

**Public spaces and the COVID-19 Pandemic: Comparative analysis of the use of
sidewalks in Downtown Toronto**

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Introduction

With the strengthening variants, increasing spread of infection and rising restrictions, the COVID-19 pandemic has affected all aspects of the urbanized life: health access, education accessibility, public space, economic activity, connectivities, and social inequalities. Social distancing guidelines and closure of public spaces have had an adverse effect on people's social and psychological intimacy needs stemming from daily interaction in "third spaces- those places that are neither work nor home"¹. The pandemic threatens the existence of these third spaces and public spaces as what was once the hub for interaction between diverse and different city dwellers who make up our social world is now a feared contagious space known to cause potential harm². Thus, forcing urban dwellers to rethink the nature of public space now more than ever to develop an urban resiliency and form safer future cities.

This research proposal explores the fascinating dynamic between keeping the nature of public space as a space for social and political activation and making the space safer for the city's density and circulation, playing a crucial part in futureproofing the city post-pandemic. Sidewalks, the "main public spaces of the city" and "its most vital organs," are paved paths for pedestrians at the side of the road that form active, ideally democratic sites of socialization and pleasure for all members of society³. Through the lens of sidewalks in downtown Toronto during the pandemic, the research aims to analyze an extremely relevant problem in Toronto's civic sphere today.

Toronto is Canada's largest city by population, known for its density. Downtown Toronto is the business and commercial hub at the heart of Toronto city, consisting of the largest pedestrian traffic with 38,333,392 annual pedestrian traffic in some parts of downtown

¹ Lina Martínez and John Rennie Short, "The Pandemic City: Urban Issues in the Time of Covid-19," *Sustainability* 13, no. 6 (2021): p. 3295, <https://doi.org/10.3390/su13063295>.

² Setha Low and Alan Smart, "Thoughts about Public Space during Covid-19 Pandemic," *City & Society* 32, no. 1 (2020), <https://doi.org/10.1111/ciso.12260>.

³ Anastasia Loukaitou-Sideris and Renia Ehrenfeucht, *Sidewalks Conflict and Negotiation over Public Space* (Cambridge, Massachusetts: MIT Press, 2009).

in 2017/18⁴. Due to the pandemic, several restaurants in downtown Toronto have started dining in patios on sidewalks, and many queues of people extend to the sidewalk due to social distancing guidelines⁵. Existing food trucks and sidewalk sale stores also form part of this pedestrian traffic on sidewalks downtown. According to city laws, sidewalks must be 2.1m at major intersections and 1.8m at minor street intersections. However, social distancing rules require a 1.83m distance on each side of every pedestrian, causing sidewalks to be unsafe contagion zones⁶.

Research Question

Through my research, I will seek to answer two questions using downtown Toronto as my area of focus: (1) How are sidewalks used during the pandemic? (2) How can we create a future typology for safer sidewalks?

Methodology

I will start by conducting a rigorous comparative analysis of four distinct sidewalk locations and forming existing typologies of sidewalks' use during the pandemic through observational methods, site analysis photography and developing a system to identify the basis of categorization between the different functions of sidewalks and locations. The four sidewalk locations will be at intersections of (1) Dundas St. W and McCaul St. (2) Queen St. W and Bay St. (3) St. George St. and College St. (4) Dundas St. W and Yonge St. These sidewalk sites are selected based on the high pedestrian volume and their program variation such as patio restaurants, food trucks, queues of people and sales respectively. The four sites thus form

⁴ Yonge Dundas Square Board, "Data," Yonge-Dundas Square, 2018, <https://www.ydsquare.ca/data>.

⁵ Emma Paling, "Pandemic-Era Patios Still Too Often Inaccessible, Disability Advocates Say | CBC News," CBCnews (CBC/Radio Canada, August 7, 2021), <https://www.cbc.ca/news/canada/pandemic-era-patios-still-too-often-inaccessible-disability-advocates-say-1.6132490>.

⁶ Toronto City, "Toronto Complete Streets Guideline," Toronto Complete Streets Guideline, 2017, <https://www.toronto.ca/wp-content/uploads/2017/11/98b5-Chapter-4.pdf>.

concrete examples of high public safety risk sidewalks. I will consider the following questions to create a specialized categorization method that will help develop the typologies of existing sidewalks at the four locations: What are the various activities on sidewalks? What are the program differences in the four sidewalk locations? What are the external elements such as pedestrian traffic, the existence of certain businesses or tourist attractions etc., affecting the sidewalks? What are the barriers to making the sidewalks safer? What would safer sidewalks entail? Given the existing conditions, how can the sidewalks be made safer? The categorization system will be detailed and include technical parameters for comparison, such as sidewalk dimensions, pedestrian traffic, and street section drawings. I will measure the sidewalk dimensions on-site, in-person or through Google Earth features if in-person research is not possible. To calculate the pedestrian traffic at the four distinct locations, I will use the empirical observation method at three specific times of the day in-person or use an online city of Toronto open-access database of pedestrian traffic at different locations for a virtual analysis. Using my proficient skill set of Adobe Illustrator, Rhino, Grasshopper and Adobe suite, I will use design methodology to represent existing typology and provide future typology prototypes based on the qualitative comparative analysis.

Interdisciplinary nature of research

As architects, city planners and the public look for answers on how the city and public space will evolve post-pandemic, this research adds to this international and interdisciplinary academic discourse providing potential typologies through the essential urban fabric public space sidewalks. While the pandemic continues as strong as ever, it forms as much of a design challenge as it is a scientific challenge. Thus, this research addresses a significant issue of public safety in the pandemic faced by cities around the world today and brings together

disciplines of architecture, urban studies, urban planning and design to address it through the urban fabric.

Research Advisor

With the guidance of Professor Michael Piper, Director of the Master of Urban Design program at the John H. Daniels Faculty of Architecture Landscape and Design and Professor of the ARC200: Drawing and Representation II studio, this research will directly incorporate methodology from his class. As the research advisor, he will guide and overlook the research process. In addition, through his expertise, years of experience in the field and strong understanding of Toronto's urban fabric, professor Michael will provide support to enrich the research process and methodology, such as using other industry-standard software for analysis etc.

Outcomes

The immediate main effect of the research is to develop typologies to assist in adapting the current urban fabric and public spaces, exclusively sidewalks better to the COVID-19 pandemic in downtown Toronto as a prototype for safer sidewalks in other large North American grided cities. Furthermore, through the pandemic-oriented research in the Laidlaw Scholars Program, a long-term influence of the research proposal will be its significant addition to the academic community's dialogue around futureproofing of public space and increasing urban resilience post-pandemic.

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