

**ROBSON STREET PEDESTRIAN DESIGN STUDY: DOES
ROBSON STREET REQUIRE PEDESTRIAN-ORIENTED
DESIGN ENHANCEMENTS IN ORDER TO BETTER
SERVE THE PEDESTRIAN, BROADEN ITS
FUNCTIONALITY AND HELP ASSERT IT AS A GREAT
STREET FOR THE CITY OF VANCOUVER?**

by

Tyler Thomson
BA, University of Victoria 2005

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Approval

Name: Tyler Thomson
Degree: Master of Urban Studies
Title of Thesis: Robson Street Pedestrian Design Study: Does Robson Street require pedestrian-oriented design enhancements in order to better serve the pedestrian, broaden its functionality and help assert it as a great street for the City of Vancouver?

Examining Committee:

Chair: **Dr. Karen Ferguson**
Associate Professor, Urban Studies Program
Associate Professor, Department of History

Dr. Meg Holden
Senior Supervisor
Assistant Professor, Urban Studies Program
Assistant Professor, Department of Geography

Dr. Peter V. Hall
Supervisor
Assistant Professor, Urban Studies Program

Jane Durante
External Examiner
Principal, Durante Kreuk Ltd.

Date Defended/Approved: June 10, 2010



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Abstract

This project examines the use of Robson Street by pedestrians and automobiles; evaluates its performance in fostering a safe, comfortable, enjoyable and navigable pedestrian environment; and assesses its existing design for pedestrians. It aims to determine whether Robson Street requires design enhancements to better serve the pedestrian, improve its functionality, and make it a great street for Vancouver. It explores the strengths and limitations of Robson's existing design for pedestrians and identify priorities for improvement. Data included pedestrian and vehicle counts, interviews with key informants, and an observational checklist of pedestrian design features. Findings show pedestrian usage greatly outweighs vehicle usage on Robson Street yet provisions are not reflected as such. The study determined that although Robson is a successful retail street with strong pedestrian usage it is not yet a great street, and improvements to the pedestrian environment are key to asserting it as a great street.

Keywords: pedestrian design; pedestrian amenities; great streets; Robson Street

Dedication

This research project is dedicated to my wife for providing continuous support and understanding through the many challenges of completing this project and for always believing in me to do great things and pursue what I am passionate about.

I would also like to dedicate this project to my parents who have always supported my life's goals and dreams and who have instilled in me that hard work and determination will be rewarded.

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1: Introduction

1.1 Context

The City of Vancouver was incorporated in 1886 and grew around the forestry and lumbering industry centred on the Burrard Inlet (City of Vancouver, 2008). Today, Vancouver is the third largest city in Canada with a metropolitan population of approximately 2.1 million people and a city population of 578,041 (City of Vancouver, History, 2008). Vancouver's downtown peninsula is the most densely populated downtown in Canada with 87,937 (2006) people in an area of only approximately 5.6km² and which is expected to grow to between 100,000 and 110,000 by 2021 (City of Vancouver, City Facts, 2007; City of Vancouver, DTP, 2005). Because of its high population density and relatively small area, it is very conducive to walking compared with other North American cities with approximately 38% of its downtown residents and 40% of its West End residents identifying walking as their primary mode of transportation to work (City of Vancouver, Pedestrian Volume and Opinion Survey, 2009). With such a high proportion of the downtown population walking as their primary means of transport, it is evident that pedestrians are a very important part of Vancouver's transportation network and therefore planning and designing streets to accommodate pedestrians is a key part of developing a successful downtown transportation system.

Robson Street is classified by the City of Vancouver as a "Regional High Street", in other words, it is a main commercial shopping street for the City of Vancouver, but which also services the surrounding municipalities throughout the region (City of Vancouver, Pedestrian Study, 2002). It is one of the most important streets in Metro Vancouver in terms of its economic value as an attraction for tourists and locals, and for its social vitality as a place to see and be seen, as well as for being a showpiece of style and urban vibrancy for the City. Its vibrancy and commercial success today is attributable partially to the original development of a streetcar line along Robson Street, which spurred commercial development and later sustained its viability by making it a highly accessible area (Robson Street Business Association, 2009). Transit continues to operate along Robson Street by way of trolley buses and is an important feature of the

street continuing to make it accessible and interconnected with the rest of the transit network.

1.2 Historical Context of Robson Street

Robson Street has long been an important commercial street for the City of Vancouver as it is centrally located between the West End and Downtown (City of Vancouver, 1977). Its unique small-scale character has a noticeably different feel than other commercial streets in Vancouver with many small and varied store fronts which create interest to pedestrians passing by and which give it a distinctly comfortable (i.e. welcoming) and enjoyable environment for shopping and dining. Its uniqueness was threatened in the 1970s when existing high-density commercial zoning by-laws on Robson meant that much of the street was subject to redevelopment, which could have ruined the “village” character of Robson (City of Vancouver, 1977). Because of this potential redevelopment of Robson into a more high-density commercial street, the City of Vancouver adopted new zoning by-laws in 1975, which was aimed at sustaining its small-scale retail character, enhance its pedestrian amenities and encourage residential uses (City of Vancouver, 1977).

In 1977, the City of Vancouver conducted a character area study of Robson Street with the purpose of reviewing the zoning and development guidelines of Robson Street (Jervis to Burrard); reviewing the transit and pedestrian role of Robson and consider parking needs; and propose specific improvements to the Robson Street shopping area (City of Vancouver, 1977).

The study conducted opinion surveys of pedestrians on potential improvements to the pedestrian environment of Robson Street. It found that Robson Street is considered a pedestrian corridor between the West End and Downtown and that pedestrians enjoy using Robson Street because of its small-scale character and shopping village atmosphere (City of Vancouver, 1977). Pedestrians indicated the areas of improvement that they would most like to see on Robson Street and the top suggested improvements were regarding sidewalk-related amenities (i.e. pedestrian amenities) such as widening sidewalks, adding benches, trees, garbage containers and more sidewalk cafés, and the next most suggested improvement was to make Robson Street a pedestrian mall (City of Vancouver, 1977). Merchants on the other hand, were generally opposed to the idea of creating a pedestrian mall but supported street

improvements, while property owners did not see the importance of street improvements and wished to see higher densities (City of Vancouver, 1977).

One of the street improvement concepts for Robson Street was entitled “Wider Sidewalks” which would provide sidewalks 5 feet wider than previous on both sides of the street. The primary urban design elements considered in this plan included: sidewalk paving, using patterned and coloured concrete pavers which would enhance the small-scale pedestrian feel; trees and landscaping; lighting, such as pedestrian scale lighting; pedestrian amenities, including benches, shelters, trash containers and bicycle racks etc; and signage such as banners and way-finding signs (City of Vancouver, 1977). The main impetus of this concept plan was aimed at improving the pedestrian environment by providing safe, comfortable, attractive and navigable amenities, which in turn would enhance the retail vitality of the street.

1.3 Relevance

Robson Street has historically been an important street throughout the growth and development of Vancouver. First as a residential street in the West End neighbourhood and second as a local commercial street to service the West End and downtown as the areas grew and became more densely populated due to the presence of a streetcar line on Robson, which catalyzed and sustained its growth (City of Vancouver, Community WebPages, 2008; RSBA, 2009). As an important transit and pedestrian route through downtown, Robson Street was identified as “traffic de-emphasized” street focusing on the movement of transit and pedestrians rather than vehicles (City of Vancouver, 1977). Today Robson Street has grown to become the main commercial shopping street downtown and it remains a key pedestrian and transit corridor/route through downtown Vancouver. Although Robson is considered a traffic de-emphasized street and is today classified as a “pedestrian arterial route” its design and provisions for users project that it is oriented rather towards automobiles with approximately 70% of the street right of way (building face to building face) designated for provisions for vehicles (City of Vancouver, 2005; City of Vancouver, 2009).

Thus, the topic under investigation for this MUrb research project is whether Robson Street’s pedestrian environment between Jervis and Burrard requires pedestrian-oriented design enhancements in order to better serve the safety, comfort, enjoyment and navigability of pedestrians, increase its functionality and assert it as a

great street for the City of Vancouver. This segment of Robson Street, particularly between Bute and Burrard, boasts some of the highest concentrations of high-end commercial retail shopping and dining in the entire City. There are approximately 200 shops and services over the three-block stretch (i.e. an average of over 30 stores per block side) with an annual net rental rate range of \$155-\$225 per square foot (psf) compared to Burrard Street (Georgia to Robson), which has the second highest rental rates for commercial streets in Vancouver at \$55-\$140psf, which is followed by Granville Street at \$55-\$130psf (RSBA, 2009; DTZ Barnicke, 2009). Therefore, Robson is a vital economic asset to the City as the most valuable commercial street in Vancouver and is an economic generator in terms of a tax base, as well as a shopping attraction for tourists and locals from around the region.

Robson is able to command such high rental rates due to its accessibility and high exposure. It is ideally situated near the geographical centre of downtown Vancouver making it easily accessible from all points of the downtown peninsula. Its attractiveness is exemplified through both its architectural makeup and the actual retail and dining outlets themselves which offer a variety of high-quality shoe, clothing and apparel outlets as well as a mix of restaurants and cafés, and other specialty shops, qualities which draw both locals and visitors alike (RSBA, 2009).

Robson Street's character and assortment of commercial services combined with its central location in Downtown Vancouver contribute to its status as the busiest street for pedestrians in the City, with six of the top ten highest pedestrian volume blocks in Vancouver including the five busiest (City of Vancouver, 2002). Further, although Robson Street is one of the busiest streets in the City its primary users are not automobiles, but pedestrians, with some blocks witnessing as much as 4.5 times as many pedestrians as automobiles and their passengers (City of Vancouver, 2002). This imbalance between transport user groups on Robson Street is disproportionately reflected in the amount of dedicated rights-of-way for each, with pedestrians confined to approximately only 30% of the cross-section of Robson Street, and as a result facilities for the pedestrian, such as adequate sidewalk widths, benches and café seating, lighting, public art and places to stay appear to be lacking (City of Vancouver, 2009). Further, the "sidewalk" is the space between the building front and the curb of the roadway, however the effective sidewalk space of Robson is that minus the unusable space of the sidewalk which is occupied by street trees, planters, street furniture, utility

poles, street lights, and street vendors, and therefore the effective sidewalk width for pedestrians can be considerably less than 30% of the cross-section as a result.

Thus Robson Street is a vital asset to the City's economy, its social vitality and to its overall urban character, however, its current urban form and function do not reflect this to its full potential of being recognized as a great street, and the imbalance of provisions for Robson's user groups favours its secondary user group (automobiles) over its primary user group (pedestrians) regarding space allocation, comfort and functionality and design. The pedestrian's needs appear to be underserved and require vast improvements in order to make it a safe, comfortable, enjoyable and navigable for pedestrians, and to create a space that is fun and enjoyable to stay in, the "place to be".

Therefore, this study investigating the design of Robson Street for pedestrians is relevant due to the following main points:

- Robson Street is a vital economic asset to the City of Vancouver (as a tax base and shopping attraction);
- Robson Street is a unique and historically significant commercial street in Vancouver, which needs to be recognized and reflected in its design;
- Robson Street is the key pedestrian route through downtown Vancouver (with the highest pedestrian volumes); and
- Robson Street has the potential to become a great street for the City of Vancouver due to its strategic location, the concentration of residential and commercial/office land-uses nearby and its role as the top commercial street in Vancouver

Streets in other cities throughout the globe have been designed or redesigned to better accommodate the demands of pedestrians and have utilized urban design principles that support pedestrian needs in order to make the street a more safe, comfortable, enjoyable and navigable environment for pedestrians and to improve the general quality and character of the street as an asset to the city as a whole. The main impetus of this research will attempt to evaluate current user demands and provisions on Robson Street, assess its performance for pedestrians, determine strengths and limitations in its design, elicit priorities for enhancement to its design for pedestrians if needed, and consider its potential as a great street for the City of Vancouver. In

addition, it will discuss the contribution of pedestrian-oriented design to creating great streets and the subsequent value of great streets to city life and character.

1.4 Research Project Statement and Primary Research Questions

This research project aims to evaluate the current state of Robson Street's pedestrian environment through an assessment of its existing pedestrian-oriented urban design features as well as assessing the need of adapting further pedestrian-oriented design features. Further, it is a secondary aim of this research project to assess the potential of Robson Street to become a great street and a public realm asset for the City of Vancouver. The research project is defined by one central research question and three guiding sub-questions:

1. *What are Robson Street's strengths and limitations in terms of pedestrian-oriented design to provide safety, comfort, enjoyment, and navigability for pedestrians towards enhancement of its pedestrian environment, to broaden its functionality and assert it as a great street for the City of Vancouver?*

And

- i. *Is there a discrepancy between user demands and user provisions on Robson Street between pedestrians and vehicles?*
- ii. *Based on professional practice and theory in pedestrian-oriented design, what pedestrian-oriented design elements are key to adapt to Robson Street in order to create a successful pedestrian environment?*
- iii. *Are there any particular pedestrian-oriented design or great street elements which are lacking or exemplary on Robson Street?*

1.5 Research Limitations and Parameters

The limitations of this study are such that due to the relatively small scope of this type of research project it was only possible to evaluate the physical design aspects of Robson Street. Therefore, this is not a full-scale pedestrian design study of Robson Street and does not specifically evaluate or address the behavioural characteristics of pedestrians on Robson Street, nor does it look at the economic development aspects of

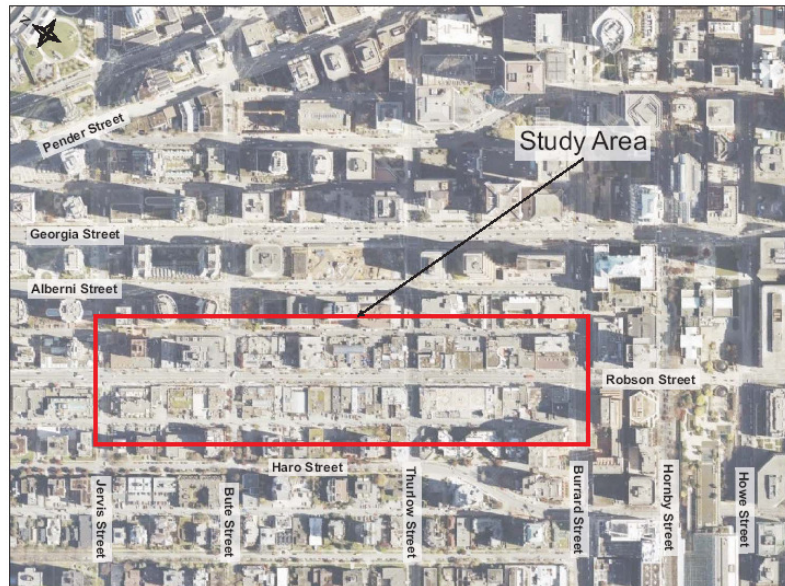
the potential design options for Robson Street or the urban or political policies affecting any decisions on adopting design options. Further, this study is geared more towards warranting pedestrian design enhancements as opposed to any feasibility as to their implementation either economically, politically, or socially.

Instead, as mentioned, this study is limited to the physical design aspects that can encourage and support a great street that functions for and fosters the needs of pedestrians. However, this study is still limited in analyzing the complete ramifications of enhancing the physical design of Robson Street for pedestrians and would require further attention to social, cultural, and behavioural preferences and habits of the many users of Robson Street (i.e. from local commuters to tourists and all other user groups), as well as some attention to how to attract and retain a “great” or optimal circumstance for business opportunities to fully realize any pedestrian design enhancement options. This would require further research to be conducted in these areas in order to supplement research conducted in this project for enhancing the physical design of Robson Street for pedestrians.

1.6 Study Area

The study area for this project is the three-block stretch of Robson Street between Jervis and Burrard Streets as shown in **Figure 1** below.

Figure 1: Study Area



Source: Google Earth, modified by T. Thomson

This area coincides with the boundaries defined by the Robson Street Business Association as the “main shopping and dining strip” of Robson Street (RSBA, 2009). The entirety of Robson Street includes a number of varying and interesting segments from the local neighbourhood shopping area west of Jervis to the transit-oriented segment between Howe and Richards. However, the segment between Jervis and Burrard identified is a special retail centre with small-scale retail character and was designated by the City as a special character area in order to maintain it as a “pleasant low-density pedestrian corridor¹” with the atmosphere of a “low-density shopping village” (City of Vancouver, 1977). Further, although it may be useful and necessary to conduct a study of this nature for all of Robson Street it would not be feasible within the scope of this research project, and therefore the study area defined is focused and manageable.

¹ Low-density in this context refers to the FSR (floor to space ratio) of the street rather than the number of stores or building units per block.

2: Literature Review

2.1 Introduction to Streets

Streets serve many functions for cities, varying from broad boulevards with grand buildings to showcase the city (ceremonial streets), scenic tree lined streets with boulevards for pedestrians to define the street and beautify the city, shopping streets for the exchange of goods and services (i.e. high streets), historic streets which provide context and meaning to the city, and residential streets to mention a few (Jacobs, A. 1995; City of Vancouver, 2005). Streets provide the space for “places” (i.e. buildings) which house our residences, our places of work, the businesses we shop and eat at and the places where we take our leisure. They also provide a space through which to move about between these places (movement) via various modes of transport, namely, the roadway to drive an automobile on, to cycle on, or be transported by bus, streetcar or taxi on; and the sidewalk to walk on and also provide a means of access to the places we want to go (access) (Jacobs, A. 1995, p.4-5).

However, streets are not meant solely for movement and access. They also can function as a place in themselves, providing facilities and activities which promote leisurely behaviour and invite its users to stay and interact with the street and with other people acting as “community open spaces” for the city and a public area for interaction and gathering (Jacobs, A. 1995, p.4; Urban Design Compendium, 2007; Antupit et al. 1996, p.117). For some types of streets including shopping or high streets and pedestrian-oriented streets, its function as a place is more valuable than its function for movement (at least regarding the movement of vehicles) (Urban Design Compendium, 2007, p.92). Streets as places constitute the public realm of cities and their importance to the public life of the city is immense because if successfully designed streets can be places, which positively influence the quality of life of those who use it and be places where people will want to stay (Urban Design Compendium, 2007).

As noted by Allan Jacobs, it is difficult to provide a precise definition of a “great street”. Jacobs provides hints of a more detailed definition of a great street such as: “The interplay of human activity with the physical place has an enormous amount to do

with the greatness of a street”, and “a great street should help make community” and “the best streets will be those where it is possible to see other people and to meet them” and “A great street should be the most desirable place to be, to spend time, to live, to play, to work, at the same time that it markedly contributes to what a city should be” (Jacobs 1995, 3-8). Simply put, Jacobs defines a great street as one that is “markedly superior in character or quality” (Jacobs 1995, 3). These definitions of what a great street is all involve a human aspect, that is the presence of people/pedestrians and how they use or interact with the street rather than the presence of automobiles and how they can maneuver on the street.

One important characteristic of any “great street” is that it promotes the “sociability” of a city, as a place where people can go to meet other people, or see and watch others, a place “to see and be seen” (Jacobs, A. 1995. p.4, p.272). Therefore, as much as streets might seem to function for movement and access of people and goods throughout the city, streets are also an important part of a city’s public realm and streets, which offer a great public environment, are assets to their city. In addition to promoting the sociability of the city, an important function of a street is in building the social capital of the street, neighbourhood/community and the city.

Stephen Marshall in his book *Cities: Design and Evolution*, notes that “public street space is not just a void separating different urban units, but must be seen as...part of the social fabric of cities. In a sense, we need streets – as much as buildings – to explain the social logic of cities” (Marshall, S. 2009. p.105). This invokes the idea that streets are places that house the social space for the social activities of the city, which thus contributes to the social capital of the city. Marshall also notes that certain disciplines including: urban planners, urban designers, human geographers, sociologists and anthropologists tend to view and understand the social importance of the street and their role as “people places and public spaces; as settings for political expression and struggle, and loci of cultural identity” which illustrates that streets are more than just “spaces for traffic”, which is a view commonly held by “traffic engineers, municipal authorities and the motoring public”, and are a social asset to the city (Marshall, S. 2009. P.105). Further, Marshall concludes that as streets are “part of the social fabric of cities...it is arguably this role as part of the social fabric that helps make cities what they are, in the first place” (Marshall, S. 2009. p. 106). Therefore, in addition to their function for the movement and access of people and goods, streets also function as social

initiators and spaces to partake in social activities and thus help build social capital for cities.

Streets themselves cannot draw people to them and they cannot force people to use them, that is, the roadway and the sidewalk (the space between the buildings) the innate space and structure of the street are not as important as the sum of all of its parts (buildings, shops, restaurants, street furniture, public art, trees and people) considered within its context (Jacobs, J. 1961). A street that is great for pedestrians is so not only because there is a sidewalk there for them to walk on, but because it has the places that they want to shop and eat at, it has the buildings and the public art that they want to look at and it offers them safety, choice (of how and where to walk and at what speed), and the comfort and ease to walk on, but more importantly it has the presence of other people who create activity for people to watch and which subsequently promotes the safety of the street, but not so many people that the street cannot be navigated (Jacobs, A. 1995; Jacobs, J. 1961). In sum, streets that are great for pedestrians are ones that are designed to foster a: safe, comfortable, enjoyable and navigable pedestrian environment but which also function to create a sense of community, provide space for social activity and contribute to building the social capital of their community.

Streets that are inherently “great” usually are so both because of their explainable and unexplainable qualities. Explainable qualities might entail the physical design of the streetscape, the urban design elements that make up the street; while the unexplainable qualities might be considered the randomness of interactions between a street’s physical elements (i.e. a bench, a piece of public art etc.) and its users (pedestrians), the relationship between how the street presents itself to be used and how the user decides to use it, or what Allan Jacobs might term the “magic” of streets (Jacobs, A., 1995; Schellinger and Priest, 2006). Schellinger and Priest believe that the successful design of the street “balances the desire for pedestrian amenities...with an understanding of the functional aspects of streets and sidewalks” (Schellinger and Priest, 2006). This essentially means that the aesthetics of the street design and comfort of the pedestrian should not compromise the ability of the street to perform its functional duties such as providing a means of access and an avenue for movement.

In order to develop an understanding of the features of great streets and pedestrian-oriented design features which contribute to great streets, we will proceed next with a discussion of the urban design elements which make great streets, followed

by defining problems faced by pedestrians due to the design of streets and lastly a discussion of pedestrian needs and pedestrian-oriented design to solve the problems faced by pedestrians.

2.2 Urban Design Elements of the Street: What are the Main Elements of a Great Street?

Streetscape design according to Schellinger and Priest generally refers to the design of a street's main components including: "the roadbed, sidewalks, landscape planting, and character of the adjacent building facade or planted setback" (Schellinger and Priest, 2006. P.49). These main components of streets can be broken down further to illustrate their urban design elements such as: floorscape (the materials which make up the roadbed and sidewalks) which can delineate a street space or differentiate between spaces on the street (sidewalk and roadbed) as well as add aesthetic qualities to the street; street furniture or special design features (items that protrude from the floorscape or building facade) which can include: lighting and hydro poles, seating, transit shelters, signage, planters, garbage cans and newspaper boxes, kiosks and public art amongst many other items; soft landscaping (including trees and shrubs); and, adequate width/space of the sidewalk (adequate to enable comfort of its users) (Carmona et al. 2007; Jacobs, A. 1995; Schellinger and Priest 2006). These elements are highlighted through **Figures 2-8** below.

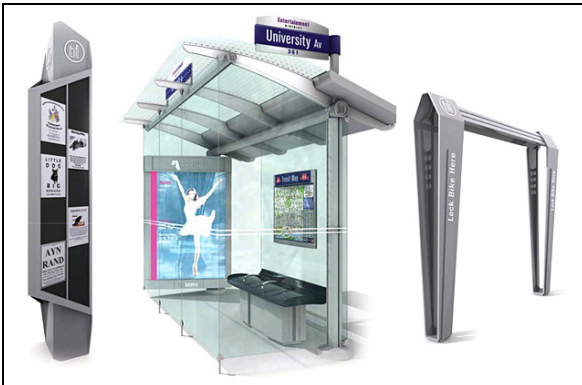
Figure 2: Example of Floorscape (high quality paving material on a pedestrian street in Munich)



Source: Tyler Thomson August 2008.

Figure 2 illustrates the use of high quality paving materials for the floorscape of a pedestrian street in Munich and highlights how the use of different materials in different patterns can shape and delineate the space as the dark cobblestones delineate a linear path down the street and narrow bands of similar material create lines of interest and appear to lead pedestrians towards the buildings.

Figure 3: Examples of Street Furniture (Toronto)



Source: http://torontoist.com/2007/04/astral_wins_str.php

Figure 4: Examples of Street Furniture (Toronto)



Source: http://torontoist.com/2007/04/astral_wins_str.php

Figures 3 and 4 are models depicting a new street furniture program for the City of Toronto produced by Astral Media Outdoor and show a public advertisement kiosk, a bus shelter, a bicycle rack, a garbage and recycling kiosk, an information kiosk and a public washroom. They are designed to be functional and stylish, they are easily recognizable and fit together and if properly incorporated onto the design of the street they hopefully will not become obstacles to the pedestrian, but rather elements, which contribute to their safety, comfort, enjoyment and navigability.

Figure 5: Example of benches on Strøget, Copenhagen



Source: <http://whf-foto.blogspot.com/>

Figure 5 above is of some benches on Strøget in Copenhagen, which is widely regarded as one of the most successful pedestrian streets in the world. The benches provide comfort for pedestrians and allow for opportunities to stop and enjoy the scenery of people passing by on Copenhagen's busiest shopping street.

Figure 6: Example of Soft-Landscaping (street trees on Avenue Champs Elysees)



Source: http://www.parislogue.com/files/2008/11/champs_1.jpg

Figure 6 illustrates the use of street trees as a means of framing the street and separating the different spaces of the street (i.e. café/amenity boulevard from the roadway, and the pedestrian boulevard from the café boulevard). The City of Vancouver considers street trees and landscaping on streets as an asset to the City because they “increase the use and enjoyment of a street and...play a key role in reducing stormwater runoff and cleaning our air” (City of Vancouver, 2009). The street trees on the Champs Elysees are widely considered best practice in terms of soft-landscaping, they frame the street and delineate different spaces or “zones” on the street, as well as provide shade for pedestrians, protection from vehicles on the roadway, and are aesthetically pleasing as well, and therefore, contribute to the safety, comfort, and enjoyment of the street.

Figure 7: Example of Sidewalk Width (comfortable for pedestrians)



Source: USDOT-Federal Highway Administration, <http://www.tfrc.gov/safety/pedbike/pubs/05085/pptchapt9.htm>.

Figure 7 illustrates a sidewalk with enough width to comfortably accommodate the pedestrians using it and has enough room to allow people to walk at different speeds, which promote Allan Jacobs' theory of providing space on streets for "people to walk with some leisure" (Jacobs, A. 1995). While this width might differ from street to street depending on its function, its level of pedestrian activity, and the types of amenities and services available on the street, it is a key urban design principle, which allows for variation in practice so long as its goal is achieved. In general, when considering the design of sidewalks with high pedestrian volumes, the urban design literature suggests sidewalks should be approximately between 12 (minimum) and 30 feet wide (maximum) to ensure a comfortable walking environment (Alexander, C. S. Ishikawa and M. Silverstein, 1977; Calthorpe, P. 1993; Whyte, W.H. 1988).

Schellinger and Priest believe that "memorable sidewalks and streets that are oriented towards the pedestrian experience characterize excellence in streetscape design", and Allan Jacobs maintains that "it's on foot that you see people's faces and statures and that you meet and experience them" and "it's on foot that one can be most intimately involved with the urban environment; with stores, houses, the natural environment, and with people", and so pedestrians are an important consideration when considering streetscape design for great streets (Jacobs, A. 1995 p. 271-272; Schellinger and Priest, 2006 p.49).

Pedestrians use the street as a place, particularly on commercial shopping streets which promote leisure activities such as shopping, strolling, hanging out (eating at a café) and people-watching and so designing the streetscape to benefit the needs of the pedestrian creates a safe, comfortable, enjoyable and navigable atmosphere for them which is important to the success of the street and which helps it become an asset to the city as a functional public space. In Brighton, UK, New Road (a previously car-oriented shopping street) has recently been redesigned to become a pedestrian-priority street where its design is oriented towards the pedestrian rather than the automobile in a shared street-space scheme and is now considered one of Brighton's most popular public space destinations (see Figure 8) (Gehl Architects, 2007).

Figure 8: New Road Brighton, UK



Source: http://upload.wikimedia.org/wikipedia/commons/5/55/New_Road,_Brighton_-_shared_space.jpg

Figure 8 highlights how New Road has been redesigned to give priority to the pedestrian. There are no curbs to delineate road and sidewalk space, and bike racks, benches, street lighting and other street furniture are all embedded into the same space. New Road has witnessed a 62% increase in pedestrian traffic and a 93% decrease in automobile traffic and is now considered a best-practice example of pedestrian priority and it illustrates the importance of the street as a public space for pedestrians (Gehl Architects, 2007).

There is no single hard and fast set of guidelines for great streets, however, many urban design scholars have researched and devised recommendations of urban design elements that contribute to the form and function of a quality street and which facilitate positive street design (particularly for pedestrians) and promote streets as assets to their cities. A working framework of urban design elements both physical and non-physical required for a great street could include: Paving (good quality and variation in materials); trees and landscaping; street lighting/pedestrian lighting, street furniture; places (i.e. small plazas or parks); density; diversity (of buildings and streetscape); and accessibility (Antupit et al., 1996; Jacobs, A. 1995; Schellinger and Priest, 2006). Incorporation of these urban design elements into streets can help create a great street but only through sound planning and design. These are the ingredients of a great street and they are utilized in an observational checklist in the analysis of this project. In spite of our knowledge of these urban design elements and how they can contribute to

designing great streets for pedestrians, pedestrians still face many problems on our city streets.

2.3 Problems Faced by Pedestrians

The North American landscape has been shaped by the automobile ever since it became the dominant mode of transport from the 1930s to the 1950s, and these are the origins of the problems faced by pedestrians. As noted by James Howard Kunstler in his book *The Geography of Nowhere*: “Americans have been living car-centered lives for so long that the collective memory of what used to make a landscape or a townscape...humanly rewarding has nearly been erased” (Kunstler, 1993. p.113). As a result, North American cities have grown and developed at a scale comfortable and recognizable by the automobile rather than at a human-scale which they had been previously when travelling by foot or streetcar were the dominant modes of transport. Cities and their streets in America in particular, were subjected to “mechanistic ‘solutions’” for their design standards and guided by municipal zoning by-laws which did not consider the effects on the landscape (Kunstler, 1993). Suburban streets have been designed (as per traffic engineering guidelines) to allow for automobiles to drive safely at high speeds even if it isn’t necessary to do so, and traffic engineers have paid little if any attention to the needs of pedestrians (Kunstler, 1993).

During the 1920s, a battle over who should have priority on streets in North American cities, the pedestrian or the automobile was being waged with safety as the platform (Norton, 2008). Increased automobile usage had led to increased pedestrian casualties on city streets, and with no clear demarcation of space for either user group and no significant “rules of the road” on streets meant that safety had become a major issue, and while pedestrians felt that the street space was theirs, so too did motorists (Norton, 2008). The result as Peter Norton notes in his book *Fighting Traffic*, was a proposal for a full scale “social reconstruction of the street as a motor thoroughfare, confining pedestrians to crossings and sidewalks” (Norton, 2008. p.65). As use of the automobile continued to increase in North American cities, priority was continually given to the automobile on city streets and pedestrians effectively became relegated. Pedestrians, although integral to the life of a city continue to face many problems and challenges on city streets, and these problems still stem from competition for space on city streets (particularly with the automobile).

Most journeys made by people in their daily lives either going to work or school, to the store for groceries, to the park for recreation, to any number of appointments, meetings or social events, and to and from the home regardless of the primary mode of transport (i.e. automobile, transit, bicycle or on foot) require a portion of that journey to be made as a pedestrian (walking or by motorized scooter or wheelchair). Walking is an inherent part of our daily lives; people have to walk to their cars parked in garages or on streets, they have to walk to the bus stop or down/up to a rail transit stop and once again to their home or other destination when the transit portion of the journey is over, and they have to walk from the bicycle storage area to their destination and back when cycling somewhere, and of course people walk as part of performing some daily activities such as with shopping (either on a high street or in a mall) (City of Vancouver, p.10 2005, Mateo-Babiano and Ieda, 2005).

Despite this, cities became increasingly more difficult for pedestrians to move around in (particularly on the streets) as technological innovations in urban transportation such as: streetcars, buses and other rail transportation systems, and automobiles in particular have taken space away from the pedestrian and given it to these other modes (Forsyth and Southworth, 2008). Competing with these newer, faster and more time efficient modes of transportation has been difficult for the pedestrian, and so it became difficult for cities to remember that even though we have many new means to move about the city we are all still pedestrians too.

Pedestrians have had to contend with automobiles for space on city streets increasingly over the past 75 years as automobile-oriented street design became the rule rather than the exception and streets were planned to accommodate more vehicles and parking and forced pedestrian activities to remaining space at the edge of roadways (Forsyth and Southworth, 2008; Gehl et al., 2006). Further, Mateo-Babiano and Ieda maintain that “the over-designed road system standards” that have developed because of increased automobile use “have been proven to undermine the quality of life in American communities” and similarly in Japan where road construction standards “displaced the pedestrians and cyclists as they were viewed as obstructions to automobile traffic” (Mateo-Babiano and Ieda, 2005, p.303). It was this kind of street design, which had degraded the pedestrian realm on streets across North America, Europe and Asia, designing streets with only automobiles in mind, which neglected

pedestrian needs and created environments, which were unsafe, uncomfortable and unattractive for the pedestrian.

Pedestrians face a tremendous number of issues on a daily basis on the downtown streets of our cities and are subjected to many harmful conditions due to competing transport modes but also due to unsound design for pedestrians in both multi-modal environments and even pedestrian-oriented environments (Tibbalds, 2001). Issues faced by pedestrians related to environment and health include noise pollution and emissions caused by the automobile and risks to their physical safety (collisions with vehicles) (Tibbalds, 2001). However, neglectful street design and maintenance for pedestrians can also negatively affect pedestrian comfort, mobility and safety in pedestrian environments such as the unorganized placement of street furniture (i.e. utility poles, bollards, seating etc.) which can impede movement or become safety hazards for bumping into or tripping over (Tibbalds, 2001). Therefore, sound street furniture placement is an essential part of creating a pedestrian environment that is useful to pedestrians rather than harmful.

City centres, were increasingly becoming negatively affected by increased automobile use around the mid-Twentieth Century, which was incongruent with the traditional culture and economy of their city centres which were generally centred around the historic town centres designed before the advent of the automobile for pedestrian use, Robertson, K. 1991; Gehl and Gemzøe, 2001; Tibbalds, 2001). However, there has been growing awareness on the part of the pedestrian that they have been demoted and that they need to reclaim the street and that cities are increasingly trying to accommodate pedestrians and public space by reclaiming space from the automobile through initiatives such as what Gehl and Gemzøe call “the reconquered city” (Gehl and Gemzøe, 2001). The fact that Gehl and Gemzøe refer to the “re-conquering” of city spaces for pedestrians alludes that the space at one time was indeed designed and meant for use by pedestrians.

The reconquered city is evidence that cities and their pedestrians are not going to continue to lie idle and quiet and wait for things to get better, but that they are in fact making a concerted effort to improve the life of cities and their pedestrian environments (Gehl and Gemzøe, 2001).

Lately, however, there is increasing thought and movement towards planning and designing city streets to better accommodate the pedestrian. This is largely attributable

to the active transportation movement (i.e. physical activity for transportation such as walking and cycling) which espouses the environmental benefits (i.e. reducing emissions from vehicle congestion) and health benefits (i.e. improving mental and physical health, cardio-vascular fitness and reducing stress) of these modes of transport and thus advocates planning and designing to enhance these environments to make it easier and more comfortable to walk and cycle in cities (Antupit et al., 1996; Forsyth and Southworth, 2008; Sallis et al., 2004).

Some problems for pedestrians are confined to the sidewalks themselves and have nothing to do with the roadway and automobiles, but which have an effect on the street's "walkability" and is likely a result of poor design and a lack of consideration for the pedestrian (Forsyth and Southworth, 2008). Sidewalks provide the means of access to buildings and services on the street and provide the space for pedestrian movement, but when considering streets as places, places to stay (sit and watch) and to walk at varying speeds (depending on the pedestrians' motives for being there) difficulties can arise in accommodating these functions (Jacobs, A. 1995).

Gehl Architects' study *World Class Streets* highlights some of the problems faced by pedestrians which can have a negative effect on the pedestrian realm such as: congested sidewalks, which inhibit a person's ability to stop (negative effect on shop-owners), can cause/force people onto roadway (safety issue), inhibits mobility for persons in wheelchairs who need more space, and can discourage walking in such conditions; obstacles on sidewalks (i.e. poorly arranged street furniture) which impedes mobility; lack of public seating which decreases pedestrian comfort and enjoyment; and a lack of stopping opportunities for pedestrians which can take away from the public realm of the street (NYCDOT, 2007). Street design needs to focus on mitigating these negative effects on pedestrians through pedestrian-oriented design, which considers pedestrian needs and recognizes the importance of a quality pedestrian realm to a world-class street. A presentation of pedestrian-oriented design and pedestrian needs which address the issues faced by pedestrians is discussed below.

2.4 Pedestrian-Oriented Design: Pedestrian Needs

Even though streets seem to be designed without the pedestrian in mind, Mateo-Babiano and Ieda state that "pedestrians are considered the most important player within the transportation network" as all modes of transport inevitably begin and end on

foot (Mateo-Babiano and Ieda, 2005, p.301). They have developed a pedestrian needs hierarchy in order to analyze pedestrian behaviour and choice (Mateo-Babiano and Ieda, 2005). According to Mateo-Babiano and Ieda, pedestrian needs include: mobility (desire for movement); protection (being free from danger or injury through reducing pedestrian-vehicle conflicts); ease (including comfort and convenience, as well as accessibility), leisure (the quality of the pedestrian environment through urban design elements to encourage use) and the need for identity (referring to sense of belonging, and sense of place with the space) (Mateo-Babiano and Ieda, 2005). It is important to understand pedestrian needs in the context of the urban design of streets so that when cities are attempting to address problems faced by pedestrians and design great streets for their cities they can relate tangible design solutions based on those needs.

The Urban Design Compendium (Urban Design Compendium, 2007) promotes designing streets for pedestrians (pedestrian-oriented design) using the “five ‘c’ principles”: connections (connect pedestrian routes to one another); convenience (easy to use); convivial (attractive and interesting design); comfortable (adequate space with minimal obstructions); and conspicuous (legibility of design) (Urban Design Compendium, 2007, p.71). By incorporating physical urban design elements which support these principles, streets can be oriented towards the pedestrian and street environments which attract large volumes of pedestrians compared to vehicles can be more safe, functional, comfortable and attractive.

The City of Vancouver’s Downtown Transportation Plan (2005) places walking as the top transportation mode for its downtown residents, and aims to make walking around the downtown easier, safer and more comfortable for pedestrians (City of Vancouver, 2005). According to the City of Vancouver, pedestrian needs that will make it easier, safer and more comfortable for them to walk through the city include: seating, shade, public art, water fountains, way-finding signage, lighting, wider sidewalks, awnings and canopies, improved street crossings including intersection design, and increased accessibility and safety for people in wheelchairs and for the vision and hearing impaired (City of Vancouver, 2005).

The abovementioned should serve as a framework of urban design elements for pedestrians. Of which, the physical characteristics will be referred to as a “pedestrian-oriented design features checklist” which are incorporated into the observational checklist in the methodology section of this project and should be considered useful and

valuable to incorporate on a street to ensure a safe, comfortable and enjoyable environment for pedestrians. This is not meant as a prescription for making a great pedestrian street and not all of these elements are present on all great pedestrian-oriented streets, however, they are meant to represent the types of urban design elements on streets that benefit the pedestrian. **Figures 9-11** below illustrate some of the essential pedestrian needs as defined by the pedestrian-oriented design features checklist in terms of physical urban design elements.

Figure 9: Example of Commercial street seating (Cambie Street Vancouver)



Source: Matthew Blackett, Spacing Toronto. 2009.

Figure 9 highlights a recently renovated section of Cambie Street (Cambie Village) in Vancouver and illustrates the use of an amenities boulevard housing pedestrian-oriented and cyclist amenities (design elements) such as benches, trees, street lighting, bike racks, parking metres and intricately designed paving. There is a clear delineation of walking space on the left and amenity space on the right, which allows pedestrians to navigate this space safely and comfortably while including elements which add to the enjoyment of the street space.

Figure 10: Example of street lighting (Avenue Champs Elysees, Paris)



Source: <http://www.ykersale.com/index.php?rubrique=2&soussections=req2&choix=chrono&idprojet=85>

Figure 10 illustrates the use of street-lighting and pedestrian-scaled lighting on the Avenue des Champs Élysées in Paris. The street-lighting is aimed at illuminating both the roadway and the sidewalk, while pedestrian lighting on both sides of the sidewalk provide ample light to increase the safety, navigability and comfort of the street as well as making it a more enjoyable atmosphere for the pedestrian. The Champs Élysées is widely considered a best practice example of great street and pedestrian-oriented design.

Figure 11: Example of Awnings (storefront awnings on Robson Street)



Source: Tyler Thomson August 2009.

Figure 11 shows an example of storefront awnings which provide protection from the elements for pedestrians which adds to the safety and comfort of pedestrians on the street.

These and other types of pedestrian-oriented urban design elements contribute positively to the pedestrian environment of streets helping to make them safe, comfortable, enjoyable and navigable in order to foster use by pedestrians and increase the functionality and attractiveness of the street, and should be considered assets to the city.

2.5 Summary

The literature reviewed has provided background information about the many functions of streets, streetscape design and the urban design of quality streets that meet pedestrian needs. The literature has also highlighted the theoretical and conceptual frameworks which are utilized throughout the methodology and analysis of this research project. The importance of the street as a place was highlighted and the key urban design elements which contribute to great streets have been delineated. A great street is nothing without people to populate it and make it a lively and vibrant place and therefore a discussion of pedestrian problems and needs on streets was included and a pedestrian needs framework developed from this to be utilized throughout the research project. Further, an observational checklist of great street features, and pedestrian-oriented design features discussed in the methodologies section was developed from key concepts in this literature review and will be a focal point for the analytical portion of this research project.

3: Research Objectives

In order to understand whether the pedestrian realm of Robson Street could be improved to enhance the safety, comfort, enjoyment and navigability of the street and assert Robson as a great street for the City of Vancouver three main research objectives were established. These objectives focus on analysis of the level of use of Robson Street to understand user demands and needs for pedestrians and automobiles; as well as assessing the current performance and future potential of Robson Street in enhancing its pedestrian environment and as a possible great street; and lastly analyzing the current design of Robson Street for the pedestrian.

The three objectives are:

Objective 1: The Use of Robson Street: examining the current levels of use of Robson Street by pedestrians and automobiles to establish whether there is an imbalance in provisions between these user groups.

Objective 2: Robson Street's performance for Pedestrians: Assessing Robson Street's current performance in fostering a safe, comfortable, enjoyable and navigable pedestrian environment, identifying what elements are missing which effect its performance, and determining priorities for enhancements to the pedestrian environment through seeking input from different professional groups through interviews with key informants.

Objective 3: The Design of Robson Street: evaluating the current pedestrian-oriented design features on Robson Street and assessing its potential as a great street.

In order to achieve these objectives various types of primary and secondary data were collected and analyzed. Objective 1 analyzed user profiles (i.e. graphs illustrating use throughout a day) based on pedestrian and vehicle counts as well as parking data to assess the use of Robson Street; Objective 2 used qualitative analysis of interviews with key informants to examine how Robson is performing for pedestrians and determine

what elements are missing and identify priorities for enhancement to Robson Street; and Objective 3 utilized an observational checklist to evaluate the design of Robson Street.

Table 1 shows the relationship between the objectives and methods by which I will achieve them.

Table 1: Relationship Between Research Objectives and Methods

Objective	Source Data	Method	Outcome data
1. Assessing the Level of Use of Robson Street	<ul style="list-style-type: none"> • Pedestrian and vehicle volume counts, and parking surveys 	<ul style="list-style-type: none"> • Primary and secondary data collection of volume data 	<ul style="list-style-type: none"> • User profile graphs of Robson Street and summary tables
2. Assessing the Current Performance of Robson Street	<ul style="list-style-type: none"> • Interviews with key informants 	<ul style="list-style-type: none"> • E-mail based interviews 	<ul style="list-style-type: none"> • Summary tables, qualitative summary of design elements missing from Robson Street and key elements to focus on
3. Evaluating the Design of Robson Street	<ul style="list-style-type: none"> • Inventory physical characteristics, pedestrian-oriented and great street features 	<ul style="list-style-type: none"> • Observational checklist 	<ul style="list-style-type: none"> • Observational checklist, and list of strengths and limitations in its current design

4: Methodology

The research was based on a case study of Robson Street and the examination of three specific research objectives which allowed for a high level of detail focusing on one subject. This case study of Robson Street examined: the level of use of Robson Street to ascertain whether there is an imbalance between user demands and user provisions between pedestrians and automobiles; the performance of Robson Street for pedestrians and its potential as a great street as well as assessing what pedestrian design elements are priorities for enhancement; and the design of Robson Street in order to evaluate the strengths and limitations of its existing pedestrian design and great street features. Sub-methods used through this case study for data collection and analysis included: *direct observation* (pedestrian volumes), *indirect observation* (parking data), *secondary data analysis* (vehicle volumes and reports on Robson Street), *observational checklist* (observations of Robson's current design for pedestrians), and *interviews* (with key informants).

Further, as this research study required data collected through interviews with human participants, it was necessary to obtain ethics approval from the Simon Fraser University Research Ethics Board. Ethics approval was obtained as the study was designated as minimal risk to human participants. Consent from from interview participants was requested and obtained in order to use their responses as well as their identities (with the exception of 3 respondents) in this report.

4.1.1 Analytical Model

This study has incorporated three components of data analysis which coincide with the projects research objectives:

1. **Use of Robson Street:** examining the current levels of use of Robson Street by pedestrians and automobiles to establish whether there is an imbalance in provisions between user groups. This analysis utilized pedestrian and automobile volumes, as well as on and off-street parking data to illustrate pedestrian and automobile demands on Robson.

2. **Robson Street's performance for Pedestrians:** Assessing Robson Street's current performance in fostering a safe, comfortable, enjoyable and navigable pedestrian environment, identifying what elements are missing which effect its performance, and determining priorities for enhancements to the pedestrian environment through seeking input from different professional groups through interviews with key informants.
3. **The Design of Robson Street:** evaluating the current pedestrian-oriented design features on Robson Street and assessing its potential as a great street which utilized an observational checklist.

As this study looked specifically at pedestrian-oriented design and elements of great streets, assessing the needs of pedestrians based on current demands and provisions for pedestrians on Robson Street it was essential to obtain data pertaining to the current use and design of Robson Street. In addition, data detailing Robson's existing physical characteristics, pedestrian design and great street features were collected and evaluated via an observational checklist. In order to develop a comprehensive understanding of what pedestrian-oriented design elements could be adaptable to Robson Street and to assess its potential as a great street, it was also essential to conduct interviews with key informants.

The extent of data required depended on the type of data being collected. Traffic-related data including pedestrian and vehicle volumes, and on and off-street parking supply and demands were only required for the blocks being analyzed in the study (and the immediate study area for off-street parking). Pedestrian volumes were compared temporally to data from the City of Vancouver's 1977, 1991, 2001-2002, and 2008 pedestrian studies, while traffic data from the City's GIS map were used to ascertain whether there were marked increases or decreases in use by pedestrians or automobiles. As there were limited resources in collecting the data it was only feasible to spend one day collecting data for each block (for pedestrian counts) and a day each collecting on street and off street parking data. The observational checklist data was only collected once for each block because it was static and did not change. The following sections summarize the methodologies utilized to conduct the abovementioned analyses.

4.1.2 Pedestrian and Vehicle Volumes on Robson Street

Pedestrian and automobile volume data were collected from both primary and secondary sources to determine levels of use by user group. Secondary pedestrian volumes derive from the City of Vancouver's 2008 study "2008 Pedestrian Volume and Opinion Survey – Commercial Streets", which looked at pedestrian travel habits on commercial streets in order to assess the performance of various City transportation, environment and land-use policies (City of Vancouver, 2009). 1977 pedestrian volumes derived from the City of Vancouver's transportation engineering department. Primary pedestrian volume data was also collected for each block to attain a wider scope of data from a different time of the year than that collected by the City, as well as to get a first-hand account of the level of use Robson and to become immersed in the realities of Robson's daily operations and performance.

Methodologies established by the City of Vancouver for collecting pedestrian volumes involved conducting "cordon counts" whereby the number of pedestrians passing an imaginary line/point are counted by direction on both sides of the street for each block being studied, which illustrates the overall level of use/activity by pedestrians on the street (City of Vancouver, 2009). The City's pedestrian volumes were counted during weekdays primarily to develop a typical base level of volume. Further, in order to account for variations experienced due to time of day, day of the week, month and weather, additional counts were made by the City at control locations (i.e. Robson Street) and which observed additional time periods (i.e. early shifts from 7am to 10am, late shifts from 6pm to 9pm, as well as Saturdays and Sundays) to ensure high quality data (City of Vancouver, 2009). The City also collected rainfall information in order to examine the its impact on pedestrian volumes. The same methodologies were replicated for pedestrian counts conducted first hand to ensure consistency and quality of data.

The parameters for collecting pedestrian volumes also stipulate that count times were to be during the daytime period of 10:00am to 6:00pm with a one-hour lunch break from 2:00pm to 3:00pm (low volume period) which would capture the daytime peak periods of pedestrian volume to evaluate peak levels of use of the street. This allowed peak pedestrian volumes to be analyzed against peak vehicle volumes to determine overall level of use and user needs based on the level of use. To ensure accurate counts were obtained, a handheld electronic counting board was utilized to count each

individual pedestrian on each side of the street by direction of travel similar to the City's data collection methods. Pedestrians that made return trips along the same block were counted twice (or possibly multiple times) and as such the data does not represent the number of individuals travelling on a block but rather of the total activity of pedestrians present which are methods consistent with the City of Vancouver's methods and are the same methods used to collect vehicle and bicycle volumes (City of Vancouver, 2009).

Automobile volumes were taken from the City of Vancouver's GIS mapping program VanMap. Traffic volumes are collected by the City for major intersections and are available for a variety of years to provide temporal comparisons. Vehicle volumes were collected for the following intersections: Robson/Bute, Robson/Thurlow, and Robson/Burrard and used to find out link flows for each block. Peak vehicle volumes have been extracted from this data to illustrate the level of vehicle use of Robson Street during daytime peak periods to be compared against peak pedestrian volumes, which has yielded user profile information shown and discussed in more detail below.

Pedestrian and vehicle volumes were analyzed over several study years to determine the level of use of Robson by user group and to develop user profiles to highlight differences in usage between groups as well as to ascertain changes in use between study years. The City of Vancouver conducted pedestrian studies in 1977, 1991, 2001/2002 and 2008 and therefore, data from these studies (as well as personally collected pedestrian volume in 2009) were analyzed to gain an understanding of any possible changes or patterns in their use of Robson. Vehicle volume data for Robson was more limited in terms of availability, and therefore only two survey years were utilized in the analysis for each block (i.e. 1995/2003 for Jervis to Bute; 1996/2003 for Bute to Thurlow; and 1996/2002 for Thurlow to Burrard) the latter year for each was the most recent available vehicle volume data.

This data was analyzed to make comparisons between vehicle use and pedestrian use of Robson Street in order to ascertain whether there was a discrepancy between user demands and user provisions when analyzed against the observational checklist. This analysis helped illustrate whether it was justifiable to be enhancing the pedestrian environment and whether pedestrian amenities were sufficient given their demands.

4.1.3 On and Off-Street Parking Supply and Demand

As with any major commercial street, parking (on and off-street) is usually an issue of contention, perhaps because shop-owners feel that there is never enough parking (or not enough near-by in the case of off-street parking) for their customers, or because parking takes up space that could otherwise be used for pedestrians, or even because parking can be a tool of urban design to enhance the safety of a street acting as a buffer to protect pedestrians from traffic. Whatever the case, it was important for this study to analyze on and off-street parking supply and demand for Robson Street in order to assess parking amenities and services for vehicles and to explore potential opportunities to remove on-street parking if needed in order to accommodate additional pedestrian amenities (i.e. widening sidewalks).

On-street parking is widely perceived by retailers as a vital component to the success of their business and to the business of commercial streets in general because it provides direct access (i.e. right in front of their doors) for customers who arrive by automobile. For instance, Strøget in Copenhagen, which is recognized by many as one of the most successful pedestrianized streets in the world, was a typical commercial street with vehicle traffic and on-street parking until the 1960s when City planners and officials proposed to pedestrianize it. Merchants on Strøget argued vehemently against pedestrianizing the street, because they felt that removing “car-shoppers and leaving only poor pedestrians in their street would reduce their turnover and ruin business” (Lemberg, 1990). The same merchants who lobbied against the removal of vehicle traffic and on-street parking praised pedestrianization of the street shortly after a trial period revealed higher customer turnover and increased profits for businesses on the street thereby dispelling the belief by retailers that on-street parking and vehicle traffic is vital and necessary for a successful and healthy commercial street.

Off-street parking (i.e. parking garages and surface lots located off of the street) facilities, although generally plentiful in parking supply and located within close proximity to commercial shopping streets, are often under-utilized and forgotten about by retail customers who look for the most convenient parking available to them (i.e. on-street) (Gagliano, 2008). As a result, there tends to be an imbalance in the utilization of on-street and off-street parking with regards to commercial shopping streets whereby on-street parking is in high demand and fully utilized most of the time and off-street parking facilities witness significantly lower demands (Gagliano, 2008). There are many reasons

for this imbalance in parking demand including convenience and proximity, pricing, attractiveness and safety, and visibility/awareness of availability of parking all of which tend to favour on-street parking (Gagliano, 2008).

On and off-street parking supply was counted to determine the “parking rate” (i.e. parking demand over supply). This was done by inventorying the parking supply on the three study area blocks by walking along each side of the street and counting the number of parking stalls. On-street parking demand surveys were conducted on Robson (east of Jervis, east of Bute, and east of Thurlow) by using standard traffic engineering methods for collecting parking data. Vehicles parked on street are counted per block (by side) in half hour intervals for the weekday daytime period between 10:00 and 18:00 (to coincide with pedestrian count times) (City of Vancouver, 2008).

Off-street parking areas were obtained from the Robson Street Business Association’s (RSBA) suggested parking area map (RSBA, 2009). This determined the off-street parking lots to survey as they are the “suggested” lots for use of patrons of Robson Street due to their close proximity to the Street. Supply surveys entailed counting the number of transient parking stalls per off-street parking location, while demand surveys consisted of “spot” counts, which are one-time counts of the off-street parking location during the weekday daytime period (10:00 to 18:00) to provide a “snapshot” of the facilities usage and are consistent with standard traffic engineering parking surveys.

4.1.4 Interviews with Key Informants

Interviews with key informants (i.e. professionals in urban design, planning, engineering, and landscape architecture, as well as other interested stakeholders) were utilized to elicit objective opinions on Robson Street’s performance for pedestrians as well as to help identify priorities for improvement and identify key design elements in making a functional and desirable street for pedestrians. E-mail based interviews were used because they were time efficient to conduct and to summarize. They are much less time-consuming (than in-person interviews) due to the fact that you do not need to arrange a meeting time and are not required to conduct interviews in person (which can be time consuming for both parties) and the informant is able to conduct the interview at their own pace and on their own time. Having said that, there is less of an opportunity within this method to adjust questions on the fly or ask follow-up questions on the spot if

insufficient responses are given or to add additional questions, and therefore can require additional follow-ups by e-mail if needed. Overall, it was an effective means of conducting this assessment and has yielded insightful and useful results for this study. A summary of interviewees is provided at **Table 2** below.

Table 2: Interviewee Summary Table

Name	Organization / Employer	Profession	Position	Interview Group
Kim Perry	Perry & Associates	Urban Design and Landscape Architecture	Principal	Group 1
Margot Long	PWL Partnership	Landscape Architecture	Principal	Group 1
Marta Farevaag	Phillips Farevaag Smallenburg	Planning, Urban Design and Landscape Architecture	Principal	Group 1
Jo Fung	City of Vancouver	Sustainable Transportation Planning and Engineering	Program Manager	Group 1
Gordon Price	SFU City Program	Academics	Director	Group 2
Sandy James	City of Vancouver	City Planning and Greenways Planning	City Planner and Greenways Planner	Group 1
Karen Parusel	VPSN	Public Space Advocacy	Transportation Director	Group 2
Lon LaClaire	City of Vancouver	Transportation Engineering	Strategic Transportation Planning Engineer	Group 1
Philip Boname	Urbanics Consultants	Retail Consulting	President	Group 2
Tamim Raad	TransLink	Transportation	Manager, Project Planning	Group 1
Andrew Pask	VPSN	Public Space Advocacy	Director	Group 2
Tim Barton	Bunt & Associates	Transportation Planning and Engineering	Transportation Planner	Group 1
n/a	n/a	Retail Sales	Store Manager	Group 3
n/a	n/a	Food & Beverage	Assistant Manager	Group 3

At the onset of this project it was intended that only professionals in the fields of urban design, planning, engineering and landscape architecture specializing in street design for pedestrians (from Vancouver) would be considered as key informants for interviews as they were well-versed on the topic and would easily be able to indicate what the strengths and limitations were on Robson Street in terms of its pedestrian design. It became apparent further along that it would be useful to also obtain the

opinions of informal experts (i.e. on public space, retail and street design) to supplement and possibly contrast the viewpoints of informed experts for a more well-rounded study. As a result, the list of key informants was augmented with individuals from various professional disciplines with varied interests in the form and function of Robson Street. Additional key informants included: a transportation engineer, a green street planner and a sustainable transportation manager from the City of Vancouver; an academic in urban planning with the SFU City Program; the Vancouver Public Space Network (public space advocacy group); a retail consultant for Robson Street; a project planner with TransLink; a transportation planner; a retailer on Robson Street; a Café manager on Robson Street; and a recent graduate student who has experience working with business improvement associations in BC. With these additional informants, the results present various viewpoints on Robson's current performance for pedestrians and its potential as a great street.

For the purposes of this study, it was not deemed necessary to have a specific number of informants participate in the interview so long as the participants represented various interest groups in order to yield well-rounded results to make an informed assessment. It should be noted that there were a total of 15 participants who provided responses to the interview from a multitude of backgrounds.

Participants were asked to respond to questions about best practices of pedestrian-oriented design of streets in providing a safe, comfortable, enjoyable and navigable pedestrian environment as well as questions pertaining specifically to the performance of Robson Street in these facets of pedestrian design and its potential as a great street. As interviews were conducted via e-mail, there was no need to record the surveys and no transcription was necessary. Responses were provided directly in MS Word by respondents in order for ease of analysis and then transferred into MS Excel to summarize both quantitative and qualitative information. Findings from this analysis helped to flesh out what design priorities should be considered for Robson Street by providing an assessment of its performance for pedestrians. They were utilized to inform what design characteristics to look for through the observational checklist, and helped to identify what the strengths and limitations were of Robson's pedestrian environment.

4.1.5 Observational Checklist

The observational checklist was developed as a means to evaluate the existing design of Robson Street in order to determine how functional it is and its strengths and limitations in fostering the safety, comfort, enjoyment and navigability of pedestrians. Also, it aimed to determine whether any enhancements to the pedestrian realm were necessitated, and if so, to identify those areas for improvement and how to proceed in doing it. It was also the aim of the observational checklist to document an inventory of any and all pieces which make up the streetscape, including its physical characteristics, pedestrian/vehicle amenities and other street furniture, as well as other street amenities and the businesses which comprise the study area.

Therefore, for ease of data collection, the checklist was divided into five categories including: Physical Elements of the street (i.e. sidewalk widths, boulevard widths, building setbacks etc.); Street Furniture (i.e. newspaper boxes, garbage cans, benches etc.); Other Pedestrian Amenities (i.e. patio facilities, street vendors etc.); Retail Stores (i.e. various categories of commercial tenants); and Professional Businesses. Through conducting the observational checklist it became apparent what the areas of improvement were for each study block and what the subsequent strengths and limitations were for each block in terms of their pedestrian environment and ability to contribute overall to a great street.

The structure and content of the observational checklist was originally grounded on the literature review whereby a list of pedestrian-oriented amenities and street furniture for great streets was determined along with other non-pedestrian oriented great street features. These were used as to measure how well Robson Street met the checklist criteria thus illustrating in the process where its pedestrian environment needed improvement. The checklist was augmented after conducting the interviews with key informants which yielded insight into other important features both to pedestrians, great streets and to great cities in general and therefore were included in the checklist and subsequent analysis.

Observations for the observational checklist were conducted on Monday February 1st 2010 (Jervis to Bute), Monday February 8th 2010 (Bute to Thurlow), and Monday February 22nd 2010 (Thurlow to Burrard) in order to maintain a consistent methodology for data collection (i.e. for non-static features/amenities such as street performers and other vendors). Observations were conducted by walking on foot up and

down each side of each study block and thoroughly documenting the various features and attributes of the street by way of note-taking and photography. Data were compiled directly on the checklist and depending on the feature being documented and was marked present or not (Yes/No) its dimensions and frequency (i.e. number of individual items) were noted and notes about the feature's general condition and impact on the streets environment were also noted.

Each of the study blocks were observed independently due to differences in physical characteristics, particularly because of the fact that the blocks are not all the same length. For instance, the block east of Jervis is the shortest by a significant margin at approximately 150m while the blocks east of Bute and Thurlow are longer at approximately 205m and 185m respectively which gives meaning to comparisons of the number of physical and urban design features between each block. Photographs were taken of the existing pedestrian-oriented design features to provide visual examples of the Robson's current design strengths and limitations to supplement the checklist. The following sections describe in detail the analysis of the abovementioned methodologies as well as provide summaries, conclusions and recommendations based on them.

5: Analysis and Findings

5.1 Examining the Current Levels of Use of Robson Street: Pedestrian vs. Automobile Use

In order to ascertain whether Robson Street provides adequate amenities for pedestrians and automobiles it was necessary to understand the current levels of use of the street by its two main user groups. Pedestrian and automobile levels became benchmark indicators of user demands on Robson Street to evaluate pedestrian and automobile amenities provided. By knowing the levels of use of Robson by user group and having an inventory of its amenities and features (from the observational checklist) it was possible to deduce whether there was an imbalance of amenities/provisions between pedestrians and automobiles, which was a central objective of this research project.

Pedestrian and automobile volumes, as well as on and off-street parking supply and demand data was not only required to understand the levels of use of the street but also to establish user needs in terms of amenities and provisions. It was necessary to obtain this data first because it was not only analyzed independently but also, as mentioned, it was used as base information for subsequent analyses to assess whether there was an imbalance of amenities on the street, as well as to evaluate the street's current performance for pedestrians, and to inform the assessment of Robson's current design and potential for pedestrians.

5.1.1.1 Pedestrian Volume Data Summary and Analysis

Daily pedestrian volumes indicate the level of use of Robson Street by pedestrians during the peak daytime hours (10am – 6pm) and are broken down and summarized by study year in **Tables 3-5** (numbers in bold indicate maximum study year volumes for each block) and illustrated in **Figure 12** and analyzed briefly below.

Table 3: Robson Street Pedestrian Volumes - East of Jervis (1200 Block)

Study Year	Pedestrian Volume by Block Side		Peak Hour Pedestrian Volume		Total Volume (both sides)
	North Side	South Side	North Side	South Side	
1977	3,271	2,790	778 1-2pm	487 1-2pm	6,061
1991	6,961	8,771	1,521 1-2pm	1,523 12-1pm	15,732
2002	7,278	7,594	1,427 5-6pm	1,627 5-6pm	14,872
2008	7,893	8,186	1,528 4-5pm	1,559 4-5pm	16,079
2009*	7,443	7,695	1,545 3-4pm	1,442 3-4pm	15,178

* Primary source data collected August 2009

Table 4: Robson Street Pedestrian Volumes - East of Bute (1100 Block)

Study Year	Pedestrian Volume by Block		Peak Hour Pedestrian Volume		Total Volume (both sides)
	North Side	South Side	North Side	South Side	
1977	2,409	3,923	642 1-2pm	896 1-2pm	6,332
1991	13,265	10,799	2,662 11-12am	2,120 11-12am	24,064
2002	12,568	13,060	2,191 1-2pm	2,565 5-6pm	25,628
2008	13,168	8,913	2,349 5-6pm	1,783 5-6pm	22,081
2009*	11,745	10,364	2,191 5-6pm	2,041 5-6pm	22,109

* Primary source data collected August 2009

Table 5: Robson Street Pedestrian Volumes - East of Thurlow (1000 Block)

Study Year	Pedestrian Volume by Block		Peak Hour Pedestrian Volume		Total Volume (both sides)
	North Side	South Side	North Side	South Side	
1977	5,077	4,131	1,100 12-1pm	857 12-1pm	9,208
1991	14,473	12,715	3,313 12-1pm	2,722 12-1pm	27,128
2002	11,172	12,046	2,024 5-6pm	2,151 3-4pm	23,218
2008	12,746	12,665	2,406 5-6pm	2,515 5-6pm	25,411
2009*	12,123	12,407	2,155 3-4pm	2,262 5-6pm	24,530

* Primary source data collected July 2009

Tables 3 – 5 above highlight daily pedestrian volumes by block side as well as peak hour volumes by block side for each study block on Robson Street. For all study blocks, volumes were relatively equal for each side of the street for most study years (i.e. except for the block east of Bute in 2008 which saw a difference of over 4,000 pedestrians between block sides) which indicates a well-balanced proportion of amenities and services are represented on both sides, or perhaps there are desirable shops and services on both sides of the street.

Further, peak hour volumes have generally trended to later times in the day for each study block (i.e. 5pm – 6pm rather than late-morning to early afternoon peaks) in

more recent years. This trend of later peak hour volumes might be attributable to a number of factors, such as perhaps shops are keeping longer hours, there may be more visitors going to restaurants on the street later in the day, or alternatively, there may be more commuting pedestrians using the street after work on their way home from work.

Figure 12: Daily Total Pedestrian Volumes on Robson Street

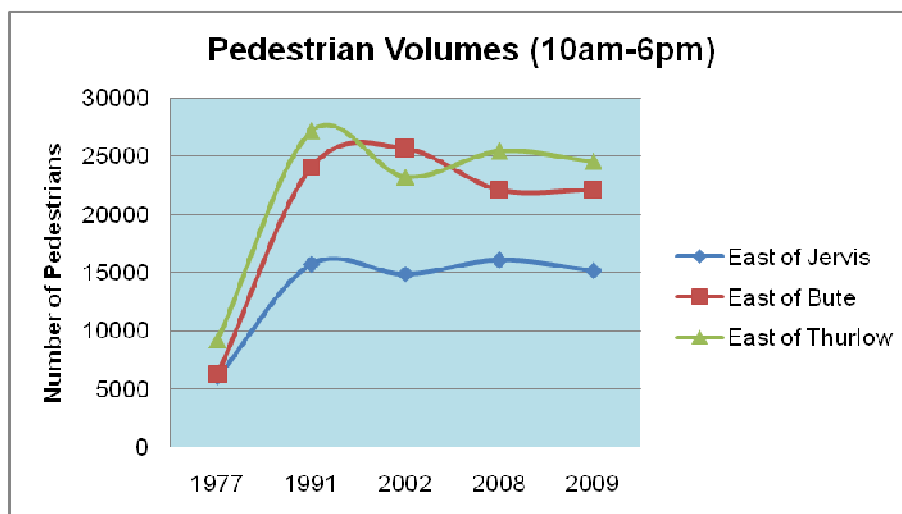
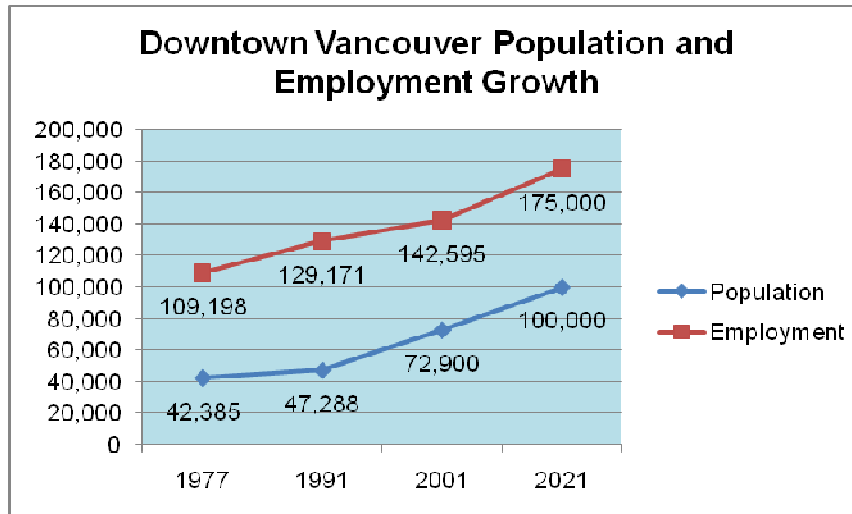


Figure 12 illustrates that daily pedestrian volumes experienced a dramatic increase for all study blocks of Robson Street between 1977 and 1991 (i.e. a 260% increase east of Jervis; a 380% increase east of Bute; and a 294% increase east of Thurlow) followed by modest fluctuations between 1991 and 2002, as well as between 2002 and 2008. For instance, the block east of Thurlow had its highest daily pedestrian volumes in 1991 with 27,128 pedestrians (10am - 6pm) only to experience a sharp decrease in 2002 (23,218) followed by a gain in 2008 (25,411) and a slight decrease in 2009 (24,530), while the block east of Bute had a further increase in pedestrian volumes between 1991 (24,064) and 2002 (25,628) but had a decrease in 2008 (22,081) and similar volumes in 2009 (22,109). The block east of Jervis had its highest volumes in 2008 (16,079) however, volumes have remained relatively constant between 1991 and 2009.

The sharp increase in pedestrian volumes on Robson Street between 1977 and 1991 is attributable to the increasing mode share of walking in Vancouver's downtown core which in turn is attributable to increasing residential population and employment downtown, trends that continue to be supported by the City's Downtown Transportation

Plan (City of Vancouver DTP, 2005). The more people were living and working downtown, walking became a more feasible transportation option. **Figure 13** below illustrates the population and employment growth trends for downtown Vancouver.

Figure 13: Downtown Vancouver Population and Employment Growth Trends



Adapted from City of Vancouver's Downtown Transportation Plan

The City of Vancouver's *2008 Pedestrian Volume and Opinion Survey – Commercial Streets* reports that Robson Street east of Thurlow was the busiest block in Vancouver in 2008 by daily volume of pedestrians (25,411) while Robson Street east of Bute ranked 3rd (22,081) and Robson Street east of Jervis ranked 7th (16,079) (City of Vancouver, 2009). Although pedestrian volumes are down slightly from levels in previous study years for the blocks east of Bute and east of Thurlow they were still two of the three highest volume blocks in the City, and the block east of Jervis witnessed its highest volumes yet in 2008, which illustrates that the stretch of Robson Street between Jervis and Burrard is still the busiest street for pedestrians in Vancouver.

Pedestrian volumes were also analyzed hourly through daily profiles which illustrate the level of use of Robson Street by pedestrians throughout the day, and which indicate the peak use of Robson Street by pedestrians. **Figures 14 – 18** below illustrate daily pedestrian volume profiles by hour for Robson Street from studies in 1977; 1991; 2002; 2008 and 2009.

Figure 14: Hourly Pedestrian Volume Profile on Robson Street (1977)

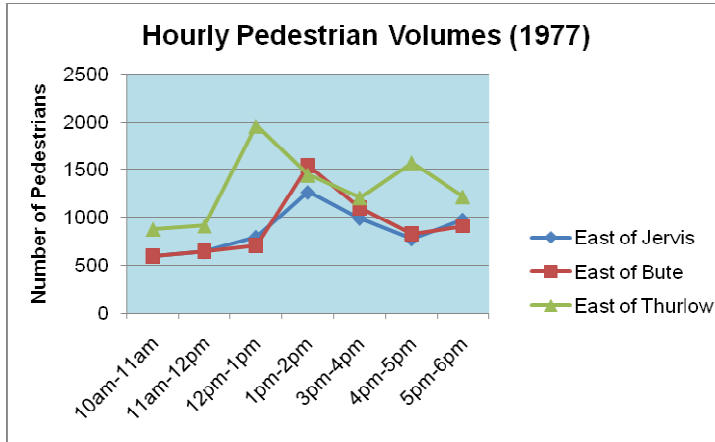


Figure 15: Hourly Pedestrian Volume Profile on Robson Street (1991)

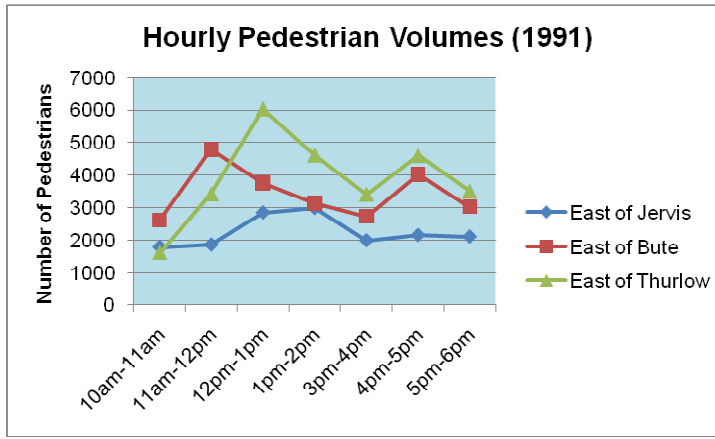


Figure 16: Hourly Pedestrian Volume Profile on Robson Street (2002)

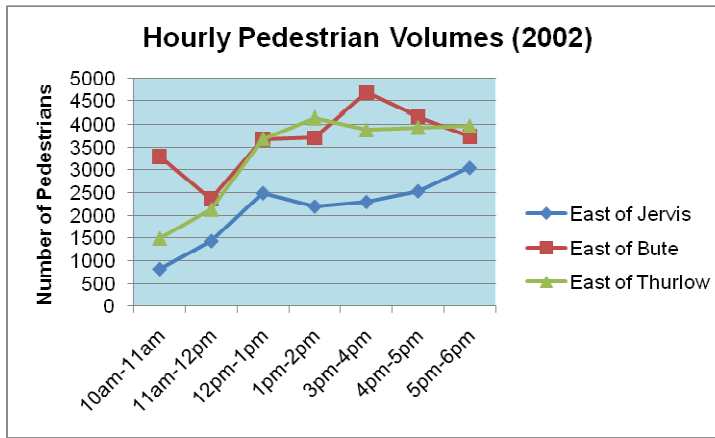


Figure 17: Hourly Pedestrian Volume Profile on Robson Street (2008)

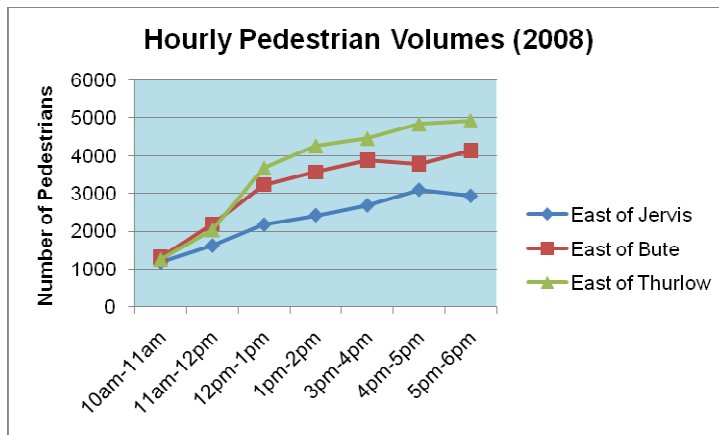
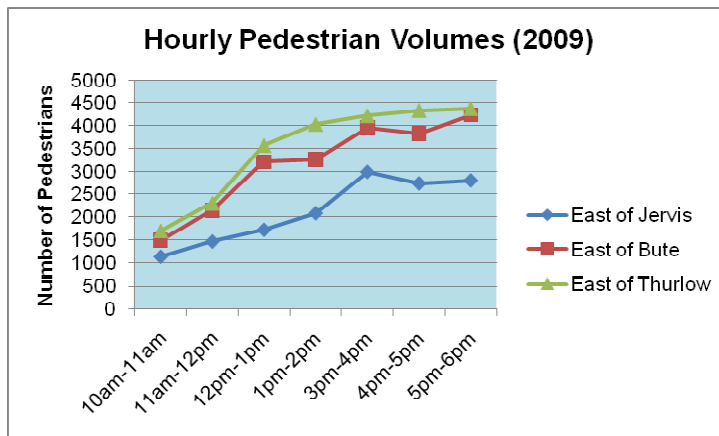


Figure 18: Hourly Pedestrian Volume Profile on Robson Street (2009)



Figures 14 – 18, as mentioned previously, illustrate a general trend of peak hour pedestrian volumes towards later hours in the day as well as more consistent pedestrian volume profiles. It is possible, on Robson Street at least, that pedestrian volumes may continue to rise later into the evening beyond survey times (i.e. after 6pm) which perhaps suggests a need to extend the parameters of the pedestrian surveys to include an evening survey period. Further, **Figures 14 – 16** illustrated inconsistent pedestrian volumes throughout the day with multiple peaks suggesting that at some times during the day the level of activity of pedestrians on Robson Street was actually quite low. **Figures 17 and 18** on the other hand highlighted more consistent pedestrian volumes which increased steadily throughout the day towards a single peak hour, which suggests there is a higher level of use by pedestrians throughout the day with no “lull-periods” in recent years. Interestingly, although the block east of Jervis has a decidedly different

make-up of tenants (i.e. more casual restaurants, hotels, banks and non-chain clothing stores) it has followed the trends of later peak hours as witnessed on the blocks east of Bute and east of Thurlow which have more similar types of retail tenants (i.e. chain and higher end clothing and shoe stores as well as high end restaurants).

5.1.1.2 Vehicle Volume Data Summary and Analysis

Peak hour vehicle volumes for AM and PM periods indicate the highest level of use of Robson Street by vehicles during the day. These data were used to assess the level of use of Robson Street by vehicles (as well as passengers) compared to the level of use by pedestrians in order to understand whether amenities and provisions for each were sufficient. Vehicle survey data were obtained for the most similar survey years available for each block to maintain consistency in their analysis. Therefore, the comparative survey years were 1995/1996 (i.e. mid-1990s) and 2002/2003. **Table 6** below summarizes AM and PM peak hour vehicle volumes on Robson Street.

Table 6: Peak Hour Vehicle Volumes on Robson Street

Study Block	Survey Year	Vehicle Volumes				Total		% Change (+/-)	
		Eastbound		Westbound					
		AM	PM	AM	PM	AM	PM	AM	PM
East of Jervis	1995	378	453	418	581	796	1034	-4.6%	+1.6%
	2003	430	435	331	616	761	1051		
East of Bute	1996	463	471	545	706	1008	1177	-19.7%	-7.9%
	2003	410	463	432	628	842	1091		
East of Thurlow	1996	416	380	425	632	841	1012	+4.3%	-19.3%
	2002	464	421	413	427	877	848		

Table 6 above illustrates the AM and PM peak hour vehicle volumes on Robson Street for each study block for two comparative survey years. As shown, there has been a rather marked decrease in vehicle volumes for most study blocks in both the AM and PM peak hour periods with the exception of a modest increase in volume for the AM peak period east of Thurlow (+4.3% or 36 vehicles between 1996 and 2002) and for the PM peak period east of Jervis (+1.6% or 17 vehicles between 1995-2003). Substantial

decreases in vehicle volumes were witnessed during the AM peak period for the block east of Bute (-19.7% or 166 vehicles) between 1996 and 2003, as well as for the PM peak period for the block east of Thurlow (-19.3% or 164 vehicles) between 1996 and 2002. Noticeable decreases in vehicle volumes were also witnessed during the AM peak period east of Jervis (-4.6% or 35 vehicles) and during the PM peak period east of Bute (-7.9% or 86 vehicles).

The decreases in vehicle volumes witnessed on Robson Street are consistent with changing mode share trends in downtown Vancouver since the mid-1990s. The City of Vancouver reported in the 2005 Downtown Transportation Plan that the travel mode share for auto drivers (and passengers) decreased from 46% in 1994 to 40% in 1999 while the walking mode share increased from 21% to 31% during that same period in downtown Vancouver (City of Vancouver, 2005). This is interesting due to the fact that pedestrian volumes on Robson Street actually decreased during this time period indicating that pedestrian mode share growth likely occurred on other streets downtown, perhaps due to overcrowding/over-saturation of pedestrians on Robson Street (i.e. making less crowded adjacent streets more attractive to walk on). Therefore, as illustrated in **Table 6**, this trend in a reduction of vehicle volumes on Robson Street is reflective of a general trend towards decreasing auto and auto passenger mode shares and an increasing pedestrian mode share in Downtown Vancouver. In order to understand the levels of use of Robson Street by pedestrians compared to vehicles and to develop a base for assessing user demands versus user provisions on Robson Street a brief comparative assessment is included in the following section.

5.1.1.3 Pedestrian and Vehicle Volume Comparison

As illustrated previously in **Figure 13**, pedestrian volumes on Robson Street grew exponentially between 1977 and 1991 (i.e. 260% - 380%) but have remained relatively constant since 1991. This suggests that pedestrian volumes have reached their peak and plateaued under the current configurations of the street cross-section, particularly with regards to sidewalk widths and their capacity for pedestrians. It is possible that pedestrian volumes are constrained under the current street cross-section (i.e. sidewalk widths) and thus growth would be limited unless capacity for them increased. A brief analysis of pedestrian capacity and level of service on Robson Street is demonstrated later in section 6.3.

Vehicle volumes on Robson Street have for the most part decreased from mid-1990s levels during peak travel times. This suggests that there is less demand for road space by automobiles on Robson and that pedestrian demand for street space is greater. **Table 7** below illustrates the level of use of Robson Street by pedestrians versus vehicles (drivers and passengers) in terms of peak hour volumes.

Table 7: Peak Hour Pedestrian Volume vs. Persons in Automobiles on Robson Street

Block	Peak Hour Pedestrian Volume	Peak Hour Vehicle Occupancy	Ratio – Pedestrians to Vehicle Occupants
East of Jervis*	2,987	1,314	2.27
East of Bute**	4,232	1,364	3.10
East of Thurlow***	4,380	1,060	4.13

* Peak hour for pedestrians (3pm – 4pm); for vehicles (4:25pm – 5:25pm)

** Peak hour for pedestrians (5pm – 6pm); for vehicles (4:25pm – 5:25pm)

*** Peak hour for pedestrians (5pm – 6pm); for vehicles (4:15pm – 5:15pm)

Table 7 above illustrates the level of use of Robson Street by pedestrians compared to vehicles (including drivers and their passengers). The number of vehicles (including passengers) was calculated using the known number of vehicles during the peak hour multiplied by 1.25 which is an average auto occupancy rate (multiplier) utilized by the City of Vancouver in their 2001/2002 and 2008 Pedestrian Studies (City of Vancouver, 2002). As shown, the level of use of Robson Street by pedestrians far exceeds the level of use by vehicles and their passengers for all study blocks. The ratio of pedestrians to persons in automobiles is 2.27:1 east of Jervis; 3.10:1 east of Bute; and 4.13:1 east of Thurlow, which demonstrates that overall there are an average of 3.1 times (310%) more pedestrians using Robson Street than there are vehicles and vehicle passengers. Therefore, it would appear that the level of use by pedestrians on Robson Street vastly the level of use by vehicles and therefore suggests that pedestrian needs are likely greater as a result.

In addition to pedestrian and vehicle volumes, bicycle volumes on Robson Street were obtained and analyzed (for the same study years as vehicle volumes and derive from the same source) in order to assess whether cyclist demands warranted consideration in this study as well. Bicycle volumes are summarized in **Table 8** below.

Table 8: Peak Hour Bicycle Volume Summary

Study Block	Survey Year	Bicycle Volumes				Total		% Change (+/-)	
		Eastbound		Westbound					
		AM	PM	AM	PM	AM	PM	AM	PM
East of Jervis	1995	14	9	17	28	31	37	-139%	-28%
	2003	8	10	5	19	13	29		
East of Bute	1996	22	21	23	41	45	62	-36%	-59%
	2003	10	21	23	18	33	39		
East of Thurlow	1996	27	52	21	42	48	94	-4.3%	-96%
	2002	29	26	17	22	46	48		

As noted in **Table 8** bicycle volumes are negligible compared to pedestrian and vehicle volumes and therefore were not considered relevant in the analysis of the level of use of Robson Street. It should be noted however that bicycle volumes on Robson Street have declined steadily for each study block during both AM and PM peak periods between the two survey years. This may be due to such factors as bicycle lanes opening on adjacent streets making cycling safer and more enjoyable and increasing travel options for cyclists as well as provisions for cyclists (i.e. bike racks and storage facilities) being located on other streets designated as bike routes. Although not part of the scope of this research project, cycling is becoming a more prominent and attractive travel mode (to work) in the City of Vancouver representing 3.7% of the travel mode share and additional research would be required to assess the feasibility of incorporating bicycle amenities on Robson Street and whether or not they are necessary (City of Vancouver, 2009).

The data presented above is used as a base for assessing the existing amenities and other provisions for pedestrians and automobiles by providing a sense of the needs/demands of each user group. It has demonstrated that the primary user group on Robson Street is pedestrians by a significant margin, and that the level of use of Robson Street is by pedestrians is approximately 388% higher than that of vehicles. This illustrates that user demands/needs on Robson Street are much greater for pedestrians compared to automobiles and suggests that perhaps pedestrians should have more of a priority in terms of the Street's right-of-way than should automobiles.

Further, it was demonstrated that although vehicle volumes have declined significantly from mid-1990 levels on Robson Street, pedestrian volumes have remained virtually stagnant over the same time-period when one might have expected an increase. It is postulated that perhaps pedestrian volume growth may be limited by the current sidewalk capacity and amenities offered and is therefore constrained unless capacity is increased by altering the current right-of-way on Robson (i.e. widening sidewalks) and or by providing additional pedestrian amenities which could attract more pedestrians and increase growth. Subsequent analyses of pedestrian and vehicle amenities with regards to levels of use are presented in later sections of the report.

5.1.2 On and Off-Street Parking Supply and Demand

5.1.2.1 On-Street Parking Analysis

For the purposes of this study, parking (on and off-street) is considered an amenity for vehicles as it provides a valuable service to vehicles and their passengers (i.e. retail customers) as a convenient means of access to commercial shopping streets. In the case of on-street parking, the space required to provide such an amenity is extremely valuable, both to shoppers who can have the most convenient access to shops and to retailers who can attract those shoppers as a result. On Robson Street the physical space that is taken up by on-street parking is also potentially extremely valuable to pedestrians as space that could otherwise be used to widen sidewalks to accommodate the high volumes of pedestrians as well as to accommodate additional pedestrian amenities on the street (i.e. benches, café patios etc.). These pedestrian amenities could in turn be valuable to retailers again as it could help increase their turnover (by attracting more pedestrians) and profits (as was witnessed in Copenhagen).

Therefore, an analysis of on/off-street parking supply and demand was conducted to determine both the levels of use of Robson Street by vehicles and to be able to assess the potential of removing on-street parking from Robson in order to accommodate wider sidewalks and space for potential pedestrian amenities and whether off-street parking facilities could accommodate displacement of on-street parking. Feasibility in removing on-street parking hinges on several factors including political factors and cost (in terms of converting on-street parking into sidewalks) but also on whether existing off-street parking facilities can handle additional parking demands and whether parking management systems can be implemented in order to make off-street

parking more attractive. **Table 9** and **Figures 19-21** below summarize on-street parking supply and demand for Robson Street.

Table 9: Robson Street On-Street Parking Supply – Jervis to Burrard (2009)

Block	North Side	South Side	Total
East of Jervis	4	12	16
East of Bute	20	18	38
East of Thurlow	20	17	37
Total	44	47	91

As illustrated by **Table 9** there are a total of 91 on-street parking stalls located on Robson Street between Jervis and Burrard (16 east of Jervis, 38 east of Bute, and 37 east of Thurlow). An on-street parking demand survey was conducted on Thursday July 30, 2009 in order to develop an understanding for the parking demand profile for a typical weekday on Robson Street and to ascertain how this space is utilized throughout the day. The survey was conducted for the same time period as for the pedestrian surveys (i.e. 10am – 6pm, except for 14:00 – 15:00 for lunch) for a typical weekday (i.e. Tuesday to Thursday) to maintain consistency of data collection methods and each block was surveyed once every half hour to capture a “snapshot” of parking demand at various times during the day. **Figures 19-21** illustrate on-street parking demand profiles throughout the day for each study block (please note that parking is restricted between 3pm-6pm Monday to Friday on the north side of Robson for PM peak period traffic).

Figure 19: On-Street Parking Demand Profile - East of Jervis (2009)

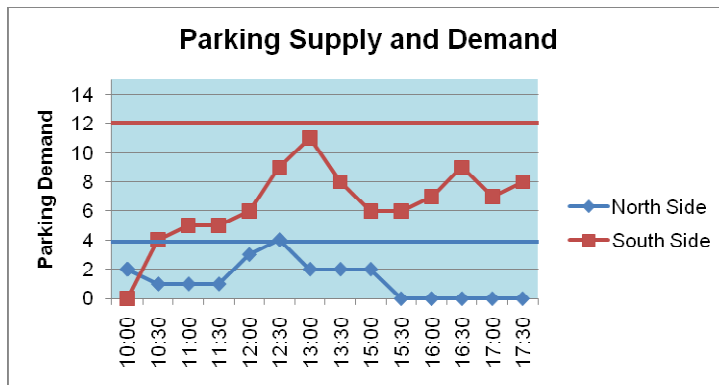


Figure 19 highlights the on-street parking demand for a typical weekday daytime period (which coincides with pedestrian and vehicle survey methods) for both sides of Robson Street east of Jervis Street. As shown, the peak parking demand on the south side of Robson was 11 vehicles (92% occupancy rate) at 1pm, and the peak parking demand on the north side of the street was 4 vehicles (100% occupancy rate) at 12:30pm. Overall, the average daytime on-street parking occupancy rate was 54% for the south side and 50% for the north side of the street (excluding the 3pm-6pm parking restriction on this side of the street). This indicates that the on-street parking demand on Robson Street for the block east of Jervis is actually quite low throughout the day and suggests that on-street parking is not vital to the livelihood of the street here. Further, it indicates that the level of use of the street by vehicles is relatively insignificant as compared to its use by pedestrians and that this level of parking occupancy would translate into a very small number of “customers” in comparison to pedestrians.

Figure 20: On-Street Parking Demand Profile - East of Bute (2009)

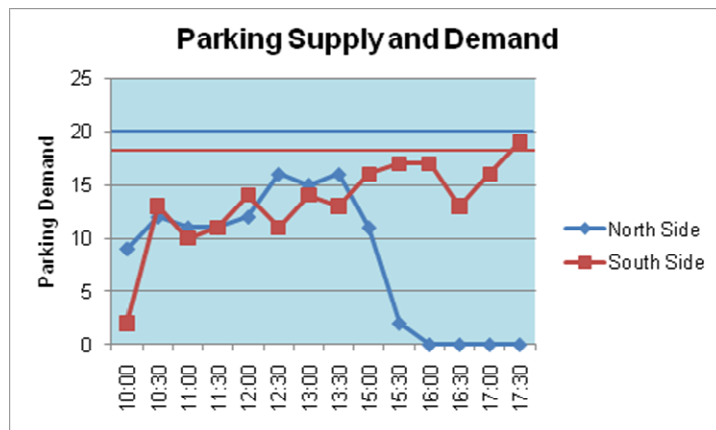


Figure 20 above shows the on-street parking demand profile for the block east of Bute Street. The peak demand for the south side of Robson Street was 19 vehicles (106% occupancy rate, due to a vehicle parked in a loading zone) at 5:30pm and 16 vehicles (80% occupancy rate) at 12:30pm and 1:30pm for the north side of the street. The overall average daytime on-street parking occupancy rate was 74% for the south side and 63% for the north side of Robson Street (excluding the 3pm-6pm parking restriction on this side of the street) which still appears lower than one might expect for the busiest and most successful commercial street in Vancouver. The on-street parking demand for this block was consistently higher throughout the day than it was for the block east of Jarvis with its busiest times between 3pm-6pm (for the south side).

However, it should be noted that until 3pm, on-street parking demand was not higher than 80% for either side of the street which indicates that on-street parking is not as vital on this block for most of the day. Anecdotally, it was observed between 10am and 12pm that a significant amount of courier and delivery vehicles were utilizing on-street parking stalls in order to make deliveries even though there are service lanes off-street behind Robson on both sides with delivery access to stores.

Figure 21: On-Street Parking Demand Profile - East of Thurlow (2009)

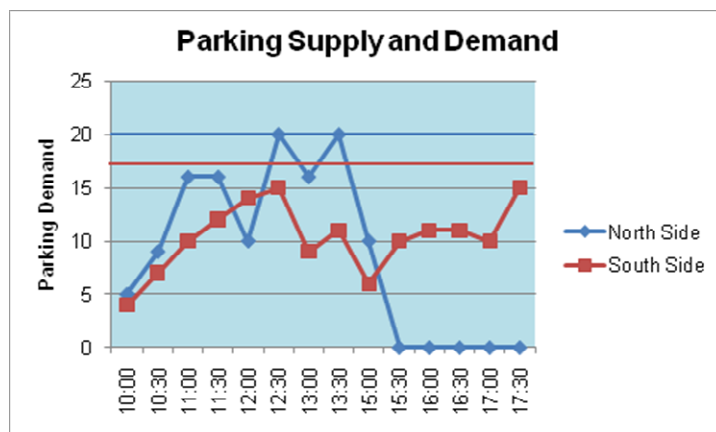


Figure 21 illustrates the on-street parking demand profile for the block east of Thurlow Street. The peak demand for the north side of the street was 20 vehicles (100% occupancy rate) at 12:30pm and 1:30pm and 15 vehicles (88% occupancy rate) at 12:30pm and 5:30pm. The on-street parking demand profile for this block was quite sporadic throughout the day compared to the two other study blocks with multiple peaks witnessed at various times of day for both sides of the street (i.e. 11am-11:30am,

12:30pm and 1:30pm for the north side and 12:30pm and 5:30pm for the south side). The overall average parking occupancy rates were 68% for the north side and 61% for the south side of Robson Street which again are relatively low demand rates for on-street parking given the level of retail activity on Robson Street.

The busiest and most consistent block in terms of on-street parking demand was the block east of Bute Street which experienced an occupancy rate greater than 50% for the majority of the day. The block east of Jervis Street experienced the lowest occupancy rates on Robson Street operating at around 50% for most of the day and also had the lowest on-street parking supply. Overall, on-street parking demand on Robson Street could be summed up as being moderately well-used throughout the day, however, it does not appear to be vital to the retail success of Robson Street due to the relatively insignificant number of “customers” that could be accommodated by its parking supply.

As mentioned, the on-street parking supply on Robson for these three blocks is 91 which equates to approximately only 4.5% of the available parking supply (on and off-street combined) in the vicinity of Robson Street. Therefore, although on-street parking is regarded by retailers and shoppers generally as being the most prime parking location for a commercial street, it represents a minute proportion of the overall parking supply on Robson Street and appears to only have the potential to generate a very small number of customers for retailers based on that supply all for the sake of “convenience”. For instance, William Whyte in his article *The Gifted Pedestrian*, notes “Merchants like on-street parking because they believe it services a high turnover of shoppers. But it does not. Our studies showed that in-and-out parking accounted for only a small proportion” (Whyte, 1984).

Further, the street space that is utilized for on-street parking is extremely valuable as potential expansion space for sidewalk widening and accommodation of pedestrian amenities and given the relatively moderate level of usage by vehicles does not appear to be justified in its current function as on-street parking. On the surface, it seems plausible that on-street parking is not vital to the functioning success of Robson Street based on its low potential to produce potential customers for the street and that perhaps on-street parking could be removed depending on whether there was enough parking located off-street to accommodate this displacement. An analysis of off-street parking near Robson Street is presented below in order to assess the possibility of the removal of on-street parking.

5.1.2.2 Off-Street Parking Analysis

Off-street parking facilities are plentiful within close proximity to Robson Street and range in type (i.e. surface lots, underground parking garages, aboveground parking garages) and size (i.e. from as few as 9 stalls to as many as 400 stalls). It was important to develop an understanding of the parking supply and demand for off-street parking facilities near Robson Street in order to be able to assess whether there was sufficient room to accommodate displaced on-street parking if it were removed from Robson Street. Further, this analysis has helped to identify means of improving off-street parking management systems for Robson Street in order to make off-street parking easier to find and more attractive to potential users.

The Robson Street Business Association has a map on its website indicating nearby (i.e. within a two-minute walk of Robson Street) off-street parking facilities for its customers (refer to **Figure 22**), which was used as the basis for an off-street parking supply and demand survey conducted on Tuesday August 25, 2009. Two additional new lots located on Alberni which are not indicated on the RSBAs map were chosen to survey due to their proximity to Robson.

Figure 22: Robson Street Business Association Off-Street Parking Map



Source: http://www.robsonstreet.ca/location_and_parking.php

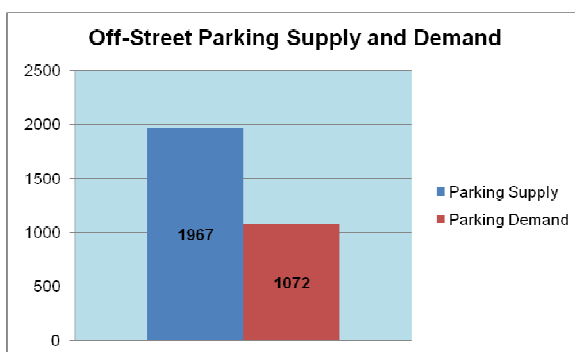
As there were 25 off-street parking facilities it was only feasible within the parameters of this study to conduct “snapshot” surveys of these facilities to give a sense of the off-street parking demand for a typical weekday. Therefore, for each facility, the supply was first documented and then the demand counted in order to calculate a snapshot occupancy rate for the facility. **Table 10** and **Figure 23** summarize the off-street parking supply and demand and subsequent parking occupancy rates for all off-street parking facilities located within close proximity to Robson Street.

Table 10: Robson Street Off-Street Parking Supply and Demand

Lot ID	Lot Info	Supply	Demand	Parking Occupancy Rate
1	Underground lot in lane south of Robson	50	37	0.74
2	Underground lot in lane north of Robson	73	30	0.41
3	Underground lot in lane north of Robson	20	5	0.25
4	Under/Above ground lot north side of Robson	106	61	0.58
5	Underground lot west side of Bute	47	31	0.66
6	Surface lot in lane south of Robson	20	12	0.60
7	Surface lot in lane south of Robson	14	8	0.57
8	Underground lot in lane south of Robson	19	12	0.63
9	Surface lot in lane south of Robson	18	6	0.33
10	Surface lot in lane south of Robson	13	2	0.15
11	Underground lot in lane south of Robson	71	36	0.51
12	Surface lot in lane south of Robson	21	18	0.86
13	Surface lot in lane south of Robson	9	6	0.67
14	Surface lot in lane south of Robson	12	9	0.75
15	Underground lot east side of Burrard	84	62	0.74
16	Under/Above ground lot in lane north of Robson	400	232	0.58
17	Underground lot in lane north of Robson	64	59	0.92
18	Underground lot in lane north of Robson	28	1	0.04
19	Surface lot in lane north of Robson	31	15	0.48
20	Underground lot south side of Alberni	41	24	0.59
21	Aboveground lot south side of Alberni	387	148	0.38
22*	Underground lot north side of Alberni	88	20	0.23
23	Underground lot south side of Alberni	280	178	0.64
24	Underground lot in lane north of Robson	35	33	0.94
25	Underground lot in lane north of Robson	36	27	0.75
Total		1967	1072	0.54 (Avg)

* Lot not included on Robson Street Business Association's Website

Figure 23: Off-Street Parking Supply and Demand



As shown in **Table 10**, there are a total of approximately 1967 off-street parking stalls (including reserved stalls, motorcycle parking stalls, handicap-parking stalls, and car-share reserved stalls – there are approximately 1774 transient parking stalls) located

in the 25 facilities near Robson Street. The total off-street parking demand was 1072 vehicles, which equates to an overall average occupancy rate of approximately 54%, leaving 895 vacant stalls (46%) available for all off-street parking facilities combined. This indicates that the off-street parking demand near Robson Street is quite low and that there appears to be an abundance of available off-street parking within close proximity to Robson Street during the course of a typical weekday, far greater than would be necessary to accommodate the displacement of 91 on-street parking stalls. It should be noted that the observed demands likely reflect a realistic indication of normal operating demands because the survey was conducted during peak operating hours for off-street parking facilities (i.e. between 10am-6pm) which would capture office workers and daytime shoppers.

Some off-street parking facilities counted had significantly low occupancy rates for a daytime peak period. For instance, lot 21, an aboveground parkade located on the south side of Alberni Street at Thurlow Street had an occupancy rate of only 0.38 which equates to a parking demand of 148 vehicles out of a supply of 387 stalls leaving 239 available parking stalls during the daytime peak period. This lot, then, would be able to accommodate more than 2.5 times the vehicles potentially displaced if on-street parking were removed. Interestingly, this lot is less than a two-minute walk (i.e. <100m) from Robson and Thurlow near the centre of the study area. Also of note were lot 16 (0.58, 168 vacant stalls) located on the east side of Burrard Street just north of Robson and lot 23 (0.64, 102 vacant stalls) located on the south side of Alberni Street between Thurlow and Bute, both of which had more than 100 vacant stalls during the daytime peak period, again indicating there is more than sufficient space to accommodate vehicles potentially displaced if on-street parking were removed. Some off-street parking facilities witnessed rather high occupancy rates including lot 17 (0.92, 5 vacant stalls) and lot 24 (0.94, 2 vacant stalls) however these lots are quite small in comparison and therefore represent a minor portion of the off-street parking supply.

One possible explanation for this variability in off-street parking occupancy could be due to price variability between lots. For instance, lots 17 and 24 had prices of \$4/hr and \$3.50/hr respectively while lots 21, 16, and 23 had prices of \$6/hr, \$7/hr and \$6/hr. This illustrates that the cheaper the price for parking in off-street parking facilities then it will likely have higher parking occupancy rates as parkers are more willing to park where it's cheaper even if it requires them to walk a little farther.

Figure 24 demonstrates the locations and proximity of off-street parking facilities with relation to the study area.

Figure 24: Off-Street Parking Supply and Occupancy Map



Source: Google Earth, modified by Tyler Thomson

Figure 24 illustrates the locations of off-street parking facilities surveyed and notes the parking supply and the occupancy rates observed. It also demonstrates the proximity of off-street parking facilities with relation to the study area by means of a walking radius. As demonstrated in **Figure 24**, all but four of the off-street facilities are located within a 300m radius (i.e. 3-4 minute walk)² of the centre of the study area with the remaining four facilities located less than 50m (i.e. < 1 minute walk) beyond that. Therefore, there are approximately 1360 off-street parking stalls with an average occupancy rate of 0.52 located within a 3-4 minute walk of the centre of Robson Street which is considered well within the comfortable walking distance for most people (i.e. 5

² Walking times are based on average walking speeds of 1.2m per second from the Pedestrian Crossing Control Manual for British Columbia (2nd Edition, April 1994).

minute walk), and indicates that there is a considerable amount of available off-street parking located nearby (McLaughlin, 2001).

5.1.2.3 Summary

In summary, on-street parking was moderately well used throughout the daytime peak period, however, perhaps not to the levels one might expect of the busiest and most successful shopping street in Vancouver. Further, with a supply of only 91 stalls, on-street parking represents less than 5% of the overall parking stalls available to users of Robson Street who arrive by automobile, and on-street parking were removed from Robson Street, displaced vehicles could quite easily be accommodated by numerous off-street parking facilities located within close proximity of Robson Street.

Off-street parking on the other hand was substantially under-utilized during the daytime peak period (54% occupancy rate) in comparison, possibly due to a number of reasons. For instance, many lots are accessible only by laneways on side streets off Robson Street, which might be difficult for drivers to locate in the absence of way-finding signage and thus are not as visible as on-street parking. Another reason off-street parking facilities are likely under-utilized near Robson Street is pricing. Even if drivers are able to locate an off-street parking facility they are often deterred because the cost of parking in them is often higher (or perceived to be higher) than on-street parking. Interestingly, prices for on-street parking and off-street parking were comparable (although generally higher for off-street parking) in some instances at \$4.00/hr for on-street parking east of Thurlow, and \$3.00/hr east of Jervis and Bute; and anywhere from \$3.50/hr to \$7.00/hr for off-street parking. Other possible reasons why off-street parking facilities are under-utilized could be a public perception that under/above ground parkades are unsafe, they are too far away from their destination, or that it is difficult to tell if there might be any available parking in them.

In her article “The Price is Right”, Vicky Gagliano offers some solutions for how to make off-street parking facilities more attractive to users to compete with on-street parking. For example, making off-street parking facilities free for a portion of their use, i.e. for the first half hour, in order to encourage drivers to go to them first before on-street parking (Gagliano, 2008). Gagliano’s most applicable solution for increasing the attractiveness of off-street parking facilities near Robson Street would be a parking management system called counting whereby space counters are integrated with

electronic signage at the entrance to a garage (or potentially to signs located near the street) which indicates to drivers the number of available parking stalls at an off-street facility (Gagliano, 2008). This would make off-street parking more attractive particularly when on-street parking nearby was full because rather than waiting for an on-street stall to open up a driver could easily see that there were stalls available to park in at these facilities.

In addition to points made by Gagliano, way-finding signage which indicate where off-street parking facilities are located and what type of parking they provide could help to make off-street parking more attractive near Robson Street. Lastly, maintenance and security of off-street parking facilities needs to be kept-up to ensure a pleasant and worry-free parking facility for users. With better off-street parking management systems and maintenance of facilities, this could potentially become a viable alternative to on-street parking, thus allowing for on-street parking to be removed from the street in order to allow for sidewalks to be widened to better accommodate pedestrian flows and additional pedestrian amenities on Robson Street.

Parking, whether on-street or off-street is an important consideration for commercial streets because it helps increase accessibility of the street to automobile users (i.e. approximately 40% of people arrive downtown by automobile) thus increasing the pool of potential customers of the street (City of Vancouver, 2005). In the case of Robson Street, parking is a very important consideration, particularly within the context of this pedestrian design study because of how valuable the space is that is currently taken up by on-street parking and for what that space could potentially represent to Robson Street (i.e. expansion space for sidewalks). Further, as this study has revealed, there appears to be a plethora of available off-street parking spaces located within a very close proximity to Robson Street that are currently under-utilized. It has also been demonstrated by this research that these off-street parking facilities would be more than capable of accommodating the displacement of on street parking if required. The following sections proceed by assessing the current performance of Robson Street for pedestrians and its potential to become a great street, as well as evaluating the current design of Robson Street for pedestrians.

5.2 Assessing Robson's Performance for Pedestrians

As this research project is investigating whether pedestrian-oriented design enhancements are required on Robson Street, it was imperative to perform an objective assessment of its current performance for pedestrians with its existing infrastructure and find out what, if any, strengths or limitations Robson has with regards to its pedestrian environment. It was also the aim of this assessment to find out best practice examples of pedestrian design for Robson to aspire, or what elements are essential to creating a safe, comfortable, enjoyable and navigable pedestrian environment on commercial streets and which contribute to great streets. This assessment also helped to inform the subsequent evaluation of Robson Street's current design for pedestrians by understanding what features and elements (either strengths or limitations in its design) to look for and pay attention to on the street for the observational checklist.

In order to develop an understanding of Robson Street's current functionality in these aspects of the pedestrian environment and assess Robson's potential to become a great street, it was important for this study to ascertain what experts in the fields of urban design and planning for streets thought on the subject.

Further, to ensure that the methodologies were justified and yielded well-rounded results, it was pertinent to find out how other interested stakeholders felt about Robson Street's performance for pedestrians and its future potential such as businesses located on the street, pedestrian and public space design advocates, City planners and officials amongst others. The primary research method utilized to conduct this assessment was through e-mail based electronic interviews/questionnaires with key informants.

5.2.1 Interviews with Key Informants - Findings

As there was such a diverse range of professional backgrounds within the sample it was necessary to modify the interview depending on the participant's professional background or interests in Robson Street in order to be able to assess how each individual viewed Robson Street, its performance for pedestrians and its potential as a great street. There was a total of 3 participant groupings within the sample: firstly, there were professionals with backgrounds in street/transportation planning and engineering, street design (including landscape architecture), and designing for pedestrians; the second group of participants were individuals with professional or academic interests related to the well-being of cities (i.e. economically, socially) but who

were not specifically involved with the planning or design of streets; and the third group of participants were simply businesses located in the study area on Robson Street. For ease of interpretation, the results have been separated into these three groupings and summarized below. The analysis utilized both quantitative and qualitative analytical methods in order to conduct this assessment and have yielded quite informative and useful findings for this study.

Group 1 Results: Professionals in Urban Design, Planning, Landscape Architecture and Engineering for Streets

The interview for this group was tailored towards the technical aspects of street design and designing for pedestrians and focused on professional experiences and finding out best-practice examples of pedestrian design for Robson Street to aspire towards as well as their assessment of Robson's current performance for pedestrians and its potential. A summary of responses for questions pertaining to Robson's performance in serving for various pedestrian needs, the importance of certain pedestrian design elements and questions with ratings scales is provided at **Appendix A1**.

The summary provided in **Appendix A1** has helped to identify what the key areas of importance are for pedestrians with regards to street design, what areas of Robson Street need to improve and therefore what should be the focus of recommendations for enhancements to the pedestrian environment. The key findings included performance ratings for the facets of pedestrian design (i.e. safety, comfort, enjoyment and navigability); the importance of sidewalk widths, opportunities to relax, interesting places/spaces, street furniture, strategic placement of street furniture, and streetscape legibility; as well as what the ideal future Robson Street would look like. A discussion of these findings is provided in the following paragraphs.

Respondents noted that Robson Street overwhelmingly does not perform "very well" in either safety, comfort, enjoyment or navigability for pedestrians, however, is performing more on the order of average to well (and in some cases performing poorly such as for enjoyment) for pedestrians with regards to those facets of design. This suggests that Robson Street has room to improve in its safety, comfort, enjoyment and navigability for pedestrians and that it is not currently at "great street status" as a result. Further, although only three respondents were asked about the importance of sidewalk widths to the comfort of pedestrians, it was unanimous that wide sidewalk widths were

very important for pedestrian comfort, however, sidewalks must not be too wide or they become void spaces that lose functionality and become boring. As Kim Perry of Perry and Associates noted: “one tries to achieve the best balance of buzz and comfort...the challenge is to manage the cross-section, balancing the need to move vehicles, bikes and pedestrians while also improving enjoyment for all...Robson (sidewalks) seems too narrow...(and) the solution could be to vary it (sidewalk widths)” in some sections (Kim Perry, email interview, Jan 2010).

Respondents also felt very strongly about the importance of providing opportunities for pedestrians to relax on the street (i.e. by way of public seating, cafés or open spaces). Jo Fung, a sustainable transportation program manager for the City of Vancouver simply states “Robson Street does not currently employ adequate opportunities to relax” while Tamim Raad, manager of project planning with TransLink notes “For Robson Street to be a truly great street (and it is pretty good) opportunities to linger are of great importance” (Jo Fung, email interview, March 2010; and Tamim Raad, email interview, Feb 2010). Therefore, addressing opportunities for pedestrians to relax by way of considering such design features as benches/tables, and public open spaces should be noted in recommendations for improvements. Further, respondents thought that creating interesting places such as public open spaces, and street furniture as well as the strategic placement of street furniture and streetscape legibility were other aspects of pedestrian design that were very important.

Other significant findings and responses from the qualitative analysis of interviews for group 1 are highlighted below by category type.

General

Some respondents were asked what in their opinion was a best-practice example of a commercial shopping street which successfully fosters the safety, comfort, enjoyment and navigability of pedestrians, and the responses given varied from local to European examples. For instance, such streets as Rue Cler in Paris, State Street in Santa Barbara, Marine Drive (Dundarave section) in West Vancouver, and Las Ramblas in Barcelona were noted as truly best practice examples of great streets for pedestrians, and perhaps ones towards which Robson Street should aspire. These examples range in scale and design from a local neighbourhood shopping street with on-street parking, wide sidewalks, beautiful landscaping and mid-block crossings (Marine Drive), to a globally known boulevard with a central pedestrian walkway which stretches for more

than 15 blocks and serves mainly for the movement and enjoyment of pedestrians (Las Ramblas), to a fully pedestrianized street with a narrow cross-section, plenty of street cafés, and less organized design (Rue Cler), to a typical looking central shopping street in America with plenty of space for vehicles and pedestrians, but with well-appointed pedestrian amenities (State Street). This demonstrates that there are many ways to design a successful street for pedestrians that is safe, comfortable, enjoyable and navigable and therefore there are no formulas to its design so long as each street is designed in its context.

Parking

Some respondents were asked if the amount of off-street parking available near Robson Street was sufficient to accommodate visitors arriving to Robson by automobile if on-street parking were removed from the street and some interesting results were revealed. Of particular interest was the fact that both City of Vancouver planners/engineers said that there was enough off-street parking located in nearby facilities to accommodate the potential displacement of on-street parking. Further, Tamim Raad stated “at first blush, yes (there is enough off-street parking). A high non auto mode share and the fact that Robson is a regional destination mean that people will take other modes or walk the few blocks from nearby streets to access it” (Tamim Raad, email interview, Feb 2010).

In addition, the same respondents were asked what the feasibility was of removing on-street parking from Robson Street in order to widen sidewalks for pedestrians, and from those who responded (Lon LaClaire, Tamim Raad and Tim Barton) the answer was yes. Tamim Raad noted that “Robson has all the required elements to make it successful. Density, access by other modes, nearby parking, regional destination. ‘Teaser’ parking not required [because of level of popularity] and benefits of reallocating space for other uses [pedestrian amenities] will be positive for the street and retailers” (Tamim Raad, email interview, Feb 2010). Lon LaClaire stipulated that this removal should be confined to mid-block sections, while Tamim Raad was sceptical about the political feasibility, and Tim Barton felt that sidewalks could definitely do with increased widths in most places and that perhaps time restrictions on parking could open up areas to pedestrians at certain times of day.

Safety

Respondents were asked to identify key factors in designing for the physical and personal safety of pedestrians on commercial shopping streets, as well as to identify the main threats to pedestrian safety on commercial streets. The central findings regarding key features of the physical safety of pedestrians on streets had to do with designing safe crossings. For instance, Perry also felt that incorporating safer crossings into the street design by way of corner bulges to reduce distances that pedestrians had to cross helps foster the physical safety of pedestrians too. Margot Long at PWL Partnership described that having distinguishable pavement patterns or textures at crosswalks makes intersections legible for pedestrians which increases their physical safety on the street, while Sandy James with the City of Vancouver expressed that curb ramps, clear signals (both visible and audible) and quick crossing times at intersections (Margot Long, email interview, Jan 2010; Sandy James, email interview, Jan 2010). In general, respondents thought that common threats to pedestrian safety on commercial streets can be deserted streets and improper lighting (too bright or too dim), unsafe crossings, as well as uneven sidewalk surfaces and sidewalks that are too crowded (force people into streets).

In addition to this, respondents were asked to identify some best-practice examples of design measures which ensure the physical and personal safety of pedestrians on commercial shopping streets as well as to identify whether Robson required any safety enhancements. Kim Perry noted that appropriate lighting levels (pedestrian scale and street scale), good visibility for pedestrians at crossings and “priority given to pedestrians, then cyclists, and finally cars” are best practice measures to ensure pedestrian safety on commercial streets (Kim Perry, email interview, Jan 2010). Further, respondents identified mid-block crossings, raised intersections, ease of movement (i.e. fewer obstacles such as sandwich boards for pedestrians), eyes on the street, a people presence, places to sit and rest and places to gather, and pedestrian level lighting as other design measures to consider to ensure pedestrian safety. Also, Lon LaClaire and Jo Fung, both of the City of Vancouver noted, “additional sidewalk width”, and Tamim Raad specified lowering vehicle speeds and enclosing pedestrian spaces with street trees and parking (as a buffer) as some effective ways at increasing the level of safety for pedestrians on commercial shopping streets.

Comfort

When asked to describe what design elements contribute most to the comfort of pedestrians on commercial shopping streets respondents noted such things as: pedestrian-scaled lighting, street lighting, and ambient lighting from shop windows as well as decorative/ornamental lighting such as seasonal lighting in trees; adequate walking space; quality sidewalk surfaces (paving); seating space; public washrooms; weather protection (awnings); water fountains; and appropriate street furnishings. Sandy James noted simply “lots of places to sit, to watch, to engage, without actually shopping” can contribute greatly to pedestrian comfort on commercial shopping streets.

Other elements which can contribute to pedestrian comfort noted by Kim Perry include appropriate scale of buildings, shade (from trees), low level plantings (provide fragrance, spatial definition, and textural variation), and benches and the arrangement of street furniture too (Kim Perry, email interview, Jan 2010). Kim Perry sums up contributing elements to pedestrian comfort and Robson’s current situation: “Food and beverage, places to sit and rest, hard and soft places of respite [open spaces like grassy parks and plazas], introduction of elements such as water...proper lighting levels, good way finding and signs. These things are not really part of the Robson experience” (Kim Perry, email interview, Jan 2010). This indicates that there are a multitude of areas to enhance pedestrian comfort on Robson Street.

Enjoyment

Some common design elements noted by respondents which are key to creating an enjoyable pedestrian environment on commercial streets include: public seating and places to people watch (benches and café/restaurant patios); high quality design/materials and an attractive environment; a good variety and mix of shops; aesthetic features such as trees, flowers/planters, water features; outdoor merchandise displays and signage; public art; adaptable spaces; no blank walls; and hidden surprises amongst others. Another essential requirement for an enjoyable street for pedestrians is opportunities for relaxation and for social interaction and engagement and as noted by Tamim Raad “Robson’s main deficiency is there is not enough space for pedestrians and there is too much of a focus on ‘moving’ people through the street. There are few opportunities to stop and enjoy the street” (Tamim Raad, email interview, Feb 2010).

Sandy James illustrates that successful commercial streets which are enjoyable for pedestrians need to be multi-dimensional/multi-functional by stating, “Great shopping

streets are not just about shopping. People need places to walk to and through”, while Margot Long adds that “Places that have a sense of history, places that are about the place” add to enjoyment of pedestrians by using contextual design measures which make the street special (Sandy James, email interview, Jan 2010; Margot Long, email interview, Jan 2010). A distinctive measure of a commercial streets success in fostering enjoyment for pedestrians is in its liveliness and as Kim Perry notes it starts with “Successful retail. There is a chicken and egg issue at play”, which means that successful and attractive retail enhances the liveliness of a street by attracting more pedestrians/shoppers thereby increasing their enjoyment of the street (Kim Perry, email interview, Jan 2010). Perry again summarizes the plight of Robson Street in needing to enhance pedestrian amenities to make it more enjoyable and become a great street: “Downtown Vancouver has paid attention to its perimeter – at the expense of the core. Robson is an important artery that should be more respected. It has succeeded in spite of its neglect. It wouldn’t take much to make a big difference, and a wholesale upgrade would be better yet” (Kim Perry, email interview, Jan 2010). Therefore, as described by the respondents’ comments above, Robson Street, although it is busy and lively in terms of retail success and pedestrian volumes, appears to require enhancements to its pedestrian environment to improve enjoyment of the street by incorporating some of the design elements noted.

Navigability

Respondents were also asked to describe key design measures involved in ensuring a navigable pedestrian environment on a commercial shopping street. The most common responses were: clear way-finding and store signage; consistent street design; good quality walking surfaces; consistent and linear placement of street furniture and subsequently clearly defined movement areas; and good lighting. Sandy James summarizes the general elements required of a navigable and walkable pedestrian environment on a commercial street are “Comfort, security, weather protection, good way-finding and legibility” (Sandy James, email interview, Jan 2010). Most respondents felt that the navigability of Robson Street for pedestrians was medium to good, however when considered with respect to key design measures of pedestrian navigability noted above it would appear that Robson Street could do with some enhancements particularly with regards to consistent street design, quality of walking surfaces, clearly defined movement areas (in some locations), and lighting, which will be confirmed by the

observational checklist in the next section of analysis. Interestingly, Las Ramblas in Barcelona was cited by a number of respondents as a best-practice example of a commercial shopping street which is navigable and walkable for pedestrians.

Potential as a great street

In order to understand Robson Street's potential as a great street, respondents were asked to discuss their thoughts on its feasibility as a great street and what, if any, improvements or enhancements would be required. Generally, when asked if Robson Street was already a great street respondents said no, but many felt that it has the potential to become a great street. Kim Perry thought "It's a logical choice for a makeover. Not sure it needs to be monumentally great, but it could be 'greatish'", while Tim Barton said that "it's a good street, but who wants to be good! It could be a great street. [with] wider sidewalks and less on-street parking" (Kim Perry, email interview, Jan 2010; Tim Barton, email interview, Feb 2010).

There were a couple of respondents who thought that Robson was already a great or at least a good street (because of its success at attracting pedestrians), while one respondent felt that it was great as a shopping street but lacked cultural connectivity. Sandy James noted that "it would be great if it was a green sustainable shopping street powered by pedestrians", while Margot Long maintained that "it needs another layer of interest [other than shopping], paving materials with a sense of durability, and huge street trees", and Marta Farevaag adds "Robson Street is special because of its scale [of buildings]...of shopfronts" of which there are many and varied, but that "Sidewalks and street trees should be replaced with a contemporary new design inspired by the place and by its role as a preferred place to walk across the downtown". All of which point to the fact that Robson Street does have the potential to become great but not without some major improvements to numerous elements of its pedestrian design and that there is likely to be significant conflicting opinions on how this will be done.

When asked to describe what improvements they might suggest to help Robson Street become a great street, Marta Farevaag pronounced that "Robson Street needs a complete rebuild from building face to curb" and others noted enhancements to the safety, comfort, enjoyment and navigability as described previously. Some examples of great streets for Robson Street to aspire towards include: the Champs-Elysees, Strøget

(Copenhagen), Florida Street (Buenos Aires), Michigan Avenue (Chicago), Oxford Street (London); Las Ramblas (Barcelona) and other streets in New York and Chicago.

Group 2 Results: Professionals, Academics and Other Interest Groups

This group offered a range of perspectives from negative experiences and supporting enhancement of pedestrian amenities on Robson Street to positive experiences and views of the current incarnation of Robson Street and support for maintaining the status quo in terms of Robson's current design for pedestrians. A summary of responses for questions pertaining to Robson's performance in serving for various pedestrian needs, the importance of certain pedestrian design elements and questions with ratings scales is provided in **Appendix A2**.

The summary provided in **Appendix A2** has helped to identify what the key areas of importance are for pedestrians with regards to street design, what areas of Robson Street need to improve and therefore what should be the focus of recommendations for enhancements to the pedestrian environment. Further, it highlights some of the key findings from these questions and reports the response frequency in order to develop an understanding of group 2's assessment of Robson's performance. A discussion of these findings is provided in the following paragraphs.

In general, respondents felt that the overall performance of Robson Street for pedestrians was medium (although one respondent thought it performed well) which indicates that Robson is not yet at great street status, particularly with regards to accommodating pedestrians and therefore, likely requires enhancements. Interestingly, opportunities to relax for pedestrians (i.e. benches, café patios etc.) were viewed to be very important to two respondents and important to another (similar to group 1 responses), while one respondent responded that they were not important at all on Robson Street.

Robson Street's liveliness was deemed medium to good by all respondents, as many noted that its busyness with pedestrians made it feel lively. The strategic placement of street furniture, similar to group 1, respondents felt was important to very important so that it promotes pedestrian navigability of the street. Further, streetscape legibility was again viewed to be important to very important by respondents to ensure the comfort and navigability of the street with some citing that it was important

particularly for visitors in order to orientate themselves on the street and in the City. Another key finding from **Appendix A2** was that respondents rated Robson's sidewalk widths from medium to very poor indicating that sidewalks could be widened to better accommodate pedestrian demands.

Lastly, when asked what the ideal future Robson Street would be like in terms of design and functionality, respondents had varying opinions about what it should be. For instance, one thought that it should become a fully pedestrianized street, while others felt that it should be somewhere between "B" (a pedestrian-oriented street with limited automobile access and wider sidewalks) and "C" (a street with enhanced pedestrian amenities but with the same cross-section), and still another felt it should remain as is. When considered along with group 1's responses, it would appear that the most respondents felt that the ideal future Robson Street should be a pedestrian-oriented street with limited automobile access, wider sidewalks and enhanced pedestrian amenities. Other significant findings and responses from the interviews for group 2 are highlighted below by category type.

Parking

Respondents were asked if the amount of off-street parking available near Robson Street was sufficient to accommodate visitors arriving to Robson by automobile if on-street parking were removed from the street and some interesting results revealed. Andrew Pask of VPSN responded that "with parking, the question is often not 'is there enough' but 'is there enough nearby' as auto-driver's willingness to walk seems to be far more restricted than say, a transit riders'" (Andrew Pask, email interview, Feb 2010). As demonstrated in Section 5.1.2, there is a significant amount of off-street parking located near Robson Street, perhaps even close enough for auto driver's to walk from. However, Philip Boname, president of Urbanics Consultants claims there is not enough off-street parking nearby noting that "no, the volume of business [on Robson] demands a much higher parking capacity...you could probably see an increase of 20% in retail volume if more off-street parking were available" further, Boname states "there needs to be better off-street parking management systems in place, both in terms of way-finding, and availability for vehicles and pedestrians" similar to the systems noted by Gagliano previously (Philip Boname, interview, Feb 2010). This illustrates a divergence in opinions regarding off-street parking supply near Robson Street, and as mentioned, it has already been demonstrated that there is an abundance of it nearby.

Additionally, group 2 respondents were asked whether they believed it was feasible to remove on street parking in order to create more space to widen sidewalks. One respondent summarized that “yes, it’s theoretically feasible...but it’s hard to sell to the businesses”, while Philip Boname stated simply it’s “not possible...there are opportunities to put pedestrian amenities on side streets”, and still another, Andrew Pask believed that it was indeed feasible to remove on-street parking to widen sidewalks for pedestrians (Philip Boname, interview, Feb 2010; Andrew Pask, email interview, Feb 2010).

Safety

In general, respondents believed that Robson Street performed medium to very well in terms of safety for pedestrians. For example, Karen Parusel of Vancouver Public Space Network (VPSN) cited there is “lots of informal surveillance since the street is busy, even late at night”, while Philip Boname added that a “high volume of people means eyes on the street” (Karen Parusel, email interview, Jan 2010; Philip Boname, interview, Feb 2010). In terms of physical safety, Andrew Pask director of VPSN noted that “high pedestrian volumes, combined with smaller than ideal sidewalk widths, presence of signage, bus shelters etc. mean that a lot of people weave a lot, occasionally stepping off the sidewalk and onto the road to get around people” which jeopardizes the physical safety of pedestrians (Andrew Pask, email interview, Feb 2010). When asked what the key factors were when designing for the safety of pedestrians, Philip Boname noted that “there is likely a correlation between the level of safety on the street and the level of traffic (i.e. the more pedestrian traffic, the safer the street)” (Philip Boname, interview, Feb 2010). Under such criteria, Robson Street would certainly be considered designed for pedestrian safety.

Comfort

When asked, whether pedestrian amenities on Robson Street were sufficient given the high pedestrian volumes, there was quite a divide between group 2 respondents. For instance, Philip Boname president of Urbanics Consultants (a retail consulting firm) said that “additional pedestrian amenities are not needed on Robson Street, particularly if they impede pedestrian traffic” indicating that from a retail perspective, the objective is to keep pedestrians (potential customers) on the move so that foot traffic past stores is increased (Philip Boname, interview, Feb 2010). On the other hand, Andrew Pask lists several improvements which could be made to the

pedestrian environment such as: wider sidewalks, better curb-cuts, better intersection signalling; additional seating, possibly small tables, additional bike rack infrastructure, other amenities (i.e. water fountains and public art), better gathering areas (i.e. public open spaces) for buskers, and additional coverage for rainy days (i.e. more awnings or porticos or other coverings (Andrew Pask, email interview, Feb 2010). This indicates that given that the study area has the some of the highest volumes of pedestrians in the City, there could and should be enhancements made to just about every aspect of Robson Streets pedestrian environment, and as Pask adds, “a general elimination of street parking and replacement [for wider sidewalks] with more traffic bulges could solve a number of issues” (Andrew Pask, email interview, Feb 2010). It is very surprising that there could be such extreme differences in opinion regarding the need of pedestrian amenities on Robson Street.

Further, Philip Boname, maintained that “Robson Street functions as a shopping street (like an outdoor mall on the street), people are there to shop not to relax. It is designed so that people in cars can experience shopping downtown” (Philip Boname, interview, Feb 2010). However, as noted by respondents from Group 1, it is precisely this notion of Robson as a one-dimensional shopping street which hampers it from being a great street and particularly a great street for pedestrians, as pedestrians (even while shopping) like to have opportunities to relax and enjoy the street scenery.

Enjoyment

Overall, group 2 respondents believed that Robson Street performed medium to very well with regards to fostering the enjoyment of pedestrians. However, there were sentiments from some respondents that this aspect of the pedestrian realm could be improved upon. Andrew Pask noted that despite it’s popularity and high level of use, “Interestingly, the street lacks a lot of simple things that could actually make it more enjoyable: more art, better architecture (some of the building design is awful)...a narrowing of the street-width that could create a better sense of scale and proportion” (Andrew Pask, email interview, Feb 2010). These comments indicate that Robson Street is indeed more of a good street, if anything, at the moment, but that it lacks many of the key elements that make up a great street, which is perhaps holding it back and therefore, may require enhancements in these areas in order to become a great street. Having said that, Pask also noted that he enjoys this part of Robson Street because of its liveliness due to the buskers, street artists and musicians, which are other

characteristics of great streets and which foster the enjoyment of pedestrians. This indicates that although Robson Street may require enhancements to improve the enjoyment of pedestrians on the street in terms of quality public art and architecture, perhaps its other aspects of animation on the street help give Robson a good start at becoming a great street which promotes enjoyment of pedestrians.

When asked what design elements are key to contributing to lively and interesting streets for the enjoyment of pedestrians, Philip Boname stated first and foremost the “Social experience – animation on the street”, more specifically, things like “sidewalk cafés are important to make the street comfortable and enjoyable so that people have the opportunity to see and be seen – some people like to do people-watching while others like to attract attention and be watched” (Philip Boname, interview, Feb 2010). This really highlights the importance of the sociability of streets which is an important characteristic of any great street as Allan Jacobs noted, however, as important as sidewalk cafés are to fostering the sociability of streets, they are limited more or less to the private realm, and as others have noted previously should be complimented and supported by public spaces for socializing on the street such as through public open spaces. Some other key design elements noted by group 2 respondents which contribute to interesting/enjoyable streets include: public furniture and public art (with a theme and unity for the whole area); “branding” (through banners, flower baskets, and furniture); and measures which protect against elements (i.e. wind, sun, rain); as well as corner bulges; places to gather; places for intermittent retail/performances; presence of sun; places for shade; and quality buildings.

Navigability

In general group 2 respondents felt that overall Robson Street performed well to poor for pedestrians in terms of its navigability. A variation in themes for what constituted navigability emerged in this group from keeping a clear walkway (i.e. decluttering) for pedestrians, to making sure there is adequate lighting (i.e. facade and pedestrian scale lighting) in the evenings, to good way-finding signage, to maintaining good sightlines, and finally to good placement of other markers (i.e. transit, clear places to rest). This illustrates that the navigability for pedestrians can refer to both their physical movement through space and their ability to be guided through it (i.e. lighting), as well as how to locate things on the street (i.e. amenities, and other things of interest).

Philip Boname made an interesting response regarding the importance of streetscape legibility: “‘Branding’ for precincts is important – streetscapes have a specific theme (be it lighting or landscaping). Robson Street is a large collection of fashion retail, and it would be astute to have a commonality and ‘destination-ness’ (signage, lighting facades etc.)” (Philip Boname, interview, Feb 2010). This branding or commonality and ‘destination-ness’ would indeed seem to help create a more legible streetscape for pedestrians (particularly for visitors) which would make this stretch of Robson Street more unique and therefore more recognizable in the process. This shows that the ability of pedestrians to “read” the street and understand their surroundings is also important to its overall navigability.

In terms of the existing signage program (i.e. retail signs, street signs etc.) on Robson Street, Karen Parusel noted that “Street signage is good, but I wish there was more variety in what was being advertised – right now it’s just retail shops with no diversity. If there are nearby public spaces or squares or anything of interest it’s not advertised on the street” (Karen Parusel, email interview, Jan 2010). This appears to be quite a valid point in that, firstly, perhaps Robson could use more animation in its signage (particularly retail signage) such as signage that is unique to this street which would help create more interest for pedestrians (enjoyment) and identification of the area to help know where one is. Further, although the newly installed way-finding signage helps direct people around downtown and let them know they are on Robson Street, it does not, as Karen pointed out identify where areas of interest are. Perhaps there are no areas of interest on the street other than for shopping and dining, or perhaps they are just not identified on the signage so people do not know how or where to find them. In any case, it would seem that there is still room for improvement in the navigability of the street for pedestrians.

Potential as a great street

When asked if Robson Street was a great street most group 2 respondents agreed that it was not yet a great street, but more like a good street that has the potential to become a great street. One respondent noted that it was very successful as a retailing street, which was exemplified earlier by the fact that it has the highest retail rental rates in the City, but it was not likely to be a grand boulevard (like Burrard). Another respondent felt that it was already great as it was, but some changes could make it even better, however changes can have implications (i.e. on business). Andrew

Pask pointed out that in order for Robson Street (or any other street in Vancouver) to become a great street [the City] “needs to start looking at streets as being more than conduits or arterials and more as gathering places and destinations” (Andrew Pask, email interview, Feb 2010).

Gordon Price notes that the potential of Robson Street as a great street are limited in terms of being able to accommodate different modes of transport in the future because of its current cross-section, for instance, “the difficulty of diverting electric trolleys from the street in order to intermittently use it for pedestrian purposes. Or the problem of removing a lane in order to create bike lanes or widen sidewalks” (Gordon Price, email interview, Jan 2010). However, Price also noted that it has a leg up in becoming a great street because of its physical dimensions and scale, saying that “the inherent proportions of the street width and building heights make it a very comfortable and vital corridor” (Gordon Price, email interview, Jan 2010). Therefore, perhaps if Robson could find a way to ameliorate the effects on other modes of transport (i.e. ensure displaced automobiles can park elsewhere, transit can still be accommodated etc.) it could be able to implement need enhancements to its pedestrian environment and help it become a great street.

In summary, group 2 respondents had a mixture of responses to the interview, which is possibly due to the varied backgrounds of the respondents, from a retail consultant, to public space advocates, to an academic and a student. For the most part, respondents agreed that there were areas of improvement to be made in the safety, comfort, enjoyment and navigability of the street for pedestrians as well as enhancements which could help make Robson a great street. A couple of respondents ultimately questioned the necessity of improvements to the pedestrian environment with a “if it’s not broke, don’t fix it” mentality, although this was likely only considered from a retail/business point of view in that it is monetarily successful.

However, as was noted time and again by other respondents, there are several pedestrian amenities lacking on the street from, safety features (i.e. wider sidewalks, less street clutter, better lighting, fewer cars etc.), comfort amenities (i.e. wider sidewalks, cafés/patios, public seating, areas of respite, and public washrooms etc.), enjoyment for pedestrians (i.e. public art, gathering places, greater mix of businesses etc.), and navigability of the street (i.e. sense of unity in design, identification as an area safe, clean and clear walkways, improved lighting etc.). Therefore, similar to group 1

sentiments, group 2 feels that there are numerous ways in which Robson Street can be improved in order to enhance its pedestrian environment and help it become a great street.

Group 3 Results: Businesses Operating on Robson Street

As their professional backgrounds were considerably different (i.e. not based in street design or design for pedestrians) from those of the previous two groups the interview for this group focused more on experiences from a retailer operations viewpoint. Significant findings and responses from group 3 are highlighted below by category type.

General

Overall, the café manager rated the performance of Robson Street in accommodating pedestrians as “good”, and rated the safety for pedestrians as “good”, the comfort for pedestrians as “good”, the enjoyment for pedestrians as “very good”, and the navigability for pedestrians as “medium”. This at first glance gave the impression that the café manager felt that Robson Street required few improvements, if any, for either aspect of the pedestrian environment. The opinions of the clothing store manager differed considerably from those of the café manager’s regarding pedestrian accommodations on Robson Street however. For instance, they rated the overall accommodation for pedestrians on Robson Street as “medium”, specifically rating safety for pedestrians as “poor”, comfort for pedestrians as “medium”, enjoyment for pedestrians as “poor” and navigability for pedestrians as “medium. Therefore, implying that Robson Street was underperforming in all aspects of accommodating pedestrians and suggests that enhancements are required to remedy this.

Automobiles and Parking

When asked how important automobiles were in bringing people to Robson Street, and/or their business, the café manager said they were “important”, while the clothing store manager said they were “not important at all” citing that there were “tons of transit options” nearby. This alludes to responses given regarding whether respondents thought it would be feasible to remove some on-street parking from Robson to create space to widen sidewalks for pedestrians and pedestrian amenities. For instance, the café manager who thought that automobiles were important in bringing people to Robson Street felt that it would not be feasible to remove on-street parking from Robson

because it “seems to be a tourist attraction in itself. Families seem to drive in a lot”. On the other hand, the clothing store manager who felt that automobiles were not important at all in bringing people to Robson said yes it would be feasible to remove on-street parking in order to widen sidewalks because they felt, “people would take transit” if there were less opportunity to drive there. Thus there were differing opinions on the importance of automobiles and parking to Robson Street amongst respondents.

Pedestrians and Pedestrian Amenities

Interestingly, while the two respondents from group 3 diverged on their opinions about automobiles and parking, they agreed when asked how important pedestrians were to sustaining their business and the business on Robson Street in general both rating it “very important”. Also of note, both respondents provided the same answers when asked what the most common complaints were from customers regarding pedestrian amenities, citing no benches or public washrooms for pedestrians. When asked whether any additional pedestrian amenities were required to enhance pedestrian comfort and enjoyment, again both respondents cited benches/seating, public washrooms and more cafés/patios, however, the café manager felt that more public art was needed too. This indicates that the importance of pedestrians to Robson Street and its businesses is great and so too should be amenities which enhance the pedestrian environment.

Safety, Comfort, Enjoyment and Navigability for Pedestrians

Respondents were also asked to comment on various aspects of the safety, comfort, enjoyment and navigability of Robson Street for pedestrians. Of particular interest, when asked what the main threats were to the safety of pedestrians on Robson Street, both respondents noted vehicles as the main threat. This was in reference to vehicles at intersections “running red lights” as well as due to the lack of mid-block crossings which force pedestrians to cross mid-block through traffic. Also of interest was that respondents rated sidewalk widths as “medium” to “good” in terms of accommodating pedestrians, suggesting that the current widths are adequate although could perhaps be enhanced. Lastly, the clothing store manager noted that sidewalks should be widened in order to better accommodate strollers and wheelchairs on Robson Street.

Visions for Robson Street

The final section of the interview asked respondents to comment on their visions for Robson Street. Interestingly, although respondents noted some potential areas of improvement for Robson Street both indicated that they thought Robson Street was a great street already. Perhaps they might be boasting for the street because their businesses are located on it, or perhaps they just feel that any improvements might only make it a greater street than it already is. When asked in what ways could the pedestrian environment of Robson Street be improved upon most respondents suggested again, with the addition of benches and public washrooms, but also noted improved driving/pedestrian safety features (i.e. mid-block crossings, corner bulges etc.), and more way-finding signs or directional signage to stores (i.e. like mall directory signs). Finally, when asked what the ideal future Robson Street would be like, the cafe manager selected C, “a street with enhanced pedestrian amenities but with the same street cross-section”, while the clothing store manager selected B, “a pedestrian-oriented street with limited automobile access and wider sidewalks”.

Therefore, while group 3 respondents diverged on their opinions regarding the importance of automobiles and the current performance of Robson Street for pedestrians, they tended to agree that pedestrians were an integral part of Robson Street and that there was room for improvement to pedestrian amenities on Robson Street.

5.2.1.1 Summary

Overall, group 1 respondents tended to be most critical of the current performance of Robson Street in fostering the safety, comfort, enjoyment and navigability for pedestrians as a group, while group 2 tended to have a rather vast divergence in opinions on Robson’s performance for pedestrians from the retail consultants stance that it was fine as is, to the public space advocates who thought it could be improved upon in virtually every aspect of its design. Group 3 on the other hand were least critical of Robson Street’s current performance for pedestrians noting the fewest areas of potential improvement and being most enthusiastic about Robson Street as a great street. With regards to Robson Street as a great street respondents from groups 1 and 2 felt for the most part that it was not currently a great street, and was more of a good street, but that it has the potential to become a great street if

enhancements are made to the pedestrian environment. Group 3 unanimously thought that Robson was already a great street and that the few recommended enhancements to the pedestrian environment might only improve upon that.

Group 1 respondents as professionals in the fields of urban design, landscape architecture, planning and engineering offered advice on key design elements for pedestrians on commercial streets, identifying the necessary areas of improvement to the pedestrian environment on Robson as well as identifying the ways to improve the its pedestrian design. They were also able to describe why certain elements were more important than others and why they should be included on Robson Street. Group 2 respondents similar to group 1 identified areas of improvement to pedestrian safety, comfort, enjoyment and navigability on Robson from a streets as public space perspective as well as noting Robson's function as a retail street from a retail operations perspective.

The assessment gathered opinions from a diverse range of professional backgrounds and interests in order to attain a well-rounded scope of Robson's performance for pedestrians and its potential as a great street. Further, this analysis of Robson Street's current performance in fostering the safety, comfort, enjoyment and navigability of pedestrians as well as its potential as a great street has helped to identify the main areas of improvement required to the pedestrian environment on Robson Street and has provided measuring tools (i.e. pedestrian design indicators, great street features etc.) to be utilized in the observational checklist in order to evaluate the current design of Robson Street for pedestrians. With this knowledge it became possible to continue with the evaluation of the current design of Robson for pedestrians, and considered in conjunction with pedestrian design elements and great street features discovered through the literature, a comprehensive observational checklist was developed to perform this evaluation.

5.3 Evaluating the Current Design of Robson Street for Pedestrians

An evaluation of the current design of Robson Street for pedestrians was conducted in order to develop an understanding of the existing inventory of its pedestrian amenities and street furniture, its great street features as well as its provisions for automobiles and general physical characteristics. This evaluation was

critical to this research project because it acted as a means of ascertaining whether the current design of Robson fosters a safe, comfortable, enjoyable and navigable pedestrian environment, and if not, it acts as a benchmark for determining what enhancements are required to pedestrian amenities in order for it to become a great street for pedestrians. From this evaluation, it would be possible in conjunction with the assessment of the current levels of use of Robson Street and the assessment of Robson's performance for pedestrians and potential as a great street to be able to produce a set of recommendations on how to improve the pedestrian environment of Robson Street so that it is safer, more comfortable, more enjoyable and more navigable towards improving its functionality as an important street and thus help it become a great street for the City of Vancouver.

The sequence of analytical approaches in this research project was important in order to maintain a logical methodology and ensure the most robust results. Therefore, it was necessary to conduct this evaluation after the interview-based qualitative assessment of Robson's performance for pedestrians because this helped identify additional aspects of street design for pedestrians and the physical characteristics which make great streets for the observational checklist (analytical tool) than were identified through the literature review thus yielding more thorough and justifiable results. The main method of data collection and analysis utilized for this evaluation was through an observational checklist which was designed to inventory the existing pedestrian amenities and street furniture, the physical elements and characteristics, the great street features and the businesses (retail, restaurants and others) for each block in the study area.

Through this it was possible to evaluate Robson's current design for pedestrians because it illuminated and identified aspects of its design which were lacking (or in some cases non-existent) or which required enhancements or renovation towards ensuring a more functional and enjoyable Robson Street for pedestrians and becoming a great street. Another means of augmenting this evaluation was through photo documentation of the abovementioned amenities and characteristics of Robson and identified areas for enhancement or renovation. The following section details the methodology behind the observational checklist and provides the analysis and findings of this evaluation of Robson Street.

The observational checklists have provided a sound understanding of the current strengths and limitations in Robson Street's design for pedestrians and its potential of becoming a great street and have helped to bolster findings from the analyses 5.1 and 5.2 previously and have also helped to guide the recommendations for this research project. In order to complete a comprehensive evaluation of the current design of Robson Street it was necessary to conduct an observational checklist for each study block, particularly because each block is unique either by design (streetscape) or by their tenant mixes, but also for ease of data collection. Findings of the observational checklist are presented by study block below.

5.3.1.1 Observational Checklist Results: Robson Street Jervis to Bute

Perhaps the most unique block in this study area is the 1200 block of Robson Street between Jervis and Bute Streets. Even though it is included within the boundaries of the Robson Street Business Association it has a considerably different mix of tenants than both the 1100 and 1000 blocks of Robson, and as a result has quite a different feel than the other blocks which sets it apart. Further, likely as a result of its different mix of retail tenants, the 1200 block attracts considerably lower volumes of pedestrians (approx. 15,000/daytime peak) than the 1100 (approx. 22,000/daytime peak) and 1000 (approx. 24,500/daytime peak) blocks of Robson Street. Therefore, it remains unique in its design and tenant mix comparatively, and should be given careful consideration when evaluating potential recommendations for this block. The observational checklist for the 1200 block of Robson Street is shown at **Table 11** below and highlights the results of the observations of the current design of this block.

Table 11: Observational Checklist - Jervis to Bute

Robson Street Jervis to Bute	Block Side		Feature Present (either side)	Data Source
	North Side	South Side		
Physical Elements				
Effective Sidewalk Width - City of Vancouver	2.4m	2.4m	n/a	CoV
Sidewalk Widths - widest [narrowest] Note: excludes Amenity Boulevard width	4.75m [2.45m]	4.0m [2.1m]	n/a	Field
Boulevard/Street Furniture Amenity Width (in metres)	1.1m	1.4m	yes	Field
Roadway Cross-Section	6.3m	6.3m	n/a	Field
Number of On-Street Parking Stalls	4	12	yes	Field
Number of Trees (per Block Side)	8	10	yes	Field
Empty or in Repair Storefronts	2	1	yes	Field
Storefront Widths (Average)	9.8m	5.4m	n/a	Field
Building Setbacks from Curb: Deepest (Shallowest)	5.8m avg	13.3m (3.75m)	n/a	Field
Building Height (max)	4 Storeys	3 Storeys	n/a	Field
Storefront Awnings	11	19	yes	Field
Number of Storefronts (per Block Side)	12	25	n/a	Field
*Sidewalk Condition (general)	Fair to good, a number of areas with large uneven humps	Good, fairly even with few cracks	n/a	Field
Sidewalk Paving Materials	Concrete with aggregate amenity boulevard	Concrete with aggregate amenity boulevard	yes	Field
Misc.	1 Fire Hydrant	1 cyclist activated signal	n/a	Field
Street Furniture				
Newspaper Boxes	9	6	yes	Field
Garbage Cans: Permanent (Temporary)	0 (2)	1 (2)	yes	Field
Street benches/seating (public)	None	None	no	Field
Mailboxes	None	1	yes	Field
Sidewalk Signage/Ads (sandwich boards)	3	29	yes	Field
Street Lighting/Pedestrian Lighting	4/6	3/6	yes	Field
Planters	1	None	yes	Field
Bicycle Racks	2	1	yes	Field
Banners (per block side)	6	8	yes	Field
Bus Shelters/Stops	1	1	yes	Field
Parking Meters	4	12	yes	Field
Signs/Poles	5	5	yes	Field
Public Washrooms	None	None	no	Field
Other Pedestrian Amenities				
Number of Restaurants/café's (per Block Side)	4	11	yes	Field
Number of Patio Facilities	3	4	yes	Field
Street Vendors (incl. Florists, food vendors, etc.)	None	None	no	Field
Street Performers/Entertainers	None	None	no	Field
Places (i.e. Plazas, parks, or other open spaces)	None	None	no	Field
Public Art/Sculptures	None	1	yes	Field
Way-Finding Signage (i.e. To parking or shopping areas)	None	None	no	Field
Mid-Block Crossings	None	None	no	Field
Corner Bulges	None	None	no	Field
Accessibility and Safety Enhancements	1	1	yes	Field
Other	2 Hotels	None	n/a	Field
Retail Stores				
Clothing/Sports Apparel	1	3	yes	Field
Shoe	0	2	yes	Field
Souvenir/Apparel	0	1	yes	Field
Jewellery/Watch/Glasses	0	3	yes	Field
Café	1	2	yes	Field
Bank or Currency Exchange	1	1	yes	Field
Misc.	4	3	yes	Field
Professional Businesses				
Professional Business/Office Buildings	None	None	no	Field
Misc.	None	None	no	Field

Findings from the observational checklist are summarized by category below.

Physical Elements:

As shown in **Table 11**, probably the most striking observation regarding the physical elements of the 1200 block of Robson Street is that of the number of storefronts per block side. There is a significant discrepancy between the north (12 storefronts) and south (25 storefronts) sides of the street whereby there are more than twice as many storefronts on the south side than the north. This is likely attributable to both the tenant mix and the land uses between the two sides of the street, a difference which is not encountered on either the 1100 or 1000 blocks of Robson Street. For instance, there are fewer storefronts on the north side of the block because there are such land uses as hotels, a parking garage, a bank and a number of large restaurants (of the hotels) all of which tend to take up more building/street frontage than the most retail stores and casual restaurants as seen on the south side of the block.

Another significant finding from the checklist was with regards to the effective sidewalk widths (collected from the City of Vancouver) on this block which were 2.4m on both sides of the street.³ This is significant because these are the widest effective widths of any study block and yet this is by far the least busy of the three blocks in terms of pedestrian demands. **Figure 25** illustrates the effective width of the sidewalk on the south side of this block which is affected by patios and the temporary sandwich board signs placed in the storefront buffer areas in front of the store (also note the many casual restaurants on this block), and also highlights that a 2.4m effective width is still not very wide even considering the lower pedestrian volumes on this block. Anecdotally, in terms of pedestrian capacity (the ability of the sidewalk to comfortably carry pedestrians), it was observed during the pedestrian volume counts that this block had sufficient sidewalk widths on both sides to carry the pedestrian demands most of the time with the exception of a couple of locations with particularly narrow widths (i.e. in front of some restaurant patios and on the south side where a building setback was only 3.75m leaving little sidewalk space). However, it should be noted that this is regarding pedestrian capacity on the sidewalk only and does not include the accommodation of additional pedestrian amenities which would require additional sidewalk space.

³ Effective sidewalk width refers to “the total width of the sidewalk, minus the buffer space that pedestrians observe along curbs, building edges, sign posts and other obstructions” on the sidewalk. (Source: <http://baysideonthepoint.com/pdf/Appendix%20S.pdf>, borrowed from the Highway Capacity Manual 2000 – Chapter 18).

Figure 25: View to West on South Side of Robson Street - Jervis to Bute



Some other interesting findings include: a low number of on-street parking stalls available on each side of the block, significantly fewer trees than the other study blocks, and some taller buildings. For instance, there are a total of only 4 on-street parking stalls on the north side of the street and only 12 on the south side, which is due to the fact that there are commercial and passenger loading zones on the north side of the street in front of the hotels. Further, there are only 8 street trees on each side of the street on the block which is almost half as many as are on the other two study blocks. One factor these findings are attributable to is the fact that the 1200 block is the shortest block in the study area at approximately 160m (about 50m shorter than 1100 and 1000 blocks) which limits its ability to accommodate as many of these features, however, there appears to be fewer of these features per capita nonetheless. Lastly, although there was a zoning bylaw implemented in the 1970s to regulate building heights on this stretch of Robson Street, there are two buildings (both hotels) on the north side of the street which are greater than 20 storeys, well above the 4 storey bylaw.

Also noted during observations were the sidewalk conditions, and the sidewalk paving materials. Overall, the sidewalk on the north side of the street was in fair to good condition with some areas with large uneven humps, while the sidewalk on the south side was in good condition being fairly even with few cracks. The east half of the sidewalk on the south side had newer and more uniform paving material and was in the best condition of all points on this block. The paving material consisted mainly of a concrete sidewalk with amenity boulevards constructed of aggregate.

Street Furniture:

The most significant finding when observing the street furniture on the 1200 block was the fact that there was not a single street bench or public seating facility of any kind.

Although there were a number of patio facilities on this block which can be beneficial to the pedestrian realm in their own right by allowing for restaurants to engage with the street and add to the liveliness, they are not available for the public to use. Also an interesting note, there are no public washroom facilities on this block, again aside from washrooms located within restaurants and cafés, there are no opportunities for the general public to utilize washrooms. Therefore, in terms of providing for the personal comfort of pedestrians, the 1200 block of Robson Street is currently designed quite poorly in these respects as pedestrians are not offered any opportunities to sit and relax and do not have the opportunity to use a public washroom.

Having said that, street furniture such as newspaper boxes (9 north side, 6 south side), garbage cans (2 north side, 3 south side), pedestrian lighting (6 poles north side, 6 poles south side), and planters (1 north side) located on this block are adequate and are pedestrian-oriented features which can contribute to the safety, comfort, enjoyment and navigability of the street in various ways. As a result, the 1200 block of Robson has the potential to be able to foster the safety, comfort, enjoyment and navigability of the street for pedestrians if some of these existing features were enhanced, or if some additional pedestrian-oriented features were incorporated into its street design. Also of note regarding street furniture on this block is the fact that there are bicycle racks (2 north side, 1 south side) and bus shelters (1 north side, 1 south side) which both contribute to the functionality of the street by providing amenities for cyclists and transit riders to make their use of the street more comfortable and enjoyable. This is important from a pedestrian perspective too because cyclists and transit riders spend at least some portion of their journey as pedestrians too and thus these features indirectly contribute to the pedestrian environment. Lastly, it is interesting to note that there was a total of 29 sandwich boards or temporary sidewalk signs (mostly for restaurants) on the south side of the street alone, which as mentioned can affect the effective sidewalk width (taking up buffer space, and sometimes considered to be clutter), but also can help to animate the street making it seem more lively through the use of different colours shapes and sizes which creates interest for pedestrians.

Other Pedestrian Amenities:

This category includes such features as: patio facilities, street vendors, street performers, public places/spaces, public art (could be considered street furniture), and way-finding signage amongst others. A finding of interest observed regarding other

pedestrian amenities on this block were the high number of restaurants/cafés (15 total), particularly on the south side (11), and the number of patio facilities related to them (7 total) both of which were the highest observed for all blocks. Restaurants present the opportunity for pedestrians to refuel when they are on the street and add to the tenant mix of a street helping to provide more services for those using the street, while patio facilities add liveliness to the streetscape for pedestrians and allow for engaging street life which enhances the comfort and enjoyment of the street. Another interesting finding was that the intersection of Robson and Jervis was the only study intersection which had any accessibility and safety enhancements for persons with vision impairments when crossing the street. This signal has an audible signal which indicates to pedestrians with vision impairments when it is safe to cross. There is also a corner bulge on the south leg of Jervis Street (although on the west side of the street, just outside of the study area) at this intersection which decreases the crossing time and distance for pedestrians on Robson Street on the south side which increases pedestrian safety and comfort. These amenities help to foster the safety, comfort and navigability of the street for pedestrians.

Perhaps a more interesting finding is not what other pedestrian amenities were observed on this block, but rather, what was not observed. For instance, there were no street vendors, performers/entertainers, public open spaces (i.e. plazas or squares), no way-finding signage, or mid-block crossings, and only 1 piece of public art for the entire block. As these features are widely considered “ingredients” of both successful pedestrian-oriented streets and of great streets in general which contribute to the safety, comfort, enjoyment and navigability of a street for pedestrians, it indicates that the 1200 block of Robson Street may require some enhancement in these areas towards becoming part of a “greater” Robson Street.

Retail Stores/Professional Businesses:

As mentioned previously, the tenant mix on this block is noticeably different than the other two study blocks. In particular, there are significantly more restaurants on this block and significantly fewer fashionable shoe, clothing and apparel stores than the 1100 and 1000 blocks of Robson Street. Further, there are such businesses as hotels, a bank and independent retail stores, which help to make the tenant mix more unique and create a different feel than the other study blocks necessitating different considerations than the other blocks when looking into recommendations.

5.3.1.2 Observational Checklist Results: Robson Street Bute to Thurlow

The 1100 block of Robson Street between Bute and Thurlow Streets is quite a departure from the 1200 block in terms of its character and retail tenant mix, its physical features and its design for its users. For instance, it is more fashion retail oriented with a number of shoe, clothing and jewellery stores. With such a higher pedestrian demand on this block, the need to provide ample amenities which foster the safety, comfort, enjoyment and navigability of the street for pedestrians is much greater than for the 1200 block and thus the design of the street must be able to accommodate such pedestrian needs. The observational checklist for the 1100 block of Robson Street is shown at **Table 12** below and highlights the results of the observations of the current design of this block.

Table 12: Observational Checklist - Bute to Thurlow

Robson Street Bute to Thurlow	Block Side		Feature Present (either side)	Data Source
	North Side	South Side		
Physical Elements				
Effective Sidewalk Width - City of Vancouver	1.8m	1.4m	n/a	CoV
Sidewalk Widths - widest [narrowest]	5.2m [2.2m] (avg. 4.2m incl. 1.5m s/b)	4.7m [2m] (avg. 4.5m incl. 2m s/b)	n/a	Field
Boulevard/Street Furniture Amenity Width (in metres)	1.9m	1.1m	yes	Field
Roadway Cross-Section	6.3m	6.3m	n/a	Field
Number of On-Street Parking Spots	20	18	yes	Field
Number of Trees (per Block Side)	18	16	yes	Field
Empty or in Repair Storefronts	1	None	yes	Field
Storefront Widths (Average)	6.9m	8m	n/a	Field
Building Setbacks from Curb: Deepest (Shallowest)	7.2m (4.1m)	5.8m (3.3m)	n/a	Field
Building Height (max)	4 storeys	3 storeys	n/a	Field
Storefront Awnings	26	26	yes	Field
Number of Storefronts (per Block Side)	29	26	n/a	Field
*Sidewalk Condition (general)	Fair to good, uneven and discoloured due to mis-matched paving materials	Good condition from Bute to Guess store. Fair condition from Guess to Cactus Club. Good condition East of Cactus Club	n/a	Field
Sidewalk Paving Materials	Concrete with aggregate amenity boulevard	Concrete with occasional lateral aggregate strips	yes	Field
Misc.	1 fire hydrant	1 traffic signal control box		Field
Street Furniture				
Newspaper Boxes	1	None	yes	Field
Garbage Cans	8 temporary	8 temporary	yes	Field
Street benches/seating (public)	None	None	no	Field
Mailboxes	2	2	yes	Field
Sidewalk Signage/Ads (sandwich boards)	29	20	yes	Field
Street Lighting/Pedestrian Lighting	4/8	4/8	yes	Field
Planters	3	6	yes	Field
Bicycle Racks	3	2	yes	Field
Banners (per block side)	14	14	yes	Field
Bus Shelters/Stops	1	1	yes	Field
Parking Meters	20	18	yes	Field
Signs/Poles	5	7	yes	Field
Public Washrooms	None	None	no	
Other Pedestrian Amenities				
Number of Restaurants/café (per Block Side)	5	6	yes	Field
Number of Patio Facilities	3	2	yes	Field
Street Vendors (incl. Florists, food vendors, etc.)	1	None	yes	Field
Street Performers/Entertainers	None	None	no	Field
Places (i.e. Plazas, parks, or other open spaces)	1	None	yes	Field
Public Art/Sculptures	1	None	yes	Field
Way-Finding Signage (i.e. To parking or shopping areas)	2	None	yes	Field
Mid-Block Crossings	None	None	no	Field
Corner Bulges	None	None	no	Field
Accessibility and Safety Enhancements	None	None	no	Field
Other	n/a	n/a	n/a	n/a
Retail Stores				
Clothing/Sports Apparel	8	12	yes	Field
Shoe	5	1	yes	Field
Souvenir/Apparel	0	1	no	Field
Jewellery/Watch/Glasses	3	5	yes	Field
Café	1	1	yes	Field
Bank or Currency Exchange	1	0	yes	Field
Misc.	7	4	yes	Field
Professional Businesses				
Professional Business/Office Buildings	1	None	yes	Field
Misc.	None	None	no	Field

Findings from the observational checklist are summarized by category below.

Physical Elements:

As shown in **Table 12**, the 1100 block of Robson Street had the narrowest effective sidewalk widths (1.8m north side, 1.4m south side) of all of the study blocks (See **Figures 26-27**). This is of interest due to the fact that there are high volumes of pedestrians using this block. In fact, the effective widths on this block are comparable to the best practice minimum sidewalk widths (1.5m – 1.8m) recommended by the Federation of Canadian Municipalities for sustainable communities regarding residential neighbourhoods where pedestrian demands tend to be negligible in comparison to commercial streets (Federation of Canadian Municipalities, 2004). The 1100 block of Robson Street however, is consistently one of the busiest pedestrian streets in the City of Vancouver. It should also be noted that the sidewalk widths on the 1100 block of Robson Street vary in width and alignment at various points due to patios bus shelters and sandwich boards thus reducing the sidewalk's effective widths.

Figure 26: Narrow Effective Sidewalk Widths due to Street Artist



Figure 27: Sidewalk Width Affected by Patio



Other interesting findings regarding the physical elements of this block include the high number of street trees here (18 north side, 16 south side) which is the most of all study blocks, as well as the high number of storefronts or businesses (29 north side, 26 south side) located on this block which as mentioned earlier helps make the street more interesting for its users.

In terms of sidewalk conditions and paving materials, the 1100 block of Robson Street has generally fair to good sidewalk conditions on both sides due to inconsistent widths, some uneven surfaces (particularly in front of Mexx on the north side, and near many tree bases) and mis-matched paving materials. There are however, some sections of sidewalk which are in good to very good condition on this block, namely, from Bute to the Guess store, and from east of Cactus Club Café to Thurlow Street on the south side.

Street Furniture:

The most significant finding regarding street furniture again was that there were no public benches or seating of any kind and no public washroom facilities on this entire block. Without these types of pedestrian amenities, the current design of this block is limited to a certain degree in its ability to foster a pedestrian environment which is safe, comfortable, enjoyable and navigable (although in this case it is hampered in being comfortable and enjoyable for pedestrians). Another interesting observation made on the 1100 block was that there were no longer any permanent garbage cans on the street (as was also the case on the 1000 block). All permanent garbage cans had been removed from the street (6 from north side and 4 from south side) for the Olympics (presumably) and had been replaced by temporary fixtures on street light poles with

transparent bags for garbage and recycling purposes during the 2010 Olympic and Paralympic Winter Games.

Similar to the south side of the 1200 block, both sides of the 1100 block had numerous sandwich boards and sidewalk signage (advertising for stores) which as mentioned has a negative effect on the sidewalk width on a street. In this instance, pedestrians are impacted more than on the 1200 block because of the resultant narrow effective sidewalk widths and the higher volume of pedestrians travelling on the sidewalks. Some positive aspects of the street furniture on this block of Robson Street for pedestrians include plentiful pedestrian and street lighting (although design and effectiveness may require some attention) a variety of planters and some bicycle racks. Pedestrian lighting on the street is adequate in terms of quantity and location, however, the lighting appears outdated in design for a fashionable street like Robson, and is rather dim in the evening which can be unsafe. Planters, although sometimes considered obstructions to pedestrian movement (navigability), can also create a space which is safe (act as buffers), comfortable (calming effect) and enjoyable (pleasant to look at).

Other Pedestrian Amenities:

As was observed on the 1200 block, there were similarly no mid-block crossings, and no corner bulges on the 1100 block. There was however, one street vendor (jewellery vendor), one private open space, and two way-finding signs, all of which were not present on the 1200 block. As with most pedestrian amenities and street furniture, street vendors take up space on the sidewalk affecting the usable walking space which on such a high volume block is considered very valuable space. They do, on the other hand, create more interest on the sidewalk for pedestrians and similar to patios, allow for interaction and engagement between the street space and its users which promotes a lively and enjoyable pedestrian environment.

Open spaces (public or private) seem to be a rare occurrence on most commercial streets in North America and so the presence of one on the 1100 block of Robson Street is a potentially valuable opportunity to enhance the comfort and enjoyment of Robson Street for pedestrians. The area under discussion is a sort of private covered (approx. 80%) outdoor vestibule in front of the Below The Belt store at 1131 Robson Street (north side). It measures approximately 6.3m (wide) by 14.5m (deep) from the edge of the sidewalk. It currently functions as an entryway for the the store and for a second level restaurant, however, the space itself is uninviting and

underutilized. If redesigned into a public open space for users of Robson Street it could potentially offer public seating, public washrooms, coverage from the elements and act as a social space for pedestrians to relax which could enhance the comfort and enjoyment of the street immensely for pedestrians. Having said that, it is currently a private space and any possibilities of transforming the space into such a use would hinge on the decisions of property owners.

Lastly, the 1100 block of Robson Street offers pedestrians two newly installed way-finding signs which are also located on the 1000 block. These signs were erected as part of network of way-finding signs for visitors downtown for the Olympics and appear as though they will stay on after (City of Vancouver, 2009). This helps increase the navigability of Robson Street and also helps visitors navigate to attractions in other parts of downtown which enhances the navigability and comfort of Robson Street.

Retail Stores/Professional Businesses:

The tenant mix on the 1100 block of Robson Street as mentioned differs from that of the 1200 block, but is similar to that of the 1000 block in that it offers an array of fashionable shoe, clothing and jewellery stores as well as some higher end restaurants. The most prevalent type of retail tenants on this block is by far clothing and sports apparel (8 north side, 12 south side) followed by jewellery/watch/glasses stores (3 north side, 5 south side) and shoe stores (5 north side, 1 south side). There is also a 7 storey office building located at 1155 Robson Street (north side) which houses several professional businesses and an English language school. This office building is unique to the 1100 block of Robson Street and is a land use not observed on the other study blocks.

5.3.1.3 Observational Checklist Results: Robson Street Thurlow to Burrard

As the highest pedestrian volume block in the City of Vancouver, and consequently the block with the greatest pedestrian demands within the study area, the 1000 block of Robson Street between Thurlow and Burrard Streets is a key block for this study area (and for the City in general) and as a result, pedestrian needs are greatest on this stretch of Robson Street and had to be considered for the recommendations. The retail tenant mix on this block is very similar to that of the 1100 block with a high concentration of fashion retail outlets.

The character of this block is noticeably different from the other two study blocks, particularly with regards to its buildings, of which there are a few heritage style buildings mixed with many small-scale retail buildings (on the north side) and some larger retail units (on the south side). As a result of this, the 1000 block is a rather attractive block in appearance and perhaps is part of the reason why this is the busiest pedestrian block in the City. Its proximity to Burrard and Granville Streets increases its accessibility due to close connections to rapid transit. With such a strategic location in Downtown Vancouver, this block will always be highly accessible to pedestrians (and automobiles) and will therefore continue to see high pedestrian volumes. As the eastern end of the study area and its natural separation from the eastern end of Robson Street due to its bisection by Burrard Street it acts almost as a gateway to this commercial section of Robson and therefore is a very important block within the study area and careful consideration of recommendations to enhance its pedestrian environment were necessary. The observational checklist for the 1000 block of Robson Street is shown at **Table 13** below and highlights the results of the observations of the current design of this block.

Table 13: Observational Checklist - Thurlow to Burrard

Robson Street Thurlow to Burrard	Block Side		Feature Present (either side)	Data Source
	North Side	South Side		
Physical Elements				
Effective Sidewalk Width - City of Vancouver	2.3m	2.0m	n/a	CoV
Sidewalk Widths - widest [narrowest]	6.3m [4m]	5.4m [3.1m]	n/a	Field
Boulevard/Street Furniture Amenity Width (in metres)	1.1m	1.1m - 1.4m	yes	Field
Roadway Cross-Section	6.3m	6.3m	n/a	Field
Number of On-Street Parking Spots	20	17	yes	Field
Number of Trees (per Block Side)	14	14	yes	Field
Empty or in Repair Storefronts	2	1	yes	Field
Storefront Widths (Average)	6.8m	10.6m	n/a	Field
Building Setbacks from Curb: Deepest (Shallowest)	6.3m (4m)	5.4m (3.1m)	n/a	Field
Building Height (max)	4 storeys	3 storeys	n/a	Field
Storefront Awnings	18	17	yes	Field
Number of Storefronts (per Block Side)	27	17	n/a	Field
*Sidewalk Condition (general)	Generally good	Good to Very Good	n/a	Field
Sidewalk Paving Materials	Concrete with aggregate amenity blvd	Concrete with aggregate amenity blvd	n/a	Field
Misc.	1 fire hydrant		n/a	Field
Street Furniture				
Newspaper Boxes	2	7	yes	Field
Garbage Cans	8 temporary	6 temporary	yes	Field
Street benches/seating (public)	None	None	no	Field
Mailboxes	None	2	yes	Field
Sidewalk Signage/Ads (sandwich boards)	22	12	yes	Field
Street Lighting/Pedestrian Lighting	4/7	3/7	yes	Field
Planters	None	None	no	Field
Bicycle Racks	1	1	yes	Field
Banners (per block side)	10	10	yes	Field
Bus Shelters/Stops	1	2	yes	Field
Parking Meters	20	18	yes	Field
Signs/Poles	4	6	yes	Field
Public Washrooms	None	None	no	Field
Other Pedestrian Amenities				
Number of Restaurants/café's (per Block Side)	5	1	yes	Field
Number of Patio Facilities	1 small table with 3 chairs	None	no	Field
Street Vendors (incl. Florists, food vendors, etc.)	2	2	yes	Field
Street Performers/Entertainers	1	None	yes	Field
Places (i.e. Plazas, parks, or other open spaces)	1	None	yes	Field
Public Art/Sculptures	1	None	yes	Field
Way-Finding Signage (i.e. To parking or shopping areas)	1	2	yes	Field
Mid-Block Crossings	None	None	no	Field
Corner Bulges	None	None	no	Field
Accessibility and Safety Enhancements	None	None	no	Field
Other	n/a	n/a	n/a	n/a
Retail Stores				
Clothing/Sports Apparel	6	11	yes	Field
Shoe	5	0	yes	Field
Souvenir/Apparel	3	2	yes	Field
Jewellery/Watch/Glasses	5	1	yes	Field
Café	1	0	yes	Field
Bank or Currency Exchange	1	0	yes	Field
Specialty/Misc.	3	2	yes	Field
Professional Businesses				
Professional Business/Office Buildings	None	None	no	Field
Misc.	None	None	no	Field

Findings are summarized by category below.

Physical Elements:

As shown in **Table 14**, the effective sidewalk widths on the 1000 block of Robson Street fall somewhere in between those of the 1200 block (widest) and the 1100 block (narrowest). There were no particularly significant findings regarding the physical elements observed on the 1000 block of Robson Street. There were fewer street trees (14 north side, 14 south side), and fewer storefronts (27 north side, 17 south side) on the 1000 block than on the 1100 block, but more than on the 1200 block. Sidewalk conditions tended to be generally good on this block with the exception of the amenities boulevard (i.e. street trees and parking meter boulevard) which was uneven and distressed causing tripping hazards in a number of locations, and there was some patchiness in locations with regards to sidewalk materials (i.e. patched up cracks in the sidewalk).

A large section of the south sidewalk from Thurlow east up to Boy's Co. Clothing store (approx. 90m) is in very good condition and has a wide effective sidewalk width with little to no obstructions to pedestrians (i.e. no sandwich boards), and also has a higher quality design and uses more attractive paving materials (see **Figure 28**). Although this is a pleasant stretch in terms of aesthetics, walkability and capacity for pedestrians, it seems a bit sterile and boring compared to other parts of this block, likely due to the larger storefronts on this stretch with consequently fewer stores and less variation and fewer points of interest to pedestrians. Further, the absence of sandwich boards and store signage ads is noticeable and is a trade-off between navigability and enjoyment.

Figure 28: Wider Effective Width and Good Quality Paving and Condition



Street Furniture:

The most significant findings here were again the lack of any form of public seating (benches or otherwise) and no public washrooms. **Figure 29** illustrates how pedestrians are currently forced to “sit” on some meagre storefront ledges (where available) on Robson Street when looking for an opportunity to relax. The fact that pedestrians are attempting to create their own seating out of storefront ledges (or curbs in some instances) due to the absence of any public seating on the street indicates that there is a demand for public benches or chairs by pedestrians which the current design of Robson Street does not satisfy.

Figure 29: "Public Seating" on 1000 Block of Robson Street



The lack of any public washrooms on the 1000 block of Robson Street was another recurring theme on all three study blocks. Although public washrooms may not be as commonplace on commercial streets as perhaps public seating is they are becoming more prevalent on streets in downtown Vancouver with new facilities continuously being added to service the needs of pedestrians in the public realm (City of Vancouver, 2009). Similar to the 1100 block of Robson Street, temporary garbage and recycling fixtures (8 north side, 6 south side) have replaced permanent garbage cans (3 north side, 4 south side) on this block temporarily for the Olympics and Paralympics and beyond but are likely to be switched back in the near future. In addition, pedestrian lighting on the 1000 block of Robson Street is again adequate in terms of quantity and locations (7 north side, 7 south side) however, design and effectiveness are lacking. While remaining an aesthetically pleasing piece of street furniture during the daytime. The current design of pedestrian lighting is another limitation of Robson Street to foster a

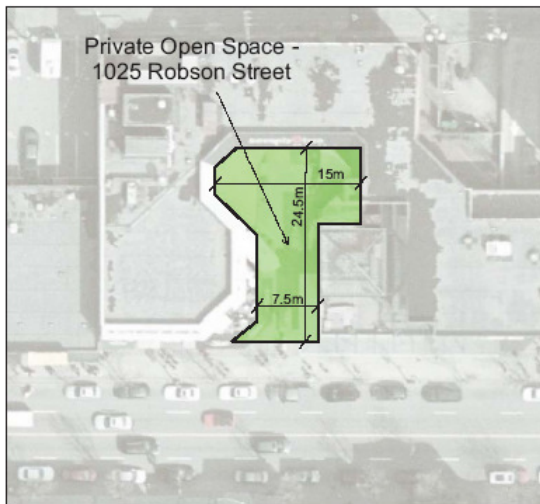
safe, comfortable, enjoyable and navigable pedestrian environment on all study blocks and would appear to require enhancement.

Bicycle racks and bus shelters are incorporated into the current design of the 1000 block of Robson Street, which promotes a diverse travel mode share, and sandwich boards and sidewalk ads are present, but not as prevalent as on the 1100 block. Unlike the 1100 block, the 1000 block has no planters on the sidewalks, which detracts from the aesthetics of this block and comfort and enjoyment of pedestrians, but allows for more effective sidewalk widths. One last item of note was a large suitcase display in front of a luggage store and which protruded significantly onto the sidewalk thereby reducing sidewalk capacity for pedestrians at this point and appears as an eyesore for this area.

Other Pedestrian Amenities:

The most significant finding regarding other pedestrian amenities on this block was a rather large open-air courtyard on the north side of Robson Street located just west of the Aldo store at 1025 Robson Street. This is a private courtyard that is currently surrounded by several vacant storefronts and a restaurant at the ground level and a vacant restaurant on the second level. The courtyard is shaped like a “cul-de-sac” and its dimensions are approximately 7.5 m wide at the opening, 15 m wide toward the back and 24.5 m deep from the edge of the sidewalk (see **Figure 30**). Similar to the space on the 1100 block, this courtyard is currently a private space, but has great potential to become a public open space which could accommodate benches and or tables, public washrooms, water fountains or other pedestrian-oriented amenities and could be a social gathering space on Robson Street and a place to relax. However, there remains the fact that this is private space and it would be up to the individuals who own this space as to whether they wish to alter its uses and improve its current function, which instills the notion people help create great streets and not just the amenities that are incorporated onto them.

Figure 30: Private Open Courtyard - 1025 Robson Street



Source: Aerial photo modified from Google Earth

The 1000 block of Robson Street also has some newly installed way-finding signs (1 north side, 2 south side, which were installed prior to the Olympics) as shown in **Figure 31** to help direct pedestrians to amenities and attractions in the area and to surrounding areas. Other pedestrian amenities located on the 1000 block include numerous street vendors of various types, such as artists and food stands, which provide pedestrians with quick alternative food choices and allow pedestrians to shop on the street (i.e. when there are flower and jewellery stands on the street) which again allows engagement between the street space and its users making for a lively pedestrian environment. Further, there are essentially no patio facilities on this block with the exception of one small table with three chairs in front of a convenience store and still very little public art (only 1 sculpture on the north side).

Figure 31: New Way-Finding Signage on Robson Street



The private open space located at the courtyard on the 1000 block of Robson Street along with new way-finding signage and street vendors should be considered valuable strengths of this block in potentially fostering the safety, comfort, enjoyment and navigability of the street for pedestrians. However, the absence of mid-block crossings, corner bulges, accessibility or safety enhancements at intersection crossings, patio facilities and a shortage of public art represent the many limitations of this block in providing for the safety, comfort, enjoyment and navigability of the street for pedestrians and therefore there remains some potential for improvements to the pedestrian realm on this block.

Retail Stores/Professional Businesses:

The tenant mix on the 1000 block is similar that of the 1100 block with a high proportion of fashionable clothing and apparel stores (6 north side, 11 south side) as well as some jewellery/watch/glasses stores and shoe stores. There were no significant findings to report on regarding the tenant mix on this block.

5.3.1.4 Observational Checklist Summary

Overall, the observational checklists proved to be a valuable tool in conducting the evaluation of the current design of Robson Street and was able to provide valuable insights into the strengths and limitations of Robson Street in fostering a safe, comfortable, enjoyable and navigable pedestrian environment and in identifying the key areas for improvement on the street. In general, the pedestrian realm appears to be

unorganized on Robson Street with a disconnect between blocks of amenities and designs. There is also generally a lot of clutter (i.e. sandwich boards and other street furniture) on the street which impacts the mobility of pedestrians, and the condition of the sidewalks and some street furniture is not very good which affects the safety, comfort and enjoyment of the street. Further, with some of the highest pedestrian volumes in the City, the pedestrian capacity (in terms of effective sidewalk widths) on its sidewalks is exceedingly low for the most part, but particularly on the 1000 and 1100 blocks. Many important pedestrian amenities are missing on all blocks which significantly limits Robson's ability to foster a pedestrian environment which is safe, comfortable, enjoyable and navigable.

There are, however, some redeeming qualities too with regards to Robson's current design which enable it to have the potential to become a great street for pedestrians. For instance, important great street and pedestrian amenities are present on this street such as street trees, street and pedestrian lighting (potential), way-finding signage, attractive mix of high-end retailers as well as facilities for non-pedestrians (i.e. cyclists and transit users). There are also some features which have great potential to benefit the pedestrian environment if appropriately addressed, including the private open spaces, and other existing street furniture. Below are summaries of the key strengths and limitations of each block in providing for a safe, comfortable, enjoyable and navigable pedestrian environment.

1200 Block – Jervis to Bute

The key strengths of the current design of this block are: 1) wide effective sidewalk widths which can adequately accommodate current pedestrian volumes (comfort, enjoyment and navigability); 2) plentiful patio facilities which encourages sociability on the street (comfort and enjoyment); 3) audible signals at western intersection for persons with vision impairments (safety and navigability); 4) unique tenant mix compared to the other blocks (enjoyment); 5) plenty of sandwich boards/signs which enhance animation of the streetscape and peaks interest of passing pedestrians (enjoyment); and 6) bike racks and bus shelters which promote travel mode diversity (comfort). These strengths help to attempt at contributing to a pedestrian environment which is safe, comfortable, enjoyable and navigable for its users, however, they are not able to do so completely because of other limitations in the current design which hinder it.

The key limitations of the current design of this block are: 1) no benches or public seating hindering opportunities to relax (comfort and enjoyment); 2) no public washrooms (safety and comfort); 3) sidewalk paving materials are low quality and in relatively poor condition (comfort, enjoyment and navigability); 4) fewer street trees which limits shade opportunities and detracts from the aesthetics (comfort and enjoyment); 5) sandwich boards which can also be an eyesore and take up sidewalk space for walking (comfort and navigability); 6) no mid-block crossing which affects pedestrian mobility and safety (safety and navigability); 7) no vendors or performer (enjoyment); 8) no way-finding signs (comfort and navigability) and 9) no public open space (comfort and enjoyment). The limitations of the current design on this block represent the many areas for improvement required to the pedestrian environment in order to ensure that it can foster the safety, comfort, enjoyment and navigability of pedestrians at a high level towards becoming a great street. The limitations in its design appear to out-weigh the strengths of its design for pedestrians and as such would appear to require enhancements to the pedestrian environment in order to improve the functionality of Robson Street and help it to be a great street.

1100 Block – Bute to Thurlow

The key strengths of the current design of this block are: 1) plentiful and large street trees (comfort and enjoyment); 2) presence of planters which enhance aesthetics of streetscape although can impede pedestrian mobility too (comfort and enjoyment); 3) way-finding signage (comfort and navigability); 4) bike racks and bus shelters (comfort); and 5) an attractive mix of high-end retail which attracts many visitors (enjoyment). The presence of many large street trees, planters and way-finding signage in particular illustrate that there has been a conscious effort to create a functional and pleasant pedestrian environment and are considered strengths in the current design. However, as with the 1000 block, there remain numerous limitations in the current design in providing a pedestrian environment which is safe, comfortable, enjoyable and navigable and which hinder its ability to be a great street.

The key limitations of the current design of this block are: 1) very narrow effective sidewalk widths (safety, comfort, enjoyment and navigability); 2) no benches or public seating (comfort and enjoyment); 3) no public washrooms (safety and comfort); 4) too many sandwich boards (safety, comfort and navigability); 5) sidewalk condition and paving materials generally poor (safety, comfort, enjoyment and navigability); 6)

inadequate street and pedestrian lighting design (safety, comfort, enjoyment and navigability); and 7) no mid-block crossings, corner bulges or enhanced safety measures for persons with vision/hearing impairments. The above limitations indicate significant restraints on the current design of the 1100 block of Robson Street to provide a pedestrian environment which is safe, comfortable, enjoyable and navigable and also detracts from it being considered a great street. Therefore, they can be considered areas for potential enhancement to the pedestrian environment and if incorporated could help Robson to become a great street. This block also has a potentially valuable asset in a private covered open space on the north side which if redesigned could become a public open space with benches and public washrooms and could be a social centrepiece of this block. However, there would be political and economic factors in the way which could slow any redevelopment plans of the space and its current design is not usable and is more of a potential strength of the block. Further, it is ultimately up to property owners and political decision makers as to the feasibility of transforming such a space and shape it to better suit the needs of pedestrians.

1000 Block – Thurlow to Burrard

The key strengths of the current design of this block are: 1) good sidewalk design and condition for a large section on the south side (comfort, enjoyment and navigability); 2) way-finding signs (comfort and navigability); 3) street vendors/artists (enjoyment); 4) bike racks and bus shelters (comfort); 5) high-end fashion retailers which attract high number of pedestrians (enjoyment); and 6) innate ability to attract highest pedestrian volumes in the City. Similar in character and design to the 1100 block, the 1000 block of Robson Street also has similar strengths in its current design which aid in trying to foster a safe, comfortable, enjoyable and navigable pedestrian environment, however, it too has several limitations in its design which impede its functionality and attractiveness to pedestrians. Further, there are some elements incorporated in its design that are neither a strength nor a limitation because they are not well designed, or are not currently being used for the proper purposes which therefore need addressed too.

The key limitations of the current design of this block are: 1) no public benches or seating (comfort and enjoyment); no public washrooms (safety and comfort); 3) narrow “amenities boulevard” (i.e. where street trees and other street furniture are placed); 4) inadequately designed street and pedestrian lighting (safety, comfort, enjoyment and navigability); 5) no mid-block crossings, or corner bulges (safety, comfort and

navigability); 6) no crossing safety enhancements for persons with vision/hearing impairments (safety, comfort and navigability); and 7) no patio facilities (comfort and enjoyment). Even with some of the strengths noted in its design these limitations in the current design of the 1000 block of Robson Street negatively affect its ability to truly foster a safe, comfortable, enjoyable and navigable pedestrian environment and consequently detract from the functionality of the street for its primary users and its potential as a great Street for the City of Vancouver. Therefore, they should be addressed as areas for possible enhancement which if considered appropriately could remedy this and significantly improve the functionality and quality of Robson Street.

In summary each of the three study blocks has strengths and limitations in its current designs. However, in all three cases the key limitations out-weigh the key strengths in their design for pedestrians and in their ability to be considered a great street and therefore there remain many areas for improvement. The main areas for enhancement in the design of Robson Street to foster a pedestrian environment which is safe, comfortable, enjoyable and navigable are: 1) public seating; 2) public washroom facilities; 3) sidewalk widths; 4) sidewalk material/design and condition; 5) street and pedestrian lighting design; 6) mid-block crossings and corner bulges; 7) patio facilities (1100 and 1000 blocks); 8) street vendors and entertainers; 9) sandwich boards; 10) intersection crossing safety; and 11) public open spaces (i.e. redevelop existing locations with potential opportunities on 1100 and 1000 blocks). In order for Robson Street to become a great street and to be able to foster the needs of pedestrians (safety, comfort, enjoyment and navigability) these identified limitations and subsequent areas of improvement need to be addressed to be able to make Robson Street more functional and attractive, and more valuable as a asset for the City. The following section details observations made during the 2010 Olympic Winter Games of pedestrian corridors on Robson Street.

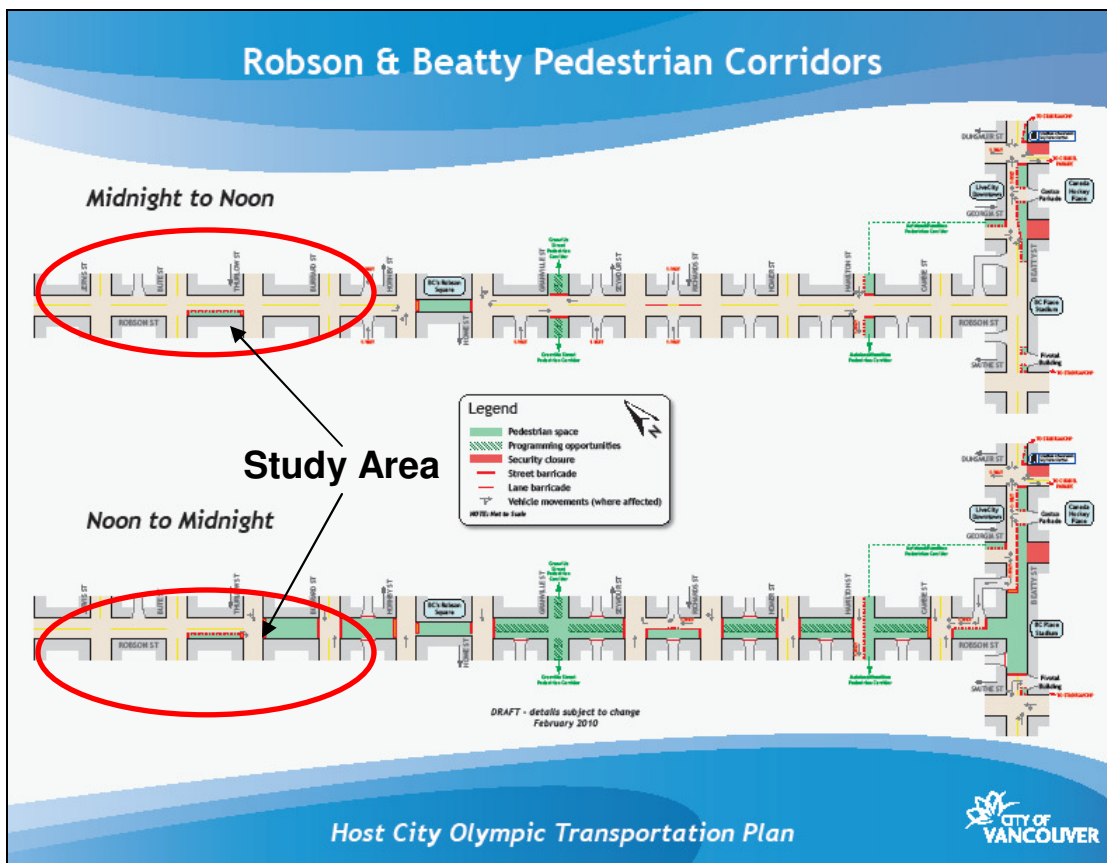
5.3.2 A Vision for Robson Street: a look at Robson as a Pedestrian Corridor during the 2010 Olympic Winter Games

As part of the Olympic Transportation Plan for the 2010 Winter Olympic Games it was proposed that significant portions of Robson Street would be closed to automobile traffic during certain times of the day to accommodate the excess increase of pedestrians, and included in it were two blocks from the research project study area. As a result, observations during the operation of this temporary “pedestrianization” of

Robson Street were conducted to gain a sense of the potential look and feel of a traffic-free Robson. It was understood that the Olympics are an exceptional case and its circumstances will likely not be duplicated and therefore may not be entirely realistic (given the extreme influx of visitors), however, it was an opportunity to witness a possible vision for Robson Street.

Observations of this “pedestrian corridor” were made during the Olympics in order to develop an understanding of its operations and its usage. The details of this pedestrian corridor on Robson Street for the Olympics are shown in **Figure 32**.

Figure 32: Robson Street Olympic Pedestrian Corridor



Source: City of Vancouver - <http://olympichostcity.vancouver.ca/pdf/Pedestrian-Corridors.pdf>

As shown in **Figure 32**, this pedestrian corridor plan affected primarily the 1000 block of Robson Street which was completely closed to vehicle traffic between noon and midnight, however, the parking lane on the south side of the 1100 block of Robson Street was also closed to vehicles lending the space to pedestrian use during all hours

throughout the Olympics. Observations were made through photo documentation on Monday February 22, 2010 and were focused on the 1000 block of Robson Street.

Figures 33 – 38 below illustrate the operation of this pedestrian corridor and highlights the level of usage and the potential in reducing automobile traffic on Robson Street.

Figure 33: View West on Robson from Burrard Street of Road Closure



Figure 33 illustrates the immense popularity of this pedestrian corridor during the Olympics with pedestrians taking up the entire street cross-section from building face to building face. It was particularly surprising just how well-used this stretch of the pedestrian corridor on Robson was during the observations because of its location to the west of the majority of the Olympic related festivities in the downtown core (i.e. Robson Square with its ice-rink and concert venues; Granville Street with its public art displays and street entertainment; and other Live City venues to the east) and therefore it was not as centrally located. This figure also shows the operational means of conducting this road closure with the use of traffic cones, barrels, and barriers as well as traffic authority personnel to prevent vehicles from entering. A pedestrian volume count was briefly attempted during these observations, however, it was quickly realized that it would be impossible to collect accurate data with the sheer volume of pedestrians using the street unless more resources were enlisted.

Figure 34: "Impromptu Seating" on Robson Street



These observations further illuminated the limitations of Robson Street in providing for the comfort and enjoyment of pedestrians, as **Figure 34** illustrates two groups of people creating impromptu public seating out of a curb and a bus shelter as they appear to have been seeking a place to relax and watch the people pass by.

Figure 35: View to West Showing Volumes

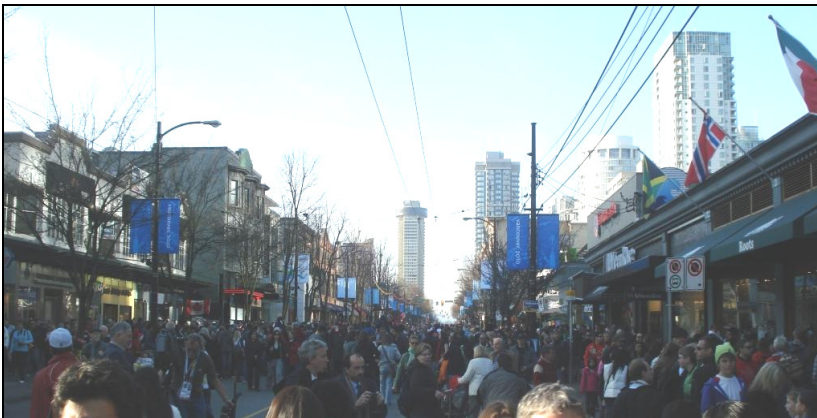


Figure 35 illustrates the high volume of pedestrian use on this pedestrian corridor with a very high density of people on the 1000 block.

Figure 36: Street Entertainers



A multitude of street performers and vendors were present on Robson Street during the Olympics such as the musicians shown in **Figure 36** which added to the liveliness of the street and helped create engagement between pedestrians on the street fostering the enjoyment of pedestrians. **Figure 37** below shows a “birds-eye view” of another street performance (dancers) which captivated the attention of pedestrians on the street and added to the liveliness and overall enjoyment of pedestrians on the street.

Figure 37: Street Performance with Large Crowd



Figure 38 shows a “birds-eye view” to the west on Robson and again illustrates just how popular this pedestrian corridor was during the Olympics. It really demonstrates the type of character and feel similar to that of pedestrianized streets in Europe.

Figure 38: "Bird's-Eye View" to West on Robson



Overall, the observations of the pedestrian corridor on Robson Street during the Olympics demonstrated its potential as a pedestrianized street and represents a vision of what a possible future incarnation of Robson Street could be. It revealed the potential of Robson Street as a great street with its ability to attract people and to encourage people to stay and enjoy the amenities of the street and the street space itself rather than just for the express purposes of walking through or for shopping. As noted, this observational case study was not intended to represent a typical scenario of operation of Robson Street closed to vehicles as a pedestrian corridor as it is recognized that the Olympics presented exceptional circumstances whereby there were higher volumes of pedestrians than normal. However, these observations were meant to illustrate a vision of a pedestrianized Robson Street and highlight its true potential as a great street.

As much as these observations of the 1000 block demonstrated the success of this pedestrian corridor during the Olympics the limitations of the street in providing a safe, comfortable, enjoyable and navigable pedestrian environment were perhaps even more pronounced than during the observational checklist. For instance, the lack of public seating facilities caused some pedestrians to seek seating on curbs, storefront ledges, bus shelters and even the street itself thereby demonstrating the limitations of the street to provide for the comfort and enjoyment of pedestrians. Further, although there were an abundance of street performers to entertain pedestrians on the street there were no additional food vendors operating on the street during the observations which highlighted the limitations of the street further in providing for the comfort and enjoyment of pedestrians. It was not obvious whether the lack of any public washroom facilities on the street affected pedestrians comfort and enjoyment of the street, however, with such a high volume of people using the street it can only be assumed that

this was an issue as well unless proprietors allowed non-paying customers to use their washrooms due to the Olympics. Lastly, it was evident during these observations that the lack of any public open space to “hang around” in and enjoy the street caused people to stop in the middle of the street and sidewalks impeding through pedestrian traffic.

Having said that, it was still apparent that people were enjoying themselves on the street even in the absence of such pedestrian amenities, and this trial pedestrianization was a great success, and Robson Street really seemed like a great street. Perhaps this can serve as evidence that people enjoy a pedestrianized Robson Street and that Robson has the potential to become a great street under the right circumstances and with the right pedestrian amenities.

6: Summary

The following sections provide brief summaries of each of the analytical methods/research objectives described in Section 5 used to explore the central research questions outlined for this study. It is intended to highlight some final summary thoughts from each analysis to be utilized to inform the conclusions and recommendations in Section 7.

6.1 Robson Street Level of Use Summary

This analysis was intended to provide insights into the level of use of Robson Street by pedestrians and automobiles in order to understand user demands of the street and to subsequently assess user provisions for pedestrians and automobiles to satisfy research objective 1. Through comparing their respective levels of use during daytime peak periods on each study block this data could be used in conjunction with later analyses of Robson’s provisions for automobiles (i.e. on and off-street parking and road cross-sections) and its current design for pedestrians. The primary methods used for this analysis were pedestrian and automobile volume data which were compared against one another to establish user demands, as well as on and off-street parking

supply and demand which was used to illustrate automobile provisions and assess the feasibility of removing on-street parking from Robson.

This analysis has shown that pedestrians are by far the primary users of Robson Street compared to automobiles (and passengers) with pedestrian to automobile and passenger ratios of 2.27:1 (1200 block East of Jervis); 3.10:1 (1100 block East of Bute); and 4.13:1 (1000 block East of Thurlow). Further, while automobiles typically experience peak volumes during the morning and afternoon peak hour commuter rushes (which is why the City of Vancouver only notes AM and PM peak hour volumes), pedestrian volumes on each study block tended to steadily increase throughout the day and remained consistently busy throughout the daytime peak period (10:00 – 18:00). Additionally, although pedestrian volumes on these study blocks are consistently the highest (or amongst the highest) in the City of Vancouver there have been some fluctuations in the pedestrian volumes on these blocks over the past few study years, however, it was also noted that vehicle volumes have decreased on Robson Street as much as 20% during the AM and PM peak periods on some study blocks. This suggests that pedestrian usage has remained constant on Robson Street, while automobile usage has experienced a decline becoming an even lesser prominent user group.

On and off-street parking supply and demand was determined to supplement automobile volume data to illustrate the level of use of Robson Street by automobiles, as well as to show the prevalence of automobile amenities on or near Robson Street. This analysis was also used to demonstrate the feasibility of removing on-street parking from Robson Street if necessary in order to accommodate wider sidewalks and other pedestrian amenities. The most significant findings here were the sheer quantity of off-street parking supply located within close proximity to Robson Street (i.e. 1967 stalls within a 3-4 minute walk) and the exceptionally low demands witnessed (1072 vehicles or 0.54 occupancy rate) during the daytime peak period. This is significant due to the fact that there are only 91 on-street parking stalls within the study area which if removed/displaced, would appear to be easily accommodated by the surplus of off-street parking nearby. In addition, on-street parking demands were also lower than expected at approximately 62% during the daytime peak period (10:00 – 18:00) for all study blocks combined, with the 1100 block (East of Bute) being the busiest of the blocks. This relatively low on-street parking demand seems to suggest that on-street parking may not be as important as merchants perceive it to be, particularly when considered with the

amount of off-street parking available nearby. For instance, as mentioned previously William Whyte demonstrated in his 1984 study of Lexington Avenue in New York, while merchants like to think that on-street parking provides the opportunity for a high turnover of shoppers, it in fact did not, as most on-street parkers stayed for long periods of time leaving little room for high turnover (Whyte, 1984).

Overall, the analysis of the levels of use of Robson Street have revealed that pedestrians unequivocally demonstrate the greatest demands (by volume) of Robson Street, and as such should be considered the priority when considering the function and design of the Street. While automobiles represent the next highest user group on Robson Street their numbers are insignificant compared to pedestrians, and as noted their provisions, in terms of on and off-street parking appear to be disproportionate (in favour of automobiles) to their demands. This supplements the analysis of the current design of Robson Street in section 6.3 in determining whether provisions for pedestrians are appropriate given their demands compared to automobiles and whether Robson Street requires enhancements to its pedestrian environment to foster the safety, comfort, enjoyment and navigability of pedestrians and to help it become a great street. **Figure 39** below demonstrates the high level of use of Robson by pedestrians.

Figure 39: High Pedestrian Demands on Robson Street



6.2 Robson Street Performance Summary

This analysis aimed at achieving research objective 2 by looking at the current performance of Robson Street in fostering a safe, comfortable, enjoyable and navigable pedestrian environment, as well as attempting to assess the future potential of Robson in achieving such goals and become a great street. The primary method used to

conduct this analysis was through e-mail based interviews with key informants from a range of backgrounds including local professionals in urban design, planning, engineering and landscape architecture, as well as a retail consultant, public space advocates, academics, and business managers on Robson Street. By interviewing such a diverse range of individuals it was possible to develop well-rounded and informed conclusions about the current performance of Robson Street for pedestrians and identify what the main areas of improvement were to the pedestrian environment and the means of ameliorating them. Further, it was helpful in assessing the potential of Robson Street to improve its functionality and become a great street.

This analysis revealed that there are many potential areas of improvement regarding the safety, comfort, enjoyment and navigability of pedestrians on Robson Street and that in its current form and function, Robson Street is merely a “good street” and requires various improvements in order to help it become a great street. For instance, generally, the personal safety of pedestrians was regarded to be acceptable (i.e. at night time, or from muggings etc.) whereas the physical safety of pedestrians could be improved as respondents identified narrow sidewalks, and a lack of mid-block crossings (amongst other things) as impediments to their safety at the moment. Pedestrian comfort on Robson Street was generally regarded as the aspect of its pedestrian environment which required the most attention. Namely, Robson simply lacks many of the key amenities which foster pedestrian comfort, particularly there are no benches or public seating (i.e. opportunities to relax), no public washrooms, narrow sidewalks, no gathering areas or areas of respite to name a few. **Figure 40** illustrates both the narrow sidewalks given the high pedestrian volumes which can negatively affect pedestrian comfort, as well as create safety hazards by potentially forcing pedestrians to walk on the street.

Figure 40: Narrow Sidewalks



With regards to pedestrian enjoyment on Robson Street, most agreed that it was a pretty enjoyable and lively street because of all of the people on the street, however, there were elements such as public art, cafe/patios, architecture, areas for socialization others that were either lacking or inadequate which would help make it a more enjoyable street for pedestrians. Navigability of the street for pedestrians was an area of concern for respondents, more so because of uneven paving surfaces, sidewalks cluttered with sandwich boards, and again narrow sidewalks, all of which impede pedestrian mobility and decrease the navigability of the street. Elements such as way-finding signs help increase the ability of pedestrians to find where they want to go and is a very useful recent addition to the street.

As mentioned, overall, the sentiments were that Robson Street was not yet a great street but that it certainly has the potential to become a great street if enhancements are made to the pedestrian environment and public realm. It has many great street features which can be built upon such as its small-scale buildings, large street trees, walkable scale, its ability to continuously attract people, and its many shops and services which attract them and the fact that it is centrally located in downtown Vancouver position it well to become a great street. Some respondents noted that currently, rightly or wrongly, the street functions for shopping only and from a retailers perspective it is already a great and successful street due to the revenues generated and rental rates commanded, but that this also makes it one dimensional working against its potential as a great street. This suggests that in addition to requiring enhancements to its pedestrian environment, Robson's functions/uses need to be diversified, and a greater mix of retailers should be encouraged on the street (i.e. rather than just fashionable clothing and shoe stores). Further, functionally it is lacking for its

primary users (pedestrians) and therefore, before it can become a great street it would seem numerous improvements regarding its pedestrian design are required. These items are discussed further, in section 6.3 which summarizes the analysis of Robson's current design.

6.3 Robson Street Design Summary

This analysis was intended to illustrate the key strengths and limitations of the current design of Robson Street to foster a safe, comfortable, enjoyable and navigable pedestrian environment as well as its potential as a great street through the use of an observational checklist which inventoried the various features and elements which contribute to a quality pedestrian environment and great street. As mentioned previously, there were both many strengths and limitations observed in Robson's current design for pedestrians and as a great street for each study block, however in all cases there were far more limitations to its design than there were strengths. As such, limitations have been regarded as possible areas of improvement where enhancements could be made to improve the functionality and quality of the pedestrian environment and aid Robson in becoming a great street.

The most prevalent limitations in the design of Robson Street were regarding the lack of or poor quality of important pedestrian amenities which promote a safe, comfortable, enjoyable and navigable pedestrian environment. Namely, these included: no benches and/or public seating (comfort/enjoyment); no public washroom facilities (safety/comfort); narrow sidewalks (safety/comfort/enjoyment/navigability); low quality sidewalk design and condition (safety/comfort/enjoyment/navigability); poor quality street and pedestrian lighting (safety/comfort/enjoyment/navigability); no mid-block crossings or corner bulges (safety/comfort/navigability); lack of patio facilities (comfort/enjoyment); no public open spaces (comfort/enjoyment); too many sandwich boards (safety/navigability); few street vendors/entertainers (enjoyment); and, no safety enhancements at intersection crossings for visually/hearing impaired (safety/comfort/navigability). Some of these limitations are documented in **Figures 41 – 43** below.

Figure 41: Safety, Comfort, Enjoyment and Navigability Issues – Narrow, Uneven and Poor Quality Sidewalk



Figure 42: No Mid-Block Crossings – Limits Safety and Navigability of Pedestrians



Figure 43: No Public Seating, Pedestrians Forced to Lean Against Uncomfortable Ledges



As shown in the above figures, these limitations in the current design of Robson Street have a negative effect on the pedestrian environment and inhibit its ability to be safe, comfortable, enjoyable and navigable for pedestrians thereby, detracting from it

being considered a great street. Existing strengths in Robson's design are mostly due to its physical dimensions, such as the scale of the street and its buildings, but also due to its central location downtown, its high quality of shops and services, its large street trees, and its many and varied storefronts, which are "the bones" of a great street and which give it the potential to become a great street. However, a street that does not currently function well for its primary users cannot be considered a great street and therefore, the limitations to Robson's current design need to be addressed if it indeed ever wants to be a street that is great in general, but more specifically, one that is great for pedestrians.

As noted in **Figure 43** it was observed that there were no benches or public seating on these study blocks either suggesting that the lack of public seating on Robson Street is a limitation in its current design to foster particularly the comfort and enjoyment of pedestrians and is an area of pedestrian design which requires enhancement. Moreover, it is alarming that with the highest pedestrian volumes in the City, the 1000 block of Robson Street hosting over 25,000 pedestrians during the daytime peak period does not have any public washroom facilities. This is another limitation in the current design of Robson Street to foster pedestrian comfort and pedestrian safety and which should be given attention. Lastly, like the 1100 and 1200 blocks, the 1000 block does not have any mid-block crossings, and similar to the 1100 block, it does not have any corner bulges or accessibility or safety enhancements at intersection crossings.

7: Conclusion & Recommendations

This research project set out to determine the strengths and limitations of Robson Street's pedestrian-oriented design in providing a safe, comfortable, enjoyable and navigable pedestrian environment and in broadening its functionality and asserting it as a great street for the City of Vancouver. As the busiest street for pedestrians and the most valuable street in Vancouver it was found that Robson Street was underperforming in virtually all aspects of its design for pedestrians and great street features and had inadequate amenities for a street of such importance. The limitations of its design as summarized in the previous section demonstrate that there are numerous potential areas where Robson could improve to help increase its safety, comfort, enjoyment and

navigability for pedestrians, which in the process would increase the streets functionality and efficiency, particularly for pedestrians, and which would help it to become a greater street and a public realm asset for the City of Vancouver.

Currently, the existing street cross-section does not allow for the accommodation of many of the needed enhancements to the pedestrian environment due to a lack of space on the sidewalks for them. The sidewalk right-of-way in most cases was too narrow to comfortably accommodate even the pedestrian demands throughout the daytime peak periods and therefore, amenities such as benches, public washrooms, public open spaces, cafe's/patios and several other items are unable to be placed within it. As a result, any enhancements to improve the pedestrian environment would likely require the widening of the sidewalks to both create more walking space for pedestrians, and to be able to incorporate these additional pedestrian amenities. This would require altering the existing street cross-section by removing on-street parking (in certain sections) to accommodate wider sidewalks and subsequently any additional pedestrian amenities.

William Whyte recommends minimum sidewalk widths between 17ft (5.18m) and 25ft (7.62m) for "main streets and avenues in high density downtowns" (Whyte, 1984). Whyte states that "Given strong pedestrian flows the sidewalks would be wide enough so that people could walk freely most of the time; narrow enough that there a nice hustle and bustle and there would be room for trees and other amenities" (Whyte, 1984, p.229). Robson Street in this case would certainly qualify as a "main street" in one of the most dense downtowns in North America, and therefore should probably qualify at the higher end of Whyte's recommendation at 25ft (7.62m). With that said, current sidewalk widths on Robson average range between 3m – 4.5m (i.e. 9.84ft – 14.76ft.) which is well below Whyte's suggested minimum widths. Therefore, it would seem that sidewalks on Robson Street could definitely do with some widening.

It was also the goal of this research project to determine whether there was a discrepancy between user demands and user provisions on Robson Street between pedestrians and vehicles. As shown in Section 5.1, pedestrians are by far the more prominent users of Robson Street compared to automobiles with pedestrian to automobile (driver and passenger) ratios of from 2.27:1 (1200 block) to 3.10:1 (1100 block) to 4.13:1 (1000 block). Further, as shown in Sections 5.2 and 5.3, provisions for pedestrians are either lacking or of poor quality and in poor condition and therefore do

not meet the demands and needs of pedestrians. Provisions, for automobiles on the other hand, such as on and off-street parking and travel lanes were found to be more than adequate in most cases and in the case of off-street parking were abundant. Thus, the research has shown that there indeed is a discrepancy between user demands and user provisions on Robson Street between pedestrians and automobiles which needs to be addressed in order to improve the functionality/efficiency of the street for pedestrians and make it a great street for the City of Vancouver.

Based on the aforementioned analyses and summaries, the following recommendations have been made regarding possible enhancements to Robson Street's pedestrian environment in order for it to better foster the safety, comfort, enjoyment and navigability of the street for pedestrians, improve its overall functionality, and help to assert it as a great street for the City of Vancouver:

Pedestrian Safety

1. Install enhanced pedestrian lighting (led) and higher quality design lighting at optimal locations on each block to improve visibility for pedestrians and drivers, and a more aesthetic street furniture design (Pedestrian lighting should be bright but inviting (i.e. LED lighting) to foster the safety, comfort and navigability of pedestrians but should also be designed to be playful and stylish allowing for pedestrian enjoyment as well during the evenings on Robson Street);
2. Install mid-block crossings on 1100 and 1000 blocks where blocks are longer and pedestrian volumes are highest;
3. Install corner bulges at intersections to reduce crossing distances as well as provide space for landscaping and public open spaces for gathering or benches;
4. Regulate placement of "sandwich boards" and other sidewalk advertisements or displays so as not to impede pedestrian mobility; and
5. Incorporate enhanced crossing safety features (i.e. audible signals, textured paving etc.) at intersections (and mid-block crossings) for visually/hearing impaired

Pedestrian Comfort

1. Remove on-street parking (at strategic locations on the 1100 and 1000 blocks) to allow sidewalk widening, corner bulges and mid-block crossings, subsequently creating space for other pedestrian amenities;
2. Install benches and tables and other forms of public seating on all blocks in appropriate locations to create opportunities to relax;
3. Install public washrooms on at least one block, ideally somewhere on the 1100 block for centrality purposes (i.e. at private open space area);
4. Create areas of respite where appropriate such as the areas identified on the 1100 and 1000 blocks for areas to rest and to encourage social interaction;
5. Repave sidewalks so that they are even and consistent in design; and
6. Create more space for patios to encourage interaction between pedestrians and businesses

Pedestrian Enjoyment

1. Install high quality design sidewalk paving materials for a more aesthetically pleasing pedestrian environment at the level of such an important street;
2. Create pockets of public open space (areas of respite) either from existing private open spaces or from corner bulges and/or areas with widened sidewalks to enhance pedestrian enjoyment
3. Install more public art where appropriate to engage the eyes of pedestrians; and
4. Allow for more street vendors and entertainers, particularly food vendors to create a more interesting and engaging street space;

Pedestrian Navigability

1. Install better quality lighting both for street lights to improve driver visibility on the road, and for pedestrian lighting to improve visibility of pedestrians on sidewalks.

2. Enhance way-finding signage to incorporate a retail directory of businesses on Robson and to direct pedestrians to areas of interest; and
3. Repave sidewalks and amenity boulevards to create a uniform and even walking surface and reduce tripping hazards;

Become a Great Street

1. Over time, develop a unique street furniture design which represents Robson Street shopping area and identifies it as a special area of the City and increase its importance;
2. Install gateway or entrance to Robson Street area to define area and create a sense of importance;
3. Install high quality design street furniture and paving to highlight the importance of Robson Street;
4. Renovate buildings which are out of date or in poor condition to enhance the architecture and improve the visual quality of the streetscape; and
5. Make enhancements to the pedestrian environment as discussed above

If such enhancements are made to the pedestrian environment of Robson Street it will become possible to improve the functionality of the street and hopefully help direct it towards becoming a great street for the City of Vancouver rather than simply a good street. Therefore, although Robson Street remains a vital and thriving commercial street for the City of Vancouver and its surrounding region, and it is still one of the, if not the busiest street for pedestrians in Vancouver, it is apparent that pedestrian needs are not currently being met, particularly to the standards of a “great street”. Robson Street has the potential to become a great street but it would seem that in its current form and function it is limited to being a “good street” only. I have learned however, throughout the course of conducting this research that there is no one specific formula as to how to make a great street and not all ingredients of pedestrian design are appropriate for every street and so Robson Street needs to be considered in context when making any potential enhancements.

In summary, Robson Street's economic importance to the City of Vancouver should give merit to warranting such improvements as they would be considered investments into the Street's future. Its uniqueness and historical significance to the City should also help warrant continued investment into the well being of the street and for its primary users. Further, as the key pedestrian route in downtown Vancouver, Robson's importance as a "pedestrian artery" should be further supported and enforced by providing more and better pedestrian amenities. Robson Street is possibly the most important street in the City of Vancouver yet it is not necessarily so obvious. It needs to be taken better care of and its design and function appropriately addressed in order to reflect its importance and so that it too can become known as one of the great streets of the world.

Appendix A1: Group 1 Response Summary Table

Question		# of Responses	Response Frequency	Summary Comments
How often do you visit Robson Street?		8	A) every day – 0 B) more than twice per week – 3 C) once a week – 1 D) once a month – 1 E) a few times a year – 3 F) never – 0	This question was directed at gaining a sense for the respondents familiarity/interest with Robson Street
What are your main reasons for visiting Robson Street?		8	(Multiple responses allowed) A) shopping – 7 B) dining – 3 C) leisurely walk – 3 D) commuting (pedestrians) – 2 E) people watching – 3 F) for work – 0	The most frequent response given for visiting Robson Street was by far for shopping
How well does Robson Street currently operate to serve the needs of pedestrians in the following elements?	Safety:	8	1) very well – 0 2) well – 4 3) medium – 4 4) poor – 0 5) very poor – 0	Most respondents felt that Robson currently operates medium to well for pedestrian safety
	Comfort:	8	1) very well – 0 2) well – 3 3) medium – 4 4) poor – 0 5) very poor – 1	Most respondents felt that Robson currently operates medium to well for pedestrian comfort, and one thought it was very poor
	Enjoyment:	8	1) very well – 1 2) well – 3 3) medium – 2 4) poor – 2 5) very poor – 0	A wide range of responses given on the enjoyment for pedestrians on Robson Street. People feel it is enjoyable for shopping mostly
	Navigability:	8	1) very well – 0 2) well – 4 3) medium – 4 4) poor – 0 5) very poor – 0	Most respondents felt that Robson currently operates medium to well for pedestrian navigability. Many felt that high pedestrian volumes can hamper its navigability. Some felt way-finding could be improved
What is your sense of Robson's overall performance for pedestrians?		4	1) very well – 0 2) well – 0 3) medium – 3 4) poor – 0 5) very poor – 0	General sense that Robson is currently performing at mediocrity to poor levels for pedestrians
What % of Robson Street's visitors would you estimate derive from automobile traffic?		4	A) Less than 10% - 0 B) 10 – 25% - 4 C) 25 – 50% - 0 D) 50 – 75% - 0 E) Over 75% - 0	A consensus was reached that automobile traffic represents approximately 10 – 25% of Robson Street's visitors
In your estimate, what % of Robson Street's visitors arrive as pedestrians?		4	A) Less than 10% - 0 B) 10 – 25% - 0 C) 25 – 50% - 2 D) 50 – 75% - 2 E) Over 75% - 0	Interestingly, two City of Vancouver planners differed in their response to this question. Although split between C and D, pedestrians were felt to be the highest mode share by far
In your estimate, what % of Robson Street's visitors arrive from transit?		4	A) Less than 10% - 0 B) 10 – 25% - 3 C) 25 – 50% - 1 D) 50 – 75% - 0 E) Over 75% - 0	Interestingly, the sole response for C was from a TransLink employee, while City officials felt that fewer people arrive by transit
How important is sidewalk width to the general comfort of pedestrians on commercial shopping streets?		3	1) very important – 3 2) important – 0 3) medium – 0 4) not so important – 0 5) not important at all – 0	Generally, respondents believed that (wider) sidewalk widths were very important to the comfort of pedestrians, but that sidewalks which are too wide are not good because they do not allow for the "buzz" of activity of great streets
How important are opportunities to relax (i.e. benches/seating, tables, open spaces) in fostering the general		8	1) very important – 5 2) important – 1 3) medium – 1	Most respondents believed that providing opportunities for pedestrians to relax was very important and that Robson Street

Question	# of Responses	Response Frequency	Summary Comments
comfort of pedestrians on commercial shopping streets?		4) not so important – 0 5) not important at all – 0	currently provides no (or inadequate) opportunities to relax in the public realm. More needs to be done here (adding benches, more cafés/patios “spilling out” onto street/sidewalk) to make Robson a great street
How important are interesting places/spaces to the overall character/design and enjoyment of a commercial shopping street for pedestrians?	3	1) very important – 3 2) important – 0 3) medium – 0 4) not so important – 0 5) not important at all – 0	All respondents felt that the presence of interesting places or spaces (i.e. public open spaces, water features etc.) on a commercial street were very important for pedestrian enjoyment
How important is street furniture in creating interesting places/spaces on commercial shopping streets for pedestrians?	3	1) very important – 2 2) important – 0 3) medium – 0 4) not so important – 1 5) not important at all – 0	One respondent stated that “street furniture that is regional (in design) can make the place special” and therefore enjoyable to pedestrians and a very important aspect of design
How would you rate Robson’s “liveliness” for pedestrians?	8	1) very good – 0 2) good – 4 3) medium – 4 4) poor – 0 5) very poor – 0	Respondents felt that the “liveliness” for pedestrians on Robson Street is medium to good. Although the liveliness is caused by the high volumes of pedestrians themselves and so some felt improvements could be made to liveliness of the street
How important is strategic placement of street furniture in order to ensure navigability of the sidewalk for pedestrians?	8	1) very important – 5 2) important – 3 3) medium – 0 4) not so important – 0 5) not important at all – 0	All respondents felt strategic placement of street furniture (i.e. linear alignment in tree boulevard) was important to very important for pedestrian navigability on commercial streets
How important is streetscape legibility for pedestrians?	8	1) very important – 4 2) important – 2 3) medium – 2 4) not so important – 0 5) not important at all – 0	Half of the respondents thought streetscape legibility was very important while the other half though it was medium to important.
How would you rate Robson’s sidewalk widths in terms of accommodating pedestrian?	7	1) very good – 0 2) good – 1 3) medium – 4 4) poor – 2 5) very poor – 0	General consensus was somewhere in the middle. Some felt that it was very “tight” at times and variation in widths in certain sections would be nice. In addition, some felt that sidewalks need to be wider in order to accommodate additional activities/amenities. Others still found they were adequate in width.
In your opinion, what would the ideal future Robson Street be most like?	4	A) a fully pedestrianized street with no automobile traffic B) a pedestrian-oriented street with limited automobile access (wider sidewalks) C) a street with enhanced pedestrian amenities (same cross-section) D) the current Robson Street (no changes)	All respondents expressed that the ideal future Robson Street would be “B) a pedestrian-oriented street with limited automobile access and wider sidewalks with more amenities. One respondent thought it could perhaps begin with B and then transition to A (a full pedestrianized street) in the future. Another respondent thought a mix between B and C (enhanced amenities, same cross-section) would be best.

*please note that not all questions were asked to each interviewee, and this table summarizes only the quantifiable responses

Appendix A2: Group 2 Response Summary Table

Question		# of Responses	Response Frequency	Summary Comments
How often do you visit Robson Street?		5	A) every day – 1 B) more than twice per week – 1 C) once a week – 1 D) once a month – 1 E) a few times a year – 1 F) never – 0	Each respondent answered differently and so respondents familiarity with Robson Street likely differed accordingly
What are your main reasons for visiting Robson Street?		5	(Multiple responses allowed) A) shopping – 3 B) dining – 4 C) leisurely walk – 3 D) commuting (pedestrians) – 2 E) people watching – 1 F) for work – 2	Again, a varying degree of responses were given, but most respondents go to Robson for shopping, dining, and walking
How well does Robson Street currently operate to serve the needs of pedestrians in the following elements?	Safety:	5	1) very well – 1 2) well – 1 3) medium – 3 4) poor – 0 5) very poor – 0	Responses ranged from medium to very well for safety for pedestrians, however, most felt it performed at a medium level
	Comfort:	5	1) very well – 0 2) well – 2 3) medium – 1 4) poor – 1 5) very poor – 1	Quite a range of answers were given regarding pedestrian comfort, however, interestingly, a couple of respondents rated it poor and very poor which indicates that pedestrian comfort needs addressed
	Enjoyment:	5	1) very well – 2 2) well – 1 3) medium – 2 4) poor – 0 5) very poor – 0	For the most part, Robson Street was perceived as performing quite well for pedestrian enjoyment with all responses between medium and very well
	Navigability:	5	1) very well – 0 2) well – 1 3) medium – 3 4) poor – 1 5) very poor – 0	Responses for Robson's performance on navigability for pedestrians was right in the middle
What is your sense of Robson's overall performance for pedestrians?		5	1) very well – 0 2) well – 1 3) medium – 4 4) poor – 0 5) very poor – 0	Respondents felt that Robson's overall performance for pedestrians is medium, which indicates a) that it is not yet a great street; and b) that it could use enhancements in order to improve the functionality of the street
How important are opportunities to relax (i.e. benches/seating, tables, open spaces) in fostering the general comfort of pedestrians on commercial shopping streets?		4	1) very important – 2 2) important – 1 3) medium – 0 4) not so important – 1 5) not important at all – 0	There was quite a divergence in responses to this question.
How would you rate Robson's "liveliness" for pedestrians?		4	1) very good – 0 2) good – 2 3) medium – 2 4) poor – 0 5) very poor – 0	Respondents were divided between medium and good regarding Robson's liveliness for pedestrians
How important is strategic placement of street furniture in order to ensure navigability of the sidewalk for pedestrians?		3	1) very important – 2 2) important – 1 3) medium – 0 4) not so important – 0 5) not important at all – 0	All respondents believed that the strategic placement of street furniture on the sidewalk is very important to ensure its navigability by pedestrians.
How important is streetscape legibility for pedestrians?		3	1) very important – 2 2) important – 2 3) medium – 0 4) not so important – 0	Respondents felt that streetscape legibility (i.e. identity of an area, way-finding and knowing how to navigate the street) was

Question	# of Responses	Response Frequency	Summary Comments
		5) not important at all - 0	important to very important.
How would you rate Robson's sidewalk widths in terms of accommodating pedestrian?	5	1) very good – 0 2) good – 0 3) medium – 2 4) poor – 1 5) very poor – 2	Respondents generally felt that sidewalk widths were poor to very poor in terms of accommodating pedestrians.
In your opinion, what would the ideal future Robson Street be most like?	5	A) a fully pedestrianized street with no automobile traffic B) a pedestrian-oriented street with limited automobile access (wider sidewalks) C) a street with enhanced pedestrian amenities (same cross-section) D) the current Robson Street (no changes)	Respondents had a mixture of responses to this question. One respondent thought it should be either 'C' or 'D' as it operates fine with current configuration; while one thought it should definitely become a fully pedestrianized street; and another respondent thought it could be anywhere between 'A' and 'C' with full pedestrianization at certain times and enhancing pedestrian amenities and also being able to allow transit vehicles as well. Still other respondents thought that full pedestrianization was unrealistic and that a better fit would be 'B'.

*please note that not all questions were asked to each interviewee, and this table summarizes only the quantifiable responses

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