

# HOW ARE WE PLANNING MORE SUSTAINABLE, EQUITABLE CITIES?

ENVR/GEOG-3850-A01 - Sustainable Manitoba Event, March 3, 2021

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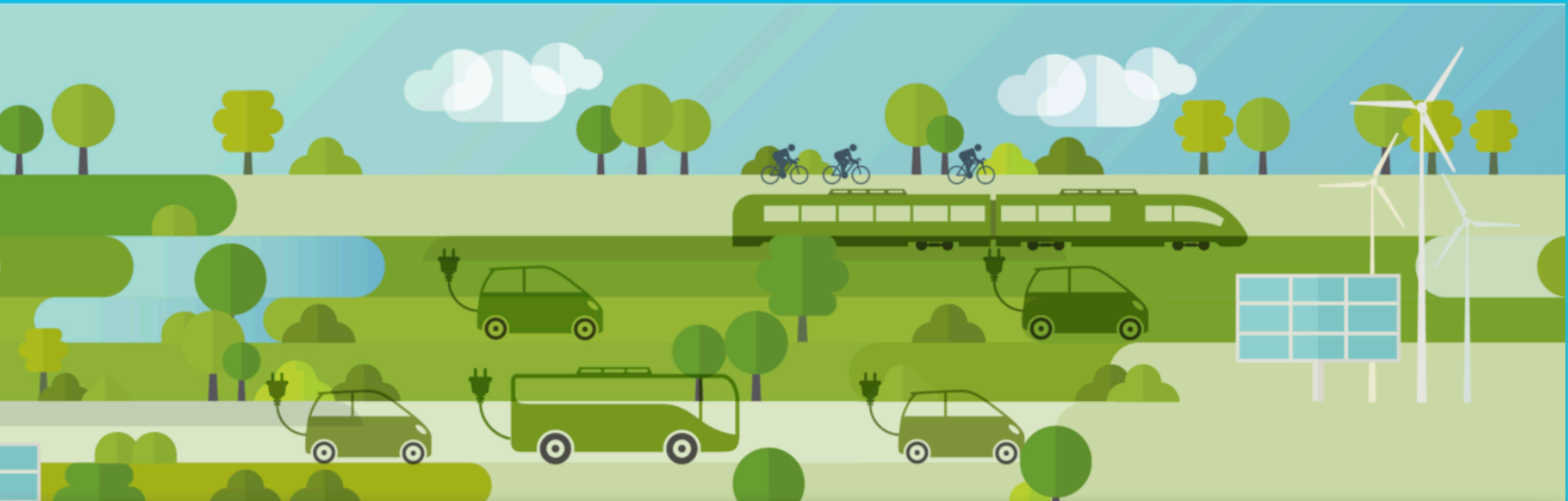


# PLANNING TOMORROW'S CITIES

- Planners are part of the solution in planning sustainable, equitable cities
- A few ways in which they are doing this:
  - Increasing access to sustainable transportation, including walking and cycling
  - Providing mobile services, such as public health, in rural areas where there is unequal access to services
  - Encouraging denser building patterns through land use zoning



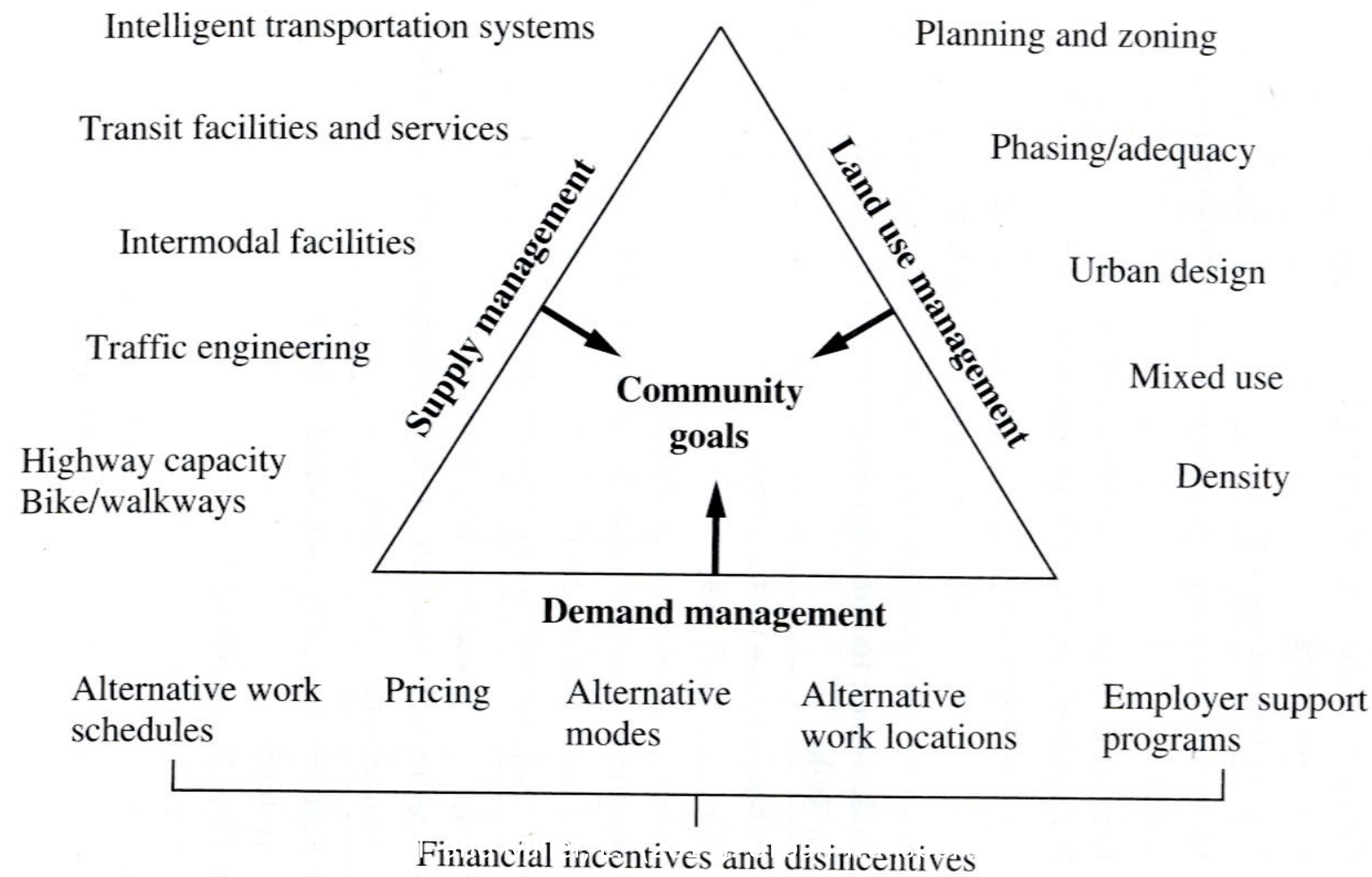
# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION



# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION

- While traditional transportation planning focused more on alleviating congestion, increasing mobility and supporting economic development, sustainable approaches focus on decreasing the negative externalities (e.g. GHGs, quality of life impacts)
- Rather than continually expanding transportation infrastructure, we now focus on making efficient use of existing infrastructure, reducing travel by single-occupant vehicles, and using other demand management strategies
- There is more integration between transportation and land use planning, which has an impact especially on short trips (mode switching from car to walking/cycling)
- More of a systems approach, understanding that transportation is linked to ecosystems, land use, economic development, public health, and social well-being

# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION





# IDA E VOLTA

Dos 67 km de vias cicláveis que a atual gestão diz ter entregado, 39 km são de novas vias da cidade com espaço reservado para a bicicleta.

## Bicicletários

Serão instalados junto aos terminais de ônibus e mais dois no Centro

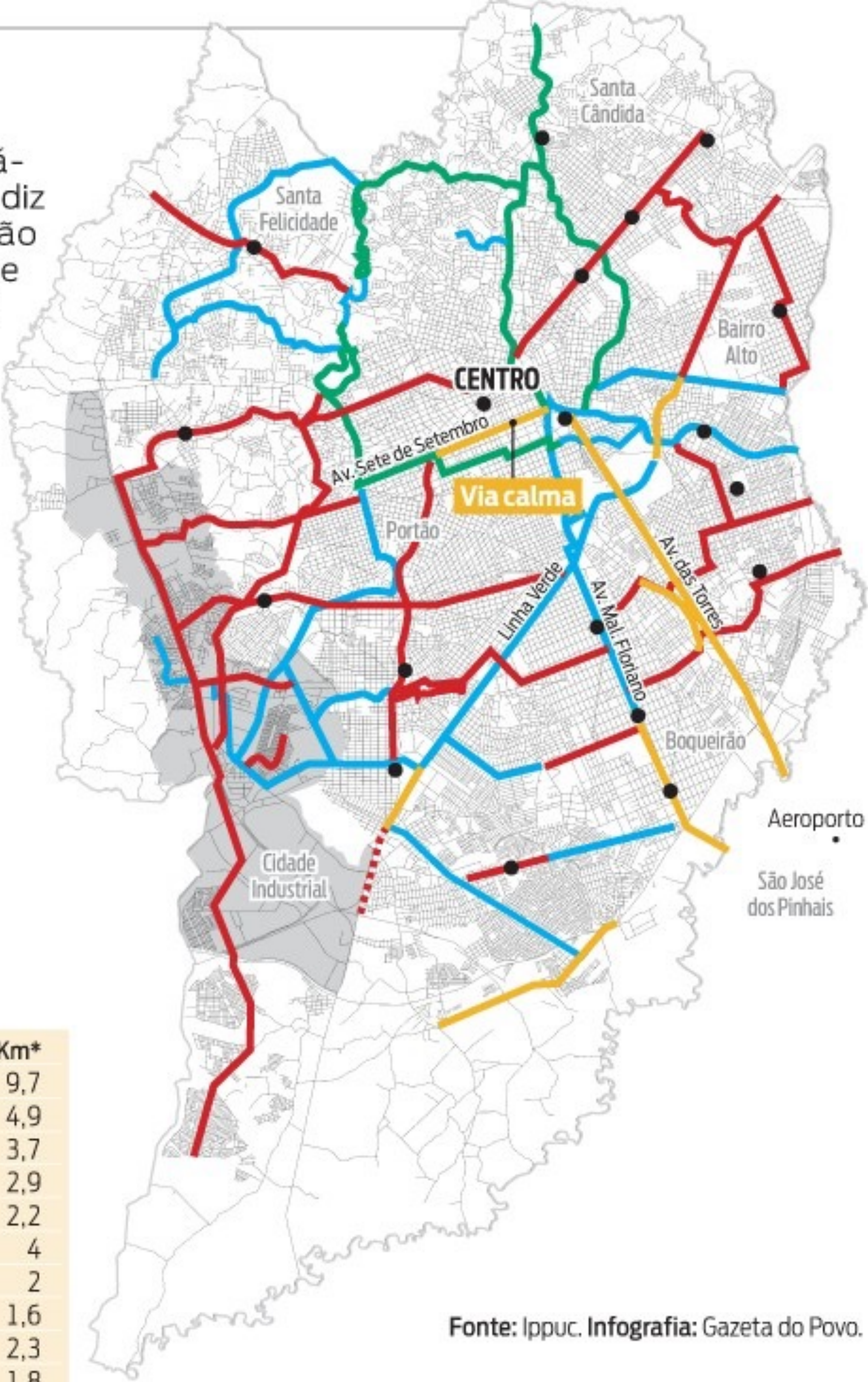
## ciclovias existentes

- circuito interparques
- outras ciclovias

## novas ciclovias

- estruturantes, ciclorrotas na CIC e conexões do interparques
- em obras
- concluídas na gestão Fruet

Ciclovias	Km*
Aeroporto-Rodoferrov.	9,7
R. Eduardo Pinto da Rocha	4,9
Av. Mal. Floriano	3,7
Via Calma (Av. Sete de Set.)	2,9
Av. Sen. Salgado Filho	2,2
Pq. Mané Garrincha	4
Linha Verde Norte	2
Linha Verde Sul	1,6
Av. Pres. Getúlio Vargas	2,3
Pq. Municipal Guairacá	1,8
Outras	3,85
<b>Total</b>	<b>39 km</b>



Fonte: Ippuc. Infografia: Gazeta do Povo.

\*Números aproximados. A prefeitura divulgou os números duplicados para alguns trechos, considerando ciclovias de ida e volta. Na conta deles, o total de ciclovias implantadas chega a 67 km.

Curitiba, Brazil currently has 55km of bike paths and lanes (27km exclusive space for bike)

Red (proposed), blue (existing)







Beijing temporarily restricted driving (by license plate number) during the 2008 Olympics





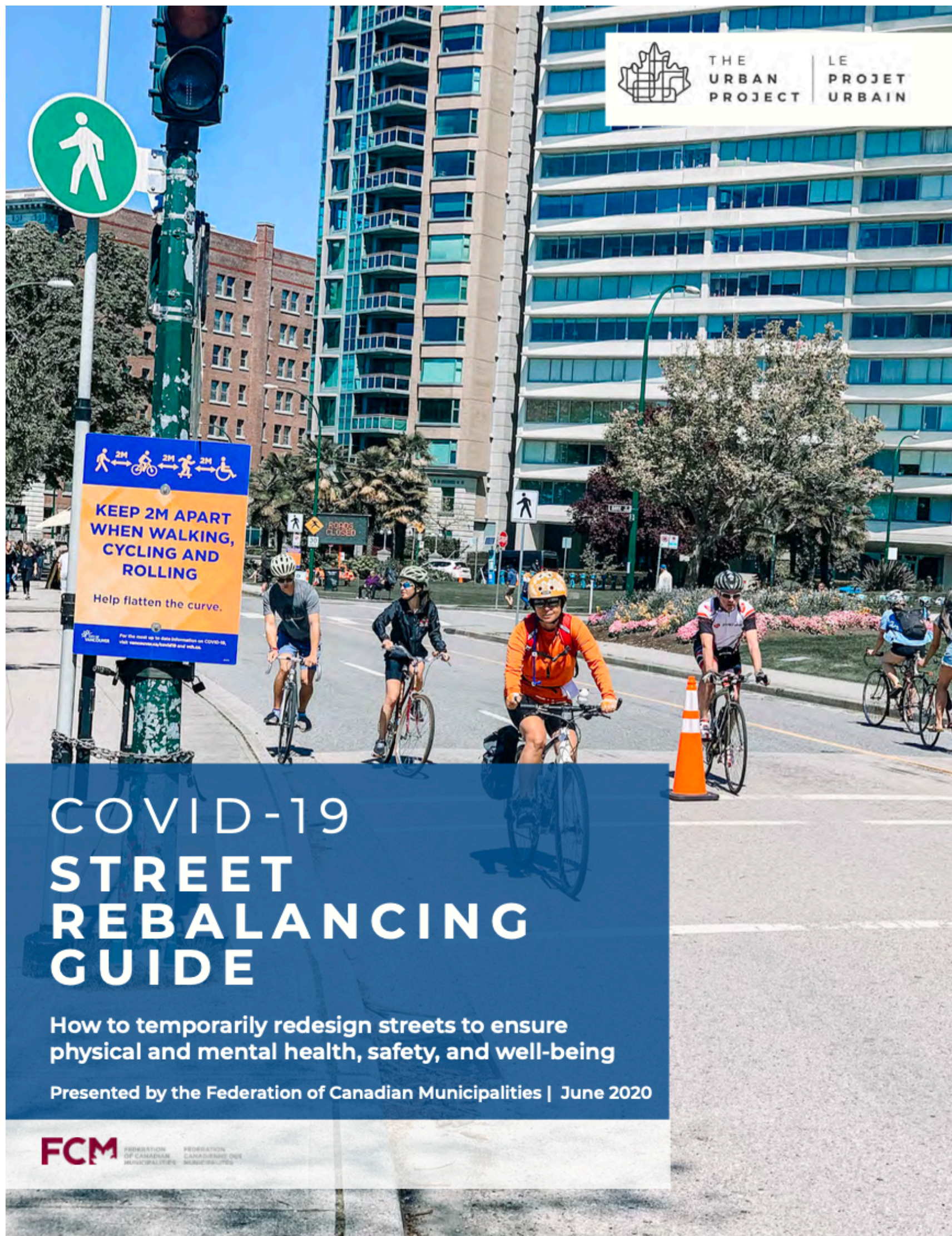
China was once referred to the “Kingdom of Bicycles” (1980s photo, left), but the country’s bike fleet decreased by 35% from 1995-2005.



Air quality issues have forced governments to implement bike sharing schemes and reclaim road space for bikes



# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION



- In 2020 Federation of Canadian Municipalities published this guide to help cities reallocate road space to pedestrians and cyclists
- The purpose was to give examples of quick, simple, cheap ways to transform streets so people could stay active during the pandemic







# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION

## 5. Toolbox and Design Guidance

This section introduces ten response treatments that cities and communities can consider to rebalance streets, including:

1. Full Street Closures
2. Shared Streets
3. Temporary Pedestrian Lanes
4. Temporary Bicycle Lanes
5. One-Way Multi-Use Pathways
6. Separate Bicycle and Pedestrian Pathways
7. Curbside Queuing Areas
8. Priority Loading Areas
9. Pedestrian Pushbutton Automation
10. Temporary Patios and Parklets

Each response treatment includes a description of the treatment, the applicable context, and general design guidance, along with a summary of key considerations for design, signage and pavement markings, implementation and maintenance, and monitoring and evaluation.

There is a range of materials that can be considered based on whether the project will be installed using temporary, interim, or permanent materials. The figures in this section generally illustrate temporary materials, but as noted previously, these treatments can evolve to interim or permanent materials depending on the response strategy.





# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION

## City of Vancouver planning to speed up TransLink buses on 10 major street corridors

 Kenneth Chan | Nov 30 2020, 8:10 pm

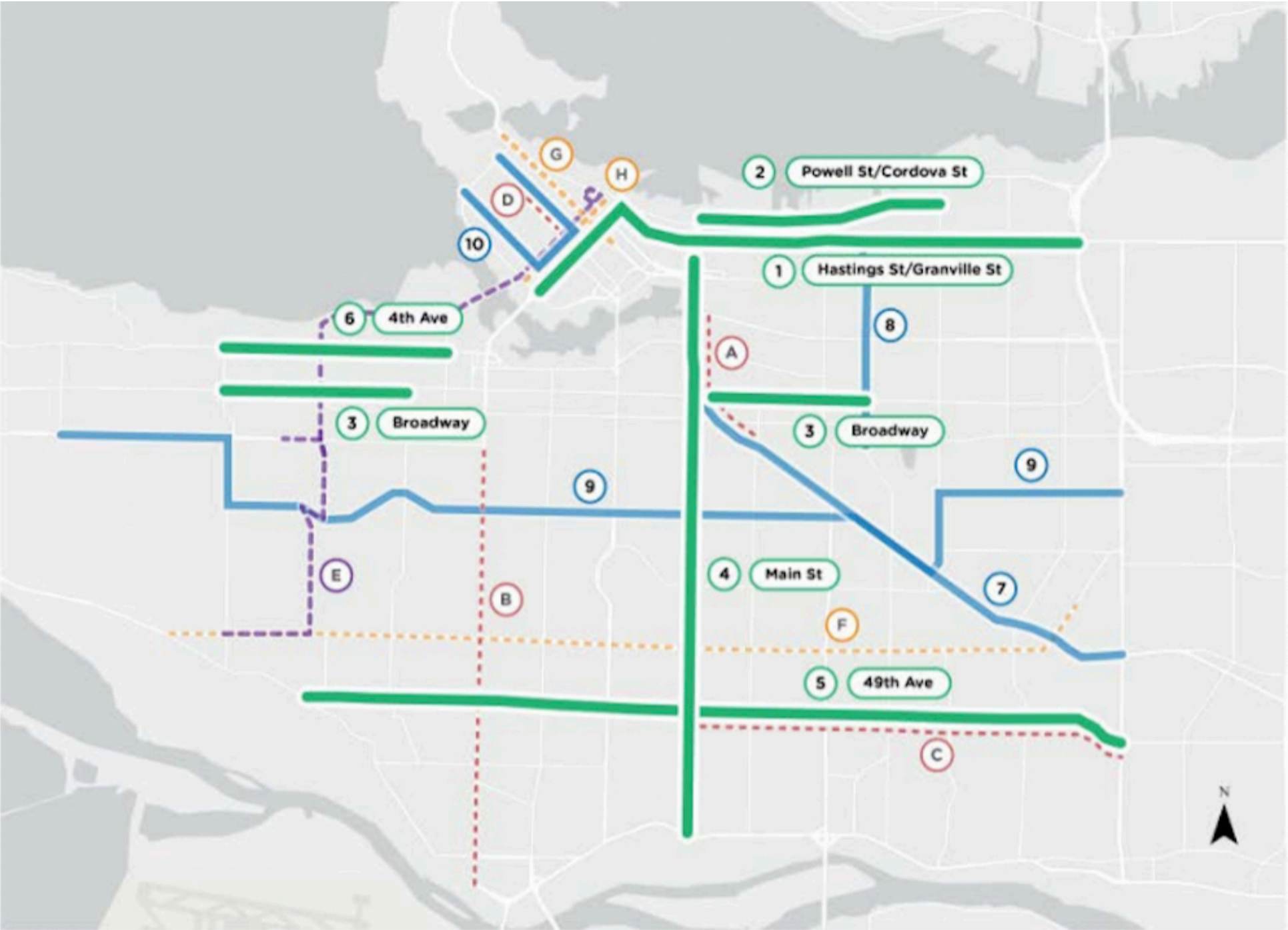


- Through their Climate Emergency Action Plan, the City will build one significant bus corridor per year, including Hastings and Granville Streets, Powell and Cordova Streets, West Broadway, Main Street, 49th Avenue, and West 4th Street
- All of these are main streets traditionally served by streetcars in the 19th century, now served by electric and diesel buses—the problem now is that they are so well used there are major traffic delays. The proposed projects will allow transit priority features like queue jumping signals

<https://dailyhive.com/vancouver/vancouver-transit-bus-priority-measures-climate-action-emergency-plan>



# INCREASING ACCESS TO SUSTAINABLE TRANSPORTATION



**Transit Action Plan Corridors - Years 1-5**

- 1 Hastings St/Granville St
- 2 Powell St/Cordova St
- 3 Broadway
- 4 Main St
- 5 49th Ave
- 6 4th Ave

**Transit Action Plan Corridors - Years 6-10**

- 7 Kingsway
- 8 Commercial Dr
- 9 King Edward Ave
- 10 Burrard St/Robson St/Davie St

**COVID-19 Recovery Bus Priority Pilot Corridors**

- A Main St/Kingsway (to Fraser)
- B Granville St
- C 49th Ave (Boundary Rd to Main St)
- D Robson St

**COVID-19 Recovery Bus Balancing Pilot Corridor**

- E #2 Macdonald/Downtown

**Ongoing Corridor Improvements**

- F 41st Ave
- G W Georgia St
- H Burrard St

Criteria	Powell/ Cordova	Hastings/ Granville	Main	Broadway	4th Ave	49th Ave	Kingsway	Commercial	King Edward	Burrard/ Robson/ Davie
Primary Factors										
Ridership	▲	▲	■	▲	■	▼	▼	▼	▼	▼
Route Performance	■	▲	■	▲	■	▲	▼	▼	▼	▼
Equity	▲	▲	▼	▼	▼	▲	▼	■	■	■
Secondary Factors										
Ability to Implement	■	▲	▲	▼	▼	■	▲	▲	▲	▲
Transit Access	▼	■	▼	▼	▼	▼	▼	▼	▼	▲
Ability to Shift Travel Modes	■	▲	▲	▲	▲	▼	■	■	▼	▼
Tertiary Factors										
Support Metro Pricing	▲	▲	▲	▼	■	■	▲	■	▼	▼
Existing Transit Priority	▲	▼	▲	▼	▲	■	▲	▲	▲	▼
Co-Benefits	■	▲	▼	▲	▲	▼	▼	▼	▼	▼
Least meets objective ▼ ▼ ■ ▲ ▲ Best meets objective										





**PROVIDING MOBILE SERVICES**



# PROVIDING MOBILE SERVICES

- **Halifax Regional Municipality and Nova Scotia Public Health Authority created a Mobile Food Market: <http://www.mobilefoodmarket.ca/>**
- **They identified six communities with poor access to fresh fruits and vegetables because they did not have a grocery store (a 2014 study identified NS has having one of the highest rate of food insecurity of any province after NWT and Nunavut)**
- **The mobile market uses a Halifax Transit bus**
- **Pilot project starting in January 2015 for 21 weeks, and now has 13 locations. They were seeking a new vehicle to accommodate food bins that couldn't be easily fit inside retrofitted buses**
- **Partner organizations include several local grocery stores, restaurants, the provincial government**



# PROVIDING MOBILE SERVICES



KING'S JOURNALISM

THE SIGNAL

## THE Signal

NEWS ARTS EDUCATION LIFE SPORTS KJR SHOWS INVESTIGATIVE MAGAZINE

### Mobile Food Market seeks a new truck to keep moving forward

HRM considering a one-time grant of \$75,000 for the organization



<https://signalhfx.ca/mobile-food-market-seeks-a-new-truck-to-keep-moving-forward/>



Mobile Food Market on the bus



# PROVIDING MOBILE SERVICES

- Mobile York South Simcoe is Ontario's first mobile health unit for Adolescent Mental Health services. MOBYSS was established following community consultations regarding the region's lack of mental health services for youth. The retrofitted MOBYSS RV brings services to young people, specifically targeting those aged 12 to 25
- The 39-foot RV contains a private exam room, a curtained off space for one-on-one counselling and an open lounge. The bus travels to local high schools and community centres
- In addition to mental health services, preventive care services are also provided including sexual education, lab services, etc. A nurse practitioner, a peer support specialist, and a youth mental health worker are on board six days a week with the team conducting follow-ups from the office on the seventh day
- MOBYSS has an app that includes schedule and location information as well as links to useful resources.
- The MOBYSS program helps reduce barriers that some youth may have to accessing care. The RV travels to where patients are located further reducing transportation barriers

# PROVIDING MOBILE SERVICES

- Telus Health for Good program offers primary medical and dental care to underserved populations in 11 cities across Canada: Victoria, Vancouver, Surrey, Calgary, Edmonton, Ottawa, Mississauga-Peel Region, Waterloo Region, Montreal, Halifax, and Toronto
- The program funds a mobile primary health and harm reduction clinic in Parkdale Queen West, Toronto

Coronavirus Update: Reduced Hours of Operation. [Click here for details.](#)

**Parkdale Queen West**  
launches  
**Health for Good Mobile Clinic**

**CLICK TO  
LEARN MORE**



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# POP-UP AND TEMPORARY SERVICES

LIFE AND LOVE


## Pop-Up Chapels Spring Up Across Canada as Alternative Wedding Venues

Engaged couples in Toronto, Ottawa and Vancouver can get married in a Pop-Up Chapel – a

BY : HANNAH ZIEGLER - JUL 12TH, 2020



MANGO STUDIOS



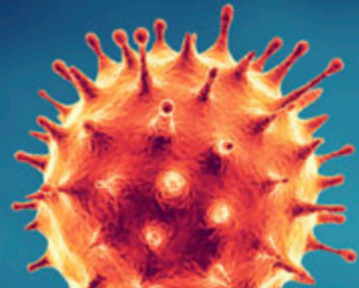
COVID-19 UPDATESSALVATIONIST.CA

THE VOICE OF THE ARMY


# Salvationist

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COVID-19  
UPDATES




### Calgary Food Hamper Pop-Up Sees Overwhelming Demand


10 months ago

Army serves 1,000 people in just two hours.

By Leigha Vegh Filed Under: [Feature](#)[COVID-19](#)



101.3 MILTONNOW.CA  
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### COVID-19: Gordon Food Service launch pop up grocery store

Milton, Ontario, Canada / 101.3 Milton Now  
101.3 myFM News staff  
Apr 27, 2020 7:11 AM

## Gordon

FOOD SERVICE

Always at your table™

A local business has made grocery shopping a little easier during the COVID-19 outbreak.

Gordon Food Service has launched a pop-up grocery store.

Director of Warehouse Operations at Gordon Food Service, Trevor Hunt, explains.

COVID-19 Response Podcast

Job Vacancies

Corps Resources

Pastoral Services Resources

French Resources

Government Updates

General FAQs

Departmental FAQs

COVID-19 Updates

COVID-19 and World Refugee



# ENCOURAGING DENSER BUILDING PATTERNS





# ENCOURAGING DENSER BUILDING PATTERNS

- Planners use land use zoning by-laws to indicate where certain uses can locate within a municipality/region, and the form/massing of buildings



Halifax Regional Municipality's Centre Plan includes corridors with higher Floor Area Ratios (FAR) requiring higher density



# ENCOURAGING DENSER BUILDING PATTERNS

- These by-laws can provide very specific requirements, such as buffers for watercourses, architectural massing, and bicycle parking

## Part III, Chapter 4: Environmental Requirements

### Coastal Areas

- 64 (1) Subject to Subsections 64(2) and 64(3), where a lot abuts the coast of the Atlantic Ocean, including its inlets, bays, and harbours, a development permit shall not be issued for any portion of a dwelling, including a basement, that is proposed to be erected, constructed, altered, reconstructed, or located at an elevation less than 3.2 metres above the Canadian Geodetic Vertical Datum 2013 (CGVD2013) standard (Diagram 2).

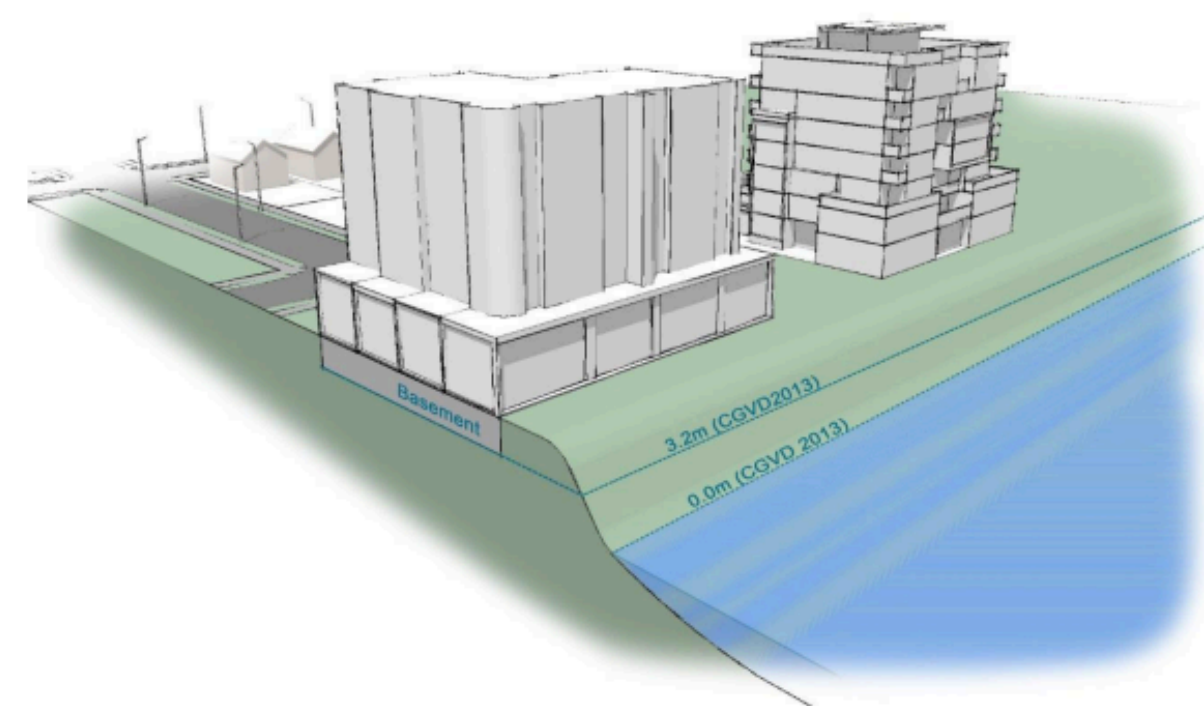


Diagram 2: Coastal area elevation requirements, per Subsection 64(1)

## Part VI, Chapter 3: Building Design Requirements

### Design Requirement: Streetwall Articulation

- 121 Streetwalls shall be divided into distinct sections no less than 0.3 metres in width and not exceeding 8 metres in width, from the ground floor to the top of the streetwall, with each section differentiated by using at least two of the following (Diagram 9):
- (a) colour(s);
  - (b) material(s); or
  - (c) projections and recesses not less than 0.15 metres in depth.

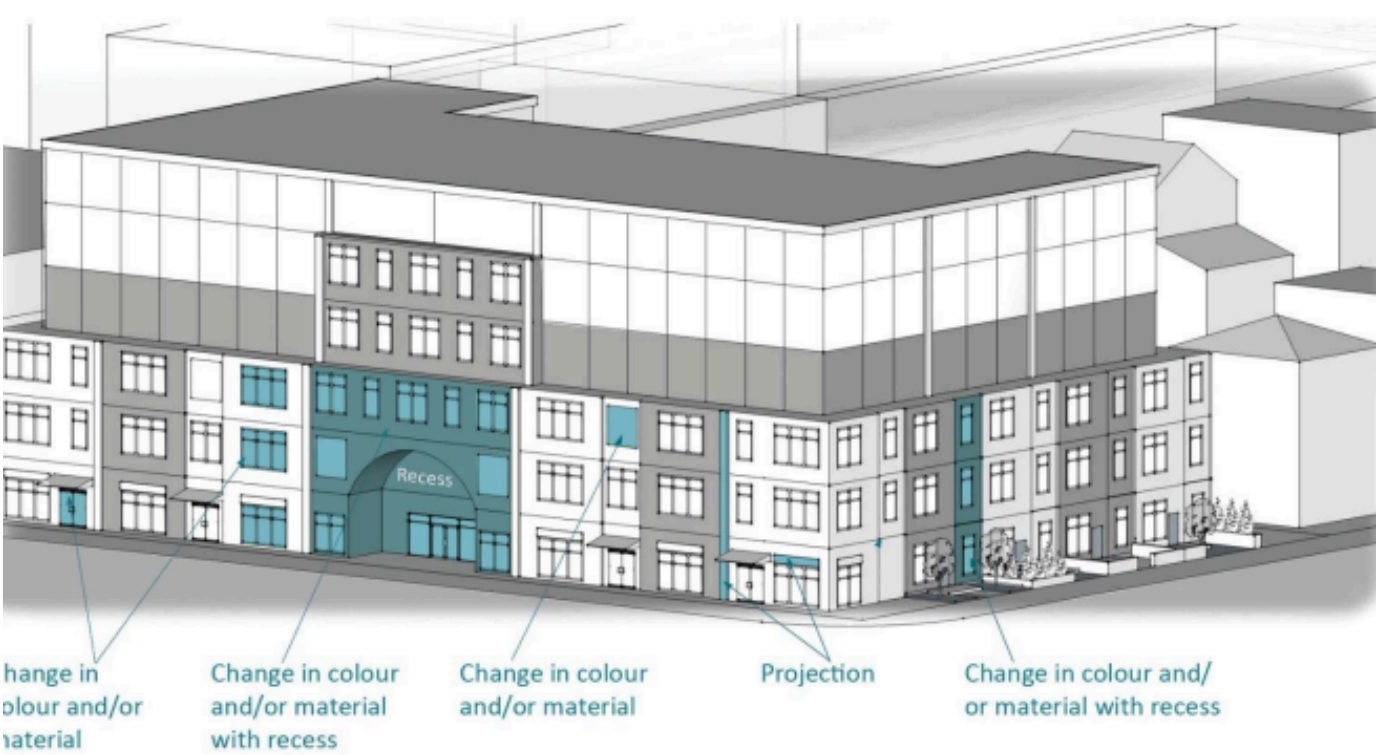


Diagram 9: Methods for streetwall articulation, as per Section 121

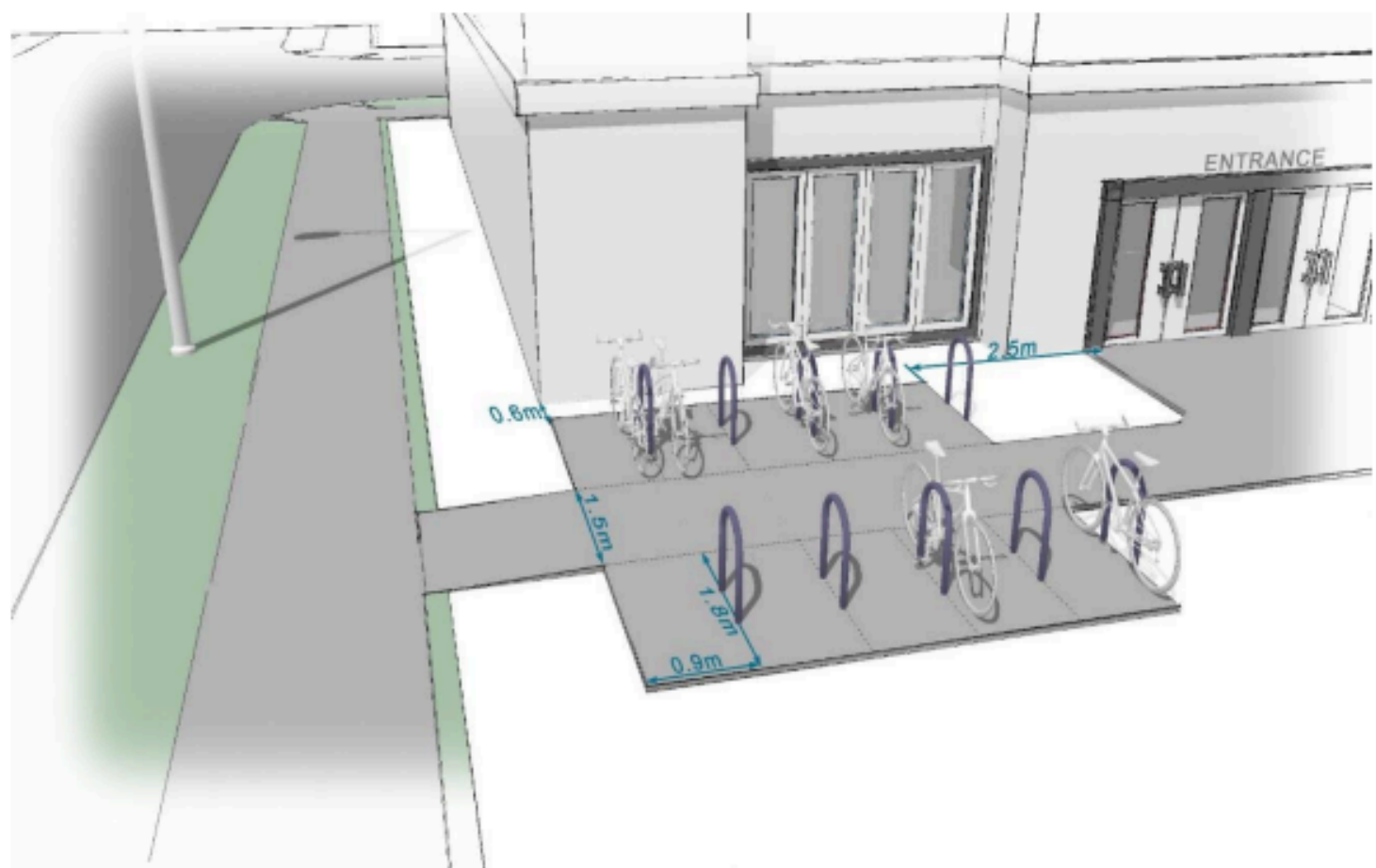


Diagram 22: Bicycle parking requirements, per Section 213



# ENCOURAGING DENSER BUILDING PATTERNS

- Increasingly, municipalities are advocating for higher building densities along main streets to make better use of existing infrastructure
  - Transit
  - Power grids
  - Water/sewer infrastructure
- Transit-oriented development “includes a mixture of housing, office, retail and/or other commercial development and amenities integrated into a walkable neighborhood and located within a half-mile of quality public transportation.” —Centre for TOD, 2019
- In order to build more densely, cities often need to update their municipal, transportation, and other plans
  - e.g. the City of Austin passed a TOD ordinance in 2005, designating the boundaries of future Red Line station areas as TOD zones and establishing an interim overlay zone to ensure developments would be supportive of transit and pedestrian environments. The City created a program that provides fee waivers and expedited review of development applications for projects that meet the criteria of being safe, mixed-income, accessible, reasonably priced, transit-oriented, and meeting green building standards



CORRIDOR HOUSING TYPES AT A GLANCE

- TOWNHOUSE**
- Generally 2.5 to 3 storeys
  - 1.2 FSR
  - Proposed Density Bonus share or fixed CAC target \$65
  - 50% of floor space for units less than 1,130 sf to enhance affordability



- 4-STORY STRATA / 6-STORY RENTAL**
- 4 Storey 2.0 FSR Strata with proposed fixed CAC target \$80
  - 6 Storey 2.5 FSR 100% secured rental housing (no CAC)



- 15-STORY AND 18-STORY TOWERS**
- 4 storey strata with proposed fixed CAC target \$80
  - High-density form to encourage the delivery of affordable housing (no CAC)
  - Opportunities for commercial space in strategic areas
  - "Tower in open space" or "tower on podium" building types
  - Amenity delivered as:
    - 100% secured rental with 20% below market rental or
    - 30% social and 70% strata



- 4-STORY AND 6-STORY BUILDINGS**
- Multi-family housing with ground-oriented units at the base of buildings and opportunities for commercial space in strategic areas.
  - 4 storey proposed fixed CAC target \$80
  - 6 storey proposed fixed CAC target \$115
  - 6 storey mixed-use proposed fixed CAC target \$125



LAND USE MAP

This map provides an overall concept for the Cambie Corridor, describing the proposed land use mix and building heights for sites in the Corridor. Refer to the Neighbourhoods Chapter of the proposed plan for more details.

- REMAINING SINGLE FAMILY AREAS**
- Retention of pre-1940s character homes
  - Opportunities for infill development and strata title dwelling units
  - Refer to citywide policy for further details

CONTRIBUTIONS TOWARDS AMENITIES & AFFORDABLE HOUSING (CAC)

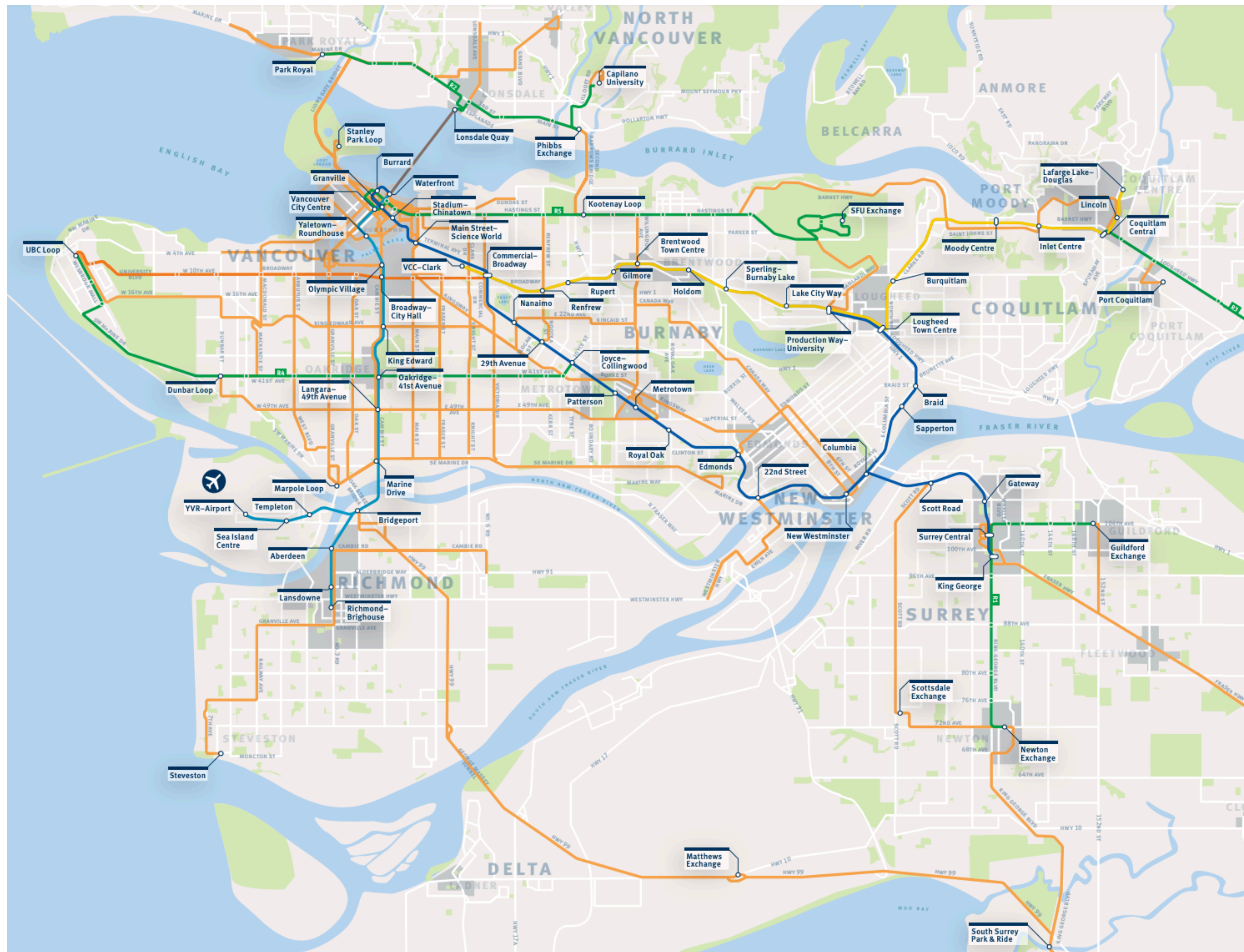
- As the Cambie Corridor grows, new public amenities and services will be needed (e.g., affordable housing, parks, childcare)
- New developments will make contributions to help fund growth needs



- LEGEND**
- Towers
  - Apartment (up to 12 storeys)
  - Apartment (up to 8 storeys)
  - Apartment (up to 6 storeys)
  - Apartment (up to 4 storeys strata or 6 storeys rental)
  - Apartment (up to 4 storeys)
  - Mixed-use tower
  - Mixed-use (up to 10 storeys)
  - Mixed-use (up to 8 storeys)
  - Mixed-use (up to 6 storeys)
  - Mixed-use (up to 4 storeys)
  - Tower with choice of use
  - Apartment with choice of use at grade (up to 6 storeys)
  - Intensive employment
  - Unique site (opportunity for higher densities)
  - Major project (separate planning program underway or approved)
  - Other**
  - Existing townhouse
  - Area boundary
  - Marpole Community Plan area
  - Canada Line station
  - Future potential station
  - Place of worship
  - School
  - Area-specific rezoning policy will apply in this area to accommodate new street

Cambie Corridor Plan

Vancouver's Frequent Transit Network





# ENCOURAGING DENSER BUILDING PATTERNS

- Charlotte, North Carolina used FTA assistance to pass new TOD regulations in 2019 to encourage new construction in their existing TOD districts
- A new density bonus will allow developers to add height if at least 10 percent of the units are affordable on each floor above the maximum height. Or they can pay into the City of Charlotte Housing Trust Fund. There are now four TOD districts, e.g. the Transit Urban Center district allows heights up to 130 feet (10 stories), but developers can build up to 300 feet (23 stories) under the bonus height system, unless the building is within a quarter-mile of a rapid transit station, in which case the height is unlimited
- There are 770 acres zoned for TOD along LRT lines, and the city was rezoning properties to fit the new regulations in 2019



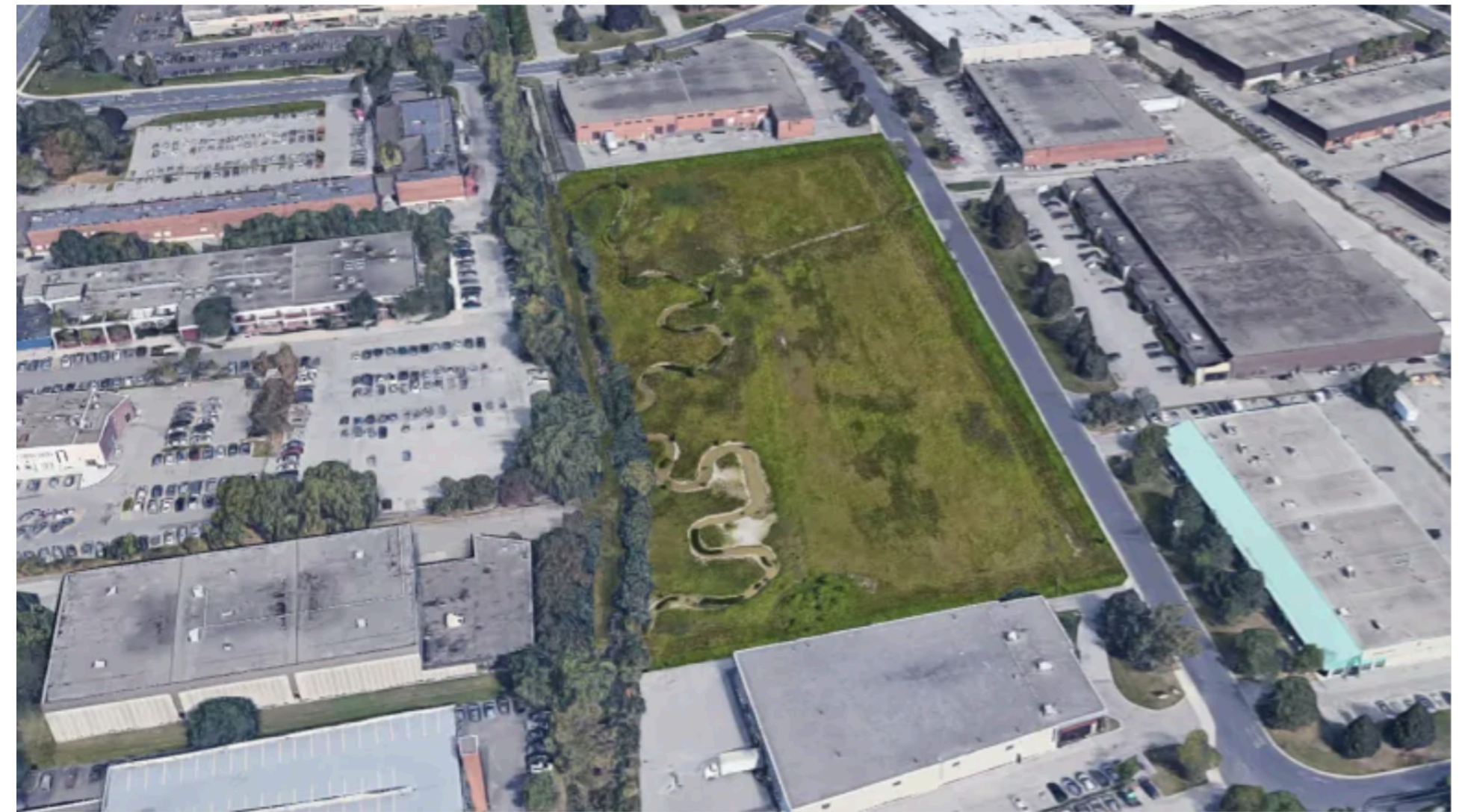
# ENCOURAGING DENSER BUILDING PATTERNS

- In Fruitvale (Oakland), local community organization Unity Council acted as a catalyst for neighbourhood transformation (Sandoval 2018)
- They led the development of the Fruitvale Transit Village TOD, including a strong desire to protect Latino retail shops. Strong connections to all three levels of government enabled them to secure funds to develop the project, which is now a model of eTOD in low-income communities
- Unity Council initiated community outreach, working with city officials, Bay Area Rapid Transit, the housing authority, politicians, and local planners



# ENCOURAGING DENSER BUILDING PATTERNS

- Building densely in established areas also allows us to preserve areas for parks, agriculture, and stormwater functions
  - e.g. the City of Markham, ON's Stormwater Management Strategy includes The Don Mills Channel industrial area, which is particularly vulnerable to floods
- The project will reclaim the flood plain, creating a storage pond and restoring the Don River watershed to its natural state. The naturalization of this area will reduce flood damages, attract natural species and reduce flooding downstream. When the pond is completed, five-year storm flood levels will be one and a half metres lower and small storms will stay in the channel instead of rising up the sides of the buildings.



An artist's rendering of the Don Mills Channel project after naturalization shows a large green space bordered by trees, industrial buildings and a road. (City of Markham)

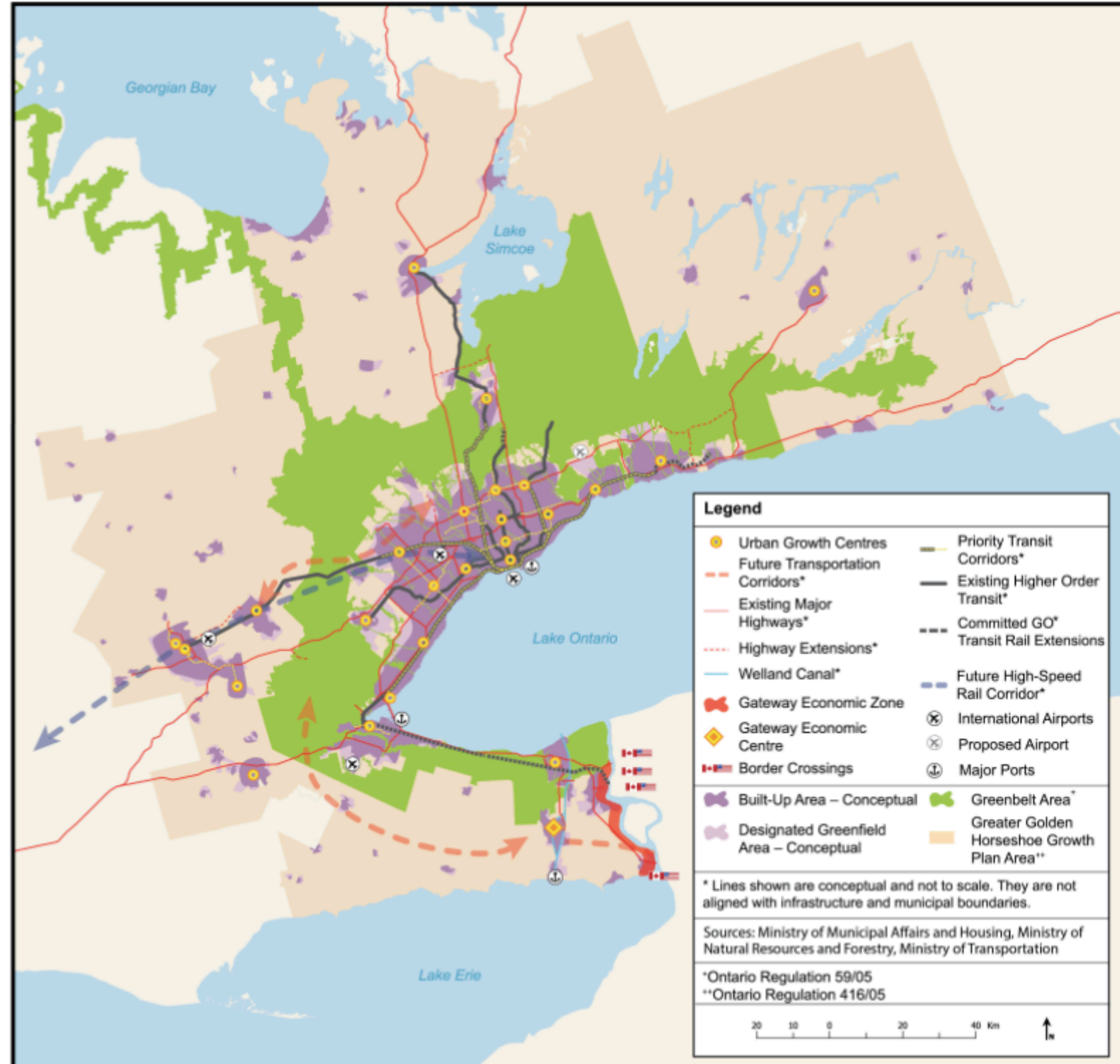
<https://www.cbc.ca/news/canada/toronto/markham-don-river-flood-plain-damage-1.5203156>





Ontario's Growth Plan for the Greater Golden Horseshoe (2006) aims to concentrate growth in 25 urban growth centres, preserving the greenbelt for agricultural use

<https://www.ontario.ca/document/place-grow-growth-plan-greater-golden-horseshoe>





# CONCLUSION: PLANNERS' ROLES IN THE TRANSITION

- Designate cycling lanes, paths, and corridors as part of a municipal comprehensive plan or transportation plan
- Ensure that pedestrian safety is protected through crosswalk design, buffers, signals
- Help plan new public transit routes and higher-level transit corridors (e.g. BRT, LRT)
- Advocate for better funding for cycling or transit
- Develop policies on travel demand
- Conduct demand analyses using Census and travel diary data
- Identify areas poorly served by public health initiatives for a regional health authority
- Identify and design alternatives to in-person service delivery
- Develop urban design guidelines for higher density buildings
- Conduct public meetings to revise the city's land use by-law
- Build mixed-use developments along main streets or on key sites



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in

RENTAL HOUSING IN CANADIAN CITIES:  
POLICIES AND INNOVATION

Search ...Search

October 26, 2018

Ren

0 Comment

Housing, Urban planning

Canadian municipalities have a vested interest in rental housing, and some have been very innovative in their policies, programs, and tools. While they still face obstacles to the preservation of existing rental housing, they have seen some success in developing new units, especially those municipalities who have strong relationships with their provincial government.

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