

A Preliminary Analysis of a Pedestrian Walkway Connection between the University of Winnipeg and the Downtown

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August, 2010

Summary Points

- University of Winnipeg is growing and with over 10,000 students and staff the campus is the largest concentration in the downtown;
- The University's AnX development will be located at the terminus point for the new rapid transit corridor that will connect the UofW with the UofM campus;
- The Downtown BIZ estimates that 4834 pedestrians walk past the Rice Building on a daily basis.
- Nearly 15,000 residents live in the neighbourhoods closest to the University of Winnipeg
- The downtown residential population is also growing and is expected to surpass 16,000
- Winnipeg's Skywalk network is comprised of 2.4 km of fixed walkways that connect the Convention Centre, three hotels, 4000 parking stalls and 21,000 employees within 2 million plus square feet
- High density, connectivity, and quality of life are three primary elements in maintaining a sustainable elevate walkway system.
- Bus transit users will walk an average of 5 minutes or 400 meters to a stop
- Maximum distance of downtown workers seeking retail services tends to be in the range of 500 to 800 meters but time is a key consideration in the choice of purchase (this includes time needed to reach a destination and return to the workplace)

1.0	INTRODUCTION	4
1.1	THE STUDY AREA	4
1.2	STUDY EMPHASIS AND LIMITATIONS	5
2.0	LITERATURE REVIEW: BACKGROUND ON SKYWALKS	6
3.0	THE DOWNTOWN AND INNER CITY CONTEXT	9
3.1	SITE ANALYSIS WITH MAXIMUM TRANSIT AND RETAIL TRAVEL DISTANCE.....	10
3.2	POTENTIAL USES, USERS AND OTHER STAKEHOLDERS OF INTEREST	13
4.0	SUMMARY, CONCLUSION AND NEXT STEPS	15
	REFERENCES	17

1.0 Introduction

With over a decade of sustained growth, the University of Winnipeg has emerged as the single largest concentration in the downtown, with over 10,000 staff and students. To meet growing need, The University of Winnipeg embarked on completing an ambitious campus redevelopment plan that is resulting in the addition and renovation of much needed space for new and existing programs and services. Part of this effort includes the development of a transportation hub within the former Greyhound facility located behind the Rice Building, which is nearing completion. This hub will be an important terminus point on the first leg of rapid transit corridor that is set to link the University of Winnipeg to the University of Manitoba campus.

This report focuses attention on the potential of connecting the University of Winnipeg into the downtown skywalk system through 491 Portage Avenue (the Rice Building), which has been named the AnX¹. The main purpose is to highlight preliminary strengths and weakness of this connection and detail critical next steps to fully understand the impact and feasibility of undertaking such an initiative.

1.1 *The Study Area*

For the University of Winnipeg, the closest connection into the downtown skywalk system is gained through two access points: The Investors Group building and The Bay. Both points of access require pedestrians to enter from ground level and proceed internally to the 2nd floor (see Figure One). Each point of access has restrictions, for example, the Bay's connection opens at 10 am daily and closes with store hours with Investors having similar hours but is closed on Sunday.

To provide the necessary context, this study focuses on the downtown and the surrounding inner city neighbourhoods located in close proximity to the University. Development and change have characterized Winnipeg's downtown over the last three decades. While many point out the challenges that exist such as the loss of retail functions or the negative perceptions of safety, significant positive progress has been made. This includes the construction of the MTS Centre, the addition of the Hydro tower along with many other noteworthy developments. In addition, the number of downtown residents has also increased, surpassing 13,400 at the time of the 2006 Census. The downtown population is also forecast to continue to increase as the last five years have seen significant residential growth with new condominium projects and the redevelopment of the Waterfront district. These initiatives are estimated to have pushed the downtown population to 16,000 residents.

The University of Winnipeg is also flanked by many diverse neighbourhoods. For the purposes of this study the areas around Spence, West Broadway and the Central Park

¹ For the purposes of this study the potential pathway connection is considered to extend from the AnX retail mall (through the 491 Parkade), across the 491 east parking lot, across Memorial, to the Burger King bridge east of Investors with the structure itself running south of the Investors Building (See Figure One).

area are examined. These neighbourhoods represent three distinctive parts of the inner city with each having unique characteristics such as a strong and diverse immigrant and refugee population in the Central Park area, significant upgrading and change over the last decade in West Broadway and the continued effort to stabilize and enhance the Spence neighbourhood. Overall the University of Winnipeg is set within a dynamic location and on the doorstep of vibrant and diverse neighbourhood populations and an ever changing downtown environment.

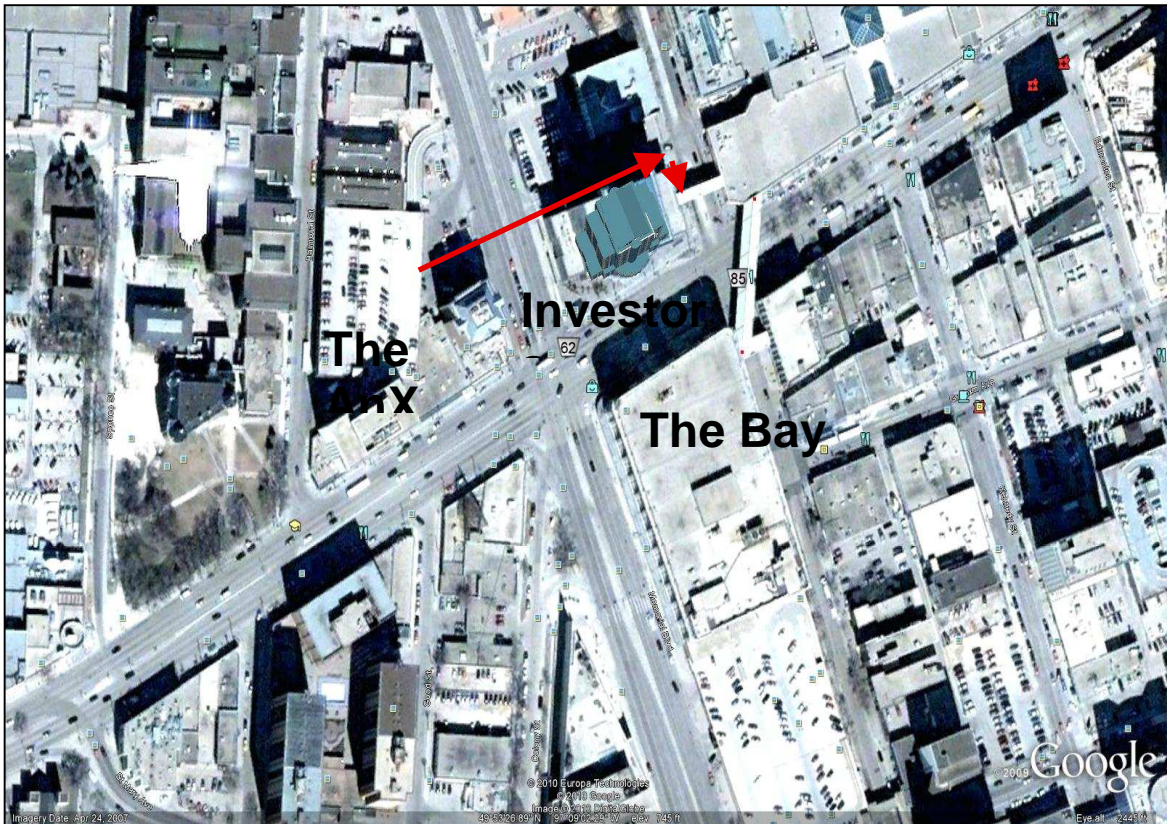


Figure One – Campus View with General Skywalk Connections and Proposed Route

1.2 Study Emphasis and Limitations

This report examines the general locational characteristics of the transit terminal located with a focus on the potential integration of the University and the terminal into Winnipeg's skywalk system². It begins with a brief discussion gathered from an early review of the literature, then proceeds to provide a general discussion of the

² Winnipeg's current Skywalk network is comprised of 2.4 km of walkways that connect the Convention Centre, three hotels, 4000 parking stalls and 21,000 employees (See Downtown Trends Report www.downtownwinnipegbiz.com)

surrounding area, highlighting characteristics of the both the downtown and the surrounding neighbourhoods. The report then shifts to assessing the potentiality of connecting the University into the Skywalk network. The report ends with some general observations and an outline of necessary next steps.

There are many important limitations regarding this brief report. First, it must be acknowledged that this is only a preliminary overview and no information or data were generated nor were key stakeholders interviewed (both being critical next steps). Move over, this study does not represent a critical analysis of the whether the connection would be economically feasible. It should thus be viewed as beginning the process of understanding whether the skywalk connection would work while highlighting critical next steps.

2.0 Literature Review: Background on Skywalks

According to Mander, Brebbia and Tiezzi (2006) "high density, connectivity, and quality of life are three primary elements in maintaining a sustainable elevated walkway system" (p.302). With respect to high density, they suggested that by creating connections through buildings and nodes, multiple points can be established that draw various uses together into a sustainable network. They consider the formation of connections as being fundamental to the process as skywalks become places to "eat, stop and breath" but only when design interventions emphasize the development of strong pedestrian environments. Quality of life remains a core ingredient for a sustainable skywalk system and for Mander, Brebbia and Tiezzi, this includes creating them as places with multiple functions and good design elements that attract people into a well-conceived network of connected places.

Robertson (1993) reviewed and assessed the pedestrianization of downtown with a focus on exploring both skywalks and the more traditional pedestrian mall. Robertson noted that a critical pathway for development agencies has been on bringing people and activities back downtown. He notes that the early literature on skywalks has been limited and mostly focused on description with little regard for a critical analysis on design elements and economic impact. Moreover, he cites that skyways have been characterized as contributing to the "dullification" of downtowns and that they face an inherently tough battle for widespread acceptance as drivers of positive change.

A key reflection by Robertson is on the historical development of skywalks and he traces the first such effort to Minneapolis in 1962. While early skywalks promoted protection from the elements, they have since been viewed through a development potential lens. Through this perspective skywalks can be viewed for their ability to attract development while also providing for pedestrian movement. Robertson offers several points for consideration:

- Skywalk systems are ever changing and cities that have them are constantly adding to the system as demand warrants;

- While most skywalk systems are publicly funded and operated, there is a perception among users that they are private as most pass through buildings,
- Most uses of skywalks are seen as “quick stop” such as banks, hair salons and travel agencies;
- Skywalks have been attributed to declining street level property values with main floor leasing presenting challenges;
- Skywalks offer a safer way for pedestrians to navigate through downtown;
- Skywalks promote convenience, comfort and climate control;
- With a focus on elevated movement of people, the perception from the street; can be that of lack of activity or vitality, regardless of the high volume of internal movement; and
- Skywalks must be planned in a comprehensive and coordinated manner that brings together parking, transit and development together.

Belanger (2007) considers walkways and their connections as part of a city’s transportation infrastructure. He writes that in Toronto the pedestrian network and “the underground is surrounded by two subway lines, six stations, a regional transit terminal and a national bus terminal” (p.272). A key ingredient in making the entire network function is the integration of the network into the transit system that creates nodes of intensity and points of concentration of people moving into and out of the system.

A key question in the discussion of skywalks and their integration into transportation networks is the distances that one would “reasonably” travel to and from a station. O’Sullivan and Morrall (1996) used Calgary as a case study to explore walking distances to both suburban and central stations. Their findings suggest that pedestrians, in general, will walk longer distances to LRT stations than would be the case for a bus. For an LRT, their estimate was an average of 650 meters for suburban stations and 325 meters for urban stations within the downtown. For bus stops, by contrast, an acceptable walk time is 5 minutes or 400 m. However, they cautioned that previous studies suggest a significant drop off occurs when the distance from a stop approaches or exceeds 400 meters (see Figure Two).

O’Sullivan and Morrall also present an important consideration in the planning of transit stations:

Transit service must be made as attractive as possible from the time riders leave their homes at the start of a journey to the time they reach their final destination. Transit properties alone cannot maximize the attractiveness of transit service. Doing so must be a cooperative effort involving transit properties, governments, and private developers (p.19).

The above quote reinforces the need to fully integrate urban design elements and transportation planning to ensure that the travel pathway and connection points present riders with the maximum quality and comfort as they move to and through the urban environment.

Current LRT Walking Distance Guidelines

CANADIAN CITIES	WALKING DISTANCE GUIDELINES
Calgary Transit, Calgary	General Guideline is 400 m
B.C. Transit, Vancouver	Guideline For LRT is 900 m
Societe de Transport de la Communaute Urbaine de Montreal, Montreal	General Guideline is 400 - 500 m
Ottawa - Carleton Regional Transit Commission, Ottawa	General Guideline is 400 - 600 m
Toronto Transit Commission, Toronto	General Guideline for Surface Transit is 300 m
Edmonton Transportation, Edmonton	General Guideline is 400 m

AMERICAN CITIES	WALKING DISTANCE GUIDELINES
Maryland Mass Transit Administration, Baltimore	Use Guidelines of the American Association of State Highway and Transportation Officials
Niagara Frontier Transportation Authority, Buffalo	General Guideline is 457 m
Regional Transportation District, Denver	General Guideline is 538 m
New Jersey Transit, Newark	General Guideline is 804 m
Southern Pennsylvania Transportation Authority, Philadelphia	An area is considered 'well served' if a stop is less than 402 m from a passenger's origin and is considered 'served' if a stop is less than 804 m from a passenger's origin.
Port Authority of Allegheny County, Pittsburgh	No Guidelines Available
Sacramento Regional Transit District, Sacramento	A 1992 Study found that 64% of transit riders walk less than 403 m and 90% walk less than 804 m. Regional Transit's Guideline is 609 m.
Bi-State Development Agency, St. Louis	No Guidelines Available
Metropolitan Transit Development Board, San Diego	General Guideline is 538 m
San Jose Trolley Corp., San Jose	Average walking distance from LRT to a commercial destination is 30 - 60 m. A one block walk is necessary for 42% of LRT passengers in the five block long core area.
Greater Cleveland Regional Transit Authority, Cleveland	No Guidelines Available

Figure Two: Distance Travel Patters (Source: O'Sullivan and Morrall)

The intent of this section was to highlight only a small and select number of reports and thus should be treated as providing only an indication of the breadth studies and issues. However, the overall conclusion is skywalks can provide pedestrians with a comfortable experience but only if they are well-planned and integrated into an overall downtown strategy and network that includes transportation. To this point pedestrian comfort and a quality experience may come with a cost and that is the loss of street life and potentially a rise in at-grade vacancies. Careful planning and implementation of solid design guidelines and routes can help alleviate these concerns as "potentially, elevated walkways can benefit the future of pedestrian movement above the ground layer without killing the street, if used sustainably" (Mander, Brebbia and Tiezz, p.302). Finally a clear point drawn from the literature is the need to consider the whole pathway a person takes on their commute, ensuring the pathway is well designed and fully integrated into the network.

3.0 The Downtown and Inner City Context

As noted at the outset of this report, downtown Winnipeg was home to just under 14,000 residents at the time of the 2006 Census. With ongoing condominium and modest rental construction and conversions, the present population is estimated to be in the range of 16,000 and growing. The most recent indication of continued growth was in the provincial and municipal Governments' announcement of the creation of a Tax Increment Financing program called the Downtown Residential Development Grant that is expected to result in the construction of 500-800 units with maximum subsidies of \$40,000 per unit (this program is also intended to generate affordable rental units as well as condominiums). The Downtown Residential Development Grant and other planning strategies to enhance downtown Winnipeg are currently underway with the intent being to increase retail, commercial and residential functions while curbing concerns over safety.

The inner city of Winnipeg also saw a slight increase in population during 2006, rising to 121,615 or 1.6%. To put this in perspective, the Inner City had previously experienced three successive losses of population (as recorded in the Censuses of 1991, 1996 and 2001).

Figure Three illustrates the neighbourhoods of the Inner City that are situated in close proximity to the University of Winnipeg, while Table One (below) presents the populations of these neighbourhoods along with percent change. It is clear from the table that the neighbourhoods around the University of Winnipeg have experienced positive population growth. Combined, these five areas had a population base of 14,960.

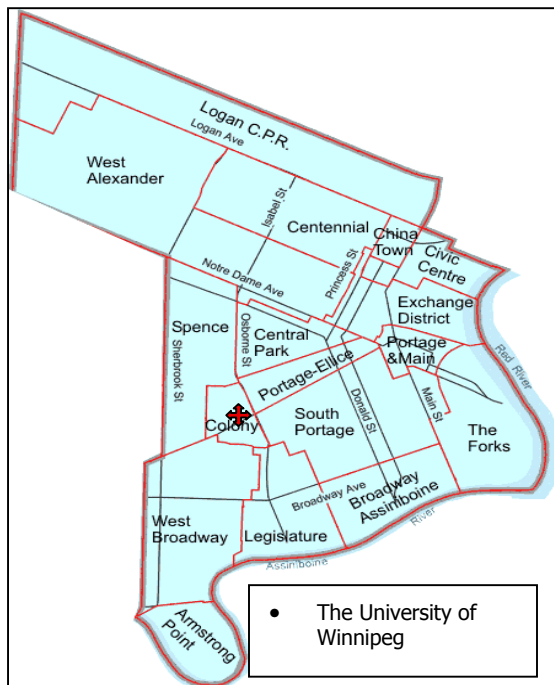


Figure Three – Select Neighbourhoods of the Inner City

Table One Select Inner City Neighbourhood Populations		
Name	2006 Population	Percent Change
Spence	3555	10.6
West Broadway	5325	5.6
Central Park	4260	13.6
Colony	715	14.4
Portage-Ellice	1105	28.5

Overall, the downtown and many inner city neighbourhoods have experienced population increase at rates much higher than the 2% growth for Winnipeg. This bodes well for the general area around transit terminal and AnX for both retail and transit demand. The nearby inner city population, along with the campus population, would certainly add to the pool of potential uses of a skywalk connection to downtown (see below for further discussion).

3.1 Site Analysis with Maximum Transit and Retail Travel Distance

The following section provides a brief review of the site of the skywalk connection. As was noted the AnX site is located within the Rice Building complex. The building is home to many users including the Winnipeg Parking Authority, a financial firm, restaurants and education and social service functions among others. Moving east along Portage a mid-sized hotel is located directly east. Across Portage Avenue is Colony Square which is a larger multi-tower apartment complex with an attached retail and commercial structure that faces the street. The Colony Square complex contains a large concentration of medical functions, office uses, restaurants and shops along with two large towers of residential units.

Figure Four illustrates the central location of the AnX with 200 meter buffer zones. The intent of the map is to display the areas from which there is:

- a potential draw of users of transit;
- the movement of passengers following disembarking transit; and
- a maximum threshold for those walking to the AnX for retail services.

Area within 400m and 600m of 491 Portage

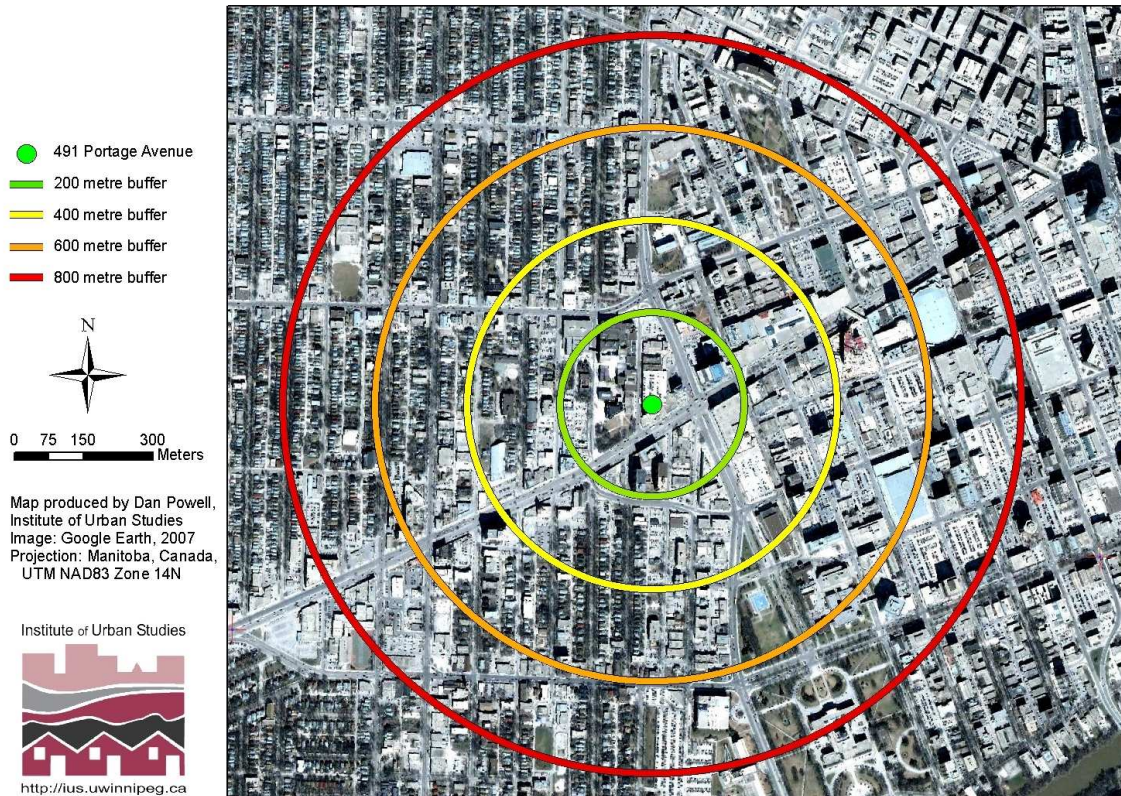


Figure Four: Radius Map showing likely distances thresholds for pedestrians

As noted, the proposed route of the skywalk connection would go from the AnX retail mall (through the 491 Parkade), across the 491 east parking lot, across Memorial, to the bridge east of Investors Group and over Staples (See again Figure One). A rough estimate of the length of the walkway is 150 meters (as a reference, the walkway that connects the Bay into Portage Place at Vaughn Street is approximately 68 meters).

The Downtown BIZ estimates that on an average day 4859 pedestrians walk along Portage Avenue at Vaughn Street while 4834 walk daily past 491 Portage at Colony Street.

The Portage Place access point for the proposed skywalk connection is through the Investors walkway over Vaughn Street. This connection is considered to be underused: with Burger King and other shops and activities having vacated recently this part of the mall that has a higher vacancy rate. As well, the Investors Group recently shortened its hours of access to the walkway in the morning (now opening to the public at 9am from the previous 7:30 am).

Public transportation at the AnX site and the transportation hub are part of an excellent concentration of routes and service into the downtown. Overall, Winnipeg Transit runs

nearly 57 routes through the downtown with 26 running along Portage Avenue, drawing some 36,000 people (Downtown Trends). As well, the Downtown Spirit provides service to some 1300 riders each day (with a current stop by at the site of the transit hub).

As noted, while pedestrians would likely be willing to walk upwards of 400 meters or further for LRT service, the travel pattern of consumers of retail goods is different. Lorch's (2004 and 2005) examinations of retailing patterns noted that maximum distance of downtown workers tends to be in the range of 500 to 800 meters. Furthermore, malls tend to keep lengthy corridors to less than 200 meters to avoid the perception of the distance being too great to travel, with design interventions used to break up longer spaces. A second important consideration is that of time. In the downtown, the average worker on lunch requires enough time to adequately travel to a destination, make a purchase decision and then return to work. A distance longer than 15-20 minutes becomes challenging given the need for decision-making on purchases and return walking time (assuming a 60 minute lunch).

Finally, parking infrastructure in the area is adequate with public parking in the 491 Portage complex and access to nearby indoor parking at the Portage Place Mall, Investors Building, Colony Square and the Bay. As well, significant street parking exists with meters and hourly parking on nearby residential streets.

Overall, the AnX site presents some interesting advantages:

- It is in a very central location and in close proximity to many services and shops that fall within the 800 meter distance that might attract students and staff into the downtown or to attract downtown workers or residents into the various retail amenities in the AnX;
- The location of the transit hub within a 400 meter radius also presents some solid potential to draw people into the station moving up to the 600 meter threshold (the upper limited of a transit draw) would certainly increase this potential;
- Has excellent access to public transportation and parking; and
- A solid base of student and staff on Campus along with 15,000 nearby residents

The Disadvantages raised:

- The length of the skywalk could present design issues with respect to the perception of safety;
- Street level activity could be diverted into the skywalk making the retail corridor along Portage from the AnX back into downtown less attractive; and
- Given there are two nearby connections points into the skywalk (from the Bay and the Investors Group Building, the cost would need to be justified.

3.2 Potential Uses, Users and other Stakeholders of Interest

For the AnX and transit hub to become a destination there must exist a draw to pull residents along with workers and visitors from the downtown to the campus and visa versa for students and others to go into the downtown. The following tables provide an overview of spending habits of downtown workers and residents as gathered from two studies completed by the Institute of Urban Studies for the Downtown Biz in 2009 and 2010.

Table Two
Top Product Categories in 2010
Proportion of People Buying/Using Services Downtown

Clothes	50.6%
Drugstore/Pharmacy Items	49.6%
Shoes	30.6%
Groceries	29.9%
Books & Magazines	23.1%
Office Supplies	23.0%
Special Occasion Cards	21.8%
Holiday Gifts	20.3%
Bargain-type Products	20.0%
Cosmetics	19.7%
CDs/DVDs	19.5%
Jewelry & Accessories	15.5%
Bath & Body Products	13.6%

Table Three
Top Services shown as a percentage of purchases
typically made, 2010

Banks	69.7%
Postal	49.1%
Medical	30.1%
Hair	22.6%
Optical	19.3%
Fitness	17.0%
Alterations	13.2%
Education	12.8%
Shoes	11.0%

Table Four
Top 5 Products 2009
Proportion of People Buying/Using Service Downtown

Drugstore/pharmacy	67.3%
Clothes	55.8%
Special Occasion Cards	44.4%
Groceries	37.5%
Shoes	32.4%
Books & Magazines	31.8%

Table Five
Top 5 Services 2009
Proportion of People Buying/Using Service Downtown

Banks	85.2%
Fast Food	72.0%
Postal Service	57.7%
Medical	23.9%
Hair Salon	19.0%

The above tables are based on two surveys that examined the purchases behaviors of close to 3000 downtown workers and residents. The critical question that remains is could the AnX have enough diversity and ability to draw in downtown workers or residents? For downtown workers, there is little doubt that there most likely purchases are coffee and small items in the morning with lunch food or other shopping. As well there is a dramatic drop off in purchases after 5pm and on weekends or holidays among workers.

To ensure that retail works it will be critical to creat destinations on either side of the walkway. This includes ensuring that the mix of services within the AnX is a draw for more than students. As well, the proposed connection point into Portage place is currently weak. It might be speculated that drawing more traffic from students, community members and transit riders might make this end of the mall more attractive.

Another interesting consideration is that the walkway on its own will not be enough to help inject life into the mall. Therefore, consideration for how the walkway becomes part of the broader integration into the entire skywalk system is crucial. This includes better signage and directions to get to and from the campus and transit points located throughout the walkway will be vital.

Considering the importance of design and safety, creating a "quality of life" experience remains the most important next step in the process. To overcome the perceived long

distance and safety issue would need to be addressed through proper design and planning.

Dealing with the potential of a long walkway will perhaps be the biggest design challenge. Drawing in people to a long walkway without carefully considering Crime Prevention Through Environmental Design (CPTED) principals along with high quality design will dissuade many from walking through, especially at off peak hours and weekends. Perhaps a consideration would be to create a midpoint break such as a viewing deck to look toward the Legislature to break up the distance.

4.0 Summary, Conclusion and Next Steps

The University is ideally situated along a high volume traffic corridor, making the use of buses and non-motorized vehicles popular for those commuting to campus. With 16,000 nearby residents, 10,000 plus staff and students, and a strong downtown workforce, there is considerable potential for the AnX to draw in users. The biggest challenge would be to creating the right design and retail mix to ensure attractiveness and integration into the broader walkway and downtown network at both ends of this new connection.

As part of a broader retail development strategy, the potential of having the University of Winnipeg's staff and students fully integrated into the downtown walkway system would bode well for generating additional revenues for retailers and help bolster demand. This would include drawing in surrounding residents who would now enter the downtown through the AnX and the University of Winnipeg en route to downtown. Having excellent amenities on campus and in the nearby area would potential draw in more downtown workers and residents.

However, the main impediment to making this connection successful would be its relatively intimidating distance, and that it would travel through some uninviting areas (surface parking lots and the backs of buildings). Both factors, unless addressed through aesthetically pleasing architecture, could be discouraging and create a sense of uneasiness among users.

It will also be important to consider distance thresholds, in terms of determining the extent to which pedestrians from neighbouring residential areas and downtown employment centres will be attracted to the AnX.

However, as a major transportation hub, the AnX site will doubtless be well-received given the high rates of transit use among students, which should only increase with the planned rapid transit connection. Interestingly, as the literature points out, transit users would be willing to walk a greater distance if the mode of transport is LRT. Should the City of Winnipeg move in this direction and the AnX station is developed into a LRT station the results would be excellent. This would based on the most likely scenario of having less LRT stations than BRT which would then increase the number of people using the UofW station.

The following section presents a summarized table of general strengths and weaknesses of the proposed walkway connection and is based on informal discussion and a limited literature review. Therefore, the intent here not definitive but for purposes of discussion.

Table One: Assessment of Strengths and Weaknesses of Connection into the Walkway	
Strength	Weakness
Integration of the campus and transit hub into the downtown skywalk	The long span and route might face design challenges in creating a safe environment (CPTED approach would be needed)
Weather protected pathway to and from the downtown	Price might be high given the limited appeal of the walkway to broader constituents
Increase attractiveness of events on campus (especially for hotel guests and/or those parking at connected structures and hotels within the skywalk)	May be detrimental to street level business, creating a vacuum effect, pulling people off the streets
Potential to increase spending in the downtown among students, staff and others from the UofW precinct	May be seen as a lower priority given other issues in the downtown and the need for infrastructure dollars
Potential to draw downtown workers and residents to the campus for retail and other activities	May weaken street level rents and property values
Potential ability to create demand for development and increase in population density	Less street level pedestrian traffic could contribute to fewer shoppers
Provide a convenient pathway for users with mobility impairments, especially making winter travel easier and safer	Potential to contribute to a negative perception of the area with fewer "eyes on the street" and dullification of downtown
Provide opportunities to expand campus into connected parts of the walkway, allowing for greater ease of access	The transit hub will bring in more people but if they are directed into the skywalk they are less likely to be attracted to street level shops along Portage
May support Portage Place Mall and in particular the west edge of the mall that has high vacancy and lower traffic	
May increase traffic through the mall and skywalk system, especially at the Vaughan Street entrance (this would be in consideration of the tremendous volume of transit activity at Vaughan and Graham)	

Overall, the challenges of connecting the UofW into the skywalk system present some interesting options but there are some significant design and integration issues that would need to be better understood. As well, this report did not undertake any stakeholder discussions and thus moving forward, students, community members, downtown workers and organizations and groups would need to be consulted for whether the goods and services currently planned for the AnX would draw people in and as well whether the idea of a skywalk connection would work.

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