

**Framing a Complete Streets Checklist**  
**for Downtown Historic Districts and Character Neighbourhoods:**  
**A Case Study of the Warehouse District, Winnipeg, Manitoba.**

by

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## **Abstract**

This Major Degree Project explores the concept of “complete streets” and the framing of an appropriate “complete streets” checklist for historic districts and character neighbourhoods in downtown contexts, attempting to learn especially from the case of Winnipeg’s Warehouse District Neighbourhood. A “complete streets” checklist is considered to include a combination of infrastructure and urban design considerations, such as sidewalks, bike lanes, intersections, transit stops, curb extensions, travel lane widths, and parking needs. It proceeds from the premise that if an individual street or system of streets is ‘complete’, individuals will be more likely to reduce the time spent using automobiles, and increase the time expended on walking, biking, or using other transit alternatives, while making travel on the streets safer and more enjoyable for all users. The MDP examines the current street-related infrastructure and uses within the Warehouse District Neighbourhood of Downtown Winnipeg and discusses the relevance of current or recent City of Winnipeg plans and proposals. Taking the form of a practicum, the research sought to inform and engage local planners, engineers and public officials regarding a “complete streets” approach to their work – primarily in terms of the recommended framing of a complete streets checklist as well as recommendations for future area improvements in the Warehouse District Neighbourhood, demonstrating the usefulness of the checklist.

***Key Words: Complete Streets, Transportation Planning, Framework, Checklists, Warehouse District Neighbourhood, Winnipeg***

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*I dedicate this practicum to the memory of three gentlemen  
who I know are very proud to see me get through.*

*Bai ji (Grandfather) Gurdial S. Gill,  
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and Raju S. Sidhu*

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## **List of Abbreviations**

CS	Complete Streets
CSG	Complete Streets Guidelines (City of Edmonton)
CSS	Context-Sensitive Solutions
DNPA	Downtown North Pre-Plan Assessment
HMMP	Historic Millwork Master Plan
NCSC	National Complete Streets Coalition
NJDOT	New Jersey Department of Transportation
NLCSF	Northeast Lancaster Complete Streets Framework
SDOT	Seattle Department of Transportation
TMP	Transportation Master Plan (City of Winnipeg)
USDG	Urban Streets Design Guidelines (City of Charlotte, N.C.)
WDN	Warehouse District Neighbourhood



## **Chapter 1: Introduction**

### **a) Defining Complete Streets**

In 2003, the term “complete streets” was first applied in a policy initiative by the American Bikes; it defined a complete street policy as one which “ensures that the entire right of way is routinely designed and operated to enable safe access for all users” (American Planning Association, 2010, pg. 3). Barbara McCann, working on behalf of American Bikes at the time, originally coined the term “complete streets” to replace the term “routine accommodation” —a term communicated by planners and engineers to show the inclusion of cycling infrastructure within transportation planning (McCann, 2010). The “complete street” term eventually expanded from here to include pedestrians, all motorists (private and commercial vehicles) and transit riders in addition to cyclists. The expansion of this term was partly due to a coalition of leaders, led by American Bikes, which formed a Complete Streets Task Force. Original members of this Task Force included AARP, the American Planning Association, the American Public Transportation Association, the American Society of Landscape Architects, and the American Heart Association. The mandate of this group was to influence the federal transportation bill that became the Safe, Accountable, Flexible, Efficient Transportation for Equity Act: A Legacy for Users (SAFETEA-LU), but it was soon realized that the approach could also be adopted by municipal and state governments (McCann, 2010).

In 2005, the members of Task Force formed a coalition known as the National Complete Streets Coalition (NCSC). An initial step was not to trademark the term “complete streets” as it was goal of the coalition that it become a common use term. According to Barbara McCann, this strategy allowed “many people to have a hand in forming and ‘owning’ complete streets, and provides the flexibility to adapt to specific situations” (McCann, 2010). With continued

advocating efforts of NCSC, there have been over 200 jurisdictions within the United States adopting Complete Street policies within the first seven years. Today, any policy which allows all users to co-exist within the street right-of-way, and which supports infrastructure designed to accommodate their needs, is considered ‘complete streets’ policy. Whether it is a seldom-used road or a major thoroughfare, Complete Streets principles can be applied to all types of streets, but the level of design detail will differ depending on street function and urban development context.

Many Complete Streets approaches also focus on areas rather than individual street designs, with policies in place to understand surrounding neighbourhood context and needs. A complete streets approach seeks safe, desirable, practical and affordable improvements that will be broadly acceptable by the wider community. Streets within each area, as well as districts within a city, may be subject to their own unique complete streets policies. The implementation of complete streets guidelines requires planners to thoroughly understand the context they are dealing with — in the case of this practicum it will be the Warehouse District of Downtown Winnipeg.

#### **b) Topic Overview –What? How? Why?**

This practicum explores the application of a ‘complete streets’ (CS) approach in the planning and development of downtown historic districts and character neighbourhoods, with particular concern for the issues that must be considered when framing a ‘complete streets checklist’ to guide re-development in such areas. A case study of Winnipeg’s Warehouse District Neighbourhood (WDN), located just north of Downtown Winnipeg’s famous Portage and Main intersection, is the main case study in this practicum.

The Warehouse District is currently of special concern to city planners; it is perceived as being in danger of losing its valued bohemian character, meriting strategies to address displacement concerns associated with redevelopment pressures. This study explores the value of a ‘complete streets’ approach as a potential part of the strategy mix, to help redevelop this area in a way that respects its historic roots and functions — active and interactive, connected and connecting. A ‘complete streets’ approach may help better rebalance development planning for such areas, since past planning practice has tended to focus on site-specific urban design elements, the architectural qualities of the buildings, or downtown through-traffic management (i.e., privileging roads for vehicles).

A ‘complete streets’ approach is expected to align with a broader transportation-oriented approach under the banner of Context-Sensitive Solutions (CSS). Complete streets and CSS are viewed as potentially complementary approaches. A CSS orientation involves a collaborative effort of stakeholders, to consider transportation on streets in its entire social, environmental and aesthetic context (Institute of Transportation Engineers, 2006). This practicum engaged city officials in thinking through how the character and quality of the streets should feel for all users, especially ‘in between’ the buildings and vehicles. As well, the practicum highlights the issues involved in implementing ‘complete streets’ design guidelines from a collaborative discussion underlining the importance of the voices and concerns of local officials on this topic – based on their professional interaction with a range of constituencies. In total, thirteen participants were interviewed in this study comprising city traffic engineers, transit engineers, public works officials, urban planners/designers as well as representatives from downtown development and cycling organizations.

The ‘complete streets’ approach is a comparatively recent development in cities across North America, particularly within the United States, but many cities have already adopted elements of a CS approach in their development plans. In its recent *Transportation Master Plan (TMP)*, the City of Winnipeg identified an implicit CS leaning, to “balance the needs of all users of the street to support complete communities and the urban structure” (Transportation Master Plan, 2011, p.37). However, the City has yet to implement a “strategy” to include CS guidelines within its system of plans. Some of the strategic key goals of the TMP align with CS principles including: the integration of transportation with land use; support for active and healthy lifestyles; and ensuring safe, efficient and equitable service (Transportation Master Plan, 2011, p. 9-10). One goal of this practicum is to serve as a background study resource for local planners, as part of pursuit of the transportation plan goal of ‘mainstreaming’ CS policies within neighbourhood plans.

### **c) Research Questions**

The main research questions are as follows:

1. What are the key issues that could be addressed with a checklist for mainstreaming a complete streets approach to the redevelopment of downtown historic districts and character neighbourhoods?
2. What lessons can planners learn from other precedents, when devising a framework for such a complete streets checklist?
3. What are the main implications, and appropriate recommendations, for current planning efforts in the Warehouse District Neighbourhood (WDN) of Winnipeg if a complete streets checklist approach were to be adopted?

#### **d) Significance to the Profession of City Planning**

This practicum is important because it could help City staff become better informed about CS, especially within the context of historical districts and neighbourhoods in need of progressive re-development. The practicum could also aid in harnessing this learning so as to better respond to opportunities for developing such neighbourhoods. The study also brings out needs and expectations of various City departments and organizations that deal with transportation issues on a daily basis within the WDN. Insights generated from the interview process offer essential knowledge for conducting future planning work within this area.

A CS approach to planning addresses safety in particular - while accommodating four main transportation modes: walking, cycling, transit and automobile (including service and commercial vehicles). By seriously considering all users of the street, planners can encourage positive change to help create liveable and safe streets. Ultimately, this practicum will provide planners with a framework of issues that would need to be considered prior to developing a checklist. This project aims to identify these key issues based on local expectations and expertise from key informant participants. Planners and others could draw upon this framework when planning for downtown historic districts and character neighbourhoods targeted for redevelopment or renewal.

#### **d) Assumptions and Biases**

This research is conducted under the assumption that the CS strategy to 'everyday' transportation planning is valued by city officials, as part of a mix of efforts for improving downtown neighbourhoods. Due to the limited scale and scope of this study, seeking public stakeholder input from local merchants, residents and users of the street was not sought after. However, this practicum referenced and relied on information obtained in the course of other

planning processes completed within WDN. The practicum assumes that all users' (pedestrian, cyclists, motorists and transit users) requirements are of equal importance and special considerations of the various tradeoffs are essential when framing a checklist for the Warehouse District Neighbourhood. It is also worth noting, the literature on planning of complete streets within downtown historic districts and character neighbourhoods appears to be a relatively new realm in CS planning. This practicum hopes to be an introduction for planners in both Winnipeg as well as other cities who intend to apply CS goals to their own downtown historic districts and character neighbourhoods.

#### **e) Chapter Overview**

This initial chapter sets the broad context for the research, its significance to the planning realm and defines the research questions guiding the practicum. The second chapter describes the context and areas of the Warehouse District neighbourhood, specifically focusing on the streets. Illustrations and figures are provided to show how the WDN functions as well as to describe what makes the area a unique part of Winnipeg.

The third chapter covers the research methodology used. The research involves key informant semi-structured interviews and the use of photo elicitation tools such as maps and images. The interview process is described in-depth, including a list of the participants involved in this study.

The literature review chapter is divided into three sub-sections in Chapter 4. The first section seeks to define CS strategies and their rationale i.e., why they are important for city planning and design. The second section considers general implementation strategies and guidelines for planning CS, particularly focusing on historical and character areas in downtown/core area contexts. As well, this section considers the issues and benefits of

incorporating ‘complete streets’ provisions, and discusses several key precedents similar in nature to the case study context. The final section of the literature review outlines some of the current planning efforts and existing planning documentation for Winnipeg, and provides an introduction to relevant aspects of the Warehouse District Neighbourhood – in terms of the main research questions.

Chapter 5 focuses on analysis of the interview sessions that were conducted with the key informants. The respondents had a tremendous amount of knowledge to share. The findings were organized into three sections of recommendations based on overlapping opinions and viewpoints among the participants. The first section focuses on complete streets recommendations and checklist items in a CS approach for downtown historic districts and character neighbourhoods. The second section provides specific considerations to be aware for this particular context. And the last section of this chapter focuses on issues and key recommendations for Winnipeg’s Warehouse District Neighbourhood; in particular, recommendations are described for the four types of users (pedestrian, cyclist, transit and motorist) of the street.

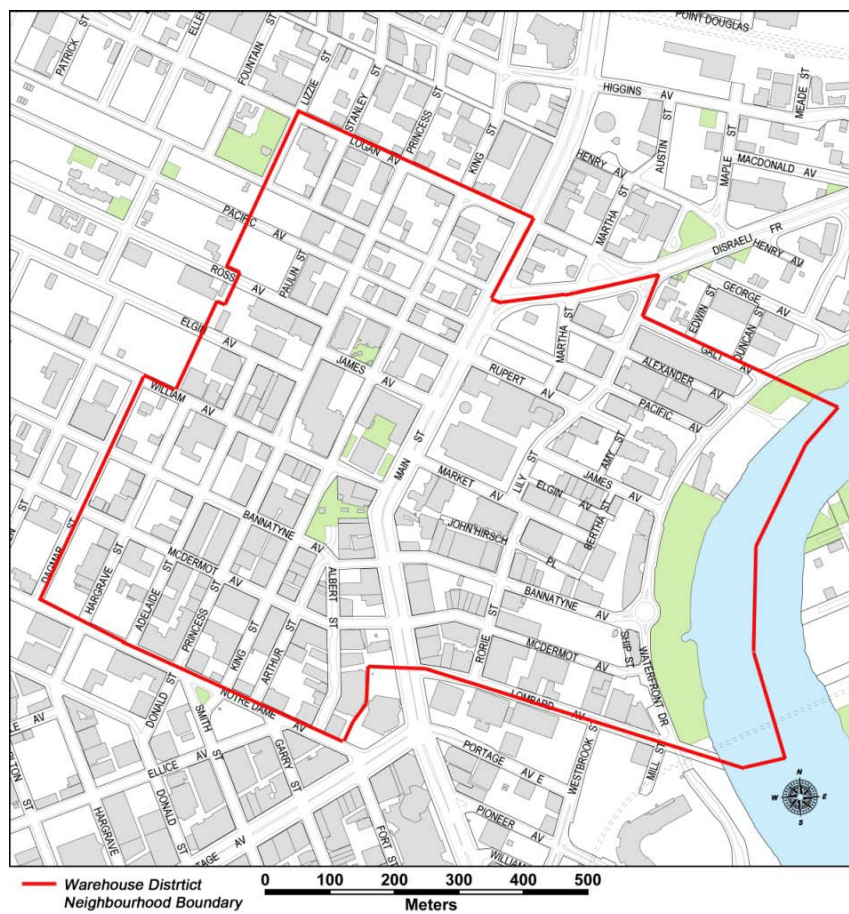
The last chapter, Chapter 6, summarizes the research and actively returns to the research questions. Implications and recommendations for professional planning practice emerged from my research findings. As well, future research questions and paths that this topic could explore are provided here. The chapter ends with a discussion on the current direction the WDN is undertaking.

## Chapter 2: Study Area Profile – The Warehouse District Neighbourhood (WDN) of Winnipeg, Manitoba

### a) Introduction to WDN Area and Boundaries

The Warehouse District Neighbourhood (WDN) located just north of Downtown Winnipeg's famous Portage and Main intersection, is the main vehicle for this exploration (see Illustration #1). The eastern edge of this neighbourhood is defined by Red River and western edge is defined mainly by Dagmar Street and Lizzie Street which neighbour the Centennial Neighbourhood. The Logan Avenue, Disraeli Freeway, and Galt Street are the northern extent of the WDN. The southern extent is to Notre Dame Avenue and Lombard Avenue.

**Illustration #1: Warehouse District Neighbourhood Boundary Map**

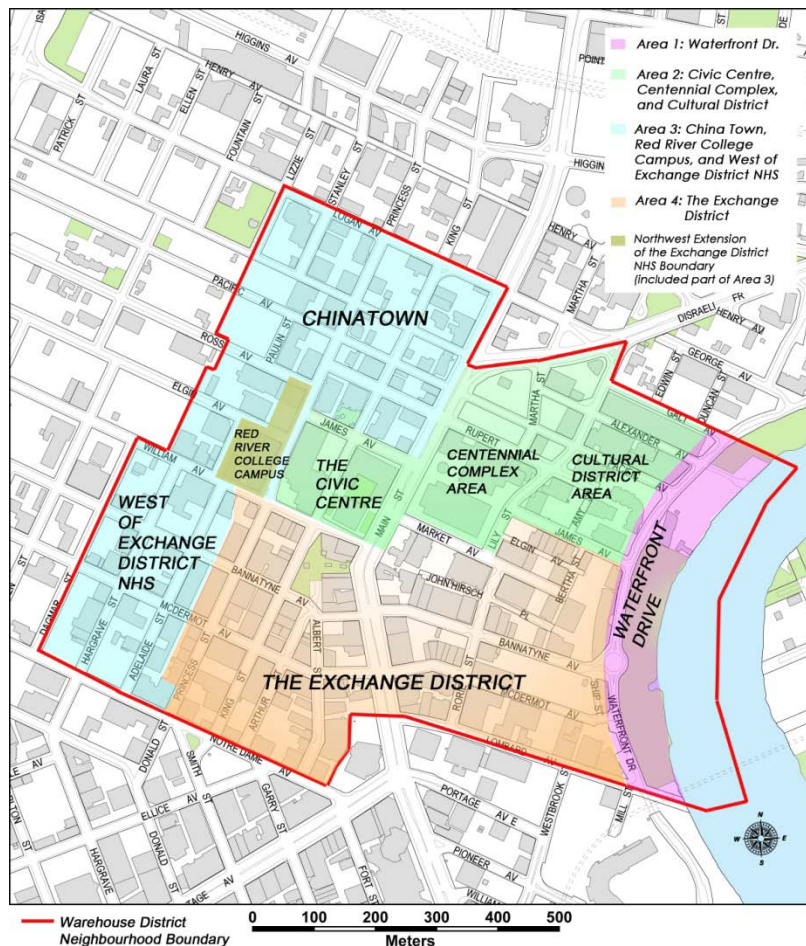




(Map based on data provided by Planning, Property & Development, City of Winnipeg, 2014.)

The WDN has 53 blocks (approximately 160 acres) and includes four identifiable areas within its boundaries: the Exchange District National Historic Site (NHS), the Civic Centre and Centennial Complex Area (including the emerging Cultural District), Waterfront Drive, and Chinatown (including the Red River College Campus on Princess Street and west of the Exchange District NHS). A description of each of these sections in the WDN and overview of the WDN characteristics is provided in this profile section (see Illustration #2). As well, street images for each of these four areas in the WDN were presented to the interviewees (see Appendix E).

**Illustration #2: Areas of the WDN**



(Map based on data provided by Planning, Property & Development, City of Winnipeg, 2014.)

## **b) The Exchange District**

The Exchange District is geographically defined as follows: to the North, it is bordered by the neighbourhood of South Point Douglas and Chinatown; its eastern and western limits are the Red River and the Centennial neighbourhood, respectively; and running along its southern boundary is a portion of downtown Winnipeg. This area is one of sixteen districts in Canada given the status as being a National Historic Site (NHS). This distinction was due to the large collection of historical commercial buildings which are still preserved today. Within this area, there are approximately 150 heritage buildings contained on twenty city blocks.

A unique landmark street within the Exchange District is Albert Street, a two-block street centrally situated within the Exchange District, running roughly north and south (see Figure 1). It is a partial two-way street located between Bannatyne Avenue and Notre Dame Avenue. Between McDermot Avenue to Bannatyne Avenue, the street is a northbound one-way street for vehicular traffic, while the section between McDermot Avenue and Notre Dame Avenue is open for two-way vehicular traffic. Like most streets within the Exchange District, pedestrian sidewalks are found on both sides of Albert Street. Compare to other streets in the WDN, only Albert Street provides bike parking on the street and is one of the few streets that also have pedestrian friendly cobblestone detailing found on the street as well as the sidewalks. Albert Street's calming tree canopies as well as tight turning curb radius for vehicular traffic makes it a great CS benchmark for other streets within the WDN. Generally, most of the streets within the Exchange District section of the WDN reflect street character which is pedestrian oriented with mature trees, stone wayfinding detailing on sidewalks, benches, and low street lighting in place.



Figure 1: Albert Street

The Exchange District today represents a diverse mix of commercial, cultural and recreational uses. The area is as well known for its restaurants, beverage and entertainment establishments and shopping as it is for its heritage buildings. At the ‘heart’ of this area is Old Market Square, which stages plenty of cultural events and concerts, including Jazz Winnipeg and The Fringe Theatre Festival (City of Winnipeg, 2008, pg. 17). The most recent addition to this growing area has been the expansion of Red River Campus into the Royal Bank Building at the corner of Main Street and William Avenue. This expansion is named the Paterson Global Foods Institute, housing the hospitality and culinary arts programs of Red River College and six floors of student residences

### **c) The Civic Centre, Centennial Complex and Cultural District Area**

West side of Main Street across from the Centennial Centre, north of Old Market Square is the City of Winnipeg’s Civic Centre. City Hall and Administration Building found east side of King Street as well as the former Public Safety Building and Civic parkade found on the west side of King Street make-up the general vicinity the Centre. City of Winnipeg occupies

additional space within the Dynasty building on James Street, Mandarin building on King Street and 280 William Street (City of Winnipeg, 2008, p. 18).

On the east side of Main Street, a complex that includes the Centennial Concert Hall, the Planetarium, and Manitoba Museum make up the bulk of Centennial Complex Area. Although they are part of the Exchange District NHS, Pantages Theatre and Manitoba Theatre Centre Mainstage (MTC) found on Market Avenue are considered part of the Centennial Complex. Other notable institutions and streets included within Centennial Complex include Martha Street Studio on Martha Street, the Costume Museum on Pacific Avenue and the Ukrainian Cultural and Educational Centre on Alexander Avenue. There are still a fair number of surface parking lots in-between the buildings and extra-wide streets within this area of the WDN (see Figure 2). The frontage the buildings within this complex are mostly stone with very few windows running along the sidewalks. The street character reflects that of the nature of an industrial site rather than a neighbourhood.



Figure 2: Centennial Complex Area (*view from Rupert Avenue*)

The emerging Cultural District section on Illustration #2 is enclosed mainly between Lily Avenue and west of Waterfront Drive. This area seems has to be an extension of the condominium development that has occurred along Waterfront Drive. Recently, a growing trend of renovating of existing old buildings has been occurring in this section of the WDN for the purposes of converting them into condominium living StreetSide Developments, a company by Qualico, has been a significant investor behind such projects on James Avenue (see figure 3). It should be noted that the Cultural District west of Lily Street leading up to Galt Street for this study was an entity included as part of the Centennial Complex and Civic Centre sub-areas in this practicum (note: this area is indicated in green color on Illustration #2).



Figure 3: Condominium development along James Avenue

#### **d) Waterfront Drive**

Waterfront Drive begins from Pioneer Avenue and runs north to Higgins Avenue. The section of Waterfront Drive within the WDN contains the core of the residential (with some commercial spaces). One of the unique aspects of Waterfront Drive is that this street runs along the Red River protected by park space (see Figure 4). As highlighted by CentreVenture, the



vision for Waterfront Drive was “to encourage the development of a thriving, pedestrian-oriented, mixed-used neighbourhood that conserves and strengthens the unique identity of this historic warehouse precinct (CentreVenture, 2004, p. 2). Recent development projects and proposals have stepped away from pedestrian focus mixed use neighbourhood development.



Figure 4: Waterfront Drive

For instance, the land between the former Harbour Master Building (now known as Cibo Waterfront Cafe) and Alexander Docks contains a 67-room boutique hotel known as the Mere hotel, which opened December 2013. As well, a 24-storey glass tower proposed to rise from the long vacant James Avenue Pumping Station is targeted as the next major development under review by the City of Winnipeg’s development committee. It is deemed to be controversial because the existing building character for Waterfront encourages 2 to 6 story-building heights respecting the contextual composition (in terms of proportion, geometry, mass versus void relationship, and texture) of existing buildings (CentureVenture, 2004, p. 4). Waterfront Drive is the only street in the WDN as well as within downtown Winnipeg that has traffic calming roundabouts established.

### **e) Chinatown, Red River College Campus on Princess Street and West of the Exchange District NHS**

The two significant one-way streets within the WDN are northbound King Street and southbound Princess Street. Entering from the northwest portion of the WDN, these streets frame much of the Chinatown neighbourhood area. On King Street at Rupert Avenue is a grand entry gate into Winnipeg's Chinatown. This gateway connects the Chinese Cultural Centre (Dynasty Building) with the Mandarin Building. Beyond the gate along King Street is a clusters of Chinese commercial establishments continuing north beyond the WDN boundaries. To the east, on Princess Street are two residential towers home to many Chinese immigrant residents, including a large number of seniors (City of Winnipeg, 2008, p. 18). Most recently, a new residential apartment complex on the corner of Princess Avenue and Logan Street is the latest development to come into this section of the WDN.

Further down Princess Street on the corner of William Avenue, west of the Civic Centre is the Red River Campus building. Across William Avenue, diagonally opposite of the Red River Campus is the Massey Building which houses the University of Winnipeg Continuing Education program. With the addition of the Paterson Global Foods Institute two blocks down, the Red River Campus represents a unique cluster of student representation in WDN.

West of the Exchange District NHS and Chinatown lies a area in WDN that resides between two neighbourhoods, West Alexander at the south end and Centennial at the north end. This area is governed by the West Alexander and Centennial Neighbourhood Plan (2008, p. 18). Within this plan, this area is designated as 'Character Commercial', and its intent is to maintain and reinforce the established commercial character of the Exchange District NHS. It should be noted this area in the WDN, along with the area around the Red River Campus and Chinatown was discussed as one section during the interview process of this practicum. One reason for this

was all three of these precinct-type areas of the WDN reflect a gradual shift from industrial warehouse uses to residential uses. Secondly, major regional arterial streets, Princess Street and William Avenue, represent connections through these areas which make it easy to identify this portion of WDN as one.

#### **f) Other Notable Streets and Entries to the WDN**

The Main Street strip is the largest regional street that impacts the WDN by bringing northbound and southbound traffic into the WDN effectively splitting the area into two-halves. The street also acts as a collector for east-west streets in the WDN. Main Street at the Disraeli Freeway coming from the northeast is the largest intersection in the WDN. There is also a strong northern edge with the enormous former Eaton warehouse at Galt Avenue. The Disraeli Freeway at Lily Street provides a ‘gateway’ potential to Centennial Complex and Cultural District portions of the WDN. At the south end of the WDN boundary, the railway overpass over Waterfront Drive already provides a gate to the site. As well, the cobblestone Albert Street starting at Notre Dame is already an established pedestrian-friendly corridor leading up to centrally located Old Market Square. These notable areas and streets are discussed further during the interview portion of the practicum.

#### **e) Street Characteristics**

This last section of the ‘Study Area Profile’ chapter discusses the street characteristics of the WDN with regards to the vehicular traffic patterns and areas, the separated bike lanes and pedestrian linkages, transit availability and designated parking areas within the WDN.



## ***Vehicular Traffic***

Table #1 shows an assessment of the daily vehicular traffic found for all major arterial streets in the neighbourhood. Main Street shows a volume of daily vehicular traffic almost four times that of other major arterial streets such as Princess and King Street. The east-west connecting arterial to the WDN, William Avenue, holds almost half the amount of vehicular traffic compared to Logan Avenue which is found at the outskirts boundary of the WDN. The information for Table #1 was gathered from the 2008 Downtown Pre-Plan assessment.

**Table #1: Vehicle Traffic Volume for Major Arterial Streets of WDN**

<b><u>Major Arterial Street</u></b>	<b><u>Vehicles per day</u></b>
Main Street	63,600 – 68,500
Logan Avenue	19,100
King Street	8,900 – 18,700
Princess Street	13,900 – 17,300
William Avenue	9,200
Notre Dame Avenue	8,700
James Street	8,500

(City of Winnipeg, 2008, p. 19)

The major arterial streets listed are part of designated full time truck routes set by the City of Winnipeg Public Works Department. The three major truck routes which run through the WDN are Routes 42, 47 and 57. Routes 47 and 57 are east-west routes which run along Logan Avenue and Notre Dame Avenue respectively. Route 42 is connected to the Disraeli Freeway through James and Alexander Avenue and proceeds to run north-south on King and Princess Streets.

William Avenue is also considered a truck route, but it is not considered part of the City's major transportation route system.

Most of the blocks within WDN are small with very few laneways in-between the buildings. There are plenty of small streets, such as Elgin Avenue and Ship Street which can be considered as laneways and loading areas for service vehicles as well as private roads for condominium owners. John Hirsch Place is a street which is essentially an alleyway that can accommodate both service vehicles and some designated parking.

Connectivity of streets off Main Street continues to be an issue for traffic in the area. As mentioned, Main Street is the largest transportation route in the WDN and its median restricts traffic on adjacent streets from turning as well as crossing on it, especially in the northern sections of the WDN. For instance, at Pacific Avenue, Main Street's concrete median restricts vehicular turns and crossings. At the Rupert Avenue-Main Street intersection, which is south of Pacific Avenue, there is no divide impeding vehicular traffic, but there is no traffic lights to safely cross. A motorist wanting to cross this particular intersection would have to risk crossing eight-lanes of traffic.

The safest point for vehicular traffic to cross through Main Street within the WDN isn't found until Bannatyne and McDermot Avenue. The conflict here is that both streets are designed for one-way traffic and act as the only east-west WDN cross streets with traffic lights on Main Street. It almost seems as if the missed opportunities to connect and funnel vehicular traffic across Main Street from the northern half of the WDN is being compensated for by connecting more traffic with the one way lanes on Bannatyne and McDermot Avenue from the southern half of the WDN. Upon a site inspection, vehicular traffic moves fairly quickly across these intersections and creates an environment uncomfortable for the pedestrian and cyclist.

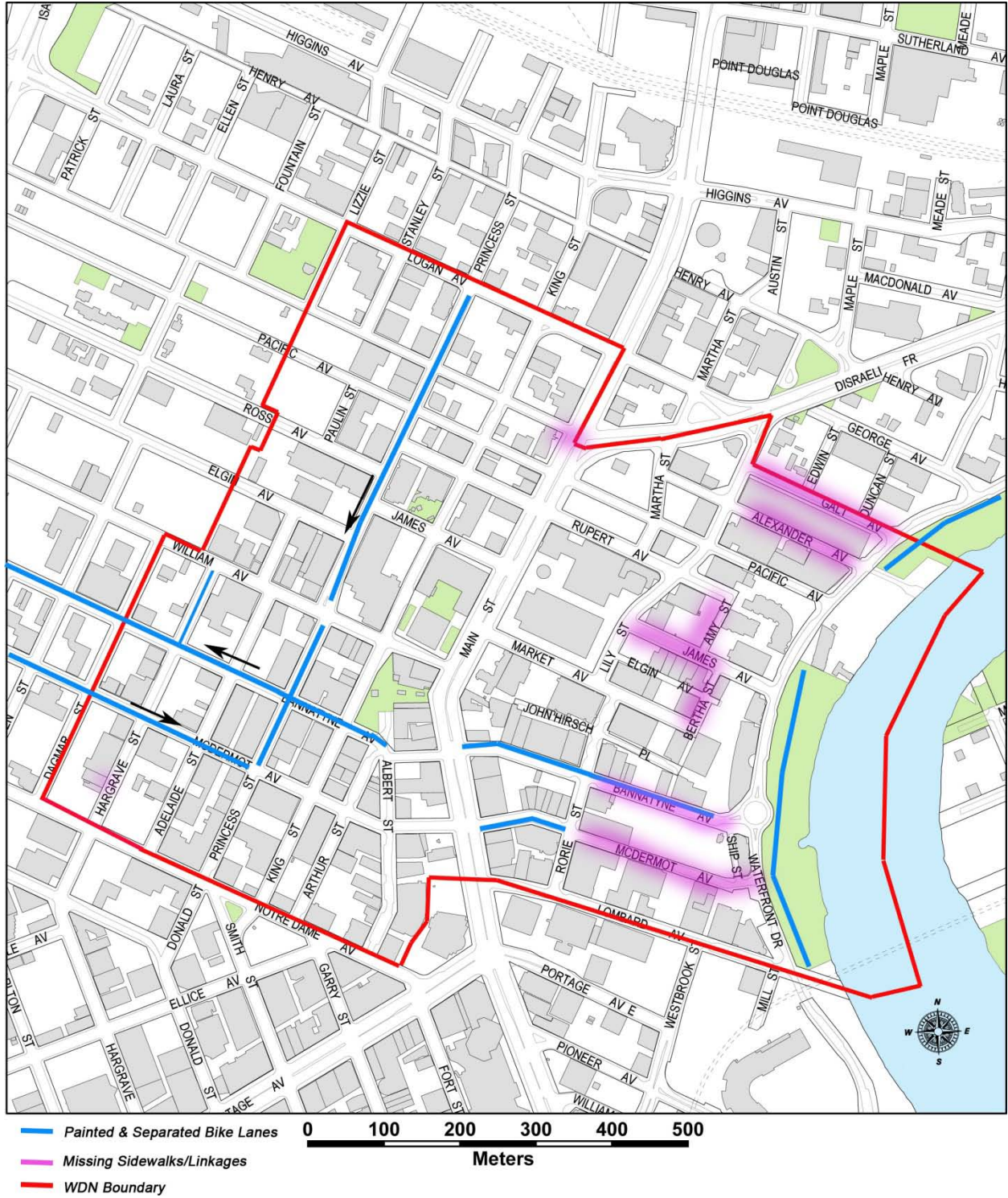
### *Separated Bike Lanes and Pedestrian Linkages*

Illustration #3 shows the cycling routes within the WDN that are designated as distinct painted lanes from vehicular traffic. Most of the streets within the district contain sidewalks and linkages on both sides of the street for pedestrians; however, as indicated on Illustration #3, there are some streets within the district missing them.

There are few areas of disconnecting bike lanes found within the WDN. From the one-way southbound Princess Street, the painted bike lane starts roughly from Logan Avenue and ends at McDermot Avenue. This eight-block stretch of bike lane has no further south destination point and cyclists must exit onto Bannatyne or McDermot Avenue, if they want to continue on a painted bike lane. The painted bike lanes of Bannatyne and McDermot Avenue don't continue along the full length of these streets. Periodically, there are some sections that require bikes to share the road with vehicles, which creates some gaps on these cycling routes. Once Bannatyne and McDermot Avenue bike lanes arrive at Waterfront Drive, it remains unclear how the bike path connects to the Waterfront bike route. A key separated bike route missing from the WDN is the one that goes back to the north on King Street. As well, there are no east-west cycling routes found in the northern half of the WDN.

There are very few areas where pedestrian sidewalks and linkages are missing completely from the street. However, some streets were missing sidewalks either part way through the street or only had the pedestrian sidewalks running along one side of the street. The areas and streets which showed inconsistencies in sidewalk infrastructure are indicated on Illustration #3. It is worth noting the walking experience in each section of the WDN was not consistent. The experience ranges from walking on calming streets like Albert Street to walking behind a warehouse full of trucks (such as on Galt Street) to walking along the high volume Main Street.

### Illustration #3: Separated Bike Lanes and Missing Pedestrian Sidewalks



(Map based on data provided by Planning, Property & Development, City of Winnipeg, 2014)

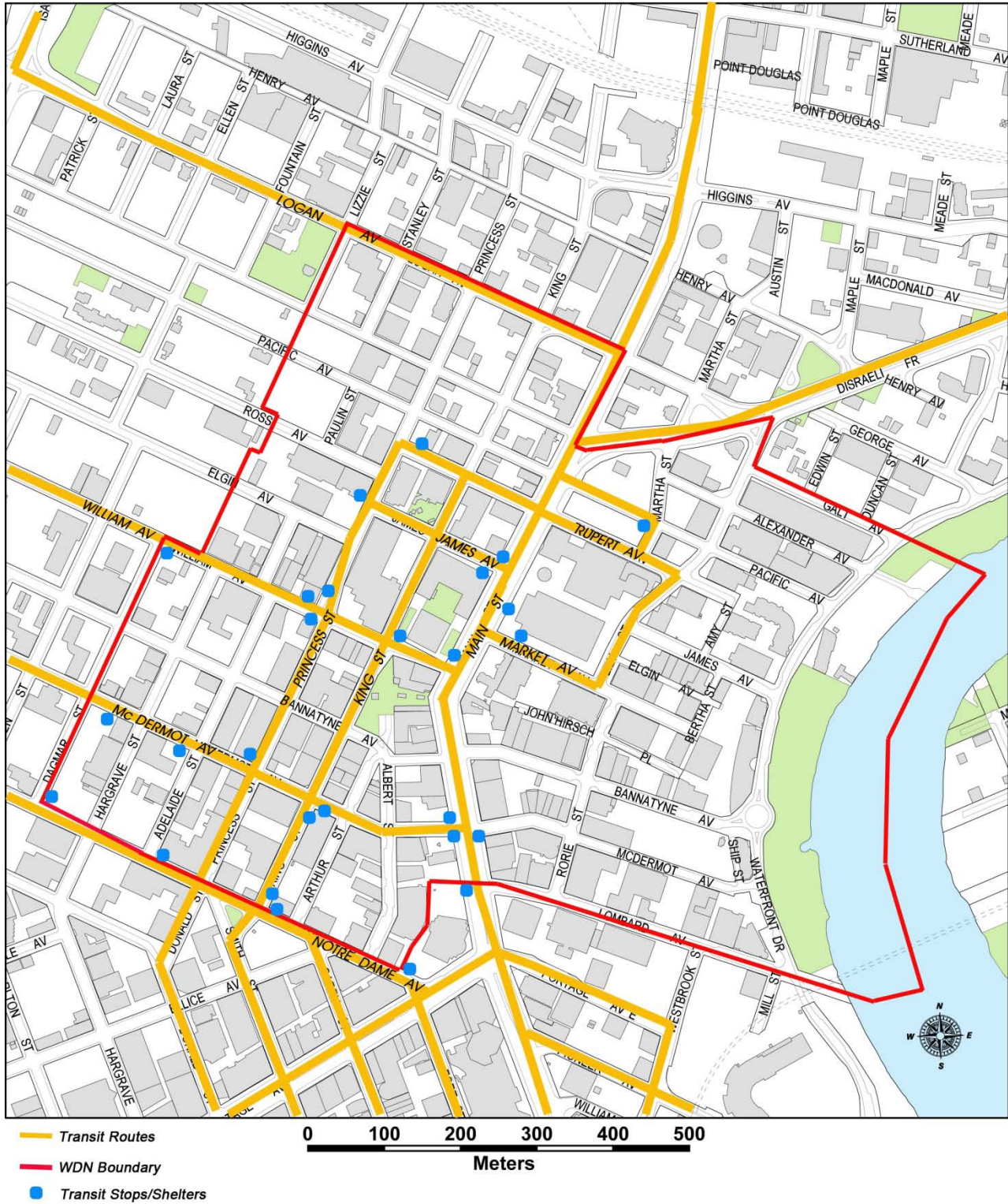
### ***Transit Availability and Parking Areas within WDN***

Transit availability for streets in the WDN is shown on Illustration #4. As expected in most downtown neighbourhoods, the presence of transit is always immense. Within the WDN, there are 31 bus routes which enter and exit this part of the city. With Main, Princess, and King Streets, containing and transporting the most of the transit in the area. There are no transit routes or stops on the eastern portion of the WDN, specifically within the Cultural District and Waterfront Drive areas. This is interesting, as plenty of new residential development has been occurring around these areas. The nearest transit stop to the Waterfront Drive section of the WDN is found either at the Market Avenue and Main Street or the Pacific Avenue and Martha Street intersections. Areas west of Main Street have well-balanced transit represented with frequent stops occurring every two blocks on streets such as William Avenue, McDermot Avenue and Princess Street. Main Street, which contains majority of the transit moving through the WDN, has designated transit priority lanes for peak ‘rush-hour’ times.

Illustration #5, maps out the parking availability as well as types of parking options within the WDN. On-street parking (shown in blue) on this map is an especially important component to complete street planning. On-street parking provides an additional buffer from the sidewalk and vehicular travel lanes. Plenty of surface parking lots (shown in yellow) are found within the WDN, including auxiliary surface parking lots (shown in green) which is private or assigned parking. Although surface parking lots aren’t part of the street network, they do have entries and exits from the streets. A consideration of how vehicles and pedestrians will safely interact around these points is important to the study of this area.



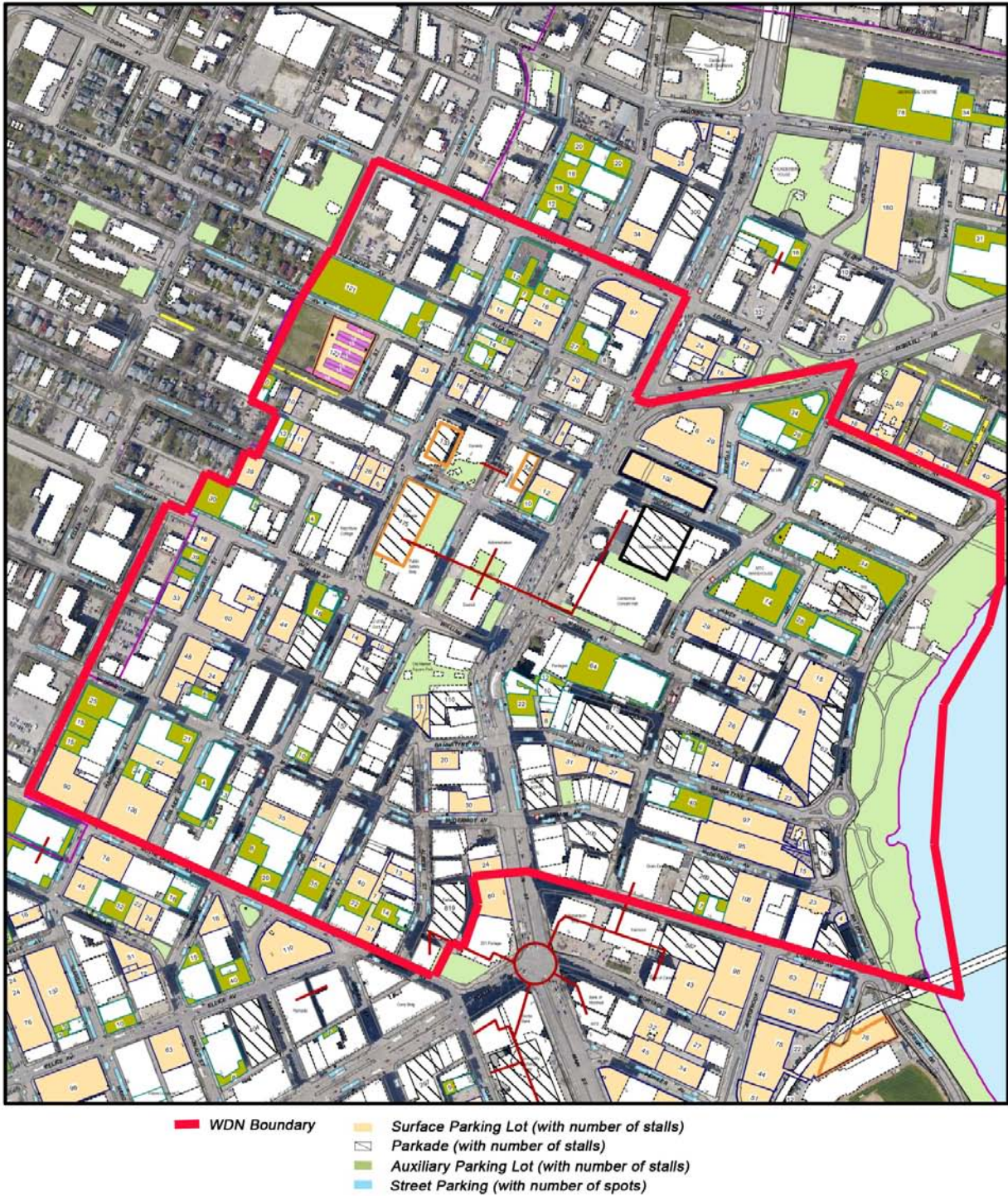
### Illustration #4: Transit Routes Map



(Map based on data provided by Planning, Property & Development, City of Winnipeg, 2014)



### Illustration #5: Parking Map of WDN



(Map based on data provided by Planning, Property & Development, City of Winnipeg, 2014)

## ***Conclusion***

This concluding section of this chapter lists some overall key issues to be noted about the WDN study area. Firstly, there are a fair number of extra-wide streets within the District, which results in certain areas of the neighbourhood having ‘unfriendly feel’ for the pedestrian. The gaps in between the existing cycling network of separated bike lanes needs to be completed. There are no cycling paths currently to connect the northwest section, especially the Cultural District of the WDN to the other areas. For vehicular traffic, connections across Main Street with lights are missing. Finally, a consideration of extending transit to the western sections of the WDN, especially around Waterfront should be investigated further.



### **Chapter 3: Research Methods**

This practicum employed five research methods for gathering information: literature review, archival research, case study research, semi-structured key informant interviews, and photo-elicitation tools - such as mapping and visuals.

#### **a) Literature Review**

The literature review in this practicum consisted of locating and selecting sources for analysis, and integrating the relevant work of others, in response to the three research questions (Craig, 2009, p.56). Peer-reviewed journals, books, planning documents and other published literature from creditable sources were targeted. Analysis of existing policies pertaining to CS, as well as a search for downtown core historical and character area precedents, which have employed a CS perspective, was conducted. In the Winnipeg context, a review of existing city and downtown area plans explored the extent to which there are currently policies in place to further the integration of CS throughout the City of Winnipeg. The literature review help framed the pursuit of the key research questions, especially issues to consider in the semi-structured interviews. Any information from gained literature to further the discussion on CS planning throughout the practicum and a full list of sources is found in the ‘References’ section.

#### **b) Archival Research**

The archival research method is descriptive as it involves “describing data that existed before the time of the study” (Jackson, 2008, p. 87). This method allows for understanding local contexts. Relevant sources include reviewing print and online sources such as newspaper articles, blogs, discussion forums and meeting minutes (ibid). An investigation of any ‘complete streets’ strategies mentioned in local planning documents, both current and past, was undertaken. As

well, demographic data for the WDN study area was identified and analysed in terms of responses to the main research questions.

Most of the sources were locally generated; however, the research did extend to other cities and contexts in North America. This helped in assessing implications for and connections to the Winnipeg context.

### **c) Case Study Research**

According to Robert Yin (2001), the case study method is relevant because it is applied when research questions are set to explain some present circumstances as well as provide an in-depth description of a situation (Yin, 2009). The research questions in this practicum are in accordance with case study research method. This approach allows “investigators to retain the holistic and meaningful characteristics of real-life events” (Yin, 2009, p. 4). These events may have already taken place or may be ongoing. In this practicum, the events relate to an exploration of the opportunities for Winnipeg’s Warehouse District (as it evolves into a ‘Neighbourhood’) through considering the merits of a ‘complete streets’ planning approach. Information from Chapter 2 ‘Study Area Profile’ section and from the key informant interviews relating particularly to opportunities for WDN makes up the research material for this methodology.

### **d) Key-Informant Semi- Structured Interviews**

The primary research method was the key-informant semi-structured interviews. Key informant participants included public sector planners/urban designers, city transportation engineers, public works officials, private sector consultants and cycling organization representatives. Thirteen participants were interviewed and eight interview sessions were scheduled during the month of December 2013. The participants for the interviews were initially

identified from a list of members on the City of Winnipeg Active Transportation Advisory Committee, while other participants were further suggested by the participants themselves or deferred the initial interview request to other colleagues in their department or organization. All participants were contacted by either email or telephone and the interviews were held in-person at a location most suitable for the participant (see Appendix A).

Semi-structured interviews involve “the researcher having a list of questions or fairly specific topics from which an interviewee has a great deal of leeway in how to reply” (Bryman and Teevan, 2005, p. 184). The list of questions and topics is referred to as an interview guide (see Appendix B). The same interview guide was used for each group of key informants, but questions were asked based on the participant’s area of expertise and knowledge on the subject matter. As anticipated, participant availability was a challenge and some adaptations had to be made to accommodate participant needs. For instance, some participants who were colleagues or worked in the same department asked to be interviewed together; arrangements to respect this request were made to fit the interview time of approximately one hour. This occurred on four occasions and participants were interviewed in either groups of two or three. On three out of the four occasions, the participants worked for the same department or organization and, on one occasion, the interview involved participants from two different departments. All participants for this practicum were provided with and signed informed consent before the interview process (see Appendix C).

Case study research requires a fairly clear focus for each interviewee; therefore, a semi-structured interview approach is more suitable than an unstructured interview method. Furthermore, semi-structured interviews offer sufficient flexibility to approach diverse respondents of varying expertise, while still covering the same areas of data collection (Noor,

2008, p. 1604). Participants' answers were probed wherever appropriate, to draw out any further issues meriting consideration. The responses were collated for documentation. This included the transcription of the tape-recorded responses of each interview, and any notes taken during the interview sessions. Transcriptions of the interviews and summaries of key points were emailed to each participant for review, corrections and additional comment. Four out of the thirteen participants emailed added comments and feedback.

Each participant was assigned a number, so they could not be associated with a particular individual or group. During occasions when participants were interviewed in groups of two or three, letters were additionally assigned as an indicator for this. Each participant's organization or job title are identified as part of the participant's list (see Table #2). This was important to identify because it defined which perspective (i.e. pedestrian, cycling, transit, vehicle, etc.) of CS discussion was of particular interest to the participant. For instance, Participant #2 (Green Action Centre Representative) interests pertained mainly to cycling and pedestrian movement on the streets of the WDN, while Participant #4 (Winnipeg Transit Transportation Planner) interview was mainly focused around transit issues and opportunities in the neighbourhood. The responses from each participant are discussed in Chapter 5 'Analysis' section of this practicum.

**Table #2: List of Key Informant Participants**

<u>Participant Number</u>	<u>Organization or Job Title</u>
Participant #1A	CentreVenture Development Corporation
Participant #1B	CentreVenture Development Corporation
Participant #2	Green Action Centre Representative
Participant #3A	City of Winnipeg Senior Urban Designer

Participant #3B	City of Winnipeg Downtown Planner
Participant #4	Winnipeg Transit Transportation Planner
Participant #5	City of Winnipeg Senior Transportation Planner
Participant #6	Manitoba Cycling Association Representative
Participant #7A	City of Winnipeg Downtown Senior Urban Designer
Participant #7B	City of Winnipeg Manager of Transportation
Participant #8A	Public Works (City of Wpg.) Active Transportation Coordinator
Participant #8B	Public Works (City of Wpg.) Street Preservation Division
Participant #8C	Public Works (City of Wpg.) Street Maintenance Division

*Note: The bold outlines as well as participants labelled with a number and letter combination were interviewed in either groups of two or three.*

### ***Photo Elicitation Tools***

Photo elicitation, a technique that involves the use of photos, videos and other forms of visual representation, aims to elicit comments from participants based on what they are viewing (Banks, 2001, p. 87). In the context of the key informant interview process, this technique applied visuals, which included a WDN area map and street photographs, to assist participants to convey CS design elements, considerations, issues and opportunities within the district. The use of such photo elicitation helps to aid in communicating otherwise potentially vague ideas, and help respondents focus on important specific details (Banks, 2001, p. 88).

An area map of the WDN identified streets within the WDN and boundary lines of this district (see Appendix D). Street photographs shown to participants showed the four identifiable areas within the WDN boundaries as discussed in Chapter 2 ‘Study Area Profile’ section (see Appendix E). The randomly selected photographs for the four areas of the WDN were shown

from a computer screen. The photographs featured a variety of vehicular streets and intersections, pedestrian walkways, street design elements, bike lanes, transit areas and parking lots. All of the photographs shown during the interview process were taken personally from a digital SLR camera.

Presenting visual context of the WDN through either a map or photograph helped in participants focus discussion to specific streets and smaller neighbourhood areas or parts within the WDN. Additionally, further insight was gained from the maps and images, and interpreted what they were seeing from the respondents' perspectives.

## Chapter 4: Research Review

The research review chapter is divided into three sub-sections in Chapter 4. The first section seeks to define CS strategies and their rationale i.e., why they are important for city planning and design. The second section considers general implementation strategies and guidelines for planning CS, particularly focusing on historical and character areas in downtown/core area contexts. As well, this section considers the issues and benefits of incorporating ‘complete streets’ provisions, and discusses key precedents similar in nature to the WDN. The final section of this chapter updates some of the current planning efforts and existing planning documentation for Winnipeg, as well as providing an introduction to relevant aspects of the Warehouse District Neighbourhood – in terms of the main research questions.

### a) Defining ‘Complete Streets’ Roles, Strategies and Related Frameworks

In 2003, the term “complete streets” was first applied in a policy initiative by the American Bikes Organization; it defined a complete street policy as one which “*ensures that the entire right of way is routinely designed and operated to enable safe access for all users*” (American Planning Association, 2010, pg. 3). The users of the street include pedestrians, bicyclists, all motorists (private and commercial vehicles) and transit riders. Any policy which allows all users to co-exist within the street right-of-way, and which supports infrastructure designed to accommodate their needs, is considered ‘complete streets’ policy. Whether a seldom-used road or a major thoroughfare, all types of transportation routes can be considered in a ‘complete streets’ policy approach. However, the types of uses (pedestrian, cycling, transit, and vehicular) and infrastructure requirements of a street are evaluated by a “street by street” basis.

A complete streets approach seeks safe, desirable, practical and affordable improvements that will be broadly acceptable by the wider community. Streets within each area, as well as districts within a city, may be subject to their own unique complete streets policies. Some districts, such as historical downtown areas, with higher traffic densities (both vehicular and pedestrian), in addition to a variety of land-uses, require policies to address multi-modal street usage (by contrast, other areas - such industrial parks which are more auto-dependent zones - may not require extensive multi-modal policies). The implementation of complete streets guidelines requires planners to thoroughly understand the context they are dealing with. A key first step in complete streets planning and design is “determining the land uses and settlement patterns in the project area” (Vermont Department of Health, 2012, p. 5). Complete streets policies and guidelines may vary from area to area as well as be design-specific to individual streets.

For instance, the City of Calgary’s *2011 Interim Complete Streets Guide* incorporates four street type categories (skeletal, arterial, liveable and local streets) from its transportation master plan. From these four street types, thirteen specific sub-classifications of streets - such as residential streets, lanes, industrial arterials, and parkways - are listed within the guide. For each classification, Calgary’s complete streets guide provides “definitions and alignment details, a detailed design for a base cross-section within the standard right-of-way, and concepts for alternates that respond to specific contextual situations” (Interim Complete Streets Guide, 2011, p. 25). As well, Calgary’s complete streets guide sets transportation mode standards for each street classification. For parkway streets, design standards for walking and cycling require high standards in infrastructure, whereas for industrial arterials street design standards for walking and cycling are less elaborate.



The *Complete Streets Guide for Vermont Communities* takes a step beyond the Calgary guide. In addition to setting street type standards, the guide accounts for the types of users and modes that would be most prevalent in different context zones. A three-step process is featured within the Vermont guide: 1) develop a map showing the places that are likely to generate non-automobile travel; 2) consult with local recreation committees or bike shops to identify popular local walking or riding loops; and 3) consult the town plan or regional bicycle/pedestrian plan for any discussion on priority walking or biking routes, and locations where improvements are needed (Vermont Department of Health, 2012, p. 9). In both the City of Calgary and State of Vermont Guides, the level of detail in policy work depends on the requirements established by planners and local community stakeholders.

Most complete streets policies and guidelines are recognized by the National Complete Streets Coalition (NCSC), an organization whose goal is to help transportation engineers and planners with the adoption and implementation of statewide, regional and local complete streets policies. The NCSC has conducted an evaluation of a number of complete street policies across the United States, featuring ten specific elements which all complete streets policies should include: vision, planning for all users and modes, all projects, exceptions, creates a network, all agencies and all roads, design criteria, context sensitivity, performance measures and implementation. The ten elements act as a standard guidelines format/framework for all complete streets during the policy making stage. These are explained further as follows:

*Vision:* A vision represents the ‘how’ and ‘why’ the community want to complete its streets. No two visions are alike, as they may vary from neighbourhood to township to a large metropolis-size city.

*Planning for “All ‘Users” and Modes:* It is important to remember “all users” aren’t just motorists, but include pedestrians, bicyclists and transit passengers of all ages and abilities, as well as the trucks, buses and automobiles.

*All Projects:* A strong CS policy will integrate CS planning in all types of transportation both new and retrofitted.

*Exceptions:* A CS policy makes any exceptions specific and should set a procedure that requires high-level of approval for them.

*Creates a Network:* This includes setting the guidelines for design, planning maintenance and operations for the entire right of ways. Taking into consideration the network applies to new and redeveloped projects. Most importantly a good network aims to “create a comprehensive, integrated, connected network for all modes” (Burden & Littman, 2011, p.36).

*All Agencies and All roads:* Ensure the CS policy is adopted by all agencies and departments to cover all roads. CS policies should address how to work with agencies when the issue of “who has jurisdiction?” comes forward.

*Design Criteria:* This element asks communities adopting CS policies to review their design policies for the right of ways to ensure they are capable of accommodating all modes of travel. In some cases, communities set new CS guidelines in place, such as was done in Calgary, Alberta.

*Context Sensitivity:* It is important to note that a CS solution will align with the context of the community. So, we don’t have inappropriately wide roads in quiet neighbourhoods, or miles of little used pedestrian sidewalks in rural areas.

*Performance Measures:* A CS policy should establish performance standards with measurable outcomes. This is not completely a measure of automobile congestion, but can be expanded to other items such as miles of bike lanes created and number of street trees added.

*Implementation:* After CS policy is prepared, identifying the next steps for implementing the policy must be established to ensure all the work done to create policy hasn't been for nothing.

The NCSC cites a number of benefits to establishing a complete streets plan or policy, including: pedestrian safety, accessibility for individuals with disabilities, improved health - with increases in physical activity, economic development - as businesses are easier to access, a sense of community pride - as more individuals will be outdoors, lower transportation costs, decreased traffic congestion, and improved air quality (National Complete Streets Coalition, 2010).

According to Burden and Littman, co-authors of the ITE Journal publication *America Needs Complete Streets* (2011), along with the social, environmental, and economic benefits, ultimately “complete streets improves livability” (Burden & Littman, 2011, p.39). Livability refers to the “environmental and social quality of an area as perceived by residents, employees, customers and visitors” (2011, p. 39).

While the term ‘complete streets’ has not yet become commonplace in Canadian planning policy, Canadian cities are making an attempt to better plan for users of all modes, ages and abilities. Recently, the *Complete Streets for Canada* organization launched a website to recognize and disseminate the street design work and complete policy research across the country. The organization employs a similar model to that set by the National Complete Streets Coalition, to foster the development of complete streets policies. Locally, The City of Winnipeg’s *Complete Communities* document sets the foundation for a complete streets approach.

Complete Street policies for the most part use checklists intended to assist in the planning and design of new and redeveloped, or retrofitted streets in urban areas. The New Jersey

Department of Transportation (NJDOT) provides a checklist as an accompaniment to NJDOT's Complete Street Policy. The checklist assists Project Managers and designers as they plan, design and construct transportation projects with appropriate accommodations for bicyclist, pedestrians and transit users, as well as people of all ages and abilities on New Jersey's roadways. NJDOT's complete street checklist is intended for use on projects during the *early stages* of concept development or preliminary engineering stage. Project Managers are responsible for completing the checklist and work with designers to ensure the checklist is completed prior to the final design stages.

The Seattle Department of Transportation (SDOT) Complete Streets practice ensures consistency every time a road is built or reconstructed with multi-modal features unless circumstances warrant otherwise. With political support firmly in place, consistent policies, practices and reporting tools including a complete street checklist form an intrinsic part of the planning structure. SDOT's complete street checklist is "for project managers, designers and planners of how each SDOT's projects is planned, designed and built consistent with Complete Streets Policy" (Gray, 2010, p. 47). According to Barbara Gray from SDOT, the checklist is an "effective tool to ensure all projects are reviewed for Complete Street elements" and helps "foster interdepartmental collaborations" (2010, p.47).

## **b) Complete Streets Precedents and Policy Framework Efforts**

### ***Charlotte, North Carolina: Starting from Scratch and Building a Framework***

In his report, *Complete Streets: Why America Needs the Safe Street Act 2013*, Kevin DeGood states how Charlotte, North Carolina has become a leader in new street designs. This effort first began in 2006 when city leaders reviewed their transportation policies to determine

“what could be improved and to provide a ‘framework’ for prioritizing investments moving forward” (DeGood, 2013, p. 7). In 2007, Charlotte adopted a set of policies called the *Urban Street Design Guidelines* (USDG). This policy called for Charlotte’s streets to be designed as Complete Streets and, importantly, that the street network become more dense. These guidelines included a new classification system to better account for the range and context of city streets from local and residential to major and commercial (2013, p.7). Since adopting the guidelines, the city and the county have added more than 160 miles of bike lanes and bikeways. In addition, the city has completed 11 thoroughfare projects, rebuilt 12 intersections, and is undertaking more than 100 sidewalk projects.

In 2010, Charlotte also incorporated key aspects of the USDG policies into ordinance, thereby ensuring that privately built streets are built as part of a Complete Streets network (2013, p.7). The Director of the Charlotte Department of Transportation, Danny Pleasant states:

“The Complete Streets policies help Charlotte create infrastructure with ‘long-lasting value’ through design standards that improve “capacity, mobility, safety, and convenience” (2013, p.7).

USDG led to a transportation planning process that is “flexible, inclusive, well-documented, and clear” (American Planning Association, 2010, p.50). The Charlotte Department of Transportation’s six-step process focuses on project context and transportation questions to taken into consideration:

1. Define the existing and future land use and urban design context.
2. Define the existing and future transportation context.
3. Identify deficiencies.
4. Describe future objectives.
5. Recommend street classification and test initial cross-section.
6. Describe trade-offs and select cross-section (American Planning Association, 2010 p. 50).

The process is applied to all plans, programs, and projects that could affect existing streets or result in new streets including area plans, streetscape plans, neighborhood improvement plans, development proposal reviews, and preparation of capital improvement plans'. Area planning, in particular, benefits from the process which integrates land use and transportation issues on a larger scale (2010, p. 50).

### ***Edmonton Complete Streets Guidelines***

As of May 2013, the City of Edmonton's *Complete Streets Guidelines (2013)* are being used for planning, designing and constructing streets in new neighbourhoods. The *Guidelines* form part of Edmonton's Transportation Master Plan to provide a multi-modal "level of service" evaluation tool and a transportation systems optimization tool for planners. The guide also provides street design and reconstruction considerations for all modes in existing neighbourhoods, including accommodation of trucks and buses in new and existing mature areas. The end goal of the *Guidelines* is to "create a network of streets that are safe, welcoming, attractive, comfortable and functional for all users and that support and enhance the unique characteristics of the neighbourhoods and districts that they serve" (City of Edmonton, 2013). The City of Edmonton recognizes not all streets are designed for all users, and a process for determining design considerations in particular neighbourhood street projects is important. For any neighbourhoods, like the WDN of Winnipeg, an overall system is designed so each mode features a complete and effective network of facilities.

The Edmonton's CSG follow six outlined principles for the intended purpose of its complete streets, which are the following:

- 1) *Provide travel options for all users and trip purposes in a safe, accessible, context sensitive way in all seasons.*
- 2) *Form a network of streets that together accommodate all users and allow for efficient and high quality travel experiences.*

- 3) *Be adaptable by accommodating the needs of the present and future through effective space allocation for the many functions of the street.*
- 4) *Contribute to the environmental sustainability and resiliency of the city.*
- 5) *Consider both direct and indirect costs, as well as value of the roadway and adjacent re-estate.*
- 6) *Be vibrant and attractive people-places in all seasons that contribute to an improved quality of life* (City of Edmonton, 2013, p. 10).

These principles were developed through engagement with Edmonton’s departmental representatives, external stakeholders and members of the public. The principles aren’t intended for a single way to developing a CS; but serve to “provide creative and innovative streets that reflect the surrounding characteristics and users” (2013, p. 11). Edmonton’s CSG follows a Complete Street Process Flowchart as shown on Figure 5.

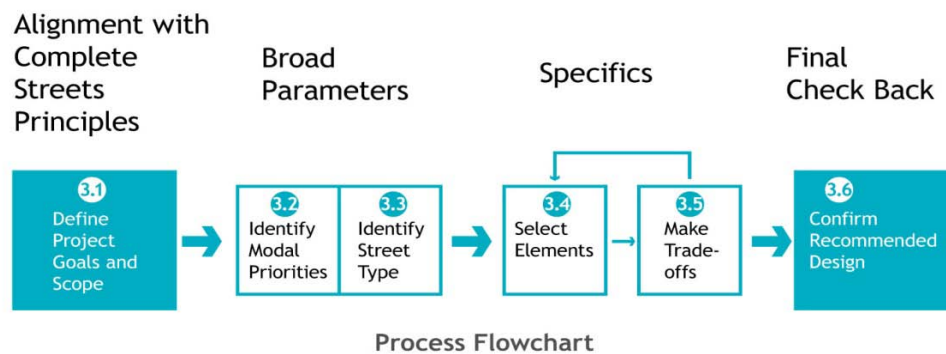


Figure 5: Edmonton’s Complete Streets Process Flowchart  
(City of Edmonton, 2013, p. 15)

A second component to Edmonton CSGs is known as the CS elements “toolkit.” General elements for street design as well as more detailed guidance for street designers are featured in the “toolkit.” General considerations address appropriate road widths, lane widths, and alternative configurations for travel lanes where width is constrained. In addition, the different modes of travel (pedestrian, bicycle, transit, etc.) have dedicated sections within the guide to both illustrate and describe to designers the best street experience for that mode of travel

(2013, p.27). The street figures in particular within the “toolkit” are useful in providing a wide range of conceptual options for CS elements.

***Northeast Complete Streets: A Framework for Northeast Lancaster, PA***

This framework was completed in 2011 by a group of Temple University graduate students in the Community and Regional Planning program. The report focuses on city policies, environmental management practices and the public engagement process. The report culminates in final recommendations for improvements involving the integration of complete streets concepts and implementation strategies. A component of this research involved the “identification of complete street ideas within policies and plans used by the City of Lancaster” (City of Lancaster, 2011, p. 11). This exercise demonstrated that there are already policies in place to integrate complete streets throughout the City. CS relevant policies existing within documents ranged from the Lancaster County Comprehensive Plan requiring transit infrastructure to fit the needs of elderly and special needs individuals to City of Lancaster’s Zoning Ordinance providing requirements for on-site parking for residential, commercial and industrial areas.

The goal of this report was to integrate complete street concepts into a framework informed by area needs community input and research analysis. This document is a key part to the City of Lancaster trying to “transform the northeast neighbourhood into an area that mirrors the revitalization that has been embraced in Lancaster’s core” (2011, p. 8). The research analysis within this report was quite CS-specific, focusing on infrastructure needs (e.g., street and sidewalk accessibility, storm water management and traffic calming measures).

Similar to Winnipeg’s Warehouse District Neighbourhood, the character of the Northeast Lancaster neighbourhood was a former industrial and commercial area, undergoing



neighbourhood change with new residential development appearing in the area. The Northeast area is also a gateway into the downtown core of Lancaster, with two high volume routes that align with the neighbourhood.

### ***Historical Millwork District of Dubuque, Iowa***

Located in northeast Iowa, Dubuque is the region's main commercial, industrial, educational, and cultural center. The city has historically relied on manufacturing and other heavy industrial enterprises, but over the last few decades it has witnessed fundamental economic and demographic shifts. The Millwork District of Dubuque features a similar character, area size, architectural history, and location in relationship to downtown, to the Warehouse District of Winnipeg.

In 2004, Dubuque adopted the Downtown Master Plan, which identified the rehabilitation of Dubuque's Historic Millwork District as a keystone to the region's aggressive economic development strategy, which included CS policies within the plan. Complete Streets concepts are being implemented on all streets within the District, and on streets connecting to the downtown business district and the adjacent Washington neighborhood of Dubuque. A key component of the Millwork District revitalization plan is to redevelop the area street network using the Complete Streets model. This has included: creating green streets with high quality streetscape and storm water systems; re-establishing connections to downtown which are pedestrian-friendly; and re-programming one-way streets into two-way streets or calmed one-way streets (City of Dubuque, 2009, p.7).

Both the Historic Millwork Master Plan (HMMP) and the Northeast Lancaster Complete Streets Framework (NLCSF) serve as contrasting approaches to framing complete street policies within urban neighbourhoods. The HMMP approach to policy making involves directly using

complete street themes as part of its urban design guidelines for future development, whereas NLCSF uses a research approach to generate complete streets recommendations and directions for implementation. Both approaches offer great examples of how CS objectives are being incorporated within downtown historic areas and character neighbourhoods.

**c) Overview: Downtown Winnipeg Planning Strategies and Documents, and Warehouse District Neighbourhood planning (to date)**

Downtown Winnipeg has been the focus of significant planning efforts over the past 20 years or so. *CentrePlan*, a plan for downtown, was originally adopted in 1994 and builds upon a former *Plan Winnipeg's* "Downtown" section. *CentrePlan* arose to fill a planning void, replacing the long-outdated 1969 Metro Winnipeg downtown plan (*Centre Plan*, 1999, pg. 4). The first iteration of *CentrePlan Action Plan* in 1994, and the updated 1999 *Action Plan*, originally prioritized a review of the downtown street system to better define street roles (*CentrePlan Action Plan*, 1999, pg. 37). In the 1999 *CentrePlan Action Plan*, with respect to pedestrian movement, the focus was on how the interior (underground and overhead) walk-way system in Winnipeg should be expanded - not so much how exterior street design should be improved. For transit users, *CentrePlan* assumed that the primary mover for pedestrians, on the streets, within and out of downtown, was a strong transit system.

These earlier missed opportunities for engaging a complete streets approach effectively began to be re-assessed within the 2008 *CentrePlan Development Framework*. Within that *Framework's* goal statements, greater importance is accorded to downtown streets as a means to "expand transportation options" and "improve transportation opportunities/choices within the

downtown neighbourhood, and between downtown and adjacent neighbourhoods” (CentrePlan Development Framework, 2008, pp. 17 & 20).

“A vibrant downtown possesses an efficient and effective transportation system that encourages all modes of transportation: walking, cycling, transit and the automobile. Commuters who bring their automobile downtown are well served through existing infrastructure. However, the key to developing a pedestrian-friendly downtown environment in Winnipeg is to develop a balanced downtown transportation system through expanding transportation options” (CentrePlan Development Framework, 2008, p 17)

The *Framework's* stated purpose was “to convey with maps, graphics and explanatory text the broad vision articulated in *CentrePlan*, the actions implemented, development directions and opportunities” (2008, pg. 2). The primary recommendation of the *Framework* was to “plan, develop, operate and manage the Downtown as a single and special entity” (2008, p. 4). With respect to neighbourhood areas and districts, the *Framework* indicates an intention to “identify, define, enhance and create unique and distinctive neighbourhoods, districts and character areas” (p. 4). This is a similar intent to what is mentioned in *Our Winnipeg's Complete Communities* document. *Complete Communities* states “districts, destinations and clusters can be made ‘complete’ while contributing to Downtown’s collective vibrancy” (City of Winnipeg, 2011a, p. 16). Furthermore, “a physical transformation of the existing downtown Winnipeg built form (buildings, streets, spaces, amenities)” will aid in better defining and enhancing the downtown neighbourhoods (p.16).

The *Framework* differs in terms of listing a number of strategies for downtown neighbourhood and character areas:

- Create unique, distinctive districts and character areas
- Define boundaries, entrances, and develop landmark sites as focal points
- Protect, enhance and develop character areas and focal points such as Portage and Main, landmark buildings, Broadway, Portage Avenue and waterfront access
- Examine opportunities to introduce 'light-scaping' in strategic downtown locations
- Enhance legibility in the Downtown through implementation of the City of Winnipeg Pedestrian Way-finding Signage Plan
- Enhance a sense of place through streetscape design that contributes to a district's character and identity
- Develop secondary plans for downtown districts and character areas that reinforce a district's particular character and encourage creative development (Development Framework, 2008, pg. 12).

Thirteen neighbourhood and character areas are mentioned in the 2008 *Framework* including the Exchange District, Portage and Main, The Forks, Chinatown and Central Park. One of the *Framework's* key points was the need to view downtown as an area of complementary neighbourhoods, rather than as a homogenous region (2008, pg. 10). In addition, secondary plans for downtown areas were recommended, to further protect the unique qualities of downtown neighbourhoods and streets. Aside from *The West Alexander and Centennial Neighbourhood Plan (2008)*, which included part of the outer western edge of downtown's Exchange District, no further downtown secondary plans have been implemented. Without this neighbourhood-sensitive direction, downtown continues to be viewed primarily as an undifferentiated monolithic area, for planning purposes. In addition, new development, removal of character buildings, and neglect of the streets' users, continues to occur in some parts of downtown without any neighbourhood-oriented considerations.

One way of addressing such issues has led in part to the creation of a more recent, more comprehensive plan for Winnipeg. *Our Winnipeg* (2010, plus the 2011 Direction Strategies) is the City of Winnipeg's current municipal development plan, setting out a vision for the next 25

years. This document sets policy direction in three main focus areas: 1) providing “A City that Works”; 2) planning for “A Sustainable City”; and 3) enhancing “Quality of Life.” Supporting the implementation of the vision in *Our Winnipeg* are four City of Winnipeg strategy documents: *Complete Communities* (2011a), *Sustainable Winnipeg* (2011d), *Sustainable Transportation* (2011b), and *Sustainable Water and Waste* (2011e). All of these documents play an important part in shaping the goals, objectives, policies and implementation strategies for Winnipeg. Direction strategy documents pertaining in particular to Winnipeg’s downtown neighbourhoods and streets are *Complete Communities*, and generally speaking within the *Sustainable Transportation* direction strategy document. The latter, and the more refined document - the *Transportation Master Plan* (2011c) – encourages, as mentioned earlier: the integration of transportation with land use (specifically stating that the transportation system should be planned and managed to support implementation of the concept of complete communities and the adopted urban structure); the promotion of active and healthy lifestyles; and safe, efficient and equitable servicing. The primary purpose of *Complete Communities* is to “lay out a framework for the city’s future physical growth and development by introducing an urban structure” (2011a, p 2). *Our Winnipeg* uses an innovative ‘Urban Structure’ approach in defining the City’s urban landscape, by organizing areas based upon period of growth and other major descriptive characteristics. The Urban Structure references two primary land categories: ‘Areas of Stability’ and ‘Transformative Areas.’

‘Areas of Stability’ are intended to provide contextually-sensitive infill development. Two sub-types of communities designated in the Area of Stability category are Mature and Recent Communities. Neighbourhoods established prior to 1950 are known as Mature Communities, while neighbourhoods planned after 1950 are Recent. Under the Mature

Communities section, neighbourhood areas which have desirable character but which are showing signs of decline are referred to as 'reinvestment areas.' *Our Winnipeg* does not currently designate any particular neighbourhoods, or streets as reinvestment areas. Nor does *Our Winnipeg* - at the present time - include criteria for identifying such areas, or for defining roles for neighbourhood streets (City of Winnipeg, 2010, pg 84). Many of the *Our Winnipeg* policies have integrated several aspects of CS into proposed planning initiatives, without necessarily referring to *Our Winnipeg* as a 'complete streets' plan. A goal of this practicum is to serve the further development of *Our Winnipeg*, as documentation of potential precedents, putting the focus back on streets as an important part of the mix, in the continued growth of - and reinvestment in - downtown neighbourhoods.

In general, the Downtown is designated under the 'Transformative Areas' category. Transformative Areas are very much intended to accommodate growth and change. Other parts of the City – outside Downtown, recognized as Transformative Areas in *Our Winnipeg*, are: Mixed Use Centres, Mixed Use Corridors, Major Redevelopment Sites and New Communities. Within the Downtown are numerous districts, destinations and clusters of residential development - including established neighbourhood areas south of Broadway and around Central Park. It is an objective of *Our Winnipeg* to better recognise these nodes, clusters, and streets as part of the downtown character, meriting enhancement efforts to improve neighbourhood quality. Furthermore, as indicated earlier, the City has set a direction within its Transportation Master Plan (TMP) to 'balance the needs of all users of the street to support complete communities and the urban structure' (City of Winnipeg-TMP, 2011, p. 37).

In 2008, the City of Winnipeg commissioned the *Downtown North Pre-Plan Assessment (DNPA)* report to assess the planning approach needed for the creation of a plan for the northern

portion of the downtown. This report was produced by Urban Edge Consulting. The study area was mainly the Exchange District, but also extended outside of that District's boundary to include northern downtown areas such as Chinatown, City Hall and Waterfront Drive. This area is described as the Warehouse District Neighbourhood and is the case study area for this practicum (See Illustration #6).



Illustration #6: Warehouse District Neighbourhood Area (*Red-outline*)

(City of Winnipeg, 2014, Retrieved from [http://www.winnipeg.ca/ppd/planning\\_secondary\\_Initiated\\_Warehouse.stm](http://www.winnipeg.ca/ppd/planning_secondary_Initiated_Warehouse.stm))

The main recommendation of the DNPA report was that any future planning for this area should be undertaken through a series of rapid and concise planning initiatives, rather than through a single comprehensive planning process (City of Winnipeg-DNPA, 2008, pg. 54). It was suggested that there are discrete components to the study area, with no compelling need to address the entire area as one. There was a perceived opportunity to value the unique qualities of downtown streets and areas, without necessarily undertaking secondary plans. Some streets within the DNPA may already be considered as ‘complete’ streets, based on field observations.

The DNPA noted there is a disconnect from precinct to precinct in terms of pedestrian-friendliness. For instance, the western half of the Exchange District and the Waterfront precinct is highly 'pedestrianized', but areas around the Chinatown precinct and the remaining study area streets are not very well developed for pedestrians. This neighbourhood – as a whole - provides a unique opportunity to learn about existing conditions favorable to complete streets, as well as why some streets are not as 'complete' as they might ideally be.

The practicum did not explicitly explore urban street design element, but concentrated in policy perspectives.



## **Chapter 5: Analysis**

### **a) Complete Streets – Framework and Checklist Recommendations**

The purpose of my practicum research sought to inform and engage the key informant participants regarding a “complete streets” approach in their work — primarily in terms of the recommended framing of a “complete streets” checklist, as well as recommendations for future area improvements in the WDN. The analysis of each interview helped provide a variety of perspectives on the issues to consider and opportunities to pursue. The spectrum of the perspectives ranged from non-profit organizations to a development corporation. The representatives from the two non-profit organizations, Green Action Centre and Manitoba Cycling Association, focused the CS discussion pertaining to pedestrian priorities and active transportation concerns and issues. Transit and infrastructure were issues addressed by Winnipeg Transit and City of Winnipeg Public Works representatives. Issues about street design elements, neighbourhood planning and policy work received key contributions from participants who were City of Winnipeg engineers, planners and urban designers, while members of the CentreVenture Development Corporation provided insights about economic opportunities, key downtown Winnipeg projects and neighbourhood development perspectives. Despite all these variety of opinions and areas of expertise of the key informants, there were some key overlapping issues among the participants to frame recommendations and checklist items in a CS approach for downtown historic districts and character neighbourhoods. These are listed in numerical order and each item discussed further.

***Checklist Recommendation #1: Pedestrians and cyclists should be strongly advocated for as part of all users of the street.***

One of the questions asked from the interview guide (see Appendix A) was “*What particular users (cyclist, motorist, transit patrons, pedestrians) of the streets will most benefit from a complete streets approach?*.” All the participants felt pedestrians and cyclists have the most to benefit and are most vulnerable in a CS approach. Participant #1B stated: “*I think the pedestrians and cyclist as users of the street benefit the most.*” Participant #5, a transportation planner, indicated “*all the research is pointing at the significant amount of the population is interested in cycling but is definitely afraid of it because of not enough separation.*” Participant #4 recognized the importance of young people in the City as key users to target and stated: “*these are the individuals who are a lot more comfortable trying another way of travel, who don’t see it as a drawback not to have a car.*”

Other participants mentioned the importance to advocate for other non-pedestrian or non-cycling users of the streets. Participant #3B, a downtown planner, mentioned “*the bigger picture aspect for all the other users is going to take some advocacy and prioritizing to them that other users (pedestrians and cyclists) have a role on the street.*” Participant #1A felt “*entire paradigm shift needs to change*” and believes “*people are still married to their cars and don’t want to walk ten minutes.*” Multiple participants in this study mentioned vehicle users will at one point or another have destinations to walk to once they park or stop their cars.

***Checklist Recommendation #2: CS planning is context sensitive, the surrounding land uses must justify all street traffic (pedestrians, cyclists, transit and vehicular) and vice versa.***

As discussed in the ‘Literature Review’ chapter of this practicum, understanding the roles of the streets and identifying street types is essential in CS planning. The same issues were

brought forward by participants in this study. Participant #3B states planning for our streets is “*context-based – it’s about what we really want to accomplish with our streets, we are not talking about going to streets the width of Main Street.*” For Participant #5: “*Complete streets don’t all look the same. A lot has to do with the land use orientation and network function of different streets as well as what the design detail will be.*” This thought was similar to what Calgary’s indicated in their *Interim Guidelines*. Participant #7A believed downtown should focus on pedestrian needs only, but mentioned the challenge of “*balancing the needs of the different traffic and functions. You have to make compromise on things where it is significant.*” Within the WDN, some neighbourhood streets (e.g. Galt Avenue and Alexander Avenue) are set up for commercial and industrial vehicles, due to the predominant warehouse buildings. However, even though some of these warehouse buildings are being converted to residential uses (such as is occurring on James Avenue), the street still reflects character, scale and size for industrial vehicles.

***Checklist Recommendation #3: CS must be balanced for all users but justifying the cost/sustainability of CS designs collaboratively through a cost analysis must be part of the mix.***

The issue of cost for CS came forward during the interview process of this study. Engineers and planner participants mentioned the ongoing concern to keep infrastructure projects within budget. For Participant #7B: “*The biggest thing is cost. We want to make sure we build what we need and from the public works side of things we are going to maintain what is built.*” The 2014 City of Winnipeg document *Our Budget - Forward Facts Booklet* estimated the cost to raise infrastructure to appropriate conditions at 3.5 to 7.5 billion dollars over the next ten years (City of Winnipeg, 2014, p.5). The key challenge for Winnipeg like most municipalities is limited dollars and aging infrastructure. Participant #3B: “*One of the challenges we are*

*struggling with and constantly trying to work towards is coming up at the planning stages is that number to put into the budget.”* Planners need to be better informed about budgetary issues as well as design issues. Participant #3A, a senior urban planner suggested *“Planners do deal with budgets – but we don’t work on the forecasting or pro-forma part of the economics.”* Generally, the City’s Public Works department sets the budget and the planning conforms to what is provided.

***Checklist Recommendation #4: The CS systems should be applied to the entire transportation network for district or neighbourhood plans, not solely for individual streets.***

An interesting point arose during the interviews regarding underground upgrades and streetscape upgrades of existing local neighbourhood streets. The City’s current practice has *“never really taken the position to say their streets are a development priority for the next 5 years, as we always had a hands-off approach to say whatever happens happens”* according to Participant #3B. The challenge remains that the neighbourhoods never really gets addressed as a whole, due to limited resources. In the context of the WDN, Participant #7A spoke about the areas both east and west of Main Street lacking consistent conductivity. Participant #7A, a downtown urban designer, suggested the WDN area is *“very piecemeal in here, where segments of land are being sold off to private developers and alleys and service lanes get lost.”* Participant #5 believed the integrated planning model needs to be applied *“ensuring the highest level of policy gets transferred down”*. Participant #5 also said the *“challenge is incorporating these policies into development plans and all of our day-to-day tools.”* Currently, there development policies and plans such as *Our Winnipeg* in place; however, these guiding documents have not been used to their full potential.

***Checklist Recommendation #5: CS must be developed for minimum traffic impacts to mobility (pedestrians, cyclists, transit users and motorists); any reductions or additions on the streets must be assessed for benefits to all stakeholders.***

For historic and downtown areas such as the WDN, Participant #7B stated: *“the key thing is to connect to the areas outside of this area, so the flow goes through the area and there are no gaps in the mobility.”* Any closures to streets, reduction of vehicular traffic lanes and street parking will have to take into the account consequences and trade-offs for motorists and transit users. From the interviews, it became clear that most participants highlighted the challenges to make changes to the existing urban downtown streets. Participant #8A, an active transportation coordinator, informed *“My biggest challenge is the negotiations it would take to get more cycling and pedestrian activity on to the Right of Way, because you have to take it from something such as to reduce vehicle parking capacity in some way.”* The implication of any traffic changes has effects to neighbouring urban areas to consider as well. A consultation of traffic studies and engineering reports as well as review of street design literature would be required to help educate changes. For Participant #4: *“I think you want to have an assessment from a transportation stand point of what is going happen and if there is anything for us to be aware, even if there is going to be delays, we have to weigh the benefits and see if it is more important than the trade-offs.”* From a broader planning perspective of downtown, Participant #5 stated: *“we need to look at the trade offs and how do we look at implications at much higher level of planning and how do we accept lower levels of service in the network.”*

#### **b) Special Considerations – Downtown Historic Districts and Character Neighbourhoods**

Downtown historic districts and character neighbourhoods such as WDN contain multiple land uses and mix-use developments. The combination of dealing with residential, commercial

and, in some cases, industrial uses in the WDN provides further challenges for this area. Special considerations for the WDN were discussed by participants as further ways to improve the quality and attractiveness of such areas. This ‘Special Considerations’ section presents both challenges and conflicts among all the users of the street and are described here.

***Special Consideration #1: Conversion of one-way downtown neighbourhood street to a two-way street to make areas more pedestrian friendly***

During the interview discussions, participants mentioned the conversion of existing one-way downtown streets, such as Princess Street and King Street, should be converted to two-way routes. Participants felt that two-way streets in the WDN are more pedestrian-oriented as compare to certain one-way routes that focus more on moving cars in and out of the neighbourhoods. For Participant #1B: *“I think all the one-ways are a challenge, they certainly accommodate vehicle traffic more than pedestrian traffic; but, where you get smaller kind of tight two-way streets like Albert Street, those feel a lot better for the pedestrian experience.”*

***Special Consideration #2: Reducing vehicular speeds on local downtown character streets to 30-35 km/h for pedestrian and cycling safety.***

The notion of reducing traffic speeds in downtown hasn’t come forward in planning documents, but, participants suggested this makes sense for certain character areas like the Exchange District. For Participant #2: *“For the Exchange District I would suggest the speed of traffic should be decreased to 30 to 35 km per hour, which would make it easier for pedestrians to get across.”* Participant #6, a representative of the Manitoba Cycling Association, believed the 30km/h speed should be standard in our residential areas. This participant said *“At 30 km/h if a pedestrian walks in front of me, then there is a good chance I am going to stop. As well, there is minimum chance I send him to the hospital to almost no chance I will kill them.”* From the Winnipeg Transit perspective, Participant #4 said, *“I think transit could support low speed limits*

in an area like this to something like 30km/hour,” but, then mentioned “It would be nice to do a traffic study of the area, to see average speed is on these corridors.” Ultimately, the reduction of vehicular speed should be prioritized on streets that are considered pedestrian-oriented sections of the WDN.

***Special Consideration #3: Make a case for investing in street trees and street furniture on tight sidewalk spaces becomes a challenge in character areas.***

As mentioned by a senior transportation planner, Participant #5 stated, “Incorporation of trees and investment of trees is huge in terms of physically framing the pedestrian space and adding both visual interest and partial protection from wind, direct sun and precipitation.” The investment of trees often gets limited by extreme challenge to place trees on an already tight sidewalk spaces found in character areas. Participant #5 said, “The general approach from a street maintenance and rehabilitation is to standardize things and simplify things much as possible, “which does a real disservice to the potential quality of pedestrian space design. This planner felt there is a constant challenge to a make a case for trees as good investment. The challenge particularly becomes tough in historic areas due to space and resources. Because of the narrow space and significant underground infrastructure, enhancements to the sidewalk corridor (trees, street furniture, etc.) are difficult to implement, according to Participant #5. An investigation about how other cities have dealt with similar issues would need to be incorporated in a CS approach to planning.

***Special Consideration #4: Limiting commercial and service vehicles into the character areas to certain hours during the day.***

Limiting service and commercial vehicles into the character areas was suggested by several participants. For instance, Participant #3A suggested, “Garbage pick-up can occur during nightly hours.” While Participant #4, suggested with “deliveries only after 5pm,”

businesses must be brought into process to “*ensure they are fine with change from the status quo.*” Participant #4 is referring to that business owners in area would have to be willing to accept this change in service from their current practices. These changes may appear as minor adjustments, but help immensely in reducing daily truck traffic during peak daytime hours.

***Special Consideration #5: Setting guidelines for safe travel of cyclists and pedestrians during partial closures of active transportation routes.***

It should be understood that downtown areas are travel destinations for *all* users. When routes to these destinations are disrupted for motorists, usually provisions and detours are set to accommodate their needs. Participant #2, an active cyclist, found during construction when active transportation routes are closed, provisions and detours are not set for pedestrians and cyclists. For instance, Participant #2 explained during the conversion of the former Downtown Canada Post building to new police headquarters, barricades set up around the construction site impeded the cycling lane from being used. Participant #2 stated: “*There certainly needs to be alternative requirements made for pedestrians and cyclist routes around construction during certain periods of time*” and more importantly, “*to accommodate safe access for pedestrians and cyclists during construction.*” The Participant #2 mentioned, on Assiniboine Avenue, condo construction has closed the cycling lane until 2015. This participant stated: “*In New York, if a sidewalk is blocked because of construction, they will move the sidewalk, protect it and actually, if need be, will move it within what is normally a traffic lane.*” Any future CS guidelines should include provisions about how to deal with construction affecting travel for pedestrians and cyclists.



### **c) Recommendations for Winnipeg's Warehouse District Neighbourhood**

Proposed recommendations for a number of design elements and area considerations for the WDN, to create “complete streets”, was the main subject of debate for the key informant participants in this practicum. When participants were asked what they liked about the WDN, most participants pointed to the Exchange District area of the neighbourhood. Participants felt streets here were the most ‘complete’ and reflected the character the WDN should achieve for the rest of the neighbourhood. This section of the chapter draws specifically from the photo elicitation research technique for seeking specific recommendations on the WDN, as well as personal opinions of the participants. To help frame recommendations, each interview was analyzed for perspectives on the four user-types of the street – pedestrians, cyclists, motorists (private and commercial vehicles) and transit users. This section concludes with maintenance considerations for multi-modal streets within WDN as an example of a downtown historic district and character neighbourhood within City of Winnipeg.

#### ***Pedestrian Recommendations for the WDN***

##### **Recommendation #1: Narrowing the wider neighbourhood streets in WDN**

Based on field observations from the photography, there are a fair number of wide streets within WDN boundaries, especially within the Centennial Complex Area of neighbourhood (see Figure 6).



Figure 6: Local neighbourhood streets within the Centennial Complex Area of the WDN

The participants agreed with this point that some of streets in the WDN are wider than they need to be, because they are still set at the old standards. Participant #3A suggested James Avenue as an example, calling it “a crazy wide street.” Participant #1A believed, “*the bones are there such as wide side-walks to make an environment for the pedestrian, although it doesn’t feel good for a pedestrian right now.*” The scale of the street will have to be narrowed to address this feel.

Recommendation #2: Improve pedestrian connectivity along Disraeli Freeway and Main Street.

Particular areas of improvement were specifically noted for crossing along the Disraeli Freeway and Main Street crossing. Participant #7A stated: “*I think within the National Exchange Historic Site, there is pretty good conductivity there, such as that between Bannatyne and Albert; but, as you move forward to where the Disraeli meets the Main Street or those crossing streets*

*along Disraeli is tough for pedestrians.”* As shown on Figure 7, one particular intersection this Participant would like to see addressed is the Disraeli Freeway and Main Street. Currently, the environment for the pedestrian experience is unfriendly, and there are very limited numbers of pedestrian crossings at this particular complex intersection.



Figure 7: Disraeli Freeway and Main Street intersection

Recommendation #3: Re-claiming the character and quality of alley-way streets and back lanes in WDN.

Residential Streets in the neighbourhood, such as John Hirsch Place and Elgin Avenue, were mentioned as streets to target for pedestrian-friendly activity. According to Participant #3A, John Hirsch Place *“was supposed to be one of those shared pedestrian streets, but it ended up being a back lane with garbage bins. It wasn’t really used, as even one of the patio spaces is being used for parking and they kind of just destroyed it and we are trying to bring it back.”* The participant mentioned a portion of Elgin Avenue as still being a gravel alleyway. Part of the issue in WDN is *“segments of land are being sold off to developers and alleyways and back lanes are being lost”*, according Participant #7A.

Recommendation #4: Complete the curbs and edges where they are missing on local neighbourhood streets of the WDN.

There are numerous streets requiring street curbs and edges, especially when it comes to defining edges and curves of the pedestrian sidewalks within the WDN (see Figure 8). Within Cultural District Area of the WDN, Participant #5 states: *“My sense is definitely the definition of street space needs an over-haul within this general area. There is no curb edge or not all streets have the curb edge where it needs to be, as street design needs to be considered for greater pedestrian activity.”*



Figure 8: The intersection of James Avenue and Amy Street, an example of missing street curbs with the WDN.

### ***Cyclist Recommendations for the WDN***

Recommendation #1: The incorporation of bike parking areas must be formalized within the WDN.

The Albert Street bike parking platform was brought up during the interviews as a necessity for cyclists. Participants felt that this platform needs to remain year-round. Other

issues for bike parking were for those WDN streets that have a narrow sidewalk corridor. *“We need proper streetscape bike parking structures here, even a parking coral or covered structure”* according to Participant #5. Providing such structures would further endorse the area as a cyclist destination. For Participant #6: *“even from a cyclist point of view, there still isn’t enough parking in downtown”*.

Recommendation #2: The existing bike lanes need be separated and consistent throughout the WDN.

The condition of the bike lanes in the WDN met the minimum standard in terms of its consistency and function according to some participants (see Figure 9). For Participant #3A: *“During certain times of the day, I wouldn’t feel comfortable biking on King and McDermot, even if it has a bike lane. Sometimes, there aren’t easy fixes, and you just can’t throw paint on the street and assume it’s comfortable for the cyclist.”* There is a need for separation of the bike lane on right-of-ways, where it may be possible to do so. Furthermore, the bike lanes need to be consistent both inside and outside of the WDN, as Participant #8A informs: *“For the bike lanes we have done, the ones I’m thinking about are McDermot and Bannatyne, where we have breaks in between and remain inconsistent, as the bike lane does not run the full street.”*



Figure 9: McDermot Avenue bike lane



### *Motorists Recommendations for the WDN*

Recommendation #1: Tighter curb turning radius for automobiles, especially near pedestrian areas.

The interaction of the pedestrians and motorist is important when looking at safe measures in street design. Pedestrians are the most vulnerable users in relation to motorists. Participant #6 stated we must look at designs where we “*slow the radius of the turning for cars.*” *If we make sharper turns, we give everyone time to react.*” For Participant #5 mentioned King Street as an example where we need drivers to “proceed with more caution,” as the street goes along a pedestrian gathering place known as Old Market Square (see Figure 10).



Figure 10: King Street Turn along Old Market Square

Recommendation #2: Hiding large traffic light boxes, hydro poles or obstructions on the pedestrian walkways to reduce street clutter and improve motorist visibility.

Participant #7A referred to Pedestrian Facilities Design Guidelines with regards to traffic lights, the issue of large boxes required on the intersections of right-of-ways was raised. The participant asked: *“Could these boxes be lower profile or could they be hidden in a more integrated fashion, so, designing street right-a-ways such a way to reduce clutter.”* This also applied to any other obstructions that limit pedestrian and motorist visibility, such as large garbage bins on street corners, street lights on back of curves, hydro poles which need to be buried or any misplaced street furniture hiding pedestrians in blind spots for motorists.

Participant #8A cited Princess Street as one example of the need to reduce street clutter (see Figure 11). The participant mentioned: *“Hydro poles should be buried and poles removed, and probably you may want to give some thought to putting the street lights to the back of the curve.”*

A secondary benefit to reducing street clutter would be to improve the aesthetics of the neighbourhood.



Figure 11: Princess Street view looking southbound.

Recommendation #3: Advocating the removal of street parking and surface parking, where it makes sense to do so.

Removing street parking was a challenge participants felt would be the most difficult to accomplish. For Participant #1B: *“One of the bigger challenges is that even if policy changes or a major shift happens, there is going to be complaints about parking.”* Participants #7A felt *“selling this idea”* to business owners requires some advocating on the benefits of removing street parking to create space for pedestrian and cycling traffic, as business owners *“feel they need to have street parking to attract customers”*. Participant #7B felt parking is not lacking in this area, because of the numerous surface parking lots compared to many other cities. The number of large surface parking lots continues to be a deterrent within the WDN as a pedestrian appealing neighbourhood (see Figure 12).



Figure 12: Surface parking lot and street parking within the WDN.

Strategies and studies would have to be examined further for benefits and solutions for restricting parking options, when framing CS policies for the WDN. Participant #1B indicated that



progressive developers need to be sold on this idea. This participant said, *“For developers too money talks. So, we can probably make a compelling argument to developers the value of their properties increases if they are fronting on to a complete street, as well as people want to live here”*.

### ***Transit Recommendations for the WDN***

Recommendation #1: Implement a transit turnaround between Pacific Street, Martha Avenue, and Rupert Street.

At the moment, Pacific Street, Martha Avenue and Rupert Street are used by public transit to re-route buses northbound or southbound on Main Street. On Rupert Street, The Manitoba Museum attracts children and young adults who are constantly dealing with buses idling or waiting to change routes. Participant #4, a transit planner, recognized the need to protect children from transit, as well as, to implement ideal transit infrastructure in the area such as a “transit loop” away from children along the streets. The participant felt the area is working *“OK at the moment”*; however, he was also concerned about the possibility of the Manitoba Museum expanding. Such expansion might alter routing of the buses and cause further congestion.

Recommendation #2: Encourage transit oriented developments within the WDN.

This recommendation relates to complete streets but focuses more on development. Participant #4 suggested the goal for the area should be: *“To have policies in place and marketing in place so that it would go after a demographic that would use transit — so you may want to build a building all for people who don’t want to use cars.”* The participant noted that in many cities there is policy in place that suggests when you live close enough to a transit station, *“the parking is waived and you don’t find any sort of parking near transit stations.”* For

Participant #4, transit has the ability to work with and build proper infrastructure facilities around developments which are “*closely attuned*” to these sorts of projects in the WDN.

### ***Maintenance of Streets Considerations for the WDN***

Participants from the Public Works department voiced opinions and issues with regards to streets to suggest two important considerations for the WDN. The first consideration is ensuring there is uniformity to the WDN area. As Participant #8C states: “*I like to keep more or less the things the same, you know it is easier to maintain when you have most of the same and in here you have a lot of different looks and feels.*” As mentioned from the ‘Study Area Profile’ chapter, the four described areas within WDN are not in tune to each other. Ensuring neighbourhoods follow standards, whether or not they are complete streets guidelines, is important to maintenance engineers from the beginning. Participant #8B, a street maintenance engineer, stated “*Feedback I received from some of our guys in the department is street maintenance could be brought in the early stages of development plans instead of having the whole area layout for us, with no consultation.*”

A second consideration for some streets within the WDN neighbourhood is addressing the issue of neighbourhood snow clearing. Participant #8C mentioned: “*The density of pedestrians, vehicles, cyclist traffic, as well as more businesses in the area makes everything congested and we don’t have as much space to work in there for sidewalk clearing, hauling or places to store snow on streets.*” Procedures and guidelines for snow removal would have to be planned out and included part of the CS policies for the WDN, if implemented.

## **Chapter 6: Conclusions**

The concluding chapter of this practicum features three sections: Lessons Learned, Planning Implications and Applications, and Directions for Future Research. The ‘Lessons Learned’ section discusses the challenges and limitations that were experienced during the key-informant interview process, as well as additional insights to inform the practicum. The ‘Planning Implications and Application’ section answers the main research questions and provides concluding thoughts about how this research can be beneficial to local planners, WDN and, in general to downtown historic districts and character neighbourhoods. The ‘Directions for Future Research’ section discusses the next steps necessary from framing complete streets checklists to designing complete street guidelines for WDN. As well, the practicum concludes with the current planning efforts being undertaken in the WDN.

### **a) Lessons Learned**

Several lessons learned came from the key informant interview process. Firstly, the interviews for this study were conducted in the month of December, during the Christmas holiday season, which was both a drawback and a benefit. The benefits for meeting during the Christmas season was most of the participants were quite generous with their time and informed me that the Christmas season has slowed down their work schedule to free time for interviews. The drawback was that some of potential participants mentioned they were going on early vacation or had other family obligations, which limited them for being potential participants. Because of this, two key informants, members of the Downtown Winnipeg BIZ and The Exchange BIZ organizations, were not able to participate. This drawback limited assessments to this study from the business and economic opportunities perspective to this research. Generally,

I felt the total number of interviewees was appropriate for this study; however, the mix of perspectives was weighted heavily towards individuals who work for the City of Winnipeg. If time would have allowed, it would have been beneficial to broaden this study to interview more members outside of the City of Winnipeg staff. However, the mix of individuals from the various City engineers and planners to public works officials offered a great range of perspectives. Certainly, not all members of the City of Winnipeg Departments have similar viewpoints on how streets should be handled.

Some of key informants initially contacted directed my interview requests to other colleagues within their department. For participants who were available for interviews, on some occasions requests were made by some participants to be interviewed in groups of two or three. As mentioned in the 'Research Methods' section, this occurred four times during the interview period of this study. Meeting in groups of two or three provided more challenges to this study. Accommodations were made to the interview guide to ensure the interview fit within the one-hour time period. Some of the less significant questions were omitted from the guide, based on my judgement.

The photo-elicitation method was also eliminated from one of the group interviews, due to time constraints. When used during the interview process, the photo elicitation technique was effective tool to draw out street issues and participants were able to provide more insights. I did, however, contemplate whether to show photographs for the four areas of WDN at the beginning of the interviews or at the end. During interview sessions of this study, I choose to do both to experiment with this technique. I felt that when the photographs of the WDN were shown at the beginning, participants were more engage into the street design issues as compared to when photographs were shown at the end of the interviews. I felt the participants used the photographs

as visual cues to draw from when questions from the interview guide were asked afterwards. At one occasion, Participant #8A felt that he needed to learn more about the site and follow up on an issue just based on looking at a photograph of the Princess Street hydro poles.

As expected there were some personal bias expressed by the participants based on their experiences dealing with the planning and development issues of the WDN. Participant #7B articulated that his job informs how he views streets within neighbourhoods. This participant stated, *“I am sensitive to the movement of people and goods in any way they need to move, so I need to balance these needs.”* Participant #7A stated her bias towards pedestrians in the neighbourhood. Both Participants #3A and #3B, who deal with the day-to-day planning issues, felt generally the entire area of the WDN was *“generally complete in terms of sidewalks for pedestrians.”* While Participant #6, whose interview was from the cyclist perspective, stated clearly *“I do have a bias because I look after a company called Rack Works which provides bike hoops, we supply those.”*

As the CS discussion is relatively new in Canada, some of the key informants felt their level of knowledge was limited on this area of planning. This was understandable to the research study, as the City of Winnipeg does not have any CS guidelines in place for complete streets. Most of their knowledge on streets was based on their expertise on everyday issues and concerns pertaining to streets within the WDN. Due to the limited scope of this study, public engagements were not included in the process. Generally these opinions would have been from the business owners, residents, students and youth who live within the WDN. This limitation in the practicum eliminated a key group of stakeholders, which would be the next group of individuals to contact to further this study.

I will conclude this section with some personal observations from this research endeavour. I found it interesting that subject matter of ‘complete streets’ ties planners and engineers together. Based on interview discussions with the City of Winnipeg street engineers, planners and urban designers, I personally felt there was a disconnect among these individuals geographically and their train of thought how the other operates. The geographical issue is that the City’s Planning Department is located in downtown (30 Fort Street), while the City’s Public Works Department is located on 1155 Pacific Avenue 4.5 kilometers away. Comparing this to Edmonton, the Public Works and Planning departments are within a 5 min walk away from each. It would be hard to comment on whether Edmonton’s Public Works and Planning Departments get together on streets issues more often than Winnipeg’s Public Works and Planning Department; however, based on location, the opportunities to meet make it a lot easier in the Edmonton compared to Winnipeg. Some of the Public Works participants of this study voiced opinions on how great it would be if “*Public Works could be brought into meetings at the beginning*”. While planners and urban design participants mentioned budgets on street repair and renewal are set by the Public Works Department. Both planners and engineer participants mentioned the amount of resources and time available prevent such meetings for taking place more often.

A second observation I have noted from this study was that a brief slideshow of the WDN area and its characteristics would have been useful to interview process. Prior to each interview, the WDN case study was introduced to each participant. A slideshow of this area would have been a great visual brief to provide the participants.

## **b) Planning Implications and Application**

As indicated in Chapter 1 'Introduction', this practicum sought to:

- 1) identify the key issues that could be addressed with a checklist for mainstreaming a complete streets approach to the redevelopment of downtown historic districts and character neighbourhoods.
- 2) determine lessons planners can learn from other precedents, when devising such a complete streets checklist.
- 3) identify the main implications, appropriate recommendations, for current planning efforts in the Warehouse District Neighbourhood of Winnipeg if a complete streets checklist approach is adopted.

This practicum first endeavored to answer this question: *what are the key issues that could be addressed with a check-list for mainstreaming a complete streets approach to the redevelopment of downtown historic districts and character neighbourhoods?* From the key informant interviews, photo elicitation technique and WDN case study presented to the participants, there are five overall checklist recommendations for CS planning and design goals to consider for downtown historic districts and character neighbourhoods:

Checklist Recommendation #1: Pedestrians and cyclists should be strongly advocated for as part of all users of the street.

Checklist Recommendation #2: CS planning is context sensitive, the surrounding land uses must justify all street traffic (pedestrians, cyclists, transit and vehicular) and vice versa.

Checklist Recommendation #3: CS must be balanced for all users but the justifying cost/sustainability of CS designs collaboratively through a cost analysis must be part of the mix.

Checklist Recommendation #4: The CS systems should be applied to the entire transportation network for district or neighbourhood plans, not solely for individual streets.

Checklist Recommendation #5: CS must be developed for minimum traffic impacts for mobility (pedestrians, cyclists, transit users and motorists), any reductions or additions on the streets must be assessed for benefits to all stakeholders.

When planning multi-modal streets and implementing a complete streets guidelines for downtown historic districts and character neighbourhoods, these recommendations may serve to frame the issues in the development of a CS checklist to provide a larger context for policy objectives. It was determined prior to this research study, planning for CS in downtown historic districts and character neighbourhoods was relatively a new realm in the planning literature. From the interview process, key informants helped to identify special considerations for these particular types of areas. The considerations open the discussion for planning debate among future researchers interested in this particular area of planning. The special considerations determined for downtown historic districts and character neighbourhoods are the following:

Special Consideration #1: Conversion of one-way downtown neighbourhood street to a two-way street to make areas more pedestrian friendly

Special Consideration #2: Reducing vehicular speeds on local downtown character streets to 30-35 km/h for pedestrian and cycling safety.

Special Consideration #3: Make a case for investing in street trees and street furniture on tight sidewalk spaces becomes a challenge in character areas.

Special Consideration #4: Limiting commercial and service vehicles into the character areas to certain hours during the day.

Special Consideration #5: Setting guidelines for safe travel of cyclists and pedestrians during partial closures of active transportation routes.

## ***Research Question #2***

The second research question to this practicum was: *What are the lessons planners can learn from other precedents, when devising such a complete streets checklist?* There were



specific examples related to complete street planning and frameworks discussed from the ‘Literature Review’ chapter of this practicum. Each of CS precedents discussed in this practicum provides lessons for CS planning. The first lesson for planners is all streets must be identified as well as the primary users on the street when planning for CS. This was discussed from City of Calgary’s *Interim Complete Street Guide* and *Complete Street Guide for Vermont Communities*. Street identifications help in the initial planning stage of knowing what are the intentions are for streets and how we would like to see them function. In case of the WDN, there are a number of wide streets on residential areas such as James Avenue, which are more scaled for industrial and commercial vehicles. Consultations with local stakeholders within the WDN will assist planners to re-identify and establish requirements for the area, as it merges into a pedestrian neighbourhood. In both the City of Calgary and State of Vermont Guides, the level of detail in policy work depends on the requirements established by planners and local community stakeholders.

A second lesson for planners is to understand the importance of using a CS checklist. As there are multiple stakeholder groups of professionals who deal with the day-to-day activities on streets, a CS checklist will ensure project managers are attuned to the various needs of the users. Generally, as indicated by the NJDOT, a checklist must be completed in the early concept development and design stages of projects. The CS checklist sets the objectives moving forward. More importantly, the CS checklist ensures a level of consistency every time a road is built or reconstructed with multi-modal features. In the WDN, based on field observations and comments from participants, there are plenty of gaps in the condition of the streets, such as missing curbs and sidewalks. This was articulated well by Participant #3A, who describes condition of the area as the following:

*“I remember once some actress came to Winnipeg and was asked, Don’t you think our Warehouse District and Exchange District is fabulous?, she responded that it looked like a gap-toothed smile and I was thinking that’s exactly it — we still have some good teeth but there are some serious gaping holes.”*

A third lesson learned from CS precedents is there is a notion that CS policies and implementation strategies are designed for newly developing areas, which is not the case. According to NCSC, any policy from the regional or statewide context to local neighbourhoods which considers the ten specific CS elements is included apart of CS planning. From precedents such as Historic Millwork District in Dubuque, Iowa; we learn that CS strategies have a place in historic downtown areas. From the City of Charlotte, we learn that CS policies were set in place purposely to make a dense urban context. The City of Edmonton recognizes six principles for all its streets, no matter the context, through an engagement process with departmental representatives, external stakeholders and members of the public.

A final lesson learned from precedents came forward from the participants when they were questioned about best examples of CS, key informant participants referred more often to places where they have visited or vacationed. Most of the participants referred to downtown districts outside of Canada, particularly within Europe and United States. For Participant #1A: *“I think a lot of places in Europe are complete. I always remember noticing in places like Vienna and Austria, which have pretty complete streets. But then again I think any place you go where there is a dense European city, it’s pretty complete.”* Participant #6A mentioned: *“San Francisco, in their dock areas and piers, those streets are amazing — there are unique lights where all the pedestrian movement happens in one direction on the intersection, where your cars are stopped.”* When participants were questioned what they liked about the WDN, most participants would point to the Exchange District Area of the neighbourhood as having streets

which are complete. Albert Street was the prime example of a ‘complete street’ among most participants. These responses teach us that most of us prefer character downtown areas that are pedestrian safe, places where we can bike and that offer “destinations” within cities.

### ***Research Question #3***

The third research question in this practicum was: *What are the main implications, and appropriate recommendations, for current planning efforts in the Warehouse District Neighbourhood of Winnipeg if a complete streets checklist approach is adopted?* To summarize, recommendations were formulated from the key informant interviews based on the four main modes (pedestrian, cyclist, automobiles and transit) of travel within the district.

The main pedestrian and street improvement recommendations within the WDN to note when planning for pedestrian are as follows:

- 1) Narrow the wider neighbourhood streets in WDN.
- 2) Improve pedestrian connectivity along Disraeli Freeway and Main Street.
- 3) Re-claim the character and quality of alley-way streets and back lanes in WDN.
- 4) Complete the curves and edges where they are missing on local neighbourhood streets of the WDN.

The main cyclist recommendations for the WDN are:

- 1) Formalize bike parking areas within the WDN.
- 2) Separate and render consistent bike lanes throughout the WDN.

Main recommendations for motorists in the WDN are:

- 1) Create a tighter curb turning radius for automobiles, especially near pedestrian areas.
- 2) Hide large traffic light boxes, hydro poles or obstructions on the pedestrian walkways to reduce street clutter and improve motorist visibility.

- 3) Advocate for the removal of street parking and surface parking, where it makes sense to do so.

For Transit, the main recommendation within the WDN are:

- 1) Implement a transit turnaround along Pacific Street, Martha Avenue, and Rupert Street.
- 2) Encourage transit oriented developments within the WDN.

In addition to the four modes of travel recommendations for WDN, special considerations for the area were mentioned. The first consideration is ensuring that street standards are in unison for the entire neighbourhood. Currently, the four distinct areas of the WDN are at different stages for development. Understanding that the streets are what will link these areas moving forward should be considered in future planning. The second consideration is planning for snow removal. It is understood winter is a big part of living in Winnipeg. Any new street standards such as the addition of separated bike lanes or narrowing of wider neighbourhood streets, must accommodate within the City's snow removal equipment. During the interviews, street maintenance engineers from the City's Public Works Department mentioned snow removal is considered one of the biggest challenges they are faced with, especially around street furniture. Participant #8C stated: "*Snow clearing is a challenge because you got bike rakes, street signs, lighting poles, street furniture like planters and outdoor patios to deal with as well as all the activity around these things. We do follow the guides from planning property and development.*" It should be anticipated that any future CS guidelines would have to consider best practices in dealing with this challenge. One criticism on the recent *Complete Streets Guidelines* from Edmonton is that it briefly mentions that the City's snow removal practices are being reviewed to align with its *Guidelines*. For Winnipeg, the handling of this issue should be formalized up front

prior to the completion of any future CS guideline work as well as included part of a CS checklist issue to consider in the planning of its streets.

All of these recommendations and considerations do not represent a complete list in the CS framework for WDN, as some key stakeholder groups are missing and could further inform this research. These include external stakeholders, such as Downtown Winnipeg BIZ and The Exchange BIZ representatives, as well as members of the public (local residents and business owners). Overall, the WDN recommendations from this practicum do align with some of CS goals and principles other Canadian cities such as Calgary and Edmonton have recommended from their stakeholder meetings.

### **c) Directions for the Future Research**

The research synthesized in this practicum was intended to help frame the development a complete streets neighbourhood guide within WDN or any other downtown historic district and character neighbourhood. The key informant interviews as well as recommendations found in literature from other cities and areas are the first steps in framing CS guidelines. The City of Charlotte went through a similar initial process as this practicum when framing recommendations for their *Urban Streets Guidelines*. As Newsome, Steinman, and Ewing (2003), in their report *Charlotte's Urban Street Design Guidelines: A Context-Sensitive-Making Method*, highlighted the importance of this first step in the process:

“... the emerging process has helped clarify the intent of the street design guidelines. Further, it has helped to organize the manner in which land use context and alternative travel modes are addressed through the street design process to ensure that, at least at the staff level, varying perspectives are incorporated very early in the design process.”

(Newsome, Steinman, and Ewing, 2003, pp.14-15)

Newsome, Steinman and Ewing mention some key research questions from Charlotte's study and may be also applied to members of the public in the WDN. These include:

- “What conditions are expected to stay the same (or what conditions *should* stay the same)?
- Would the community and the users like the street and the neighborhood to stay the same or to change?
- Why and how would the community and the users like the street and the neighborhood to change?
- Given this, what conditions are likely to change as a result of this street classification (how will the street classification and design support the stakeholders' expectations)?”

(Newsome, Steinman, and Ewing, 2003, p. 7)

An initial response to these questions concerns the challenge to respect the work that has been already been done within the National Historic Exchange District section of the WDN. Any future research work will have to lay out how future CS guidelines or strategies within the WDN would work with street design implementations in the National Historic Exchange District Site and would respect buildings' heritage quality.

To further this research, a second set of research questions as the next steps to investigate for the WDN could include: What would a set of complete streets design guidelines look like for the WDN?, What would be the engineering street standards and how does one justify these conclusions?, and How much impact do traffic studies play on the decision making for these guidelines?

### ***The Current Planning Direction within the WDN***

It was announced the City of Winnipeg and MMM Group are currently working in partnership on a study called the North East Exchange District Engineering Study. The study was anticipated to be released some time in the fall of 2014. This study was to focus primarily on the Centennial Complex area, Cultural District area, and portions of Waterfront Drive. Public open houses and conceptual drawings were undertaken. According to the City of Winnipeg website, the study for the area is anticipated “to provide the City with a blueprint for providing prioritized, coordinated infrastructure improvements (roads, sidewalks, bike paths, street furniture, underground services, landscaping, etc.) to the area over the next 10 years”. This practicum would advocate that any future recommendations from this study would consider connections to the entire WDN as well as provide local decision makers a tool to ensure future conceptual designs for the neighbourhood are aligned to checklist recommendations of the four main user types (pedestrian, cyclist, motorist and transit users) of the area. The ultimate goal of practicum is to continue to promote the attractiveness of downtown historic districts and character neighbourhoods by setting recommendations whereby applicable for elements of green infrastructure and function be included within the context of the surrounding land uses.

## References

- American Planning Association. (2010). *Complete Streets: Best Policy and Implementation Practices*. (B. McCann & S. Rynne, Eds.) (PAS Report.). Chicago, IL: American Planning Association.
- Banks, Marcus. (2001). *Visual Methods in Social Research*. New York: Sage Publications Inc..
- Bryman, A. and James J. Teevan. (2005). *Social Research Methods (Canadian Edition)*. Toronto: Oxford University Press.
- Burden, Dan and Todd Littman (2011). *America Needs Complete Streets (April Edition)*. ITE Journal, 4, 36-43.
- CentreVenture. 2004. Expectations for new development, Waterfront Drive. (Report.) Winnipeg: CentreVenture.
- City of Calgary. 2011. *Interim Complete Streets Guide*.
- City of Dubuque. 2009. *Historical Millwork Master Plan*. (Prepared by Cunningham Group Architecture, P.A.)
- City of Edmonton. 2013. *Complete Streets Guidelines*.
- City of Lancaster. 2011. *Complete Streets: A Framework for Northeast Lancaster*. (Prepared by Community and Regional Planning Department of Temple University)
- City of Winnipeg. 2008. *Downtown North Pre-Plan Assessment (DNPA)*. (Prepared by Urban Edge Consulting).
- City of Winnipeg. 2008. *West Alexander and Centennial Neighbourhood Plan*. (Prepared by the Planning, Property and Development Department Planning and Land Use Division)
- City of Winnipeg. 2010. *Our Winnipeg*. Retrieved from <http://www.winnipeg.ca/ppd/OurWinnipeg/pdf/OurWinnipeg.Jul15.2010.pdf>
- City of Winnipeg. 2011a. *Complete Communities*. Retrieved from [http://speakupwinnipeg.com/wp-content/uploads/2011/07/CompleteCommunities.Jul\\_.12.2011.WEB\\_.RGB\\_.pdf](http://speakupwinnipeg.com/wp-content/uploads/2011/07/CompleteCommunities.Jul_.12.2011.WEB_.RGB_.pdf)
- City of Winnipeg. 2011b. *Sustainable Transportation*. Retrieved from [http://speakupwinnipeg.com/wp-content/uploads/2011/07/SustainableTransportation.July\\_.12.2011.WEB\\_.RGB\\_.pdf](http://speakupwinnipeg.com/wp-content/uploads/2011/07/SustainableTransportation.July_.12.2011.WEB_.RGB_.pdf)
- City of Winnipeg. 2011c. *Transportation Master Plan(TMP)*. Retrieved from <http://transportation.speakupwinnipeg.com/files/2011/11/2011-11-01-TTRWinnipegTMP-Final-Report.pdf>



City of Winnipeg. 2011d. *Sustainable Winnipeg*. Retrieved from [http://speakupwinnipeg.com/wp-content/uploads/2011/07/aSustainableWinnipeg.July\\_.12.2011.WEB\\_.RGB\\_.pdf](http://speakupwinnipeg.com/wp-content/uploads/2011/07/aSustainableWinnipeg.July_.12.2011.WEB_.RGB_.pdf)

City of Winnipeg. 2011e. *Sustainable Water and Waste*. Retrieved from [http://speakupwinnipeg.com/wp-content/uploads/2011/07/SustainableWaterWaste.July\\_.12.2011.WEB\\_.RGB\\_.pdf](http://speakupwinnipeg.com/wp-content/uploads/2011/07/SustainableWaterWaste.July_.12.2011.WEB_.RGB_.pdf)

City of Winnipeg. 2014. *The Our Budget, Forward Facts Booklet*. Retrieved from <http://www.winnipeg.ca/interhom/budget/2015budget/pdfs/ourbudgetforwardfactsbooklet.pdf>

Craig, D.V. (2009). *Action Research Essentials*. New York: John Wiley & Sons Inc.

Clean Air Partnership. (2012). *Complete Streets Gap Analysis: Opportunities and Barriers In Ontario*. (R. A. Whitney, Eds.). Retrieved from [http://tcat.ca/sites/all/files/Complete\\_Streets\\_Gap\\_Analysis.pdf](http://tcat.ca/sites/all/files/Complete_Streets_Gap_Analysis.pdf)

Complete Streets Canada. (2011). *About Us*. Retrieved from <http://completestreets.ca/about-us/>

DeGood, Kevin (2013). *Complete Streets: Why American Needs the Safe Street Act*. Retrieved from <http://www.americanprogress.org/issues/economy/report/2013/12/10/80772/complete-streets-why-america-needs-the-safe-streets-act-of-2013/>

Gilliam, Bill. (2000). *Case study research methods*. London: Continuum International Publishing Group.

Gray, Barbara (2010). *Seattle's Complete Streets Program*. APWA Reporter, pp. 44-47, July 2010. Retrieved from <http://cdn.americanprogress.org/wpcontent/uploads/2013/12/CompleteStreetsv2.pdf>

Institute of Transportation Engineers (2006). *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*. Washington: Institute of Transportation Engineers.

Jackson, L. Sherri. (2008). *Research Methods: A modular approach*. Belmont, CA: Thomson Wadsworth Inc.

McCann, Barbara (2010). "Happy Anniversary, Complete Streets!". Retrieved from <http://www.smartgrowthamerica.org/2010/12/03/happy-anniversary-complete-streets>

National Complete Streets Coalition (n.d.) *Policy Elements*. Retrieved from <http://www.smartgrowthamerica.org/complete-streets/changing-policy/policy-elements>

Newsome, T., Steinman, N., and Ewing, R. (2003). *Charlotte's Urban Street Design Guidelines: A Context-Sensitive-Making Method*. Retrieved from [http://www.sacog.org/complete-streets/toolkit/files/docs/Charlotte%20DOT\\_Charlotte's%20Urban%20Street%20Design%20Guidelines.pdf](http://www.sacog.org/complete-streets/toolkit/files/docs/Charlotte%20DOT_Charlotte's%20Urban%20Street%20Design%20Guidelines.pdf)

Noor, B. and M. Khairul. (2008). Case study: a strategic research methodology. *American Journal of Applied Sciences*, 5(11):1602-1604.

Toronto Centre for Active Transportation. (2012). *Complete Street By Design*. Retrieved from [http://tcat.ca/sites/all/files/CSxD\\_WebSpreadsMay2012.pdf](http://tcat.ca/sites/all/files/CSxD_WebSpreadsMay2012.pdf).

Vermont Department of Health. (2012). *Complete Streets: A Guide to Vermont Communities*

Yin, K. Robert. (2001). *Case study methods: Design and methods*. London: Sage Publications Inc.

## **APPENDIX A: Email/Phone Script for Initial Contact with Potential Participants**

Salutation,

My name is Pawan Gill and am a student in the Master of City Planning Program at the University of Manitoba. I am currently completing my Major Degree Project which explores the concept of “complete streets” and the framing of an appropriate “complete streets” checklist for historic districts and character neighbourhoods in downtown contexts. I am attempting to learn especially from the case of Winnipeg’s Warehouse District Neighbourhood.

Attached to this email is a project overview sheet for your information.

I would appreciate your willingness to share your expertise and knowledge – through an interview- to help complete the research for this project. The interview will take approximately one hour of your time and will occur at a time and place of your choosing.

If you would like more information or would like to discuss your involvement, I can be reached by email at [umgillps@cc.umanitoba.ca](mailto:umgillps@cc.umanitoba.ca) or by telephone at 204-962-0049.

Thank-you very much for your time and consideration

Sincerely,

Pawan Gill

## APPENDIX B: Interview Guide

The main research instrument for this practicum will be this interview guide (a list of 'complete streets' questions) for the key informant semi-structured interviews.

Each interviewee will be probed wherever appropriate (if appropriate, researcher will use maps and images to aid discussion during the interview) to further draw out any issues meriting consideration, or to further pursue any opportunities that may arise. The responses from each interviewee will be collated for documentation and analysis in the practicum. This will include the transcription of the tape-recorded responses of each interview, and any notes taken by the researcher at the time of each interview.

- What are the general (planning, design, development) challenges that currently face Winnipeg's Warehouse District Area? Specific challenges relating to streets and intersections? Sidewalks? Alleys/Laneways? Parking Lots within the neighbourhood?
- What particular improvements in terms of street design would you like to see addressed?
- How well do the streets in the District function in support of current land use and development? How 'complete' are the streets, individually and as a system? What can the Exchange District teach the rest of the City (in terms of 'complete streets')?
- What challenges do you foresee incorporating 'complete street' policies into District development plans and procedures? Any worries about this planning approach? Any sensed opportunities?
- What is your personal vision for the streets within this District? How do you envisage this vision being realized? What will it take, in terms of new initiatives?
- What, in your experience/estimation, are among the best examples of a 'complete street' within Winnipeg? Within Downtown Winnipeg? Within other downtown character areas in other cities you can think of? What makes these great example(s) of a complete street?
- What particular users (cyclist, motorist, transit patrons, pedestrians) of the streets do you feel will most benefit from a complete streets approach? How can the approach be sold to other users?
- What concerns do you see in creating multi-modal streets for a range of users? How can such concerns be best addressed?
- In your opinion, looking into past history of the Warehouse District, what aspects of the area do you wish to keep? Wish to eliminate? Wish to enhance? What threats need to be borne in mind, and how can these be mitigated/averted? (Note: SWOT analysis probe)

## APPENDIX C: Statement of Informed Consent



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OF MANITOBA

## Faculty of Architecture

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### Statement of Informed Consent

#### Research Project Title:

Framing a Complete Streets Checklist for Downtown Historic Districts and Character Neighbourhoods: A Case Study of the Warehouse District, Winnipeg, Manitoba

**This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.**

#### Research Project Description:

The purpose of this Master's level practicum is to explore the implications of a 'complete streets' (CS) approach in the planning and development of character inner-city neighbourhoods and historical downtown areas, with particular concern for the issues that must be considered when framing a 'complete streets checklist' to guide re-development in such areas. A case study of Winnipeg's Warehouse District Neighbourhood (WDN), located just north of Downtown Winnipeg's Exchange District, will be the main vehicle for this exploration.

#### Participant Activities, Risk and Benefits:

To complete this research, you are invited to participate in a one-time semi-structured interview that is anticipated to last approximately one hour. The interview questions will be structured around a list of questions to guide the interview process as well as the use of maps and images to further discussion. Interview questions are all related to complete streets issues and opportunities within the context of the Warehouse District Neighbourhood of Winnipeg.

You will not receive any monetary compensation as part of your involvement in the research. However, projected benefits may include the opportunity to contribute your knowledge and experience to the research in your professional field, and the possibility of being introduced to a new arena for your own practice consideration as well as consideration into future project opportunities that may arise.

### **Feedback/Debriefing:**

After the completion of each interview, individual feedback will be provided within one month. The written individual feedback of each interview will be given by email or delivered in-person to each participant to ensure information that was provided is accurate. Once all the interviews have been completed, an overall summary will be provided to all participants in accordance with the informed consent. Finally, at the conclusion of the overall project, the participants will be offered a digital copy of the practicum through email.

### **Audio Taping and Confidentiality**

The interview, with your permission, may be audio-recorded and transcribed at a later date for research purposes, so that analyzing the material may be completed with greater ease and efficiency. Any audio-recordings will be kept in a secure place and be destroyed by the researcher after they have been transcribed.

This study will not include any personal information of the participants and will only address issues within their area of professional expertise. Participants will not be identified by name in any research unless they have provided written consent to do so. The research information collected will be in a safe and secure place with access only to the principal researcher. After a two year period from the practicum's final submission, any non-anonymous data will be shredded and disposed of by the principal researcher.

### **Dissemination of Results:**

The dissemination of this Master's practicum results will be available by hard copy at the University of Manitoba Architecture/Fine Arts Library as well digitally online via MSpace. There will be an oral defence of the proposed practicum, to which participants will be invited. Participants will be made aware of how and where their information will be disseminated. The confidentiality of participants' information will be maintained unless they have explicitly waived the right for their information to be treated anonymously.

### **Participant Correspondence:**

Attached you will find a copy of the email/phone script and project overview sheet used for all potential participants.

**Your signature on this form indicates that you understand to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued**

**participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.**

**Contact Information:**

*Principal Investigator:*

Pawanpreet (Pawan) Gill, Graduate Student, Department of City Planning, University of Manitoba

Phone: (204) 962-0049

Email: umgillps@cc.umanitoba.ca

*Supervisor:*

Dr. Rae Bridgman, Professor, Department of City Planning, University of Manitoba

Phone: (204) 474-7179

Email: Rae.Bridgman@ad.umanitoba.ca

**This research has been approved by the Joint Faculty Research Ethics Board (JFREB). If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 204-474-7122. A copy of this consent form has been given to you to keep for your records and reference.**

Your participation and insights are very valuable and are greatly appreciated. Thank you for taking the time to contribute to this project.

I, \_\_\_\_\_, consent to the inclusion of my name in  
(Name of Participant: please print)

publications resulting from the study.

I, \_\_\_\_\_, **DO NOT** consent to the inclusion of my  
(Name of Participant: please print)

name publications resulting from the study.

I understand that the information I provide will be incorporated in a presentation and report by the student researcher. I also understand that all information will be treated as confidential, stored in a secure place, and subsequently destroyed two years after the end of the project by the Principal Investigator.

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Signature of Participant

Date

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Name of Principal Investigator

Signature of Principal Investigator

Date

**APPENDIX D: Warehouse District Neighbourhood Map**

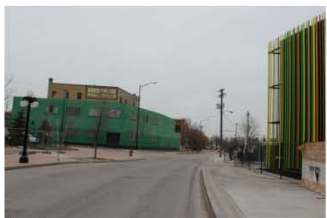


(Map based on data provided by Planning, Property & Development, City of Winnipeg, 2014.)



# APPENDIX E: Street Photographs of the WDN

## Area 1: Waterfront Drive



**APPENDIX E: Street Photographs of the WDN**

**Area 2: The Civic Centre, Centennial Complex and Cultural District Area**



**APPENDIX E: Street Photographs of the WDN**

**Area 3: Chinatown, Red River Campus on Princess Street and West of Exchange District NHS**





**APPENDIX E: Street Photographs of the WDN**

**Area 4: The Exchange District**

