997).

5.1.1 **Bayview Transit Neighbourhood**

**Housing Stock**

Between 1996 and 2006, the total number of occupied dwelling units in the Bayview transit neighbourhood more than doubled (see Table 5.1). In comparison, the number of occupied dwelling units in the City of Toronto increased by approximately 21%. The conspicuous decline in the number of occupied dwelling units in the Bayview neighbourhood between 1996 and 2001 was a result of the demolition of older medium...
density housing stock to make room for new high density housing construction. High density development was facilitated by The Sheppard East Subway Corridor Plan, which was implemented to support transit ridership along the Sheppard Corridor (City of North York, 1997).

Table 5.1 Housing in the Bayview transit neighbourhood. (PCensus, 2012)

<table>
<thead>
<tr>
<th>Bayview Transit Neighbourhood Housing Profile</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayview</td>
<td>Toronto</td>
<td>Bayview</td>
<td>Toronto</td>
</tr>
<tr>
<td>Occupied Dwellings</td>
<td>735</td>
<td>1,488,360</td>
<td>121</td>
</tr>
<tr>
<td>Owner-Occupied Dwellings</td>
<td>55 (7%)</td>
<td>869,575 (58%)</td>
<td>77 (64%)</td>
</tr>
<tr>
<td>Renter-Occupied Dwellings</td>
<td>680 (93%)</td>
<td>618,760 (42%)</td>
<td>39 (33%)</td>
</tr>
<tr>
<td>Average Price of Owned Dwellings</td>
<td>$162,771</td>
<td>$241,124</td>
<td>$251,783</td>
</tr>
<tr>
<td>Average Gross Rent/Month</td>
<td>$910</td>
<td>$763</td>
<td>$981</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupied Dwelling Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Detached Homes</td>
</tr>
<tr>
<td>Semi-Detached Homes</td>
</tr>
<tr>
<td>Apartments less than 5 storeys</td>
</tr>
<tr>
<td>Apartments More than 5 Storeys</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persons/Dwelling</td>
</tr>
<tr>
<td>Total Area (Sq. Km.)</td>
</tr>
<tr>
<td>Persons/Sq. Km.</td>
</tr>
<tr>
<td>Dwellings/Sq. Km.</td>
</tr>
</tbody>
</table>

*All currency is represented in 1996 dollars

According to the former City of North York, the Secondary Plan for the Sheppard Corridor was created to “manage, direct and ensure quality development in support of this significant public investment in rapid transit” (City of North York, 1997, pg. D15-1). The Secondary Plan designated the Bayview transit neighbourhood a ‘key development node’,
providing specific direction to focus on residential intensification and some commercial development. The opening of the subway line, even in its early phase of pre-construction, served as the primary catalyst of development in the Bayview transit neighbourhood. By the official opening ceremony of the Sheppard Subway in November of 2002, Mayor Mel Lastman was already able to claim that, “to date, the Sheppard subway line is responsible for 35 million square feet of new development in our city” (City of Toronto, 2002).

**Housing Tenure**

Between 1996 and 2006, housing tenure in the Bayview transit neighbourhood shifted from a dominant renter-occupied, to owner-occupied area (see Table 5.1). The transition occurred in tandem with the demolition of medium density rental apartments to make room for high density owner-occupied condominiums. While a slight rise also occurred in the number of owner-occupied dwelling units in the City of Toronto, the shift was more substantial in the Bayview transit neighbourhood. Increases in the number of owner-occupied dwellings may be attributed to the replacement of apartment style housing units with a larger number of condominium units in the neighbourhood. This satisfied the high demand from first-time home-buyers to purchase an affordable home with convenient access to public transit.

According to both realtors and residents, home-buyers were attracted to the Bayview transit neighbourhood for the combined benefits of accessibility and affordability provided by the Sheppard Subway Line (Cordileone, 2002; Cordileone, 2003; Liebenberg, 2008). From a realtor’s perspective, “it’s a very competitive market and we try to differentiate ourselves. We focus on the subway” (Cordileone, 2003). High home ownership rates in the
neighbourhood occurred as a result of the increased supply of affordable housing in the neighbourhood. Real estate developers constructed housing stock in anticipation of increasing demand to locate near the subway. Significant shifts in tenure suggest that the opening of the Sheppard Subway Line transformed the Sheppard Corridor into an area of high market demand, by providing access to an affordable location in the City.

**Housing Type and Density**

Between 1996 and 2006, substantial growth in the number of apartment style dwellings over five storeys tall and significant increases in density occurred in the Bayview transit neighbourhood (see Table 5.1). Comparatively, the City of Toronto experienced almost no change in the composition of housing types, and saw only minor increases in densities. Changes in the Bayview neighbourhood reflected the growing preference for higher density living and a more urban form. High density development, in the form of high rise condominium developments, was enabled by The Sheppard East Subway Corridor Secondary Plan, which increased densities along the Sheppard Corridor for the purposes of promoting intensification (City of North York, 1997).

According to Toronto condominium developer Mitchell Cohen, the president of Daniels Corp., The Sheppard East Subway Corridor Secondary Plan played a key role in influencing condominium development in the Bayview transit neighbourhood (City of North York, 1997; Globe and Mail, 2003). To support the transit line, The Sheppard East Subway Corridor Secondary Plan encouraged intensification in the Bayview transit neighbourhood through new residential development by permitting higher densities (City of North York, 1997, pg. D15-11-D15-12). The attraction of condominium developers to the area, as noted
by Cohen, resulted directly from heightened densities as “reflective of the value that has come with the investment in the Sheppard subway” (Globe and Mail, 2003). Higher allowable densities aided ridership on the Sheppard Subway Line by prompting a significant shift in built form and satisfying the growing demand for compact condominium development in the Bayview transit neighbourhood.

5.1.2 DON MILLS TRANSIT NEIGHBOURHOOD

HOUSING STOCK

Between 1996 and 2006 the number of occupied dwelling units in the Don Mills transit neighbourhood remained relatively constant (see Table 5.2). In comparison, the number of occupied dwelling units in the City of Toronto increased by 21%. Noticeable growth between 1996 and 2001, however, followed by sudden decline, occurred as a direct result of the demolition of housing stock to be replaced by commercial development. Housing construction was limited through The Sheppard East Subway Corridor Secondary Plan, in order to focus on developing the Don Mills transit neighbourhood as an employment center (City of North York, 1997).

The Sheppard East Subway Corridor Secondary Plan identified the Don Mills transit neighbourhood as a ‘key development node’ (City of North York, 1997). This designation encouraged commercial development and other subway-related facilities, such as a commuter parking structure, around Fairview Mall (City of North York, 1997). Criticisms of the lack of mixed-uses in the area rose quickly across the City, as the line became known as a “stubway” (McGran, 2003), “subway to a shopping mall” (Malcolm, 2000), and a “subway to nowhere” (Lewington, 2002). Direction provided by the Secondary Plan to transform the
area into an employment center, had a significant impact on the Don Mills transit
neighbourhood by foregoing residential development in favour of commercial expansion
(City of North York, 1997).

Table 5.2 Housing in the Don Mills transit neighbourhood. (PCensus, 2012)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupied Dwellings</td>
<td>1,720</td>
<td>2,350</td>
<td>1,657</td>
<td>1,801,075</td>
<td>1,217,120</td>
<td>584,130</td>
</tr>
<tr>
<td>Owner-Occupied Dwellings</td>
<td>65 (4%)</td>
<td>354 (15%)</td>
<td>248 (15%)</td>
<td>869,575</td>
<td>1,033,460</td>
<td>1,412</td>
</tr>
<tr>
<td>Renter-Occupied Dwellings</td>
<td>1,660 (97%)</td>
<td>2,012 (85%)</td>
<td>1,412 (85%)</td>
<td>618,760</td>
<td>601,280</td>
<td>584,130</td>
</tr>
<tr>
<td>Average Price of Owned Dwellings</td>
<td>$36,499</td>
<td>$821/mo</td>
<td>$299,152</td>
<td>$241,124</td>
<td>$251,783</td>
<td>$330,522</td>
</tr>
<tr>
<td>Average Gross Rent/Month</td>
<td>$721</td>
<td>$863</td>
<td>$852</td>
<td>$763</td>
<td>$801</td>
<td>$777</td>
</tr>
<tr>
<td>Occupied Dwelling Types</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Detached Homes</td>
<td>80 (5%)</td>
<td>90 (4%)</td>
<td>116 (7%)</td>
<td>646,325</td>
<td>733,020</td>
<td>750,260</td>
</tr>
<tr>
<td>Semi-Detached Homes</td>
<td>140 (8%)</td>
<td>252 (11%)</td>
<td>147 (9%)</td>
<td>270,555</td>
<td>308,880</td>
<td>367,965</td>
</tr>
<tr>
<td>Apartments less than 5 storeys</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>151,095</td>
<td>144,365</td>
<td>203,740</td>
</tr>
<tr>
<td>Apartments More than 5 Storeys</td>
<td>1,515 (88%)</td>
<td>2,015 (85%)</td>
<td>1,407 (85%)</td>
<td>419,735</td>
<td>447,755</td>
<td>478,555</td>
</tr>
<tr>
<td>Density</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons/Dwelling</td>
<td>2.5</td>
<td>2.7</td>
<td>2.6</td>
<td>2.9</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Total Area (Sq. Km.)</td>
<td>0.5</td>
<td>N/A</td>
<td>0.5</td>
<td>5,903</td>
<td>0.5</td>
<td>5,903</td>
</tr>
<tr>
<td>Persons/Sq. Km. Dwellings</td>
<td>8,740</td>
<td>12,954</td>
<td>8,720</td>
<td>N/A</td>
<td>793</td>
<td>866</td>
</tr>
<tr>
<td>Dwellings/Sq. Km.</td>
<td>3,440</td>
<td>4,718</td>
<td>3,314</td>
<td>N/A</td>
<td>283</td>
<td>320</td>
</tr>
</tbody>
</table>

*All currency is represented in 1996 dollars

**Housing Tenure**

Between 1996 and 2006, the Don Mills transit neighbourhood remained primarily renter-occupied with fairly stable housing tenure (see Table 5.2). In comparison, the City of Toronto was mostly owner-occupied, and experienced only modest changes in tenure.
Little change observed in housing tenure in the Don Mills transit neighbourhood was influenced by The Sheppard East Subway Corridor Secondary Plan, which promoted development on commercial lands around Fairview Mall (City of North York, 1997).

The Sheppard East Subway Corridor Secondary Plan was a significant determinant of limited residential development in the Don Mills transit neighbourhood (City of North York, 1997). The Secondary Plan focused solely on commercial expansion around Fairview Mall and on subway related facilities, to develop the area as an employment center. Without provisions to encourage a mix of uses, by locating employment, housing, and other amenities, in close proximity to each other the area failed to attract condominium developers or home-buyers (City of Toronto Official Plan, 2010).

**Housing Type and Density**

Between 1996 and 2006 almost no change occurred in the composition of housing types or densities in the Don Mills transit neighbourhood (see Table 5.2). While the City of Toronto also experienced little change in housing types, densities across the city increased modestly. The employment center designation implemented by The Sheppard East Subway Corridor Secondary Plan significantly reduced the potential for changes in housing types and densities in the Don Mills transit neighbourhood by limiting opportunities for new residential development (City of North York, 1997).

As noted in The Sheppard East Subway Corridor Secondary Plan, the Don Mills transit neighbourhood was identified for its connection to Highway 404, for its role as a shopping destination, and for its pre-existing developed residential communities (City of North York, 1997). By designating the area as an economic center, the Secondary Plan limited
opportunities for mixed-use development, which encouraged criticisms (Malcolm, 2000; Lewington, 2002; McGran, 2003; Transit Toronto, 2012) of reducing the area’s potential, as envisioned by Mayor Mel Lastman, to become a “real thriving downtown” (Morrow, 2012).

5.2 DEMOGRAPHICS

The demographic profiles of the transit neighbourhoods surrounding Bayview and Don Mills stations also experienced notable change between 1996 and 2006. Tables 5.3 and 5.4 illustrate the changes observed in overall population growth and household composition in the transit neighbourhoods. In addition to the opening of the transit stations, macro trends played a key role in compounding population growth and increasing household diversity in the two transit neighbourhoods.

5.2.1 BAYVIEW TRANSIT NEIGHBOURHOOD

POPULATION GROWTH

Between 1996 and 2006, the population of the Bayview transit neighbourhood more than doubled, while the number of families and households in the area almost tripled (see Table 5.3). In comparison, the population of the City of Toronto increased by 20%, while the number of families and households increased by 24% and 21%, respectively. In addition to plans outlined in The Sheppard East Subway Corridor Secondary Plan supportive of intensification, macro trends predicting continuous city-wide growth coupled with the accessibility benefits provided by the opening of the subway further contributed to population increases in the Bayview transit neighbourhood (City of North York, 1997).
Table 5.3 Demographics in the Bayview transit neighbourhood. (PCensus, 2012)

<table>
<thead>
<tr>
<th>Bayview Transit Neighbourhood Demographic Profile</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>1,495</td>
<td>348</td>
<td>4,248</td>
</tr>
<tr>
<td>Total Population</td>
<td>4,263,755</td>
<td>4,682,895</td>
<td>5,113,155</td>
</tr>
<tr>
<td>Males</td>
<td>615</td>
<td>166</td>
<td>1,980</td>
</tr>
<tr>
<td>Males</td>
<td>(41%)</td>
<td>(48%)</td>
<td>(47%)</td>
</tr>
<tr>
<td>Females</td>
<td>880</td>
<td>182</td>
<td>2,268</td>
</tr>
<tr>
<td>Females</td>
<td>(59%)</td>
<td>(52%)</td>
<td>(53%)</td>
</tr>
<tr>
<td>Average age of population</td>
<td>44.6</td>
<td>35.8</td>
<td>38.4</td>
</tr>
<tr>
<td>Dominant Age Group</td>
<td>40</td>
<td>35.9</td>
<td>37.6</td>
</tr>
<tr>
<td>Families</td>
<td>375</td>
<td>99</td>
<td>1,196</td>
</tr>
<tr>
<td>Families</td>
<td>1,135,125</td>
<td>1,280,955</td>
<td>1,405,845</td>
</tr>
<tr>
<td>Persons per family</td>
<td>2.7</td>
<td>1.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Persons per family</td>
<td>1</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Persons per family</td>
<td>1.2</td>
<td>1.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Families</td>
<td>1,488,355</td>
<td>1,634,755</td>
<td>1,801,075</td>
</tr>
<tr>
<td>Persons in private households</td>
<td>1,500</td>
<td>349</td>
<td>1,442</td>
</tr>
<tr>
<td>Persons per household</td>
<td>2.1</td>
<td>2.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Persons per household</td>
<td>2.8</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Average household income</td>
<td>$52,184</td>
<td>$76,366</td>
<td>$52,462</td>
</tr>
<tr>
<td>Average household income</td>
<td>$60,111</td>
<td>$70,409</td>
<td>$72,005</td>
</tr>
<tr>
<td>Dominant Demographics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian Citizens</td>
<td>1,225</td>
<td>293</td>
<td>3,431</td>
</tr>
<tr>
<td>Canadian Citizens</td>
<td>(82%)</td>
<td>(83%)</td>
<td>(77%)</td>
</tr>
<tr>
<td>Immigrants</td>
<td>1,772,875</td>
<td>2,032,960</td>
<td>2,320,160</td>
</tr>
<tr>
<td>Immigrants</td>
<td>(49%)</td>
<td>(54%)</td>
<td>(63%)</td>
</tr>
<tr>
<td>Dominant Immigrant Place of Birth</td>
<td>Rep. of South Africa</td>
<td>Hong Kong</td>
<td></td>
</tr>
<tr>
<td>Dominant Immigrant Place of Birth</td>
<td>Hong Kong</td>
<td>Hong Kong</td>
<td>India</td>
</tr>
<tr>
<td>Dominant Official Language</td>
<td>English</td>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Dominant Official Language</td>
<td>English</td>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Dominant Non-Official Language</td>
<td>Persian (Farsi)</td>
<td>Chinese</td>
<td>Chinese</td>
</tr>
<tr>
<td>Dominant Non-Official Language</td>
<td>Chinese</td>
<td>Chinese</td>
<td>Chinese</td>
</tr>
<tr>
<td>Dominant Ethnicity</td>
<td>English</td>
<td>Chinese</td>
<td>Canadian</td>
</tr>
<tr>
<td>Dominant Ethnicity</td>
<td>English</td>
<td>Chinese</td>
<td>English</td>
</tr>
<tr>
<td>Total Visible Minority Population</td>
<td>210</td>
<td>183</td>
<td>3,003</td>
</tr>
<tr>
<td>Total Visible Minority Population</td>
<td>(14%)</td>
<td>(32%)</td>
<td>(71%)</td>
</tr>
<tr>
<td>Dominant Visible Minority</td>
<td>1,338,090</td>
<td>1,712,535</td>
<td>2,174,065</td>
</tr>
<tr>
<td>Dominant Visible Minority</td>
<td>(32%)</td>
<td>(37%)</td>
<td>(43%)</td>
</tr>
<tr>
<td>Dominant Visible Minority</td>
<td>Chinese</td>
<td>Chinese</td>
<td>Chinese</td>
</tr>
<tr>
<td>Dominant Visible Minority</td>
<td>Chinese</td>
<td>Chinese</td>
<td>South Asian</td>
</tr>
<tr>
<td>Dominant Visible Minority</td>
<td>Chinese</td>
<td>Chinese</td>
<td>South Asian</td>
</tr>
</tbody>
</table>

*All currency is represented in 1996 dollars

The Sheppard East Subway Corridor Secondary Plan enabled population growth in the Bayview transit neighbourhood by increasing permitted densities, focusing on new

Graham 46
residential development, and zoning for mixed-uses (City of North York, 1997). These provisions encouraged development to occur in a manner appropriate to absorbing substantial growth by adding new, high density construction – largely in the form of affordable condominiums (Cordileone, 2002; Globe and Mail, 2003). Macro trends, which influenced continued city-wide growth, complemented intensification efforts. Noted by one developer, “there’s 100,000 people a year coming into Toronto, and usually within six to eight months they are able to purchase a home”(Globe and Mail, 2003). Both intensification efforts and macro trends, in addition to the anticipated demand of housing with increased access to public transit, attracted newcomers to the Bayview transit neighbourhood. This sentiment was expressed by one new home owner in the Bayview transit neighbourhood, stating, “It’s fantastic. It’s a two-minute walk from the key in my front door to the token in the turnstile”(Royson, 2002).

**Household Composition**

From 1996 to 2006, the number of immigrants living in the Bayview transit neighbourhood almost tripled, while those recognized as visible minority status increased by over fifteen times (see Table 5.3). Changes in household composition were reflected by a shift in the dominant ethnicity in the area from English, to Chinese. Across Toronto, both immigrant and visible minority populations also experienced growth, however, increases were far more substantial in the Bayview transit neighbourhood. Increasing household diversity in the Bayview transit neighbourhood was, in combination with the opening of the subway, prompted by macroeconomic forces.
According to developers and realtors, access to jobs and affordable housing were significant factors in the location decisions of immigrants and those of visible minority status who chose to locate in the Bayview transit neighbourhood. Conversations with developers in the area disclosed efforts to build condominiums to appeal to immigrant buyers, based on the knowledge that the affordability of these developments coupled with subway access would appeal to a wide range of groups (Globe and Mail, 2003). Realtors commented on the increasing demand of immigrants for housing in the Bayview transit neighbourhood for the benefits of increased access to public transit and affordability of the area. Realtors were content that, “as long as immigration and jobs keep up there’s no problem [in the Bayview transit neighbourhood condo market]” (Cordileone, 2003).

5.2.2 DON MILLS TRANSIT NEIGHBOURHOOD

POPULATION GROWTH

Between 1996 and 2006, the Don Mills transit neighbourhood population experienced modest increases, followed by overall decline (see Table 5.4). Fluctuations in the number of families and households in the area exhibited similar changes. In comparison, the City of Toronto experienced overall growth. The Sheppard East Subway Corridor Secondary Plan played an influential role in restraining population growth by limiting opportunities for new residential development (City of North York, 1997).

As previously noted, The Sheppard East Subway Corridor Secondary Plan designated the Don Mills transit neighbourhood a ‘key development area’, with specific objectives to focus on commercial development around Fairview Mall, as well as on other subway related facilities such as commuter parking structures (City of North York, 1997, pg. D15-10). This
direction limited potential population growth by preventing new residential development. Population losses observed in the Don Mills transit neighbourhood following the opening of the Sheppard Subway Line indicate the influence of the Secondary Plan in restricting residential development in favour of commercial expansion (City of North York, 1997).

**Household Composition**

Between 1996 and 2006, the number of immigrants and those of visible minority status in the Don Mills transit neighbourhood increased, despite overall population loss (see Table 5.4). Increasing household diversity significantly altered the composition of the Don Mills transit neighbourhood, prompting a change in the dominant ethnicity from English to Chinese. In comparison to the City of Toronto, the Don Mills transit neighbourhood had a much higher concentration of immigrants and those of visible minority status. Changes in household composition in the Don Mills transit neighbourhood were, in combination with the opening of the subway, prompted by macroeconomic forces.

As previously mentioned, access to jobs and affordable housing were reported to have played a significant role in the location decisions of immigrants and those of visible minority status who chose to locate along the Sheppard Corridor. While the population declined in the Don Mills transit neighbourhood following the opening of the subway, the availability of rental apartments attracted immigrants and families looking for affordable housing with access to public transit. In the eyes of one resident “if you want to live in the City, you have to find what fits your budget” (Cordileone, 2002).
Table 5.4 Demographics in the Don Mills transit neighbourhood. (PCensus, 2012)

<table>
<thead>
<tr>
<th>Don Mills Transit Neighbourhood Demographic Profile</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Population</strong></td>
<td>4,370</td>
<td>6,477</td>
<td>4,360</td>
</tr>
<tr>
<td>Males</td>
<td>1,965 (45%)</td>
<td>3,078 (48%)</td>
<td>2,125 (49%)</td>
</tr>
<tr>
<td>Females</td>
<td>2,415 (55%)</td>
<td>3,400 (52%)</td>
<td>2,235 (49%)</td>
</tr>
<tr>
<td><strong>Average age of population</strong></td>
<td>35.5</td>
<td>34.2</td>
<td>35.6</td>
</tr>
<tr>
<td><strong>Dominant Age Group</strong></td>
<td>25-34</td>
<td>25-34</td>
<td>35-44</td>
</tr>
<tr>
<td><strong>Families</strong></td>
<td>1,175</td>
<td>1,822</td>
<td>1,267</td>
</tr>
<tr>
<td>Persons per family</td>
<td>3.0</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Children per family</td>
<td>1.2</td>
<td>1.2</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Households</strong></td>
<td>1,725</td>
<td>2,344</td>
<td>1,664</td>
</tr>
<tr>
<td>Persons in private households</td>
<td>4,370</td>
<td>6,482</td>
<td>4,282</td>
</tr>
<tr>
<td>Persons per household</td>
<td>2.5</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Average household income</strong></td>
<td>$33,995</td>
<td>$70,409</td>
<td>$46,334</td>
</tr>
<tr>
<td><strong>Dominant Demographics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadian Citizens</td>
<td>2,900 (66%)</td>
<td>3,918 (60%)</td>
<td>2,501 (58%)</td>
</tr>
<tr>
<td>Immigrants</td>
<td>2,750 (63%)</td>
<td>4,584 (71%)</td>
<td>3,223 (75%)</td>
</tr>
<tr>
<td><strong>Dominant Immigrant Place of Birth</strong></td>
<td>Iran</td>
<td>China</td>
<td>India</td>
</tr>
<tr>
<td>Dominant Official Language</td>
<td>English</td>
<td>English</td>
<td>English</td>
</tr>
<tr>
<td>Dominant Non-Official Language</td>
<td>Chinese</td>
<td>Chinese</td>
<td>Chinese</td>
</tr>
<tr>
<td>Dominant Ethnicity</td>
<td>English</td>
<td>Chinese</td>
<td>Canadian</td>
</tr>
<tr>
<td><strong>Total Visible Minority Population</strong></td>
<td>2,660 (61%)</td>
<td>4,264 (66%)</td>
<td>2,988 (70%)</td>
</tr>
<tr>
<td>Dominant Visible Minority</td>
<td>Arab/West Asian</td>
<td>South Asian</td>
<td>South Asian</td>
</tr>
</tbody>
</table>

*All currency is represented in 1996 dollars*
5.3 Transportation

The transportation profiles of the transit neighbourhoods surrounding Bayview and Don Mills stations experienced further changes between 1996 and 2006. Tables 5.5 and 5.6 summarize mode share data extracted from PCensus for the employed labour force (15 years and older) in each of the transit neighbourhoods. In addition to the opening of the transit stations, the high value placed on access to public transit by both people and firms, along with The Sheppard East Subway Corridor Secondary Plan played important roles in influencing travel patterns in the transit neighbourhoods (City of North York, 1997).

5.3.1 Bayview Transit Neighbourhood

Mode Share

Between 1996 and 2006 mode share for driver (by car, van, or truck) declined by 7% while mode share for public transit increased by 12% in the Bayview transit neighbourhood (see Table 5.5). In comparison, mode share across the City of Toronto changed by only 1-2%. Overall, mode share for driver (by car, van, or truck) remained the dominant mode of travel. Decreases in automotive use and increases in transit ridership, which resulted from the opening of the Sheppard Subway Line, were complemented by transit neighbourhood residents' value of access to public transit.

According to local retailers and residents, people in the Bayview transit neighbourhood highly valued access to public transit. Observations made by local retailers such as Michael Smith and John Kambouris noted increased pedestrian activity following the subway opening: “there’s more hustle, more people, more activity” (Morrow, 2012). Bayview residents such as Nori Bradley, stated their preference for travelling by transit as, “when
we moved to Toronto, we basically lived here for the subway... to shut it down would be like shutting us off from everything” (Tossell, 2007). Public recognition of the value of increased access to public transit was influential in altering travel patterns in the Bayview transit neighbourhood residents.

Table 5.5 Mode share in the Bayview transit neighbourhood. (PCensus, 2012)

<table>
<thead>
<tr>
<th>Bayview Transit Neighbourhood Transportation Profile</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed Labour Force</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver (by car, van, or truck)</td>
<td>430</td>
<td>1,259,320</td>
<td>101</td>
</tr>
<tr>
<td>Passenger (by car, van, or truck)</td>
<td>25</td>
<td>128,625</td>
<td>6</td>
</tr>
<tr>
<td>Public Transit</td>
<td>160</td>
<td>424,575</td>
<td>40</td>
</tr>
<tr>
<td>Walking</td>
<td>65</td>
<td>89,105</td>
<td>12</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0</td>
<td>14,455</td>
<td>7</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>0</td>
<td>1,130</td>
<td>0</td>
</tr>
<tr>
<td>Taxi Cab</td>
<td>10</td>
<td>3,080</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>9,255</td>
<td>0</td>
</tr>
<tr>
<td>*Data is based on the total employed labour force (15 years and older) in each year.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.3.2 DON MILLS TRANSIT NEIGHBOURHOOD

MODE SHARE

Between 1996 and 2006, mode share by driver (by car, van, or truck) declined by 16%, and mode share by public transit increased by 23% (see Table 5.6). In comparison, the City of Toronto experienced almost no change in mode share. Changes in mode share in the Don Mills transit neighbourhood, however, occurred over the ten year period of study at a constant rate. Steady changes in mode share were regulated by The Sheppard East Subway
Corridor Secondary Plan as a result of designating the Don Mills transit neighbourhood as an employment center (City of North York, 1997).

As previously stated, the Sheppard Subway Corridor Secondary Plan played an influential role in transforming the Don Mills transit neighbourhood into a commercial destination (City of North York, 1997). Consequently, this limited opportunities for increased local transit ridership. Local transit-users such as Brian Harvey, comment on the resulting implications of the commercial designation: “there’s absolutely nothing along Sheppard that’s worth going to, except for IKEA, if you’re an IKEA person, and I’m not, other than that, there’s about twenty-five blocks between anything of note”(Tossell, 2007). Despite the preference of residents to take public transit, the impacts of the employment center designation implemented through The Sheppard Subway Corridor Secondary Plan limited local ridership potential in the Don Mills transit neighbourhood (City of North York, 1997).

Table 5.6 Mode share in the Don Mills transit neighbourhood. (PCensus, 2012)

<table>
<thead>
<tr>
<th>Don Mills Transit Neighbourhood Transportation Profile</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employed Labour Force</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driver (by car, van, or truck)</td>
<td>920</td>
<td>1,259,320</td>
<td>1,431</td>
</tr>
<tr>
<td></td>
<td>(55%)</td>
<td>(65%)</td>
<td>(47%)</td>
</tr>
<tr>
<td>Passenger (by car, van, or truck)</td>
<td>70</td>
<td>128,625</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td>(4%)</td>
<td>(7%)</td>
<td>(5%)</td>
</tr>
<tr>
<td>Public Transit</td>
<td>555</td>
<td>424,575</td>
<td>1,285</td>
</tr>
<tr>
<td></td>
<td>(33%)</td>
<td>(22%)</td>
<td>(43%)</td>
</tr>
<tr>
<td>Walking</td>
<td>105</td>
<td>89,105</td>
<td>161</td>
</tr>
<tr>
<td></td>
<td>(6%)</td>
<td>(5%)</td>
<td>(5%)</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0</td>
<td>1,130</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(0%)</td>
<td>(1%)</td>
<td>(0%)</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>0</td>
<td>3,080</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(0%)</td>
<td>(0%)</td>
<td>(0%)</td>
</tr>
<tr>
<td>Taxi Cab</td>
<td>0</td>
<td>9,255</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(0%)</td>
<td>(0%)</td>
<td>(0%)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Data is based on the total employed labour force (15 years and older) in each year.
5.4 Summary

In summary, the opening of the Sheppard Subway Line in 2002 did have a significant impact on the housing, demographic, and transportation profiles of both the Bayview and Don Mills transit neighbourhoods. However, this analysis also shows that the opening of the Sheppard Subway Line influenced the Bayview and Don Mills transit neighbourhoods very differently. While the opening of the subway was successful in stimulating residential development, attracting diversity of households, and increasing transit ridership in the Bayview transit neighbourhood, its impact on the Don Mills transit neighbourhood was more effective in supporting commercial development and attracting employment.

The case studies of the Bayview and Don Mills transit neighbourhoods, in demonstrating the impacts of transit investments on transit neighbourhoods, provide useful indicators of the experiences of TODs across Toronto. The implications of these findings are discussed further in the next chapter of this report.
6.0 RECOMMENDATIONS

The following five recommendations are offered to the City of Toronto and to Metrolinx to inform policies to better guide future transit-oriented developments specific to Toronto.

6.1 ENCOURAGE CONDOMINIUM DEVELOPMENT TO CREATE AFFORDABLE HOUSING OPTIONS

One of the impacts of "successful" public transit investments is significant increases in land values in transit neighbourhoods. As this study shows, a large proportion of transit neighbourhood residents in Toronto tend to be middle and low-income households, including immigrants. From a social equity perspective, therefore, it is important to ensure an adequate supply of affordable housing in TODs.

It is recommended that the City of Toronto create policies favorable to the development of high-rise condominium style housing in TODs. Informal discussions with real estate developers suggest that high densities achievable through such building styles will help in keeping per unit cost of housing low. The City should revisit zoning regulations such as minimum allowable condominium unit size, minimum parking requirements, etc. that increase housing costs. Research has shown that reducing the number of required parking spaces leads to overall building cost saving and therefore reduction in housing unit prices (Shoup, 1999; Jung, 2011; McDonnell, et al., 2011).

6.2 INCREASE DWELLING UNIT SIZES TO ACCOMMODATE GROWING HOUSEHOLD DIVERSITY

Public transit investments, in providing the benefit of increased accessibility, allow households that value access to public transit to choose to locate in transit
neighbourhoods. As demonstrated in this study, households living in transit neighbourhoods in Toronto are becoming increasingly more diverse. With an increasing number of families and immigrants living in transit neighbourhoods, both single person households and large families are equally present in transit neighbourhoods. In response to increasing household diversity, more large units of two and three bedrooms, as well as smaller one bedroom units, are required to accommodate the varied needs of households of different sizes.

It is recommended that the City of Toronto partner with developers to create policies that encourage not only a mix of housing types, but also a mix of housing unit sizes in TODs. Media statements from realtors indicate a growing interest from first-time home-buyers, particularly young families and immigrants, to purchase units with public transit access. Important considerations for these different households include requirements for large, flexible spaces to absorb changing needs; as well as cultural preferences to house multiple generations under one roof. Recent newspaper articles show that South Asian immigrants tend to prefer to live with their extended families as per their cultural tradition (Grewal, 2013). In doing so, these families are able to lower their cost of housing and reap the benefits of additional child support provided by older generations for young families (Grewal, 2013). Accordingly, amendments to bylaw standards for multi-family dwellings in TODs should be considered to appeal to these groups.

6.3 Zone for Mixed-Uses to Maximize Local Ridership

As major catalysts of development, public transit investments attract a variety of users for a wide range of activities. According to the findings of this study, mixed-use designations
within transit neighbourhoods successfully achieve changes in travel behaviour, by encouraging transit neighbourhood residents to walk to public transit stations. Outside of transit neighbourhoods (more than 400 meters from a public transit station) people are more likely to travel by private automobile despite mixed-uses. Based on the many benefits associated with increasing ridership – such as, contributing to energy conservation, air quality improvement, congestion reduction, and lifestyle and health benefits – it is thus important to provide a mixed-use environment within transit neighbourhoods to maximize TOD ridership potential.

It is recommended that the City of Toronto revisit the present zoning bylaw to implement mixed-use designations throughout TODs. Mixed-use zoning, by encouraging additional street level activity will contribute to improving the pedestrian environment surrounding public transit stations. The City should also use re-zoning to create policies to explore potential joint-development opportunities through land assembly at the completion of a new transit line. According to the findings of several studies, coupling access to public transit within a distance of 400 meters to a station with a favourable pedestrian environment, which may be enhanced through public-private development opportunities, increases the value people place on a particular location (Atkinson-Palombo, 2010; Duncan, 2011). Mixed-uses help households living inside transit neighbourhoods to walk to a public transit station.
6.4 Create Secondary Plans to Address the Specific Needs of Transit Oriented Development

Supportive policy environments, addressed through zoning bylaws, Official Plans, Secondary Plans, and pro-development policies, are necessary to ensure the “success” of major transit investments. As shown in this study, Secondary Plans play an extremely influential role in dictating future housing, demographic, and transportation characteristics in transit neighbourhoods. Also demonstrated in this study are the unique needs of transit neighbourhood households, according to different preferences for housing, household compositions, and travel behaviours. To maximize the benefits of transit investments, therefore, it is essential that policies supportive of transit and transit neighbourhood residents guide development in TODs.

It is recommended that the City of Toronto mandate the creation of Secondary Plans that address the specific needs of transit neighbourhood residents, and are supportive of public transit, to accompany all new transit investments. Secondary Plans should be based on the findings of precedent TOD Secondary Plans, site-specific TOD studies, stakeholder input, and consideration for area master transit planning. Secondary Plans have proven useful in directing development to support transit use, and in addition, may also be effective in improving accessibility and connectivity in areas surrounding transit, generating opportunities for joint development, and minimizing the negative impacts of transit investments (Cervero & Landis, 1993; Cervero, 1994; Huang, 1996; Diaz, 1999; Polzin, 1999; Levine, et al., 2005).
6.5 Tailor TOD Secondary Plans to be Context Specific

By providing transit services across a city, public transit investments increase accessibility for residents living in all different types of transit neighbourhoods. Based on the findings of this study, the experiences of transit neighbourhoods differ greatly between a residential neighbourhood and an employment center. In recognizing the differences between various types of transit neighbourhoods, Secondary Plans should consider context-specific policies, to encourage development suitable to supporting long term growth.

It is recommended that the City of Toronto conduct detailed site studies to clearly identify the contextual elements of different transit neighbourhoods. The findings of these studies should be integrated into Secondary Plans that are created for each TOD. Site-specific studies will help to avoid a universal, generic approach to TOD planning, which may fail to address the needs of a particular transit neighbourhood. Context-specific policies will ensure that the unique needs of a neighbourhood, apart from its identity as a public transit hub, are adequately addressed.
7.0 Conclusions

This report considered the impacts of the opening of the Sheppard Subway Line in 2002, on the housing, demographic, and transportation profiles of the transit neighbourhoods surrounding Bayview and Don Mills Subway Stations in Toronto. To address the research question, Census data was collected and analyzed over three Census periods (1996, 2001, and 2006) for each of the transit neighbourhoods. Findings showed that the opening of the Sheppard Subway Line did have a significant impact on both transit neighbourhoods; however, also, that the subway line influenced each of the transit neighbourhoods differently. While the opening of the subway was successful in stimulating residential development, attracting diversity of households, and increasing transit ridership in the Bayview transit neighbourhood, its impact on the Don Mills transit neighbourhood was far more effective in supporting commercial development and attracting employment.

The findings of this report support the view that major transit infrastructure investments have a significant impact on the housing, demographic, and transportation profiles of surrounding areas; and as such, require policy guidance to maximize the benefits of these investments. Based on the findings of the analysis, this report offers five recommendations to the City of Toronto and to Metrolinx, to provide these agencies with direction for policy efforts to improve the guidance of future transit-oriented development in Toronto.
REFERENCES


