THE SAME STATION IN AN URBAN CITY

Our proposal introduces a pedestrian-friendly vision for Connaught Heights with access to a healthy ecological urban landscape that can support increased density through high-quality, diverse housing options. We agree with the competition brief for the project and share common values. Our proposal looks to create a more equitable city that enhances the sense of place and creates a more resilient community. Of course, this proposal is only an idea, but one that we hope the city finds useful for future conversations on 22nd Street Station and the communities it supports.

The Hub

2040

TOC

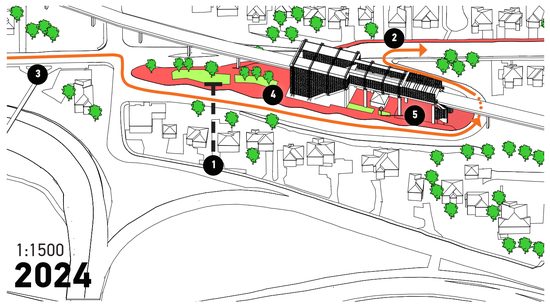
Page 1: **THE ENABLING PROJECT**

Page 2: **THE FRAMEWORK**

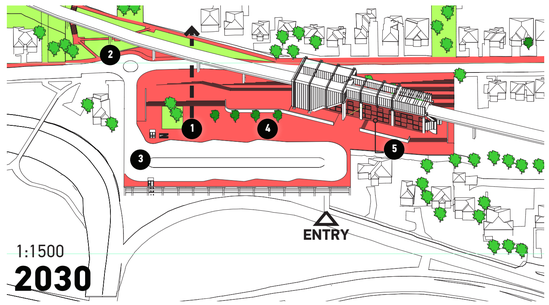
Page 3: **THE BUILD OUT**

Page 4: **NEW WEST FUTURE**

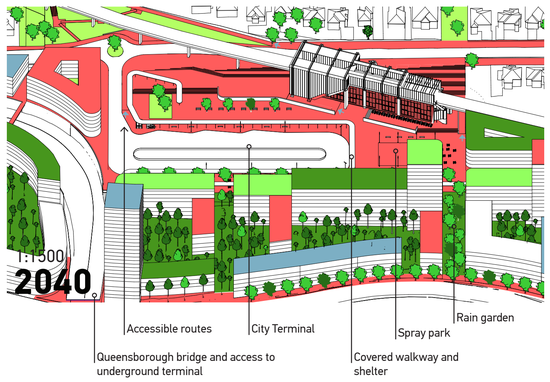
PHASED DEVELOPMENT



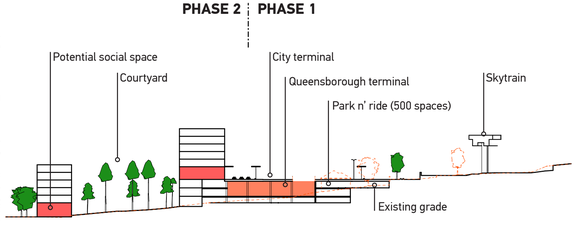
EXISTING CONDITIONS - 1: poor visibility across the site, 2: poor pedestrian infrastructure to the station, 3: bus lane bisects pedestrian pathways, 4: no space for programing or activity, 4: no amenities



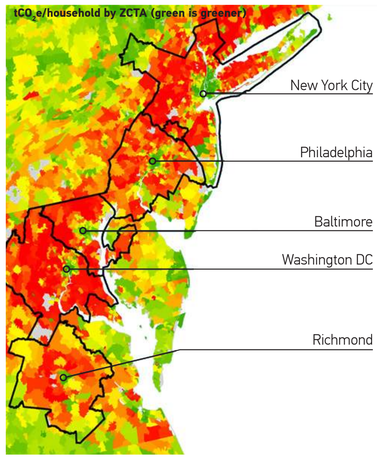
ENHANCED STATION - 1: increased visibility across site, 2: improved pedestrian infrastructure to the station, 3: clear separation between bus and pedestrian traffic, 4: space for programing and activity, 5: space for amenities to activate the station

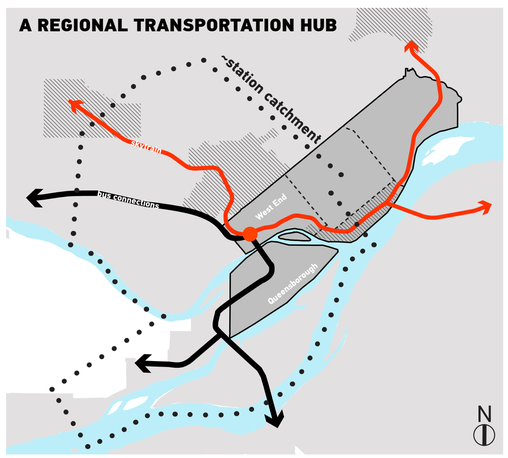


FINAL STATION: Successful transit stations need pedestrian access and efficient public transportation connections. The current configuration of 22nd Street Station has neither. The proposed renovation first involves building a parking garage that can house a new bus loop, accommodate a future terminal with direct access to the Queensborough Bridge, and provide 500 spaces that serve the larger community and anticipate further densification to the south. The new garage consolidates traffic and gives space to pedestrians to ensure a safer, more active station. This proposal uses the existing topography to limit excavation. There are other options, but regardless of the existing conditions, adjacent properties will likely need to be purchased to give the space the station needs.

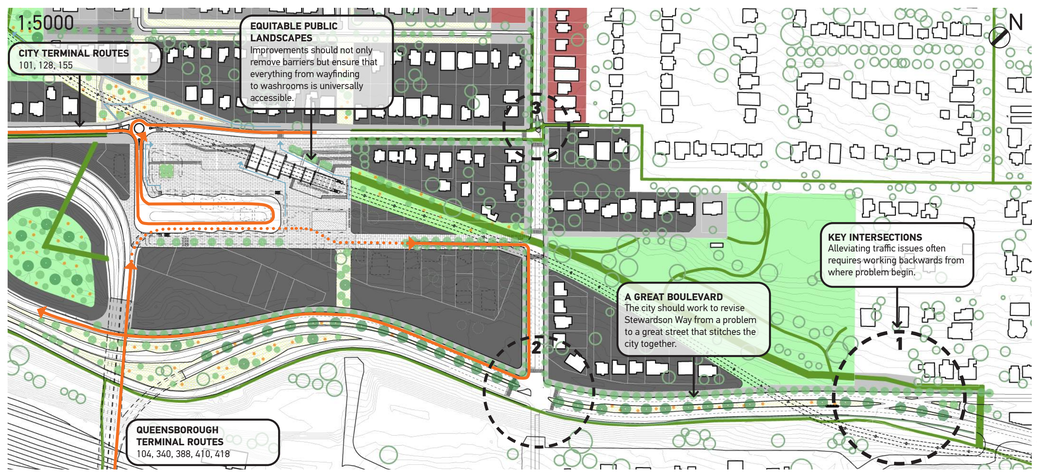


STATION SECTION





The first step is to develop a coherent plan supported by all the interested parties for the 22nd Street Station, including the City of New West, the Ministry of Transportation and Infrastructure, TransLink, and BC Hydro. For far too long, the station has failed to be integrated into Metro Vancouver, constrained by the car's needs. Prioritizing public transportation will improve Connaught Heights and allow public transport to alleviate the endless traffic issues in the area. The research is clear that denser communities centred on public transit have a lower carbon footprint.[1]

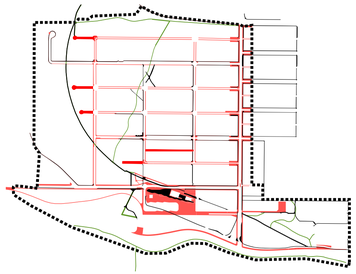


TRANSPORTATION ACCOUNTS FOR OVER 50% OF BUILDING EMISSIONS[2]

THE ENABLING PROJECT: BUILDING THE HUB

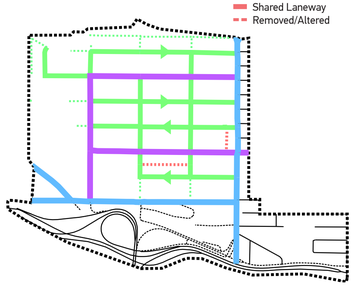
PEDESTRIAN NETWORK

- Existing Sidewalks
- Proposed Sidewalks
- Park Trails



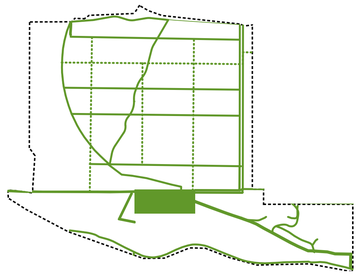
STREET TYPOLOGIES (also see page 3)

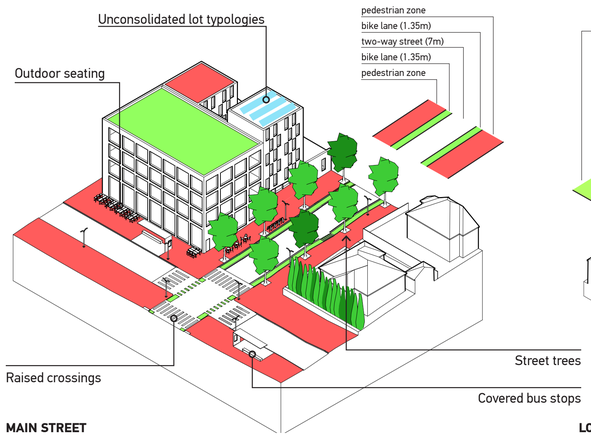
- Main Street
- Circulator
- Residential
- Shared Laneway
- Removed/Altered



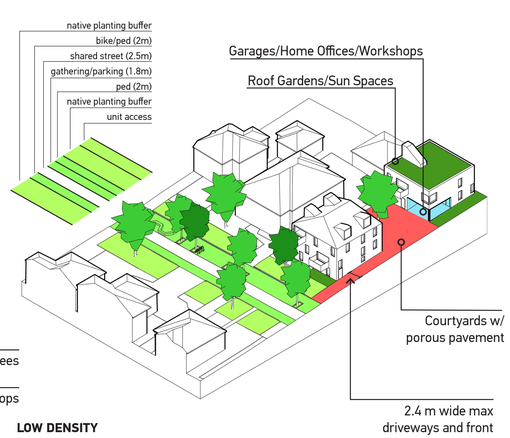
BIKE NETWORK

- Dedicated Lane
- Shared Lane





MAIN STREET
FSR: 3.0 (Single Lot) or 4.5 (Consolidated Lot)
Site Coverage: 100%

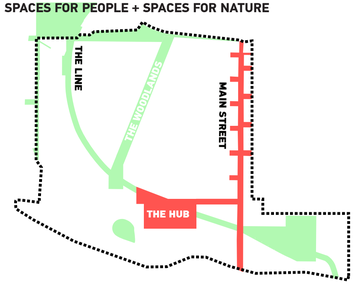


LOW DENSITY
FSR: 2.0
Site Coverage: 50%



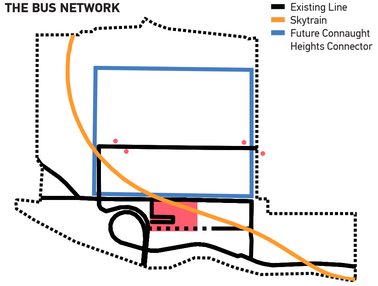


SPACES FOR PEOPLE + SPACES FOR NATURE



THE BUS NETWORK

- Existing Line
- Skytrain
- Future Connaught Heights Connector

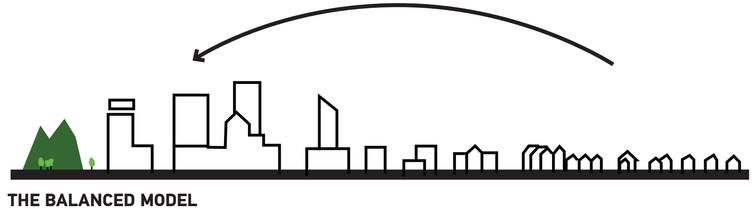


SITE COVERAGE
0% → 100%

OPEN SPACE | SINGLE-FAMILY HOMES | TOWNHOUSES | MISSING MIDDLE | HIGH-RISE



THE TRANSECT MODEL[3]



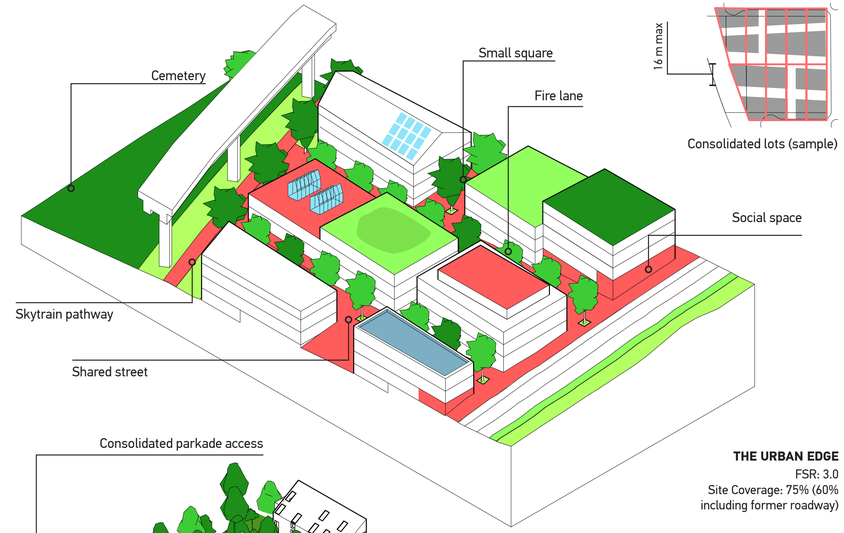
THE BALANCED MODEL

Every great neighbourhood has a strong park system that supports it. The myth of Vancouverism is that innovative tools such as the tower and podium made the city a success story. The reality is that improvements to the waterfront were essential to the success of those neighbourhoods. Thriving urban communities need access to high-quality public space, especially as density increases. Instead, looking at Metro Vancouver, the places often with the best access to open space are low-density neighbourhoods. The neighbourhoods around Lynn Canyon and Pacific Spirit Park are just two examples. Therefore before we think about housing its imperative that we first look at the landscape as the framework for new densities..

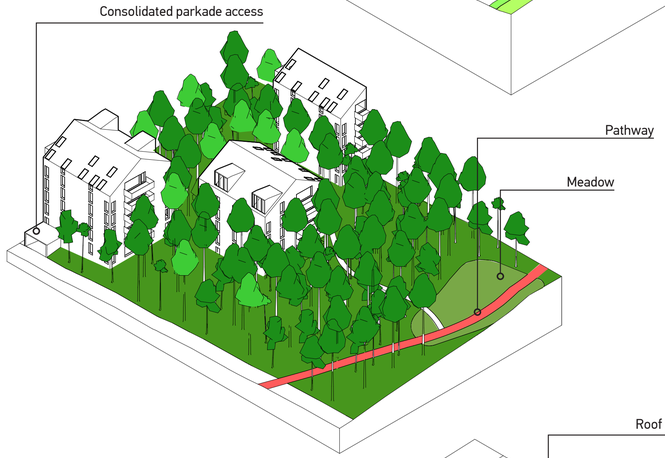


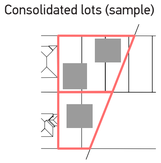


THE FRAMEWORK : **AN URBAN LANDSCAPE**

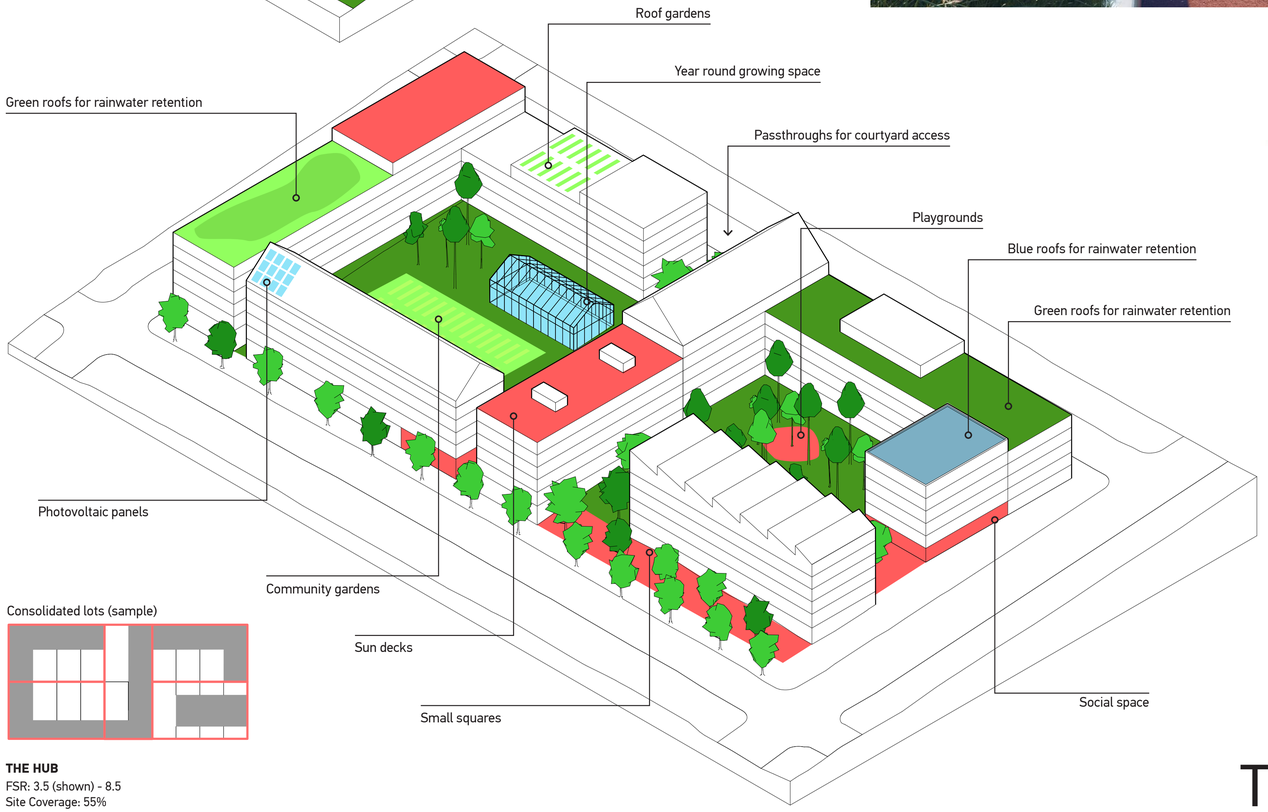


THE URBAN EDGE
FSR: 3.0
Site Coverage: 75% (60% including former roadway)





THE WOODLANDS
FSR: 2.0
Site Coverage: 33%



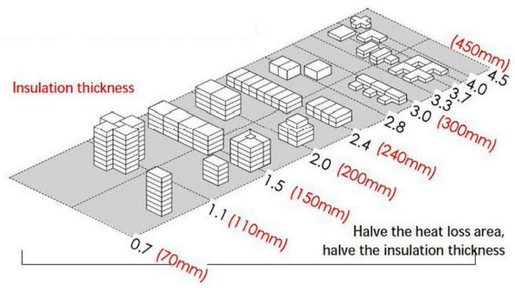
THE HUB
FSR: 3.5 (shown) - 8.5
Site Coverage: 55%



SOME PRINCIPLES FOR RESILIENCY

COMPACT FORMS... BUT WITH ACCESS TO DAYLIGHT AND NATURAL VENTILATION

FORM FACTOR[4]



DAYLIGHT ANALYSIS

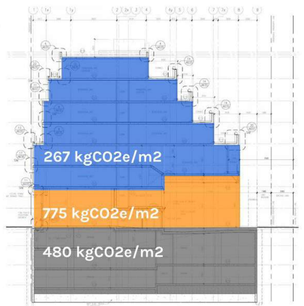


The key to resilient building is to compact, denser buildings that minimize heat loss. Buildings with low form factors perform better, and the decrease in insulation can lower costs. However, compact forms cannot come at the expense of access to daylight and natural ventilation. Not only does daylight and natural ventilation improve the aesthetic quality of the housing, but it reduces dependency on building systems to provide comfortable dwelling units. Overly deep floor plates require higher floor-to-floor heights, larger windows, and complex stack ventilation systems to provide passive performance levels.

Excavation costs money and has twice the carbon footprint of the upper levels of a mid-rise structure. The means to reduce the impact of the ground floor exists, but basements without concrete remain unfeasible. Taking advantage of the topography to build structures above grade will reduce the structure's cost and allow for future re-purposing of the garage.

BUILD UP, NOT DOWN

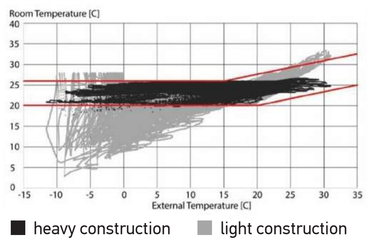
MID-RISE CARBON COST BY FLOOR[4]



INCREASED INSULATION, AIR TIGHT CONSTRUCTION AND LOW WINDOW-TO-WALL RATIO IS THE NEW STANDARD, BUT WE CAN STILL DO BETTER.

Passive House buildings use low window-to-wall ratios, air-tight construction, and increased insulation levels to lower the operating costs of a building, reducing the carbon footprint, and improving the overall thermal comfort of a building. Research shows, however, that adding thermal mass, preferably through non-concrete sources, can stabilize temperatures and further reduce dependence on mechanical systems for heating, cooling and ventilation.

THERMAL COMFORT BY CONSTRUCTION TYPE[6]



THE BUILD OUT: **LOW-COST RESILIENT HOUSING**

1:2500

MULTIFUNCTIONAL PUBLIC AMENITIES
To accommodate increased densities, our public facilities need to be fully utilized. Single-use buildings should be replaced with centres that can accommodate various uses for people of all types.

THE WOODLANDS
Despite the housing crisis, the temptation to prioritize open space for buildings should be resisted. Open space is critical to healthy, dense communities, and any opportunity to add functional open space should be taken.

ENGAGING THE FREEWAY
Jurisdictional barriers must be removed to allow enhancements around Highway 91a. Further widening will only increase volume, not relieve congestion, and the space around the highway is too valuable to be left to pasture.

THE HUB
A new transit hub organized around equitable pedestrian access is at the centre of it all. The hub will be the active heart of the community, providing key services as commuters move to and from work during the day.

N

Networks

Ecological
Open spaces need to be either productive for people or for nature. Too many landscape buffers consist of unproductive monoculture landscapes. Ensuring those buffers are more ecologically productive will improve the community's overall health.

Park
Though the area has a significant amount of open space, much of it lacks identify, neither for people nor ecologically productive. The proposal introduces a nature corridor along the existing BC Hydro line that will enhance the community's ecological health and provide a key connector for increased density within the community.

Pedestrian
Rather than adding expensive traditional sidewalks to the area, the focus should be on giving space dedicated to cars over to other modes of transportation, including pedestrians. Wide existing streets create distance from front porch to the front porch, reducing informal interactions. An improved network compresses the street while accommodating more varied uses.

Zoning

Type: **The Woodlands** Stories: 6
FSR: 2.0 Site Coverage: 33%

A zoning district characterized by its relationship to the adjacent Woodlands. Though denser than the traditional residential blocks, the density should be consolidated as much as possible to minimize site coverage and allow for enlarged park space, increasing the ecologically productive area.

Type: **Low Density** Stories: 3
FSR: 1.2 Site Coverage: 50%

This zoning district maintains the neighbourhood's existing character with a slight increase in density and a new streetscape, making it more urban. Using porous pavement for driveways rather than concrete and more varied uses will foster more activity and improved exterior comfort.

Type: **Hub** Stories: 6 to 25
FSR: 3.5 to 8.5 Site Coverage: 55%

An intensification of the area around the transit station will make the station a safer and more active place and provide more housing with convenient access to the station. The density will vary from block to block, with high density and taller structures as one moves south down the hill and closer to Highway 91a. Incorporation of social space to support the denser neighbourhood will be necessary for the new developments.

Type: **Main Street** Stories: 6
FSR: 3.5 to 4.5 Site Coverage: 100%

20th Street and 7th Avenue are the main commercial streets for the neighbourhood and should be developed to support further additional amenities. Improvements to the existing streetscape will allow for outdoor activities and improve pedestrian comfort. Though traditionally, in Metro Vancouver, consolidation is the preferred method of development, typologies for single lots should be available for landowners.

Type: **Urban Edge** Stories: 4
FSR: 3.0 Site Coverage: 75%

Neighbourhoods are not islands. Development of the edges is important to ensure access to surrounding amenities and to maintain urban continuity. Here, 4-story rows of 16m to 12m structures (townhomes of apartments) along pedestrian-centred shared streets will maintain those critical connections beyond Connaught Heights.

References

1 Jones, Christopher, and Daniel M. Kammen. 2014. "Spatial Distribution of U.S. Household Carbon Footprints Reveals Suburbanization Undermines Greenhouse Gas Benefits of Urban Population Density." Environmental Science & Technology 48 (2): 895–902.
2 Wilson, Alex, and Paula Melton. 2018. "Driving to Green Buildings: The Transportation Energy Intensity of Buildings." BuildingGreen. October 22, 2018.
3 "Smart Code Version 9.2." 2009. The Town Paper.
4 "The Challenge of Shape and Form: Understanding the Benefits of Efficient Design." 2016. NHBC Foundation.
5 "Half_City of Toronto_Comparative Carbon Emissions of Mid-Rise Buildings_2023.Pdf." n.d.
6 Junghans, Lars. 2019. "Feasibility of the '22/26' Building under Varying Construction, Occupancy and Climate Condition." In LowTech in Buildings, 21:54–65. Bundesamt fuer Bauwesen (Department of Building Construction and Urban Planning, Germany).