DOWNTOWN TRANSPORTATION PLAN



NEW WESTMINSTER

FINAL REPORT

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City of New Westminster
Downtown Transportation Plan
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1 OVERVIEW

The Downtown neighbourhood is a vital economic, cultural, historical, and residential hub of New Westminster, and the Metro Vancouver region. The neighbourhood serves as home to the residents, businesses, and institutions and is an important destination for the entire region. It's a place that people and goods travel through on foot, bicycle, SkyTrain, bus, motor vehicle, truck and rail, a significant transfer point particularly for public transit, and for the movement of goods by all modes of transportation.

This document—the Downtown Transportation Plan (the Plan)—sets forth objectives, principles, and a strategic plan for achieving the goals of the Downtown Community Plan (DCP) and the Master Transportation Plan (MTP). It describes the multi-modal transportation network that provides the canvas upon which the vision of the Downtown Building and Public Realm Design Guidelines and Master Plan (the Guidelines and Master Plan) will be painted.



DOWNTOWN IS AN ECONOMIC, CULTURAL, HISTORIC AND RESIDENTIAL HUB OF NEW WESTMINSTER. ITS HIGH DENSITY RESIDENTIAL AND COMMERCIAL BUILDINGS IN CLOSE PROXIMITY TO TRANSIT PROVIDE A SHOWCASE FOR THE ATTRIBUTES OF SUSTAINABLE AND RESPONSIBLE GROWTH IN THE METRO VANCOUVER REGION. *– DOWNTOWN COMMUNITY PLAN*

1.1 Plan Goals

The Plan provides a framework and steps to support a shift to sustainable modes of transportation, improved safety, and livability. The Plan goals are:

- Create a **walkable community** that prioritizes walking as a safe, convenient, and universally accessible way to get around.
- Make **cycling a comfortable** and inviting way to move within and through the neighbourhood for people of all ages and abilities.
- Ensure that **transit is a reliable**, convenient, and inviting way to get to and to travel through Downtown.
- **Manage local and regional travel** through the city in a manner that balances the quality of life of New Westminster residents with its important economic role within the region.
- Increase the **use of sustainable transportation** for all trips.
- Enhance the **safety and livability** of the community.
- Establish a transportation network that **supports the reallocation of road space** to achieve a quality people-centred public realm.
- Address **barriers to accessibility** to create a livable community that supports everyone.
- Celebrate and acknowledge the **historical nature** and urban form of Downtown.

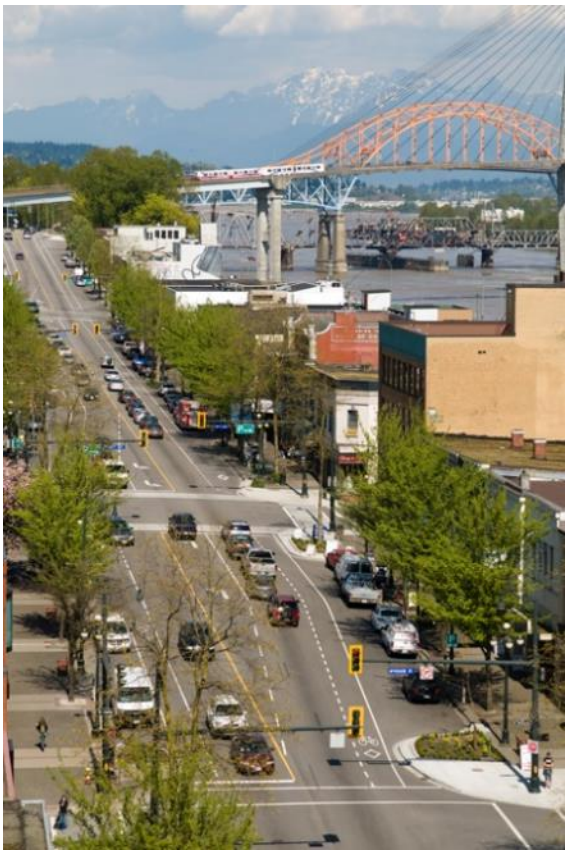


Figure 1 Columbia Street looking east toward Pattullo Bridge and SkyBridge (TransLink)

The Plan will:

- Provide a strategic plan for city staff, the developers, and the community to achieve a neighbourhood that prioritizes walking, cycling, and transit, and supports shared motor vehicle use and sustainable movement of goods.
- Provide clarity to council, city staff land use planners, developers, and strategic partners regarding near-, medium- and long-term strategies, principles, and plans for the multi-modal transportation network.

1.2 Opportunities

Through the initial Listen and Learn Public Workshop at the launch of the program, participants identified what they saw as the most significant opportunity to improve safety, connectivity, and livability. The recurring themes identified by the participants are integral to the big moves and measures identified in this Plan.

Great opportunities to improve SAFETY	Great opportunities to improve CONNECTIVITY	Great opportunities to improve LIVABILITY
- Better street lighting. - Calmer, more comfortable local streets. - Improved walkability and accessibility. - Improved pedestrian safety.	- Improved pedestrian and bicycle connections. - Dedicated bike lanes. - Improved transit.	- Improved commercial activity. - Calmer, more comfortable, local streets. - Better connectivity. - More parks and green space.

1.3 Process

The Downtown Transportation Plan program was launched in 2017 and included a three-phase engagement process:

Fall 2017 – Spring 2018	**Phase 1: Listen and Learn**
Spring 2018 – Fall 2019	**Phase 2: Identify and Evaluate Options**
Fall 2019 – Summer 2020	**Phase 3: Refine and Prioritize**

A working group was created to provide direct input into the process from key stakeholder groups and to gain initial feedback on materials and items under consideration prior to events with the public. Representatives on the Working Group included Downtown New West BIA, New Westminster Downtown Residents' Association, Quayside Board, HUB New West, Walkers Caucus, Community Living Society, and Douglas College. A second Working Group was created to invite targeted feedback on the Agnes Greenway project.

In total, over 140 people participated in scheduled activities and meetings with stakeholders, civic advisory committees, and public workshop events throughout Phase 1 and 2. Workshop #1 was held in November 2017 (Figure 2) and Workshop #2 in June 2018. As the planning process was nearing completion, a global pandemic was declared, and the Phase 3 public engagement process was halted. In order to enable the city to respond to the pandemic and advance plans for open streets, the final round of public and stakeholder engagement was modified, and Council was invited to review the Plan and consider adoption based on input received to date, including feedback provided by key stakeholder groups.



Figure 2 Community participants during facilitated table discussions at the public workshop

1.4 Plan Structure

The Plan builds upon established city-wide policies and plans, and those specific to the neighbourhood are organized into sections for Pedestrian, Cycling, Transit, and Vehicle Networks. The Plan also touches on New Mobility and includes Implementation and Monitoring Strategies.

Each of the sections identifies:

- Opportunities and challenges for each of the transportation networks.
- Key directions on implementation policies within the local neighbourhood context.
- Immediate, near-, medium-, and long-term projects and measures to be implemented within Downtown.

A vibrant, compassionate, and sustainable city that includes everyone.

- Vision Statement - Council Strategic Plan 2019-2022

2 POLICY CONTEXT AND NEIGHBOURHOOD CONTEXT

2.1 Established Policies

The Plan builds upon several established city policies, including the DCP, MTP, Downtown Parking Strategy (DPS) and the Guidelines and Master Plan.

This Plan outlines opportunities and challenges for the transportation networks and key directions to improve safety and livability in Downtown. The focus is on how people move within, around, and through Downtown, whether they are travelling on foot, bicycle, transit, or vehicle.

While there are specific policies that directly influence transportation networks and infrastructure in the neighbourhood, there are a number of city-wide strategies and policies that influence the public realm more generally. Throughout this Plan, opportunities are identified to support priorities implemented through other departments such as increased greening and canopy cover in the *Urban Forest Management Strategy* (2016), finding space and locations for Green Infrastructure from the *Integrated Stormwater Management Plan* (2017), and integrating best practices from the *Environmental Strategy and Action Plan* (2018).

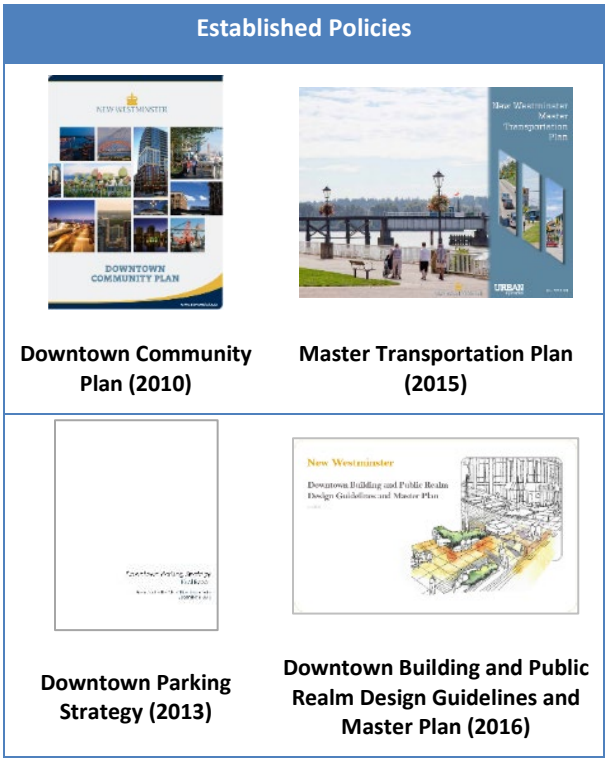


Figure 3 Established city policies

2.1.1 Long Term Growth

Metro 2040 anticipates New Westminster will grow to a population of 102,000 people by 2041. According to the *Official Community Plan* (OCP), Downtown is anticipated to absorb a significant share of residential development within the city, with approximately 43% of the projected population growth landing in the neighbourhood.

2.1.2 Recent Direction

The 2019-2022 Strategic Plan adopted by Council outlines their leadership role, key directions, and actions for seven priority areas. The Strategic Plan acts as a road map for steering the city's activities, including advocating and planning for inclusive and sustainable transportation that supports everyone. Key directions consider the most vulnerable road users first, both now and in the future, where mobility is inclusive, shared, connected, electric, and autonomous. The directions outlined are integrated into all areas of the Plan to support: everyone making sustainable transportation choices, a transit-friendly city, addressing safe and comfortable travel to school, and using a disability justice lens to recognize and mitigate barriers to universal access and mobility.

After the city declared a climate emergency in 2019, Seven Bold Steps for Climate Action (the Bold Steps) were adopted, including:

- **Bold Step 2: Car Light Community**—accelerate the MTP targets for mode split by ten years.
- **Bold Step 7: Quality People-Centred Public Realm**—convert a minimum of 10% of motor-vehicle serving street space to a quality people-centred public realm. The Bold Steps helped outline a framework for implementing the major components of this Plan and timing for immediate-, near- and medium-term items.

2.2 Plan Area and Neighbourhood Context

The Downtown neighbourhood is located on the north shore of the Fraser River (Figure 4). It is an essential residential and commercial area. It contains key destinations and connections for major transportation, including transit, road, and rail corridors.

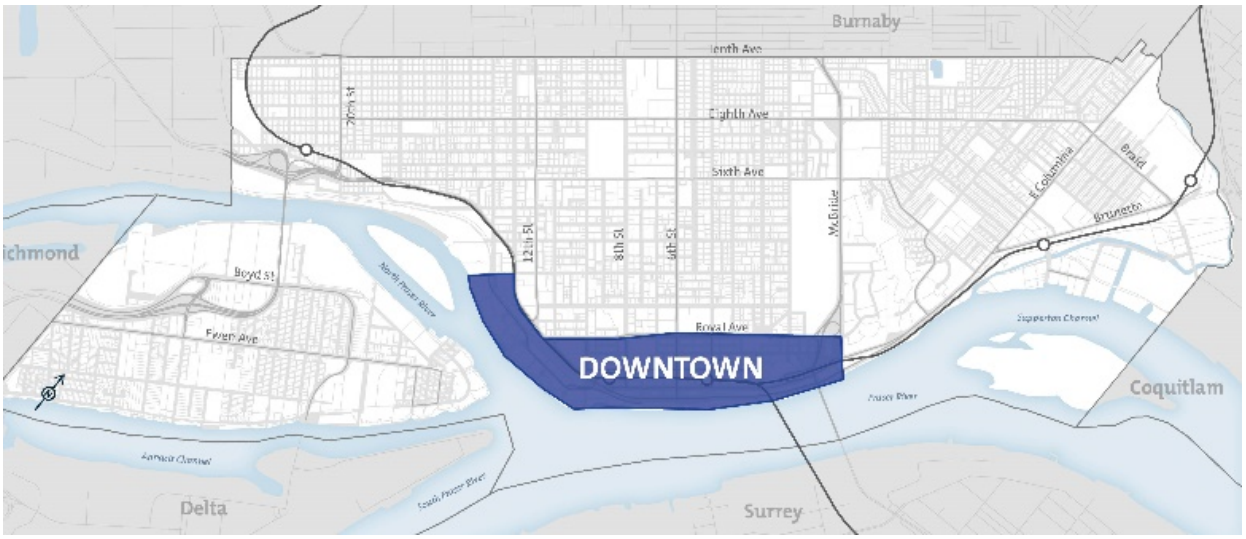


Figure 4 Downtown Neighbourhood

The Plan area includes Quayside and is bounded by Royal Avenue to the north and the Fraser River to the south, Stewardson Way to the east and McBride Boulevard and the Pattullo Bridge to the west.

The neighbourhood has a population of approximately 12,000 people (2016 Census). By 2031, Downtown expects to house more than one-third of the city's population or more than 30,000 people.

The Downtown neighbourhood comprises of five distinct precincts with unique characteristics and functions (Figure 6). The Tower and Historic Precincts (Figure 5) include most of the commercial, office, retail, and institutional uses. Albert Crescent and Waterfront Precincts are predominately residential. SkyTrain Precincts are located at New Westminster and Columbia Stations. More information on each of the Precincts is provided in the DCP.



Figure 5 Tower and Historic Precincts including SkyTrain Precinct at New Westminster Station



Figure 6 Neighbourhood Precincts (Downtown Community Plan)

Over 97% of the residential dwelling units in Downtown are either mid- to high-rise apartments (64%) or low-rise apartments (33%). Recent large mixed-use developments are occurring around the New Westminster Station, in the Tower Precinct, and the Waterfront Precinct. New Westminster has a high percentage of people who use transit for work trips. The Downtown neighbourhood mode split by sustainable modes (Figure 7) supports the continued shift in travel mode to advance toward the accelerated targets identified for New Westminster.

	Work Trips			All Trips	
	Downtown NW	New Westminster	Metro Vancouver	New Westminster	Metro Vancouver
Transit	42%	31%	20%	20%	12%
Walk	6%	6%	7%	15%	14%
Bicycle	1%	1%	2%	1%	2%
Active (Walk, Bicycle)	7%	7%	9%	16%	16%
Sustainable (Transit, Walk, Bicycle, Motor Vehicle Passenger)	49%	42%	34%	49%	44%
Private Vehicle	48%	57%	64%	50%	55%

Sources: for work trips, 2016 Census; for all trips, Translink 2017 Trip Diary

Figure 7 Table of Current Mode Split Work Trips

2.1 Key Destinations

A number of key destinations are identified in Downtown including, rapid transit stations and hubs, schools, civic facilities and major institutions. These locations (Figure 8) generate significant amount of movement of people into and through the neighbourhood.

Rapid transit stations	1. New Westminster Station 2. Columbia Station
Schools	3. Fraser River Middle School 4. École Qayqayt Elementary School
Destinations	5. Anvil Centre and Anvil Tower 6. Hyack Square 7. Riverfront/River Market 8. Pier Park 9. Columbia Square 10. City Hall
Institutional	11. Douglas College Main Campus 12. Law Courts

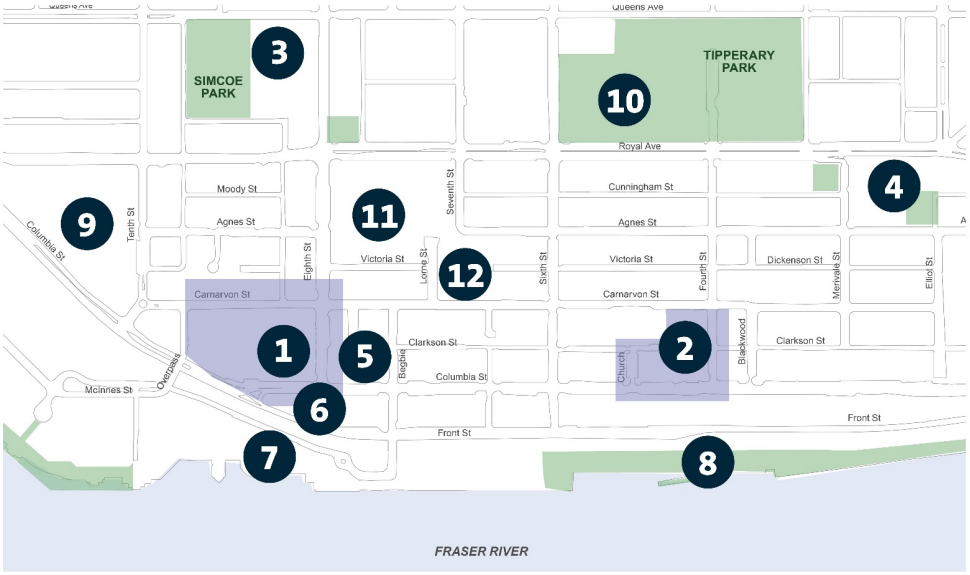


Figure 8 Key destinations Downtown and in the surrounding neighbourhood

Having a complete sidewalk network and quality public realm that connects people to major destinations to live, work, shop, learn, and play is a priority.

3 PEDESTRIAN NETWORK

The Downtown neighbourhood is considered one of the most walkable neighbourhoods within New Westminster. The neighbourhood is laid out as a grid street network that provides options for travel routes to local destinations and transportation hubs. However, Downtown is situated on a hill with steep grades that make pedestrian mobility difficult, especially for people with disabilities or requiring assistance.

Overall, the Downtown neighbourhood has a complete pedestrian and sidewalk network. The vast majority of the study area has sidewalks, of varying widths, with surfaces in good condition, and with various treatments to buffer them from traffic. Traffic signals, push-button activated crossings, and marked crosswalks are provided at most major streets or other roads that may otherwise be problematic for pedestrians to cross. There are documented locations where pedestrians currently have issues crossing, which have been addressed below.



Figure 9 Parklet on Columbia Street. Credit: Downtown New West BIA

Opportunities

- Key destinations within proximity.
- Complete sidewalk network.
- SkyTrain and bus network—most key destinations within short walking distance.
- Plans exist to widen McInnes overpass sidewalk.
- Significant number of pedestrians going from Douglas College main campus to Anvil Tower, and from New West Station to Douglas College Main Campus, Anvil Centre, Anvil Tower, and the Riverfront.
- Proactively remove barriers to accessibility and apply a disability justice lens when planning and implementing changes.
- Embrace and enhance the network of mid-block pedestrian connections through the historic area of Downtown.
- Explore opportunities to activate the corridors with adjacent businesses.

Challenges

- Steep grades.
- Ageing infrastructure and inconsistent designs.
- Connective and accessibility barriers, including large arterial corridors, obstructions in the sidewalk.
- Inconsistent and discontinuous street lighting.
- Inconsistent traffic signal push-button placement.
- Surface treatments that may present slip and trip hazards in some locations.
- Weather protection is discontinuous.
- Limited number of universally accessible and convenient connections to the Riverfront.

Downtown Building and Public Realm Design Guidelines and Master Plan

The Guidelines and Master Plan document provide the basis for public realm and pedestrian connectivity opportunities within each of the Downtown Neighbourhood Precincts. Further, it identifies preferred locations, elements and features such as pedestrian rooms (typically smaller, more intimate spaces that serve as a zone for pedestrians to engage in the public realm), park streets, pedestrian connections, nodes, and POPS (Privately Owned Publicly Accessible Spaces). The Guidelines and Master Plan outline typologies for each of the elements and include a tool kit as demonstrated in Figure 10. This Plan reinforces the locations identified in the Guidelines and Master Plan and integrates them into the priority projects and the Key Directions.



*Figure 10 Example of a Park Street in Albert Crescent Precinct illustrative view (*Guidelines and Master Plan, pg. 101*)*

3.1 Key Directions

The Plan builds upon the existing policies and plans that outline the overall direction for the Downtown neighbourhood. Defining the transportation networks is required to realize the vision of the Guidelines and Master Plan and the Climate Emergency Bold Steps.

The following sections outline key areas and directions to improve the pedestrian network at priority locations and along specific corridors.



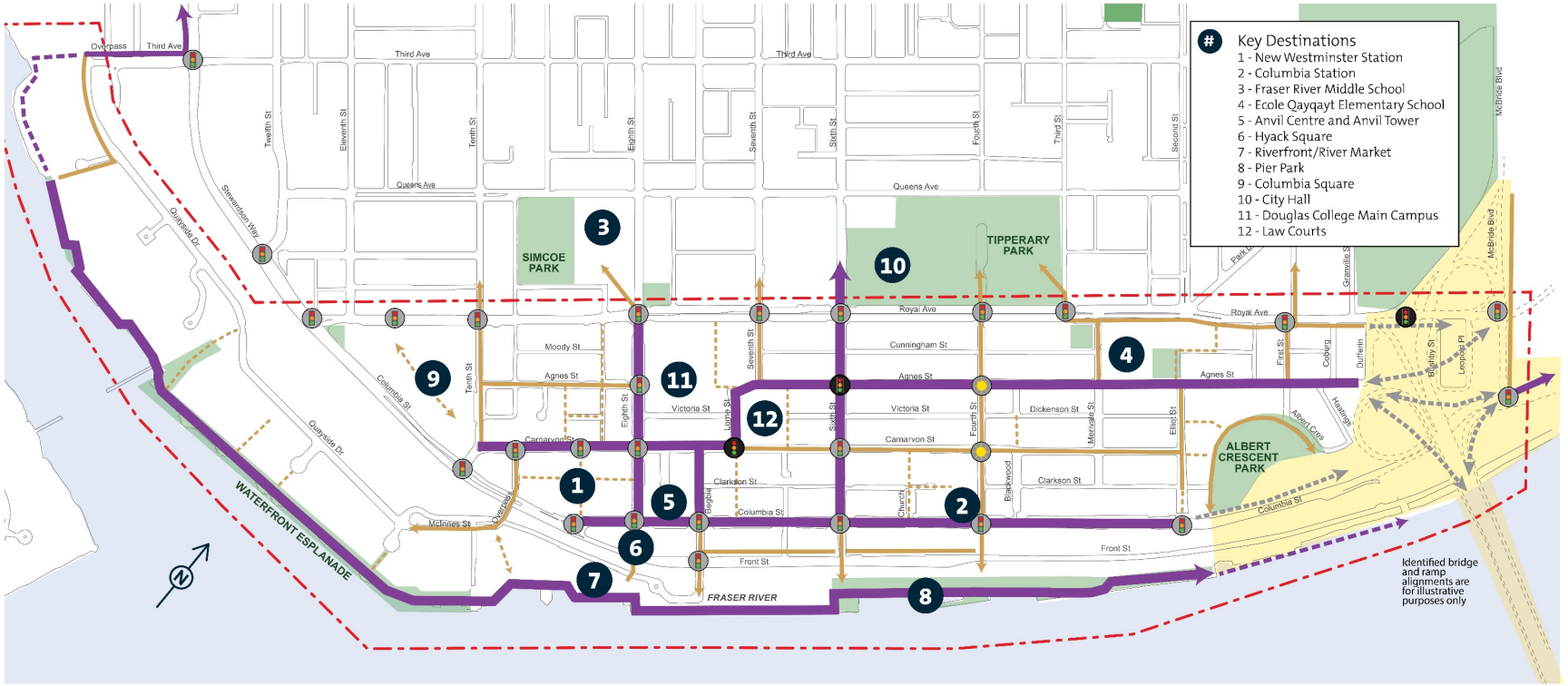
Figure 11 Bench on Columbia Street

3.1.1 Neighbourhood Walkability and Livability

A neighbourhood's walkability and livability is influenced by the quality of the public realm, pedestrian infrastructure, and space and places found within the community. For a neighbourhood to be walkable and wheel-able, a foundation of sidewalks and safe, comfortable paths of travel are needed to connect people to where they live, work, play, learn and access their daily needs. As the community densifies and pressures are placed on the road network, thoughtful planning is needed to ensure that changes in vehicle movements and volumes do not adversely impact walkability. The Pedestrian Network map (Figure 13) shows the routes and connections identified within the MTP, DTP and the Guidelines and Master Plan.



Figure 12 "You Are Home" augmented reality mural. Collaboration of Vera Kobalia and Union Gospel Mission. Artist: Cynthia Vo with Vancouver Film School students (2019)



LEGEND

- Study area boundary
- Priority route (including Greenway, Great Street, Complete Streets, Esplanade, etc.)
- Enhanced route
- Passageway, Breezeways
- Future connections (partnership/coordination req.)
- To be implemented with Pattullo Bridge replacement
- Existing pedestrian activated signal
- Existing traffic signal
- Proposed traffic signal

Figure 13 Pedestrian Network Map of Priority and Enhanced Corridors

Accessibility and Inclusion

New Westminster is recognized as an "Age-Friendly City" and "Dementia-Friendly City" with identified strategies to adapt services and structures to be accessible to persons with varying needs and capacities. The city is committed to: creating an age and ability friendly city; encouraging active ageing in place; promote inclusion by optimizing opportunities and participation within the community; and, removal of barriers in the built environment. The Strategic Priorities for Sustainable Transportation includes applying a disability justice lens to recognize and mitigate barriers to universal access and mobility. As such, the Plan integrates accessibility into all aspects to ensure that future improvements and changes within the neighbourhood works for everyone.

	Key Direction
Disability Justice Lens and Addressing Barriers to Accessibility	Apply a disability justice lens when considering, planning and implementing projects to identify and understand the impacts to persons with disabilities, potential barriers created within the process and/or the design, and steps to address potential barriers or remove existing ones. Identify and proactively address barriers to accessibility in areas such as: - Design, continuity, and consistency (e.g., curb ramp design, surface treatments, clear widths, travel distances to reach accessible entrances). - Construction activities and events (e.g., wayfinding and signage, accessible detours, notification). - Availability, design, and distance between resting areas (e.g., level landings, seating, weather protection). - Infrastructure (e.g., electrical plug-ins for mobility aides/scooter/electric wheelchairs). - Maintenance and operations best practice (e.g., ageing infrastructure, snow removal priorities, encroachments on sidewalks, leaf litter/debris, crossing times). - Enforcement (e.g., signs and sandwich boards, merchandizing/displays, snow removal).

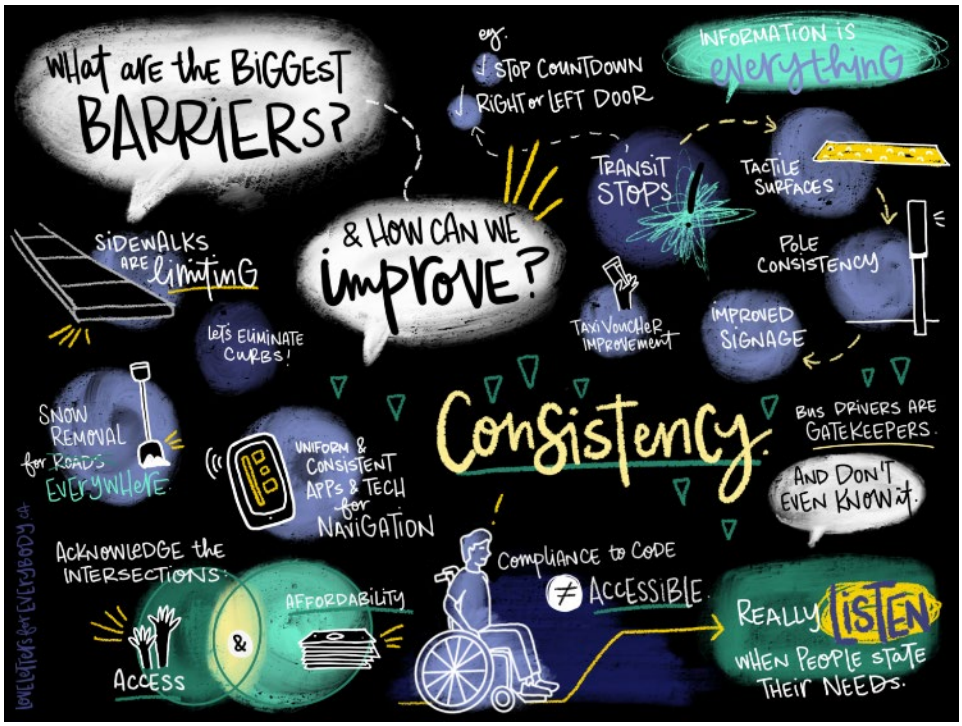


Figure 14 Graphic illustration of discussion on "How Accessible is Accessible?" and Biggest Barriers experiences within the city, Innovation Week 19: Transportation Forum – Accessibility and Inclusion (March 2019)

Amenities to support walking

The quality of the public realm, including sidewalk condition, impacts the walkability and accessibility of a community. In addition to pedestrian infrastructure, a number of other amenities are identified that improve livability and make travelling on foot more comfortable and convenient. Implementation of these types of improvements occurs primarily through existing asset management plans, as well as when opportunities that may arise at the time of redevelopment of adjacent properties.



Figure 15 Elliot Street sidewalk with street trees

Amenity	Key Directions
Weather Protection	Continue to support requirements for weather protection and seating to be integrated with buildings to minimize the need for stand-alone bus shelters and seating, which present barriers to the free flow of pedestrians, including those with disabilities.
Seating	Increase resting and seating opportunities (with level landings and space for mobility devices) throughout the neighbourhood with priority locations being along Greenways, Great Streets, and along enhanced priority routes and routes to transit with steep topography.
Wayfinding	Continue implementation of a wayfinding campaign around the New Westminster Station hub and expand the campaign throughout the neighbourhood.
Pedestrian Crossing Improvements	Continue to improve existing pedestrian crossings throughout the neighbourhood with the priority locations identified through existing processes for the pedestrian crossing program. Construct new pedestrian crossings at strategic locations outlined in this Plan with priorities on enhanced pedestrian corridors or areas with high pedestrian volumes.
Sidewalk Conditions	Continue to improve the quality of sidewalk conditions and increase the clear width to current standards including, curb ramps through adjacent redevelopment, city-wide capital maintenance and replacement programs, and all available third-party funding opportunities.
Electrical Plug-ins for Mobility Scooters and Electric Wheelchairs	Explore opportunities to install electrical outlets for mobility scooters and electric wheelchairs in public spaces, to expand the range of persons with disabilities who use electric mobility devices and enable “emergency top-up” to complete travel to destination.

Other Pedestrian Corridors

In addition to the Agnes Greenway, Eighth Street Complete Street and Columbia Street Great Street, other key pedestrian corridors are identified in the neighbourhood. Proposed changes to vehicle access and circulation present opportunities to explore more extensive projects, along these corridors, that would not be possible through other means.

Corridor	Key Directions

Fourth Street Corridor (Royal Avenue to Columbia Street)	Improve the pedestrian experience and public realm opportunities through reallocation of road space, and address sidewalk and road paving conditions that create barriers to accessibility.
	
	Key projects:
	- Agnes Greenway presents an opportunity to:
	  o improve the Fourth Street/Carnarvon intersection, redesign;
	  o accommodate one-way vehicle travel southbound Agnes Street to Carnarvon Street;
	  o improve and narrow pedestrian crossings at Cunningham Street; and,
	  o relocate obstructions and barriers from pedestrian path of travel.
	- Increase number of resting and seating opportunities.
	- Increase greening.
	- Replace uneven sidewalk panels.
	- Opportunities for use of excess space for public/community projects.
	- Coordination with future Columbia Station upgrades (see Chapter 5 Transit Network).
	
	
	Figure 16 Fourth Street corridor

3.1.2 Eighth Street Complete Street

Eighth Street is a key connector to the Downtown and historic Columbia Street from Uptown and other neighbourhoods in the city. It also serves as a front door to New Westminster SkyTrain Station and Shops at New West, in addition, it is the main pedestrian connection to the newly constructed Anvil Centre and Tower, and Douglas College's two campuses. The volume of pedestrians using Eighth Street between Carnarvon Street and Columbia Street is high, which warrants a shift in how space is allocated to more explicitly prioritize the space for pedestrians.



Figure 17 Eighth Street and Columbia Street with Anvil Centre on the right

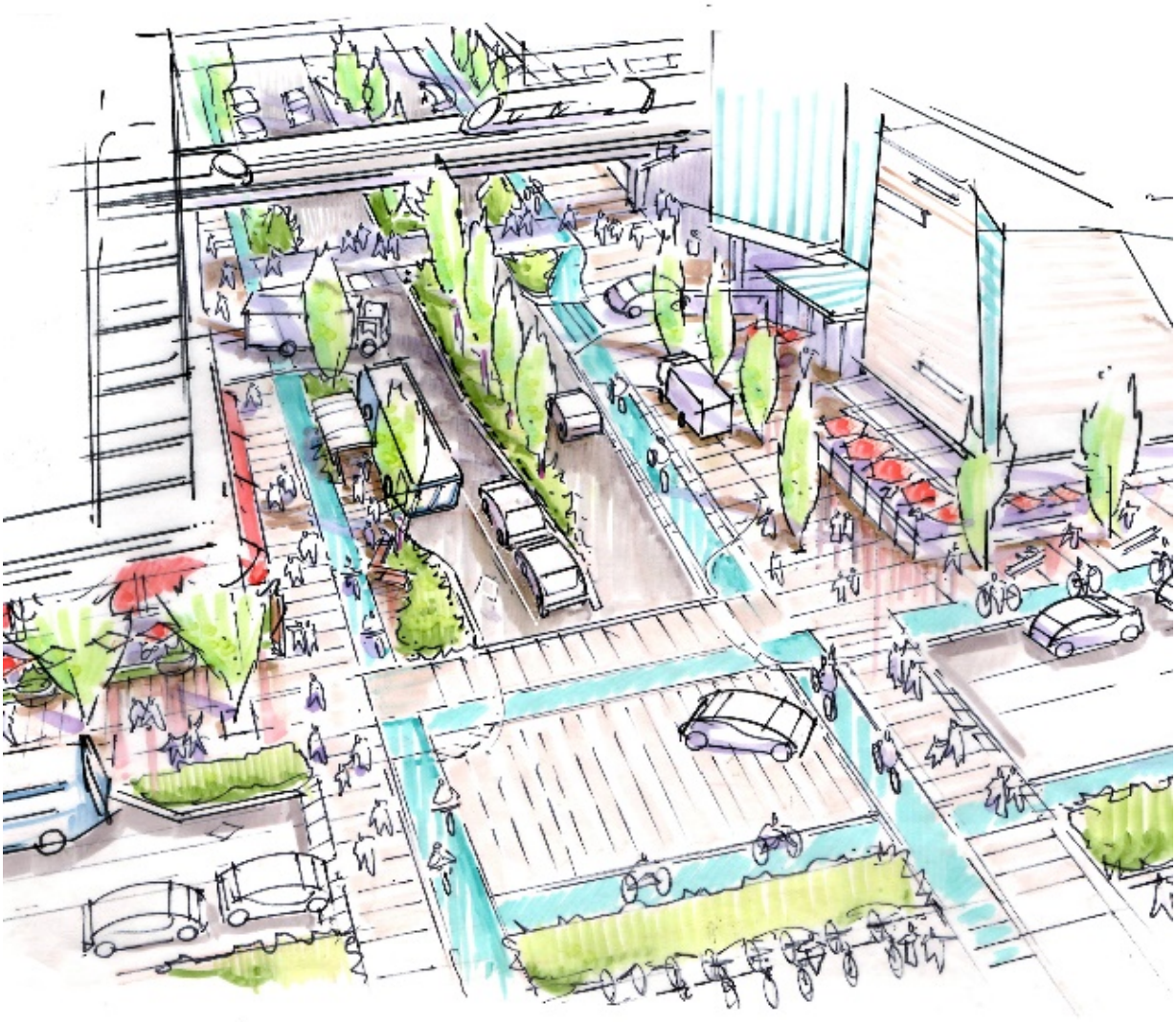


Figure 18 Artist Illustration of potential improvements at Eighth Street and Columbia Street intersection

Walking, transit, and cycling are important modes of transportation along and across Eighth Street, but the proportion of road width which is allocated for these priority modes does not presently reflect that importance. This Plan recommends reallocating a significant portion of the existing right of way to prioritize walking, cycling, and transit. Key directions and features are identified for Eighth Street to realize the vision as a complete street.

	Key Features and Direction
Eighth Street Complete Street **(Royal Avenue to Columbia Street)**  	**Key Features:** - Widen sidewalk on the west side of Eighth Street, north of Columbia, adjacent the transit stop. - Install a mid-block crossing at New Westminster Station entrance. - Widen sidewalks min. 3m as opportunities arise through annual capital programs and at the time of redevelopment of adjacent properties. - Provide boulevard and street trees as opportunities arise. - Improve cycling infrastructure. - Prioritize walking at Eighth Street and Columbia Street intersection. - Redesign of Eighth Street and Carnarvon Street intersection including cycling facilities (east-west and north-south) and prioritize pedestrian movements. - Transit priority measures. - Right size the road for the low motor vehicle volume that is experienced, and realign travel lanes to provide space for walking, transit and cycling improvements. - Change curbside uses based on transportation priorities. - Seating and space for activation and greening.

The following sample road cross-sections were explored for upper Eighth Street from Royal Avenue to Carnarvon Street (Figure 19) and for lower Eighth Street from Carnarvon Street to Columbia Street (Figure 20). Final design will be confirmed at time of construction through redevelopment of adjacent sites or through specific infrastructure improvement project.

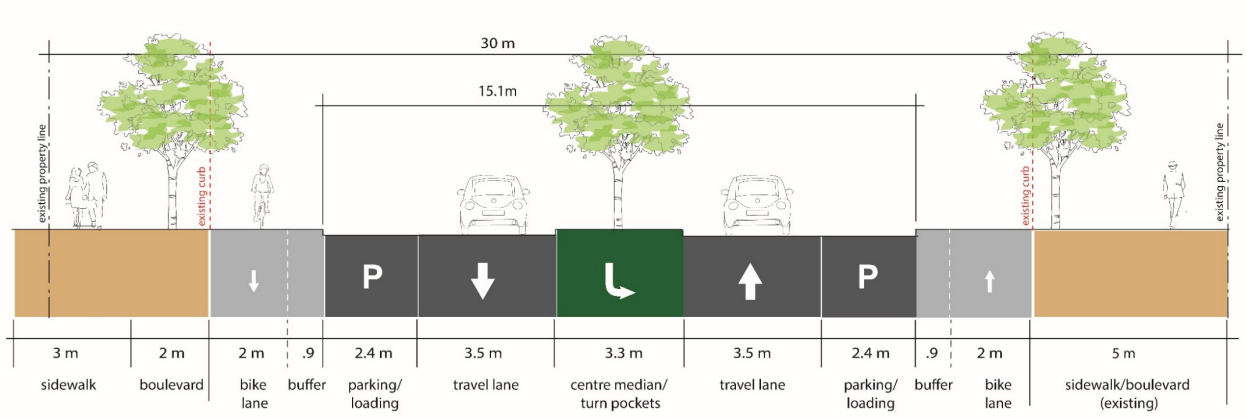


Figure 19 Potential cross section for upper Eighth Street (Royal to Carnarvon) looking north

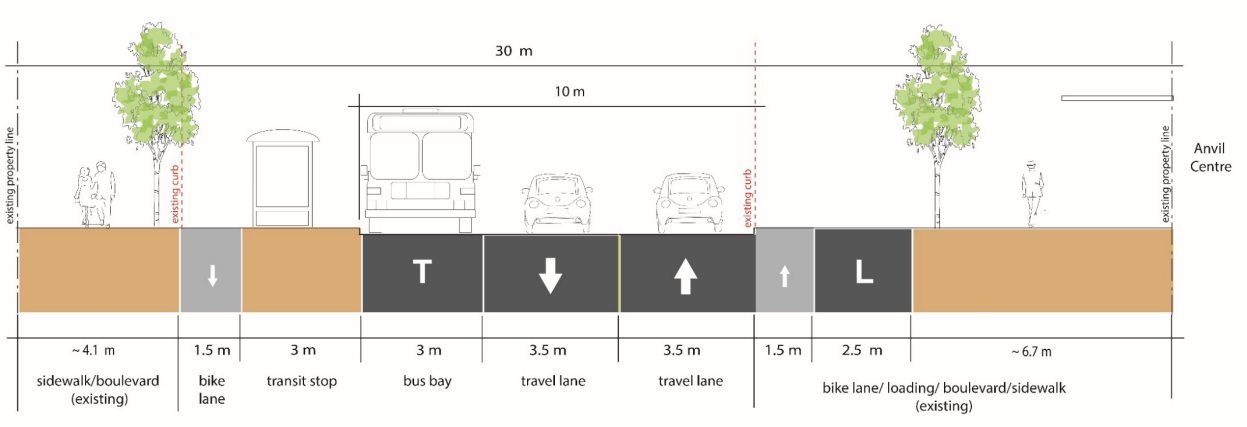


Figure 20 Potential cross section for lower Eighth Street (Carnarvon to Columbia) looking north

The Complete Streets vision intends to improve the public realm experience, and provide comfortable and convenient walking and cycling connections. The following illustrations explore potential improvements along the corridor (Figure 18, Figure 21, Figure 22, Figure 23).



Figure 21 Artist illustration of potential improvements at Eighth Street and Carnarvon Street intersection



Figure 22 Artist illustration of potential mid-block crossing on Eighth Street at the New Westminster SkyTrain Station entrance

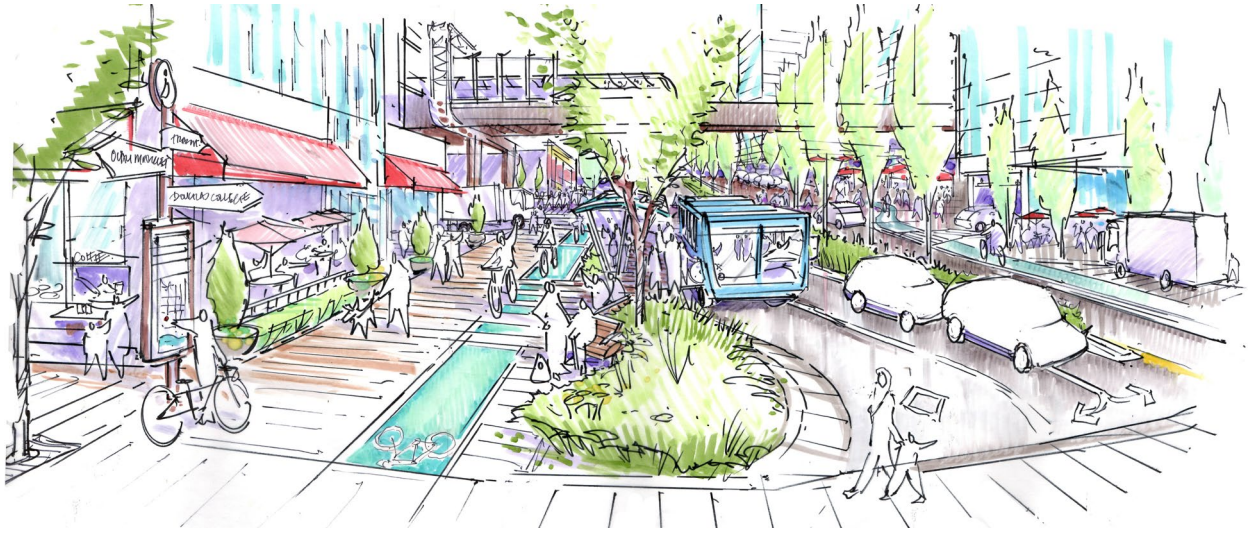


Figure 23 Artist illustration of potential improvements to bus stop on Eighth Street north of Columbia Street

3.1.3 Carnarvon Street Complete Street

Carnarvon Street carries a high volume of people accessing the SkyTrain station and Shops at New West. The long-term vision for Carnarvon Street as a multi-modal corridor includes creating space for walking and accessing transit while managing curbside access to support sustainable modes of travel, cycling infrastructure, and transit amenities.

	Direction
Carnarvon Street Complete Street **(Eighth Street to Tenth Street)** 	**Key Features:** - Changes to vehicle and realignment of travel lanes. - Changes to curbside uses, loading and on-street parking based on priority matrix. - Widen sidewalks and remove barriers to accessibility as opportunities arise at the time of redevelopment of adjacent properties and through annual capital program. - Narrow/improve pedestrian crossings as opportunities arise at the time of redevelopment of adjacent properties and through annual capital program. - Transit priority measures and transit stop amenities. - Cycling connection from Eighth Street to Tenth Street. - Increase street tree canopy as opportunities arise. - Improve lighting as opportunities arise. - Reduce motor vehicle through travel.

The following sample road cross-section (Figure 24) explores potential road reallocation, using the existing curb lines, for Carnarvon Street between Eighth Street and Tenth Street. Final design will be confirmed at time of construction through redevelopment of adjacent sites or through specific infrastructure improvement projects to provide additional space for walking, cycling connections and accessing transit.

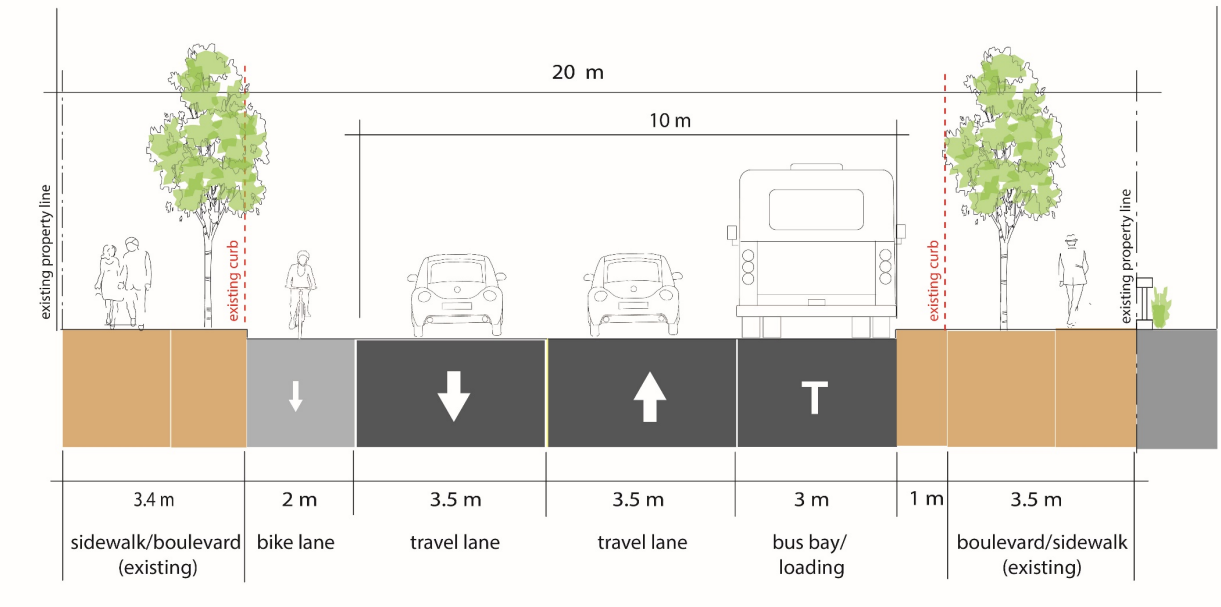


Figure 24 Example of a Complete Street for Carnarvon Street (Eighth Street to Tenth Street) looking east

3.1.4 Riverfront Connections

Over the last 20 years, New Westminster has made exceptional progress redefining the Riverfront as a valuable asset. The city has started reconnecting residents, visitors, and businesses with the river—a transformation that's been realized through implementation of the community plans and policies as well as public and private investment. An updated Riverfront Vision (the Vision) was endorsed by Council in 2016 with the goal to "seamlessly connect our Riverfront through a system of parks and greenways running the length of the city and to provide improved connections from neighbourhoods to the river. Along with enhanced access and facilities, the Riverfront's recreation and tourism potential will be bolstered by public spaces and activities that generate interest for all demographics, all year long".

The Vision outlines a number of existing and proposed projects that support the goal mentioned above. Many projects in the Vision that address people's movement by the various modes of travel are integrated into the Plan.



Figure 25 View of Pier Park from the Fourth Street Overpass

	Direction

Riverfront Vision Projects Located Within the Downtown Neighbourhood	**Select Projects:**
	- Riverfront connection Westminster Pier Park to Sapperton Landing.
	- Fourth Street overpass (completed).
	- Front Street Parkade removal (completed).
	- Front Street Mews (completed).
	- 660 Quayside Drive (Bosa Development) including improved cycling access at Begbie/Front St.
	- Westminster Quay Pedestrian and Accessibility Upgrades:
	  ○ McInnes Overpass pedestrian improvements,
	  ○ Sixth Street pedestrian overpass (complete),
	  ○ 100 Quayside Drive elevator and stair connection (complete),
	  ○ Hyack Square to Quayside Drive accessible connection.
	- Q to Q Pedestrian and Cycling Link (Bridge).
	- Poplar Landing multi-use pathway.
	- North Arm North Waterfront Trail.
	- Stewardson Way Crossing (complete).

A complete bicycle network makes cycling a safe, comfortable, and enjoyable transportation option for people of all ages and abilities.

4 BICYCLE NETWORK

Cycling is the second-highest priority in the city's hierarchy of modes, as outlined in the MTP. There are several primary and secondary cycling routes existing and proposed in the Downtown to serve regional, city-wide, and neighbourhood trips.

As depicted in Figure 26, cities like San Francisco recognize that cycling is the most convenient, affordable, quick, and healthy way to make the average trip within their city (3 - 5km). It also communicates the relative costs and benefits associated with all modes.

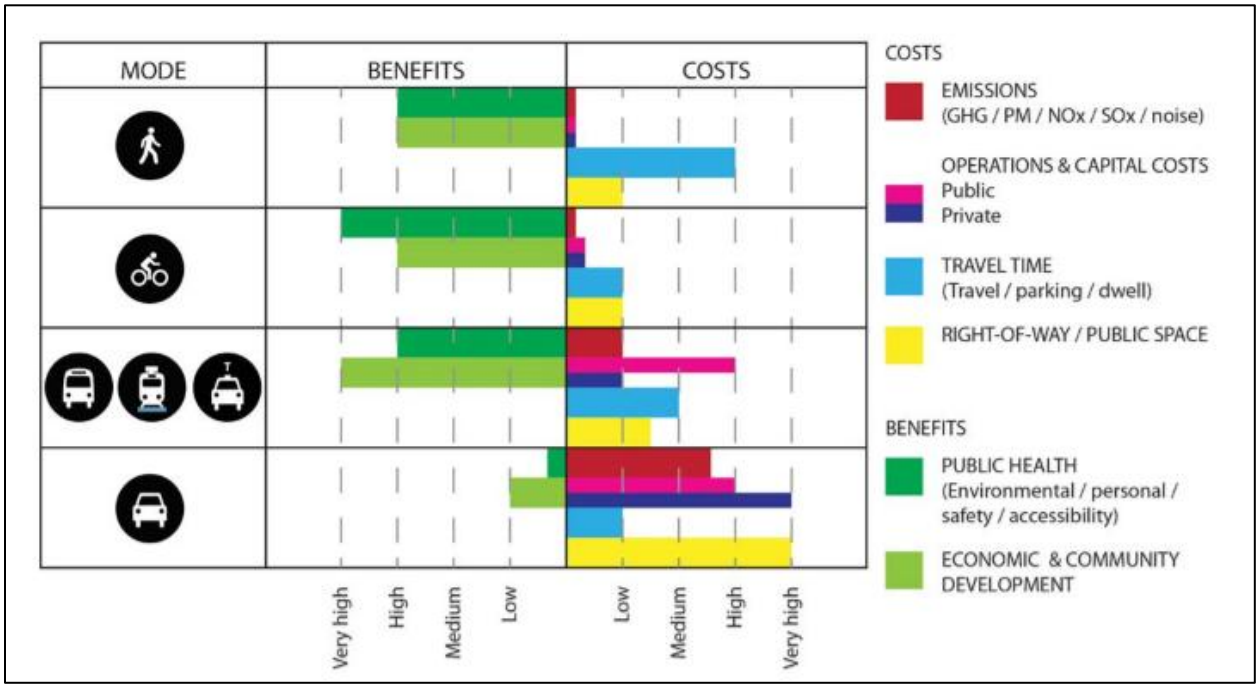


Figure 26 Graphic of relative costs and benefits associated by mode of travel. Source: San Francisco MTA Bicycle Strategy (2013)

Opportunities	Challenges
• Mapping out the Downtown bike network. • Many destinations within close proximity of existing east-west major greenways. • Policy already established for Agnes Greenway, with general corridor/alignment mapped out, and commitment to All Ages and Abilities (AAA) design. • Increase use of e-bikes, considerations for future shared micromobility.	• Topography and steep grades. • Limited road right of way, with much of it also used by transit. • Limited space for amenities such as bike parking and future public bike share, micromobility. • Rail and major roads act as barriers.

4.1 Key Directions

4.1.1 Downtown Bike Network

Cycling in Downtown can be challenging due to steep topography, busy roads, limited right of way within which to construct dedicated cycling infrastructure, and limited infrastructure that supports cycling. The routes outlined in the Cycling Network map (Figure 28) provide more options for people who cycle for their everyday needs and completes the remaining undetermined portions of the network outlined in the MTP. This network also supports the potential implementation of a public bike share system, electrified or not.

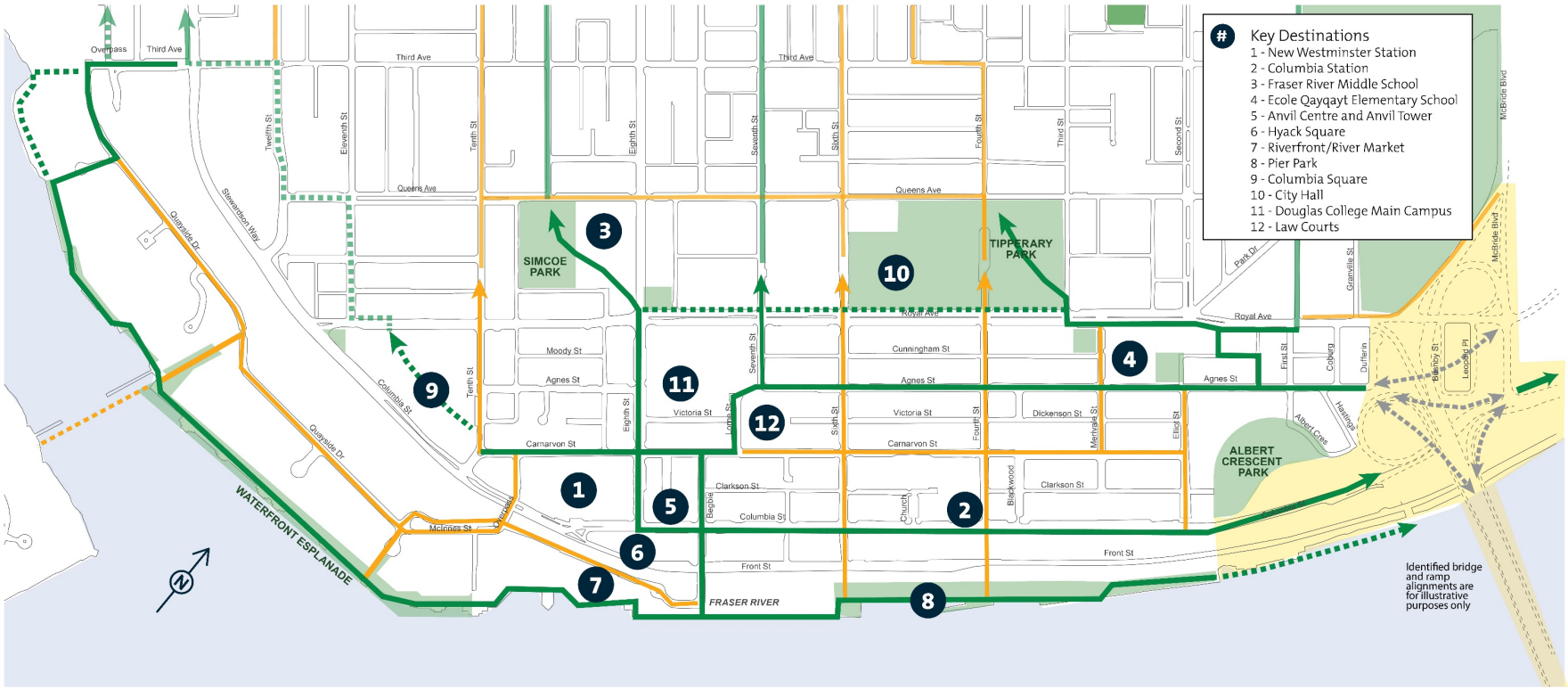


Figure 27 Family riding uphill on Eighth Street at Carnarvon Street intersection

Currently, the BC Parkway and Central Valley Greenway are the primary existing routes within Downtown. These two regional routes overlap along a portion of Columbia Street, which has painted bike lanes. This Plan recognizes the need for improvements to these regional greenways in Downtown segments that do not meet current design standards and are not suitable for people of all ages and abilities.

The Agnes Greenway is a Key Deliverable of this Plan, identified through previous initiatives (e.g., DCP). Uphill from the existing routes, the Agnes Greenway will serve as a new primary east-west cycling route across Downtown. The new Greenway incorporates input from this Plan, traffic calming features that address other community interests, and current best practices for the design of cycling infrastructure that is comfortable and appealing for people of all ages and abilities.

Other local cycling connections within Downtown and to other New Westminster neighbourhoods are also included in this Plan. These include a primary north-south route along Eighth Street/Begbie Street, a connection between Downtown and Uptown via new routes around École Qayqayt Elementary. Various secondary options for access to the Riverfront, and connections to planned multi-use pathways across the Pattullo Bridge north bridgehead, among others.



LEGEND

- Study area boundary
- Primary route
- Secondary route
- Long term desired connections
- To be implemented with Pattullo Bridge replacement

Figure 28 Cycling Network Map

Primary and Secondary Routes

Figure 29 provides a brief description of the primary cycling routes planned for Downtown as well as the anticipated type of facility. This primary network provides good coverage for the Downtown neighbourhood, ensuring all residents are within a relatively short distance of a comfortable cycling route. In many cases, people will need to ride only a short distance on the secondary network (described in the subsequent section) to reach a primary route. The type of facility and design features will be finalized at the time of detailed planning and design.

There are several secondary cycling routes identified for Downtown that will serve as local connectors to the primary network. These routes will generally not meet criteria for supporting people of all ages and abilities.

Primary and Secondary Cycling Routes in Downtown			
PRIMARY Routes	Type of Facility*	SECONDARY Routes	Type of Facility*
Agnes Street/ Carnarvon Street	Protected bike lane	**BC Parkway on-street route (Riverfront bypass)**	Combination of shared road, painted bike lane and advisory bike lane
Columbia Street (BC Parkway, Central Valley Greenway)	Protected bike lane	**Carnarvon Street (east of Sixth Street)**	Shared road
Esplanade (Riverfront recreational route)	Multi-use pathway	**Fourth Street**	Combination of painted bike lane and shared road
Downtown-Uptown Connector	Combination of multi-use pathway and shared road	**Sixth Street**	Combination of painted bike lane and shared road
Eighth Street	Combination of protected bike lane and buffered bike lane	**Elliot Street**	Combination of shared road, buffered bike lane, and multi-use pathway
Royal Avenue (Third Street to First Street, south side)	Multi-use pathway	**Tenth Street**	Combination of shared road and buffered bike lane
**More details on cycling facilities is available in 4.2 Comfortable Cycling Facilitates of the MTP and BC Active Transportation Design Guide (Government of BC).*			

Figure 29 Table of Planned Primary Cycling Routes

Future Connections

In addition to the routes described above and in Figure 29, there are several future connections that the city wishes to pursue. However, timing and funding are uncertain due to a high level of complexity and anticipated high capital costs. In most cases, the city would need to rely on external funding sources (e.g., senior levels of government, private funders) to achieve these.

Corridor/Location	Vision and Considerations
Columbia Square Site	Provision of a new east-west walking/cycling connection through the site at the time of redevelopment of the property to link Downtown (Carnarvon Street) to the signal at Eleventh Street and to the BC Parkway further to the west.

Poplar Landing Site	Provision of new multi-use pathway (with consideration for separate walking/cycling facilities) from the end of the Esplanade to the Third Street Overpass at the time of redevelopment of the Poplar Landing site.
Quayside/Stewardson Way Connection	Development of new or alternate alignment over rail tracks between Quayside Drive and Stewardson Way, potentially via Fourteenth Street, to address narrow sidewalk on the Third Avenue overpass. Potential coordination at time of redevelopment of the Poplar Landing site or as improved connectivity along the BC Parkway along Stewardson Way.
Bridge Connection Quayside to Queensborough	Development of a fixed, accessible walking/cycling connection between Quayside and Queensborough/Port Royal as identified in the Riverfront Vision.
Riverfront Connection	Development of an accessible walking/cycling connection between Westminster Pier Park to Sapperton Landing Park as identified in the Riverfront Vision.
Royal Avenue (Second Street to Eighth Street)	Reallocation of excess road space to provide comfortable walking and cycling facilities and landscaping by right sizing travel lanes, turn lanes and intersections (e.g., Third Street, Second Street), reallocation of excess road space at Eighth Street intersection in coordination with Eighth Street Complete Street design and Royal Avenue Corridor operational efficiencies.
Sixth Street Parkade Connection	Improve the walking and cycling connection between Columbia Street onto the parkade structure (Sixth Street access) and the pedestrian overpass.

Amenities to Support Cycling

The Plan considers types of amenities that support and make cycling more comfortable for everyday riding including families travelling within the neighbourhood as well as commuters. Implementation of many of these measures are through existing city programs and processes and opportunities when adjacent properties redevelop. Specific details on infrastructure design and features such as leaning poles, wayfinding, paint and markings will be identified as part of the overall design process of specific routes, whether primary or secondary.

Amenity	Vision and Considerations
Bicycle Parking	Undertake a review of Downtown on-street bike parking inventory and prepare an implementation plan to provide more widespread parking. Consider needs for electric bike charging options, possibly integrated with digital wayfinding kiosks. Implement updated off-street bike parking requirements for developments, including requirements for charging capacity.
Repair Stations	Consider opportunities for public bike repair stations in the public realm or associated with private development, recognizing the potential challenges of vandalism and theft of tools.
Public Bike Share	Continue to explore opportunities for a docked or dockless (likely electric-assist) public bike share system. Where needed, docking stations must be appropriately spaced to encourage use (approx. every two blocks) and must not impede sidewalks or other walking routes. Docking stations may be located on private property (with public access) or public property (in larger public spaces or through reallocation of on-street parking stalls, for example).

4.1.2 Agnes Greenway

The Agnes Greenway is a priority project and is a major deliverable of the Plan. The project was identified through the DCP and serves as a new primary east-west cycling route across Downtown and uphill from the existing routes. The Greenway design incorporates input from this Plan, traffic calming features to address other community interests, and current best practices for the design of cycling infrastructure that is comfortable and appealing for people of all ages and abilities.

Key objectives for the Agnes Greenway are:

- Crosstown cycling route for all ages and abilities.
- Improved walking experience and accessibility.
- Enhanced public realm—trees, seating, and lighting.
- Accommodate emergency access.
- Reduce impact of motor vehicles and through traffic in the neighbourhood.
- Limit impacts to people who rely on on-street parking and loading.
- Seek opportunities for green infrastructure.

The Agnes Greenway (Figure 31) runs the extent of Agnes Street from Dufferin Street and future connections to the Pattullo Bridge to Seventh Street and Douglas College. The route travels through a narrow passage between Douglas College and the Law Courts to Lorne Street and downhill to Carnarvon Street. The Greenway will connect to Columbia Street and the Riverfront via Begbie Street.

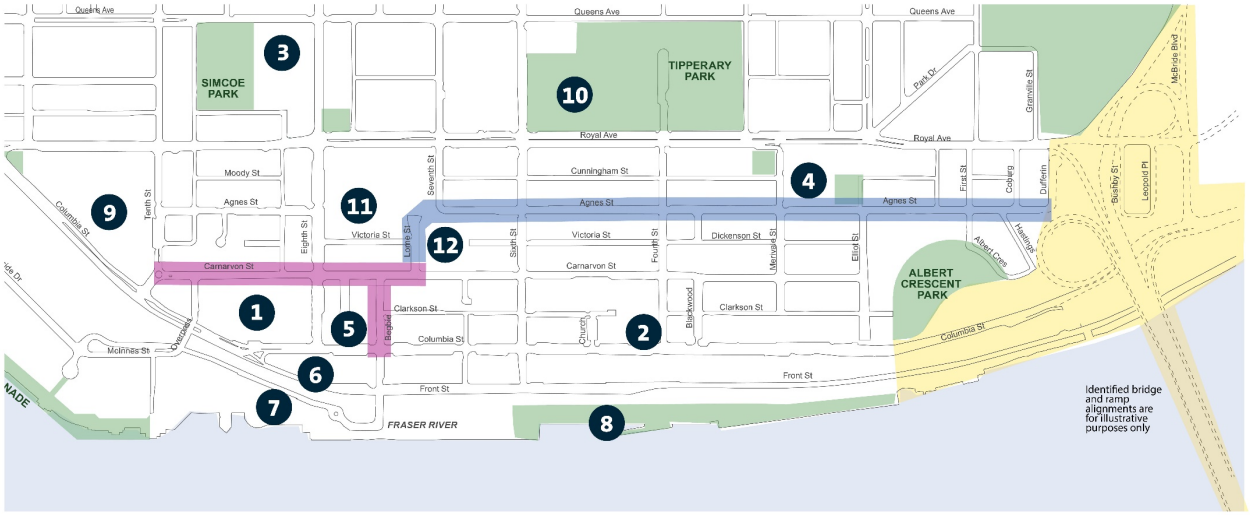
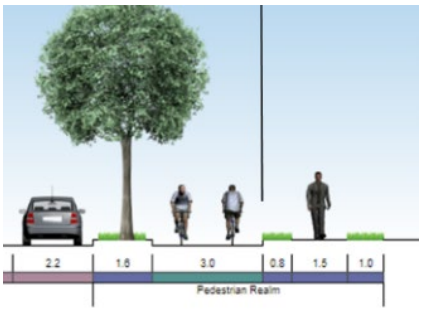
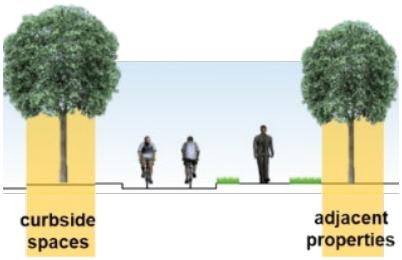


Figure 30 Agnes Greenway Route and Phasing

Each block along the Agnes Greenway route is unique and requires balancing the adjacent land uses' needs and functions. The design works within the existing roadway curb-to-curb space, which varies block by block. As such, each segment of the Agnes Greenway is tailored to the existing conditions and needs. Implementation of the design will be phased, and interim measures will be installed until the final construction is completed.

Major Components of the Agnes Greenway

The proposed design for the Agnes Greenway informs access and circulation for all modes of travel within the Albert Crescent Precinct (east of Sixth Street), and along Carnarvon Street to New Westminster Station. The major components and changes related to the Agnes Greenway include the following:

Major Components	Rationale and Key Features
Dedicated Cycling Facilities  *Figure 31 Example of dedicated cycling facilities*	Due to the existing vehicle volumes, the needs associated with access to adjacent properties, and transit services along Agnes Street, separated bike lanes are recommended to provide comfort for cyclists of all ages and abilities, including families. **Key Features:** - Bi-directional cycle tracks on the south side of Agnes Street. - Physical/visual separation from sidewalks. - Separation from vehicle travel. - Enhanced design around bus stops to address conflicts. - Protected crossing at major intersections. - Wayfinding signage.
Pedestrian Facilities and Public Realm  *Figure 32 Example of pedestrian facilities and public realm*	Agnes Street contains a complete, fully accessible sidewalk network, however much of the existing infrastructure is built to older standards, less than 1.8m wide, aged, and/or have physical barriers in the pathways. **Key Features:** - Curb extension to narrow crossings as opportunities arise. - Level crossings at driveways as opportunities arise at the time of redevelopment of adjacent properties or through annual capital programs. - Wider sidewalks (min. 3.0 m with redevelopment of adjacent properties). - Improved pedestrian level lighting. - Benches or resting areas. - Boulevards and street trees/greening as opportunities arise. - Physical separation from cyclists. - Opportunities for other activation and use (as identified in the Guidelines and Master Plan).

Major Components	Rationale and Key Features
Vehicle Access and Circulation  *Figure 33 Vehicle access and circulation on Agnes Street (between Sixth Street and Elliot Street*	One-way sections for vehicle travel are identified to provide the required space needed to accommodate dedicated cycling facilities and buffers while retaining on-street parking on specific sections of Agnes Street. The changes also serve to address non-local through travel on Agnes Street and Fourth Street and to reduce vehicle volumes to create a more comfortable experience for people walking and cycling. Vehicle access to residential buildings is maintained, including emergency vehicle requirements. Two-way vehicle travel is maintained on the remaining portions of Agnes Street and adjacent streets to accommodate transit routes and ensure residents and visitors can reach their destinations including École Qayqayt Elementary School. **Key Features:** - Agnes Street, one-way eastbound between Sixth Street and Fourth Street. - Agnes Street, one-way westbound between Fourth Street and Merivale Street. - Fourth Street, one-way southbound between Agnes Street and Carnarvon Street. - Merivale Street, close slip lane from Royal Avenue and provide two-way vehicle travel to the École Qayqayt parking lot entrance from Agnes Street.
Intersection Design and New Infrastructure  *Figure 34 Example of intersection design and new infrastructure*	Changes to specific intersections are required to accommodate the new cycling infrastructure, improved pedestrian crossings, and one-way vehicle travel. New traffic signals and stop controls will be installed at locations to provide convenient and comfortable crossings for people walking and cycling. **Key Features:** - New traffic signal at Agnes Street and Sixth Street. - New traffic signal at Lorne Street and Carnarvon Street. - Redesign of intersection at Agnes Street and Fourth Street. - Redesign of intersection at Carnarvon Street and Eighth Street.
On-street Parking, Curbside Uses	Changes to on-street parking and curbside uses are required to balance the space requirements to maintain two-way vehicle travel, pick-up/drop-off/loading functions, cycling facilities and transit services. **Key Features:** - Removal of parking on south side of Agnes Street from Merivale Street to First Street. - Maintain pick-up and drop-off areas on north side of Agnes Street adjacent to École Qayqayt Elementary School.
Transit Routes and Stops	Rerouting of transit service on Agnes Street is required due to the proposed one-way sections on Agnes Street and Fourth Street. **Key Features:** - Rerouting of transit services on Agnes Street (Fourth Street to Elliot Street) to Carnarvon Street.

Major Components	Rationale and Key Features
 *Figure 35 Reallocation of transit routes and stops along Agnes Street*	- Rerouting of transit service on Fourth Street (Agnes Street to Carnarvon Street) to Merivale Street or Elliot Street (to be determined by TransLink and Coast Mountain Bus Company (CMBC)). - Maintain existing route on Agnes Street from Elliot Street to First Street to Royal Avenue. - Relocation of discontinued transit stops to new route.

Temporary and interim measures may be used to fast track priority elements of the Agnes Greenway until the ultimate design can be advanced.

4.1.3 Columbia Street Great Street and All Ages and Abilities Cycling

Columbia Street is the historic centre, and commercial and economic hub for New Westminster. As a Great Street, many of the enhanced pedestrian and cycling facilities have already been implemented, making it a multi-modal corridor. Long-term improvements for the corridor are outlined in the MTP.

In order to improve the connectivity and comfort of people cycling to and through Columbia Street, staff are recommending that the cycling infrastructure be upgraded for all ages and abilities.



Figure 36 Person cycling on Columbia Street at Sixth Street

Corridor	Direction
Columbia Street Great Street	**Key Projects:** - Changes to curbside regulations along 800 block (Kelly & Carlos O'Bryan's) for new mobility and pick-up/drop-off space around the transportation hub. - Removal of barriers within travel paths/sidewalks to improve accessibility. - Explore widening of pedestrian crossings for improved alignment with back of sidewalk. - Increase resting opportunities on each block for people walking.
AAA Cycling Facilities along Columbia Street	- Standardize bicycle infrastructure and upgrade Columbia Street to All Ages and Abilities standard, with separated bike lanes.

Convenient and attractive public transit is critical to creating a vibrant and sustainable community.

5 TRANSIT NETWORK

The delivery of transit services is planned and funded by TransLink and operated by various subsidiary companies. The city plays a role in identifying and advocating for matters influencing current and future transit service, and delivery of infrastructure and amenities to support access to transit.

The MTP outlines seven policies to support attractive and convenient transit, including frequent service, improved neighbourhood connections, transit priority measures, safe and accessible access, and excellent customer facilities and information. A *Transit Priorities* reference document, endorsed by Council in 2018, highlights projects and priority areas that address current and future needs of the community that require coordination with multiple players in order to implement. Building upon these key documents, the transit network's identified measures focus on improving access to transit, providing amenities that make using transit more comfortable, and supporting service optimization through transit priority measures.

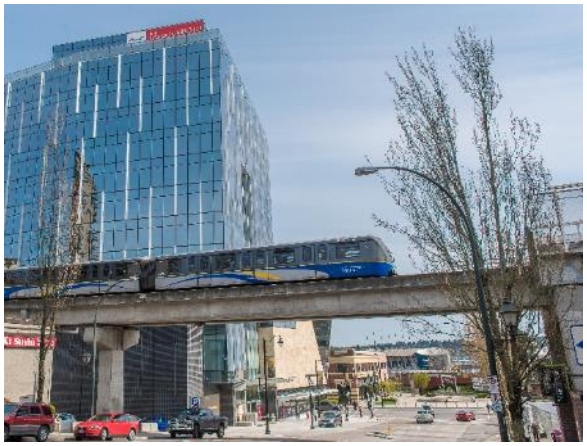
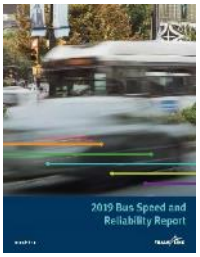


Figure 37 SkyTrain guideway above Eighth Street at New Westminster Station

TransLink Reports and Resources



Area Transportation Plan Burnaby-New Westminster (2003)



Bus Speed and Reliability Report (2019)



Transit Priority Toolkit (2019)



Bus Infrastructure Design Guidelines (2018)

Figure 38 TransLink Reports and Resources

Opportunities	Challenges
• Two SkyTrain stations within walking distance to key destinations, including the Riverfront. • Access to high density residential areas, institutional, office, and commercial areas. • Intersecting transit and greenway networks and cycling routes that support multi-modal hubs. • High existing transit ridership within the neighbourhood. • Future upgrades to Columbia Station.	• Limited sidewalk and public realm space to accommodate transit shelters and seating. • Steep grades that prevent fully accessible transit stops. • Transit service delivery and operations is decided upon and managed by TransLink and CMBC. • Vehicle congestion impacts bus speed and reliability on some key corridors.

5.1 Key Directions

The following Key Directions consolidate the various directions, strategies, and actions to be completed by the city and TransLink. Implementation of the various measures identified below will be incremental, require coordination and partnership with various organizations, and may require planning with other major projects at the time of redevelopment of adjacent properties, or as part of a capital project.

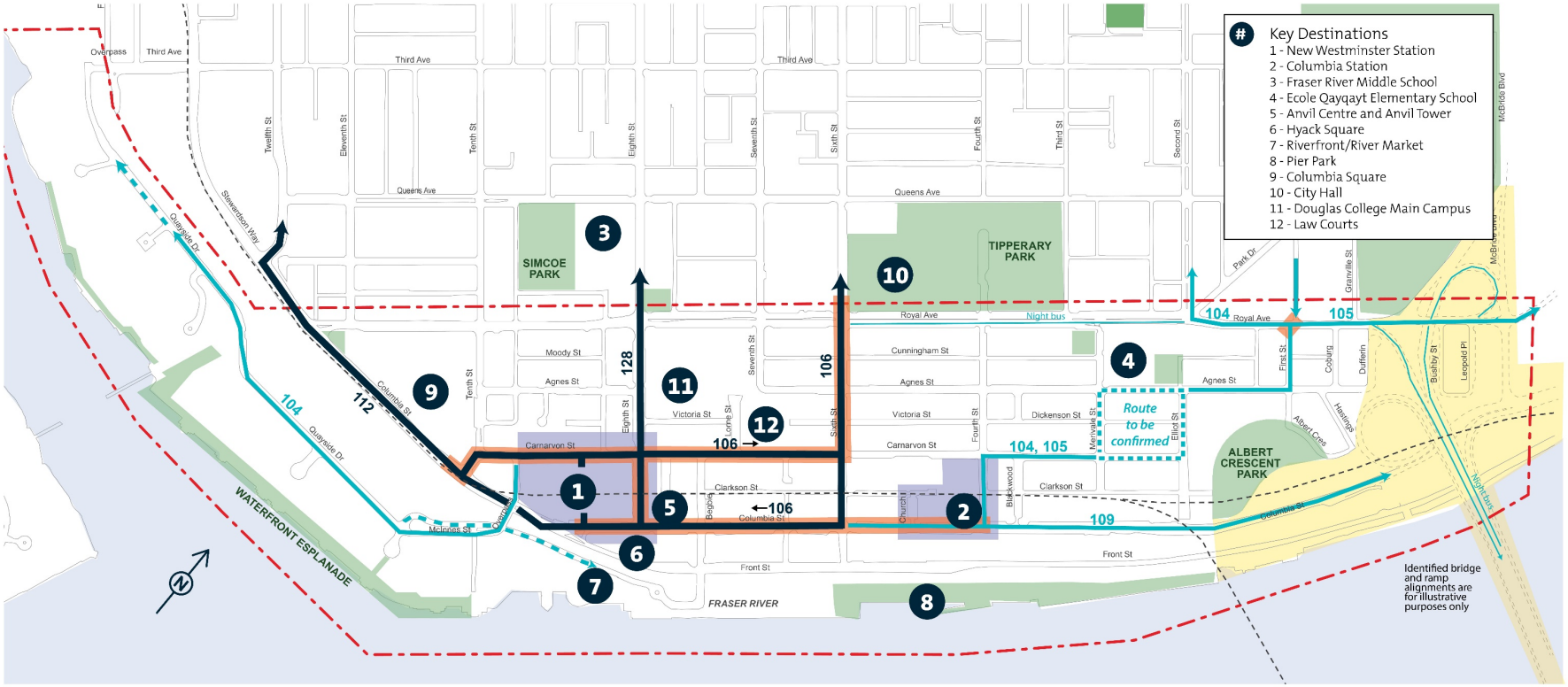
5.1.1 Downtown Transit Network

New Westminster has some of the highest transit use in the region. Convenient access to multiple SkyTrain stations in the city has resulted in high transit mode share in the dense, walkable Downtown neighbourhood where two stations are located. New Westminster Station and Columbia Station serve as multi-modal transportation hubs and transfer points to bus routes that service Uptown, Queen's Park, Brow of the Hill, Kelvin, and Victoria Hill neighbourhoods, as well as the dense residential areas within Downtown and businesses along Columbia Street and the Riverfront.



Figure 39 Transit bus on Columbia Street

There are a number of transit priority corridors in Downtown that serve the Frequent Transit Network (FTN) routes that carry a high percentage of the transit riders travelling to other city neighbourhoods and destinations. Improving amenities and implementing transit priority measures along these routes are essential to address bus speed and reliability issues caused by congestion on the road network and encourage transit ridership. Addressing operational efficiencies around the transit hubs is required to balance the space and curbside access needed to support transit service with increased space needed to safely accommodate people walking, cycling, and new mobility needs. The Transit Network map (Figure 40) outlines transit priority routes, routes primarily serviced by regular transit services and community shuttles not currently identified as existing or future FTN, corridors where transit priority measures are to be explored to address reliability issues, as well as areas with local connectivity considerations.



LEGEND

- Study are boundary
- Multi-modal transportation hub
- Priortity route (Frequest Transit Network)
- SkyTrain line
- Regular or Night Bus route
- Routes to be determined (coordination with TL/CMBC req.)
- Corridors for transit priority measures

Figure 40 Transit Network Map

5.1.2 Multi-modal Transportation Hubs at SkyTrain Stations

New Westminster Station

New Westminster Station (Figure 41) is a major transit and commercial hub that services high density residential areas, Anvil Centre, Anvil Tower, both Douglas College campuses, connections to the Riverfront and Columbia Street businesses, and a transfer point for Frequent Transit Routes to Uptown. The station is envisioned as a multi-modal hub connected to Agnes Greenway and BC Parkway.

See: Carnarvon Street Complete Street and Eighth Street Complete Street for more details on this hub.



Figure 41 Entrance to New Westminster Station on Eighth Street

Station/Corridor	Consideration
New Westminster Station Node	- Collaborate with TransLink and CMBC to enhance the efficiency of the bus interchange to free up underutilized curbside space that is otherwise reserved for transit, to increase space on sidewalks for boarding and alighting, queuing, and through-travel for pedestrians. - Coordinate with TransLink and CMBC to shift FTN stops into the bus interchange with less frequent routes using on-street bays. - Increase bicycle parking along designated bicycle and Greenway routes within and adjacent to the station, including both short term and secured long-term parking. - Increase pedestrian priority areas and routes to and from the station. - Implement transit priority measures to address bus reliability. - Increase sidewalk clear widths at pinch points along pedestrian routes and proactively remove barriers and obstructions. - Integrate or expand amenities to accommodate new mobility needs around the station. - Improve wayfinding signage identifying accessible connections from the station to key destinations.

Columbia Station Improvements

Columbia Station (Figure 42) is a key transfer point within the SkyTrain network linking the Expo and Millennium Lines. The station is situated towards the end of the Columbia Street commercial area, and is situated in a dense residential area. Due to the age of the station and surrounding grades on Fourth Street, the station presents many significant barriers to access for people with disabilities.

TransLink identified future upgrades to the station, including access points between station platforms.



Figure 42 Entrance to Columbia Station on Fourth Street

Station	Consideration
Columbia Station Multi-modal Transportation Hub	Measures to consider when future upgrades to the station are carried out: - Renew vision for the station as a multi-modal transportation hub. - Improve accessibility, connectivity, and capacity within and to the station. - Improve linkages and interface with the street and neighbourhood. - Mitigate operation noise from the station that impacts adjacent properties. Measures to consider when properties adjacent or near to the station redevelop: - Changes to vehicle access and circulation on Fourth Street to mitigate non-local through travel. - Changes to curbside management on Fourth Street and Columbia Street to better support new mobility priorities. - Explore relocation of bus stops to locations that are level, and that can accommodate space for shelter and seating. - Transit priority measures at Columbia Street and Fourth Street intersection to address turning delays at the signal. Priority Access to Curbside on Fourth Street and Columbia Street (adjacent the station): - Access for transit services. - Pedestrian space. - Cycling infrastructure along Columbia Street. - New mobility.

5.1.3 Transit Priority Measures on Priority Corridors

The city continues to explore opportunities to address bus speed and reliability issues–including vehicle congestion–along priority transit corridors that service the FTN and routes with high ridership.

Specific locations and issues are identified through TransLink's *Bus Speed and Reliability Report (2019)* and the *Area Transportation Plan Burnaby-New Westminster (2003)*. The following corridors currently experience bus speed and reliability issues and are identified for exploration of transit priority measures:

- Carnarvon Street (Eighth Street to Tenth Street),
- Eighth Street (Carnarvon Street to Columbia Street),
- Columbia Street (Eighth Street to Fourth Street), and
- Sixth Street (Columbia Street to Royal Avenue).

TransLink's *Transit Priority Toolkit (2019)* identifies the following categories for potential measures that could be used to address specific issues and include projects such as:

- bus stop placement,
- curbside management,
- traffic regulations,
- street design, and
- signal priority.

To address existing bus speed and reliability issues, the following specific measures are identified as part of this transportation plan. Future measures and opportunities will continue to be explored through the upcoming Burnaby-New Westminster Area Transport Plan process and through ongoing discussions with TransLink and CMBC on data for service operations.

Station/Corridor	Consideration
Transit Priority Measures on the Road Network	- Rerouting of #106 from Columbia Street to Carnarvon Street to address delays caused by congestion on Columbia Street and provide fully accessible transit stops. - Explore transit detection at Carnarvon Street and Sixth Street intersection. - Install transit detection at Columbia Street and Tenth Street intersection to maintain transit access. - Explore transit priority measures at the time of redevelopment of Columbia Station and Fourth Street (see Columbia Station Improvements). - Explore Transit priority measures with redesign of Eighth Street and Carnarvon Street intersection (see Eighth Street Complete Street).

5.1.4 Improved Local Service and Connectivity

The city advocates for route and service changes to address concerns and issues raised by residents, businesses, and visitors to the area, as well as locations that are experiencing growth.

The following considerations have been identified to address specific local service routes and connections to service future developments and growth within Downtown.

Station/Corridor	Consideration
Local Service and Connectivity	- Improved access, reliability and accessibility to River Market from the New Westminster Skytrain station, including advocating for increased transit coverage. - Improved service for Victoria Hill-Quayside route to address peak period overcrowding.

5.1.5 Amenities to Support Access to Transit

Transit service and supporting amenities are high priorities for the Multi-modal Transportation Hubs around the SkyTrain Stations, for transit stops along priority corridors, and when considering road reallocation opportunities. Sidewalk infrastructure at transit stops is the responsibility of the city. Transit stop locations and physical design specifications are provided in TransLink's *Bus Infrastructure Design Guidelines (2018)*.

Actions and targets are outlined in the MTP to improve access to transit and transit facilities (i.e., benches, shelters). Many of these initiatives are addressed through existing city programs for infrastructure improvements and replacement. Over the years, third-party grants have been utilized to improve walking infrastructure to



Figure 43 Community Shuttle unload a family with stroller at Eighth Street transit stop

transit stops, provide and upgrade curb ramps, construct accessible landing pads, and address pinch points. Currently, New Westminster has contracts in place with third-party providers to install and maintain transit shelters and benches throughout the city. Further to the existing city-wide measures and programs, the following are identified for implementation within Downtown:

Amenity	Consideration
Transit Stop Amenities and Infrastructure	- Increase the number of transit shelters (or combination of weather protection, seating and lighting) on priority routes, and locations on other routes with high number of boardings, schools, seniors, and persons with disabilities. - Install Tactile Walking Surface Indicators (TWSI) (where feasible) at all new transit stops and at existing stops through collaboration with TransLink or through development opportunities.
Access to Transit Stops and Accessibility	- Replacement of curb ramps and sidewalks that were constructed to older standards. Priority locations are FTNs and transit hubs, and locations with high transit boardings, on Great Streets, and along pedestrian corridors that provide services/amenities for the most vulnerable residents. - Explore opportunities to address accessibility of transit stops on steep slope/grades by relocating stop (where feasible).

The car will still be part of the city's transportation mix in the future. Our policies seek to limit increases in both local and regional trips by private vehicle, and support growth by sustainable modes of travel.

6 ROAD NETWORK

New Westminster is in the geographic centre of Metro Vancouver with two bridge crossings. The city accommodates significant truck and rail traffic en route to other destinations. Mitigating the negative impacts of this activity is critical to ensure community livability and long-term health and wellness for residents. The Plan needs to balance competing road usage needs and ensure sufficient access and mobility on the city streets for residents, businesses, emergency services, and transportation of goods. The street network supports general-purpose traffic, goods movement, transit, walking, and cycling.

The MTP sets targets that limit growth in motor vehicle trips, with a target for no net increase in regional through-traffic. The Plan sets out measures to preserve local access and mobility while prioritizing sustainable transportation and quality people-centred public realm.



Figure 44 Front Street looking east

Opportunities

- Ensure that the right traffic uses the right roads.
- Reallocation of excess road width for sustainable transportation and quality people-centred public realm.
- Support shift to sustainable transportation by prioritizing curb to support this priority.
- Support new mobility and micromobility opportunities.

Challenges

- Competing needs for curbside space.
- Limited road right of way and curb space to accommodate all demands.
- High demand for parking of personal vehicles on the street.
- Existing regional through travel and designated truck routes.
- Gaps in the Greenway and local street grid between Riverfront and the rest of Downtown.

In general, New Westminster's Road Network contains the following:

- major road network and truck routes,
- arterial,
- city collector,
- neighbourhood collector,
- local street, and
- laneway/narrow street.

This network accommodates various types to trips including:

- regional/inter-municipal travel,
- local and destination travel to Downtown from other areas within the city,
- neighbourhood travel within Downtown, and
- goods movement (trucks, rail).

The Downtown neighbourhood includes routes that carry regional through traffic, including Stewardson Way, Royal Avenue, Front Street, and connections across the Pattullo Bridge on McBride Boulevard and E. Columbia Street. The designation of these routes is coordinated and managed on a regional level by TransLink. While these designated routes service regional and local needs for goods movement and deliveries, they can present significant barriers to sustainable transportation, and increased traffic for residents travelling to and within the neighbourhood.

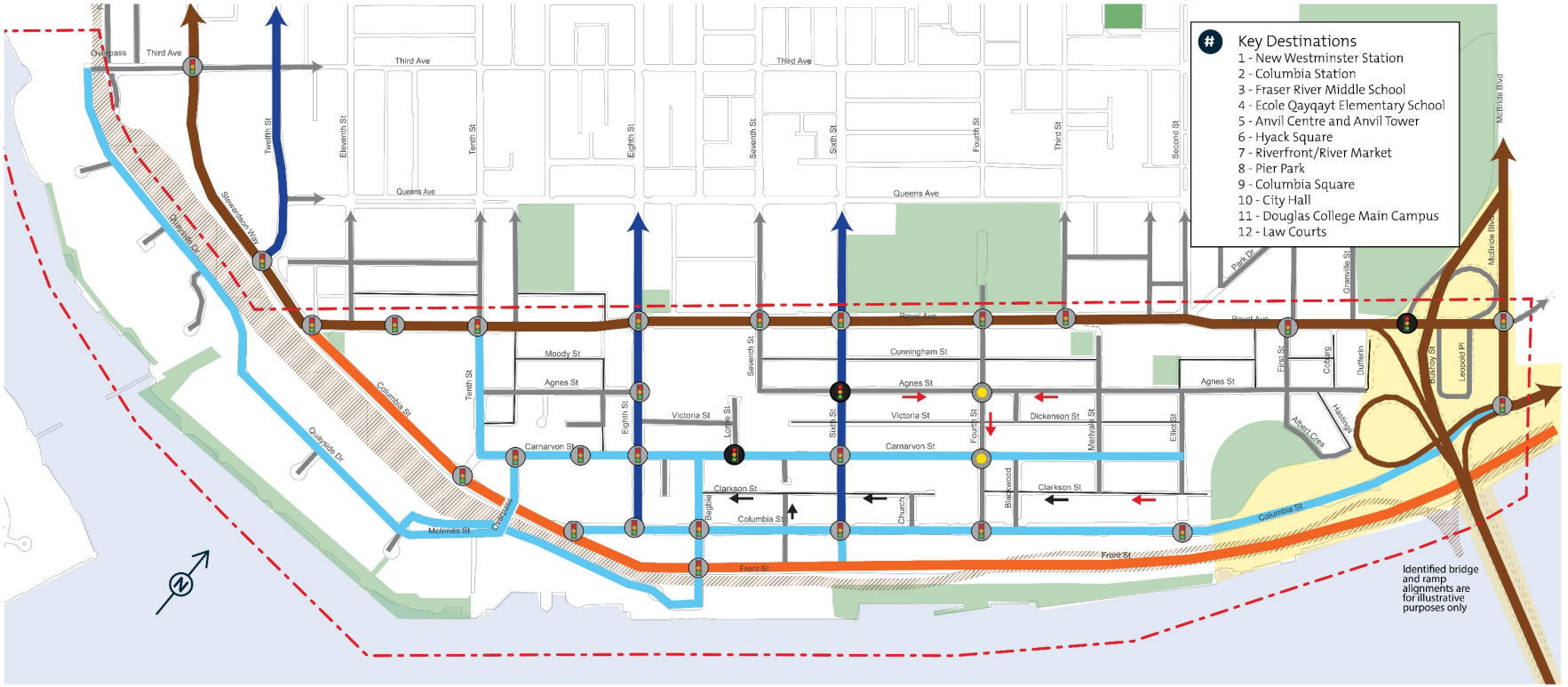
Detailed characteristics on the city-wide roadways are provided in the MTP Managed Road, as shown in Figure 45. The road classification sets the primary function of each street within the neighbourhood, as shown in Figure 46. This framework is referenced throughout the Plan.

	General Purpose Travel Lanes	Access management	Traffic and connectivity	Priority	Pedestrian Facilities	Cycling Facilities	Transit	Daily Volumes	Parking	Goods Movement
Major Road Network	4	Rigid access control	Regional traffic connecting to major destinations and corridors	People and Goods Movement	Sidewalks on both sides, Boulevard	Separated path Aspirational / recommended	Frequent or Regular	>10,000	Not permitted	Permitted
City Arterial	2-4	Limited	Cross-town traffic connecting to major destinations	Transit, Vehicles	Sidewalk on both sides	Bike lanes or separate path	Frequent	5,000 to 20,000	Metered/ restricted	Only permitted on designated routes
City Collector**	2	Some limitations	Cross-town traffic connecting to arterials	Pedestrians, Bicycles, Vehicles, Transit	Sidewalk on both sides	Bike lanes, bicycle parking	Frequent or Regular	<8,000	Metered/ restricted	Only permitted on designated routes
Neighbourhood Collector	2	Some limitations	Neighbourhood traffic connecting to arterials	Local Vehicles, Pedestrian, Bicycles	Sidewalk on both sides	Bicycle lanes or local street bikeway	Regular	<6,000	Permitted	Not Permitted, local deliveries only
Local Road	2	No limitations	Local traffic connecting to individual properties and collectors	Local Vehicles, Pedestrian, Bicycles	Sidewalk on both sides	Local street bikeway	N/A	<1,000 *	Permitted	Not Permitted, local deliveries only
Laneway	1	No limitations	Local traffic connecting to properties and collectors	Vehicles, Pedestrian, Bicycles	Shared Road	Shared Road	N/A	<500	Permitted	Not Permitted, local deliveries only

* May be higher on multi family streets
** Some city collectors are varying daily volumnes above the specified number on this table

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Figure 45 Table of Detailed Characteristics of Roads (as outlined in the MTP)



LEGEND

- Study area boundary
- Major Road Network (including truck route)
- Arterial (including truck route)
- City collector
- Neighbourhood collector
- Local road
- Laneway/Narrow street
- Rail corridor
- Existing pedestrian activated signal
- Existing traffic signal
- Proposed traffic signal
- Existing one-way circulation
- Proposed one-way circulation

Figure 46 Road Network and Street Classifications

6.1 Key Directions

The road network—while it concentrates on space primarily dedicated to the movement of motor vehicles— serves a number of other functions, including sustainable transportation, as well as curbside uses such as bus stops, parklets, passenger pick-up and drop-off, loading and servicing for adjacent properties, and parking. This section provides key directions for curbside management, on-street parking, roadway design that impact the management of the available space between the curbs to align with the MTP, and climate emergency goals.



Figure 47 Sixth Street north of Columbia Street

6.1.1 Curbside Management

Management of curbside space in Downtown presents challenges in balancing transportation needs with economic interests and activities. As communities and transportation options continue to evolve, there is increased pressure for space, and the city will need to make choices based on clear principles and priorities. Those choices may not be popular with all interests; in many cases, the outcomes will mean that some residents and businesses will need to adjust their practices. In the long term, and as off-street parking supply evolves with redevelopment, there will be less on-street space for parking private motor vehicles. Every street—and to some extent, every block—in Downtown is different, and there is no 'one-size-fits-all' approach to curbside management and prioritization. The prioritization of curb space needs to account for the local context of land use and activity on each block.

At a general level, Figure 49 identifies the functional priorities for curbside uses within Downtown. These priorities will assist with evaluating the inevitable trade-offs necessary and help ensure that the allocation of curbside and right-of-way in specific locations meets the city's broader community, transportation, and livability goals.

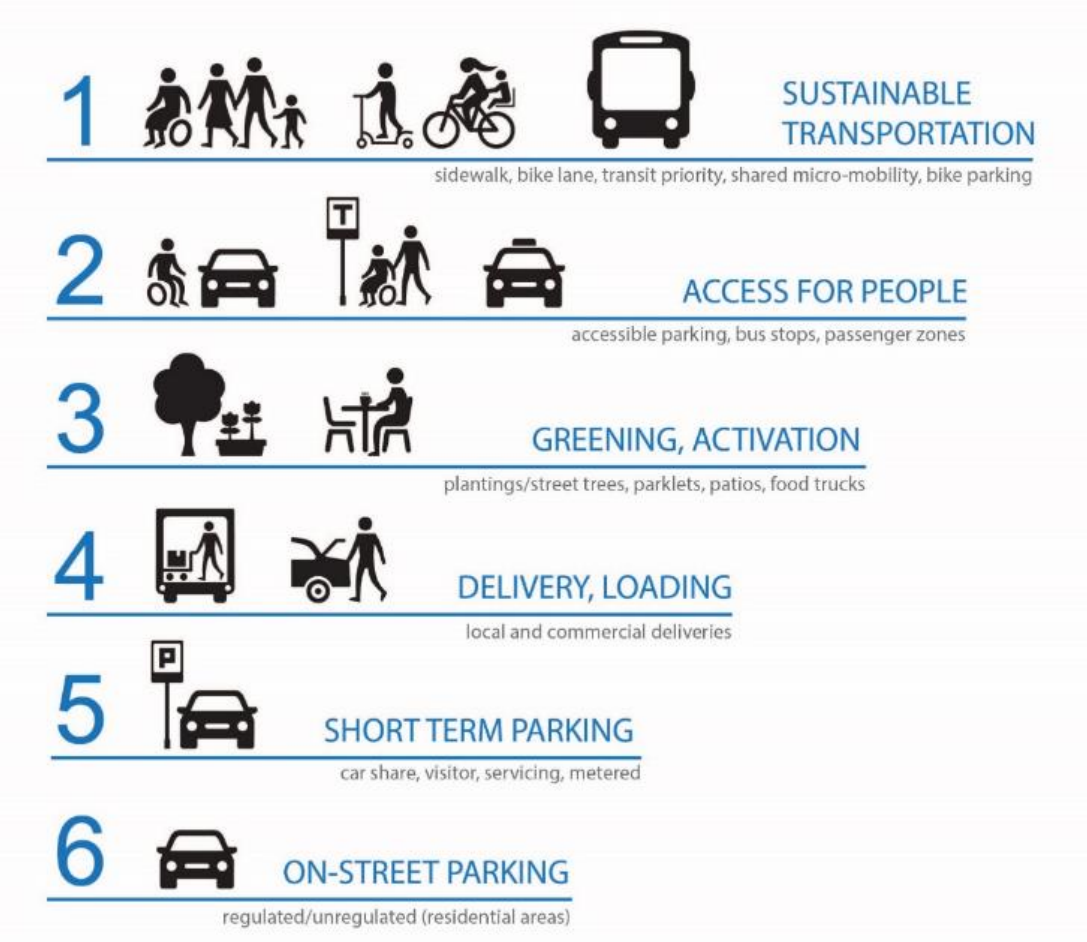


Figure 48 Curbside Access Priorities

Designated curbside uses in the city are generally allocated on a request or as-needed basis for loading zones, taxi zones, and accessible parking stalls. The demand for curbside spaces is evolving and increasingly requires proactive and intentional management to support city goals. Many larger cities are now developing and deploying technology for the management of curbside space. As these technologies become more advanced and widespread, the city may consider adopting various new approaches for managing curbside space, particularly in commercial areas like Downtown.

A variety of considerations are provided below as well as recommendations on implementing future technologies when they are explored within the city.

Measure	Consideration
Consolidated Uses	Consolidating curbside uses for efficiency and to optimize the overall space allocated to specific functions. For example, there are opportunities to consolidate residential loading zones traditionally installed for individual multi-family dwellings. These consolidated zones may also be relocated (e.g., around the corner) in instances where the curbside in front of the subject property is required to serve higher-priority functions.
Flex Zones	Implementing flex zones that accommodate multiple uses. These areas could accommodate different right-of-way functions in a variety of ways such as: - Combined commercial and passenger loading zones. - Different functions using time-of-day restrictions, such as daytime short-term parking with evening taxi/ride hailing zones.

Measure	Consideration
	- Multiple functions served simultaneously in different spaces along the block face, as most blocks are managed today (e.g., short-term parking, parklets, bus stops, curb extensions with greening, etc.). - Conduct curb productivity analysis (where needed) to inform shared activities as part of the flex zones.
Congestion and Curbside Management Permits	Implementing a Congestion and Curbside Management Permit program as part of city-wide new mobility policies and initiatives.
Digitization of Curbside	Explore digitization of curbside space—including infrastructure requirements—as a tool for mapping regulations and making them available online. It may also be used in combination with curbside sensors to monitor parking occupancy and other uses, make parking availability information available online, and adjust parking pricing on a dynamic basis to target occupancy levels to reduce the likelihood of motorists cruising for parking.
Geofencing	Implementing geofencing at key destinations and transportation hubs in order to safely manage pedestrian pickup and drop-offs, shared micromobility applications (e.g., bike share, shared e-scooters). Fee charges for curbside use and for automated enforcement of curbside regulations as needed to support new mobility strategies, policies and proposed management tactics.
Real-time off-street parking availability	Explore technologies to indicate real-time off-street parking availability as well as wayfinding signage to encourage motorists to use off-street storage options. This can apply to both city-owned and private parkades and available both online and on roadside signage.

6.1.2 Parking

The DPS was completed in 2013 to guide long term planning and management of parking in Downtown. The strategy was created to address issues within the neighbourhood, including providing parking that is supportive of retail and economic vibrancy without encouraging automobile dependency. Initiatives in the DPS addressed demand management, supply, pricing and support strategies. Many of the recommendations and measures have been completed or are underway. Most recently, time restricted parking was implemented along a portion of Quayside Drive. The remaining strategies and potential methods outlined in the DPS have been reviewed and, where appropriate, incorporated into the Plan for further implementation.

The nature of curbside use, including parking, in cities is changing rapidly as new mobility options become available and local goods deliveries increase. As such, the direction provided for on-street vehicle parking provision is proactive in addressing future demands and new priorities for curbside access that support the city's mode share targets. Parking within Downtown is comprised of on-street parking, publicly-accessible private and city-owned off-street parking, and private (not publicly-accessible) parking. Management of the city's on-street parking, including pricing, is being considered within a city-wide framework while addressing localized and adjacent uses and needs.

On-street Vehicle Parking

On-street parking in Downtown is designed and used primarily for short-term parking. According data in the Downtown Parking Strategy, over 85 percent of vehicles are parked for less than two hours, suggesting on-street parking is serving the needs of economic activity throughout the downtown core.

In older and lower-density residential areas of the city, primarily near major employment areas (e.g., hospital) and rapid transit stations, a parking permit system is in place to discourage commuters from parking in these neighbourhoods. The permits typically exempt permit holders (residents living nearby) from posted time limits. Newer, high-density residential areas, such as Quayside, are designed to have sufficient parking on private property to accommodate residents' needs. Permit systems are challenging to administer in high-density areas where there is limited street space relative to the number of people that may wish to obtain permits, so this Plan does not recommend a new permit system in the Downtown neighbourhood.



Figure 49 Metered parking on Church Street looking north to Holy Trinity Church

As a general principle, on-street parking will be managed by the city in a way that encourages people to store their private vehicles off the street. This principle is consistent with the city's transportation priorities and support the general priorities of curbside management described in section 6.1.1. Curbside Management.

The following table summarizes considerations for how on-street parking areas are managed.

Type	Considerations
On-street Accessible Spaces	Prioritize accessible parking spaces over standard spaces. Distribute accessible spaces throughout the neighbourhood, especially where accessible off-street parking is not available in close proximity to key destinations. Improve access to designated on-street accessible spaces with the removal of barriers and improving curb ramps to make the spaces more functional for people with disabilities and using mobility devices.
Car Share/Shared Mobility	Continue to support car sharing and continue to designate on-street space for access to shared mobility (where logical and feasible) and where it fits within the prioritization for curb space.
Electric Vehicle (EV) Charging Stations	Although the city supports the continued implementation of EV infrastructure, future implementation will be located off-street. Future on-street locations will be considered on a site-specific basis, where off-street space is not possible. Continue to manage on-street EV stalls, as part of the city-wide parking strategy that includes any pricing and/or time limits. Consider restricting usage of existing on-street EV stalls to EV only to increase availability and turnover. To date, the EV stalls are not limited to electric vehicles (i.e., anyone can park in these stalls).
Short-term On-street Parking (Metered, Time Restricted, etc.)	Continue to manage on-street parking to encourage turnover to support local businesses. Continue to manage pricing within the scope of a city-wide strategy to encourage people to choose off-street options where possible and encourage the use of sustainable modes.
Residential Permit Parking	Continue to manage pricing within the scope of a city-wide strategy. Permit rate structures should encourage people to choose off-street options where possible, and encourage people to own fewer private vehicles (e.g., increase rates for additional vehicles).

Type	Considerations
	Future consideration: It is recommended that the city develop a comprehensive Parking Policy to inform how parking will be managed in the future. Permit parking will not be available to any residents or tenants of new developments. Residential Parking Permits should be issued to those buildings that are deficient in parking on-site.

Changes to on-street parking supply are expected to be incremental and/or implemented through projects such as the Agnes Greenway, Eighth Street Complete Street and Carnarvon Street upgrades, or at the time of redevelopment of adjacent properties. Any changes related to future reprioritization of curb space, adjacent development, or through projects geared toward climate-emergency targets will be brought to the public through the consultation and engagement processes for each project.

6.1.3 Right Traffic on the Right Roads

Downtown is greatly impacted by crosstown traffic heading to the Pattullo Bridge, Highway 91A, and Highway 1. Royal Avenue experiences peak period congestion and delays, and short cutting occurs on the local streets within the Albert Crescent Precinct. Replacement of the Pattullo Bridge is underway with anticipated completion in 2023. It is anticipated that the updated bridge design, with better connections from E. Columbia Street and Royal Avenue, will reduce many of the through travel trips on local roads.



Figure 50 Vehicle congestion on Royal Avenue at Fourth Street

With the implementation of the Agnes Greenway, access and circulation within the neighbourhood will be impacted as residents and visitors find their preferred route to key destinations. To address these future conditions, the Plan outlines key directions addressing the local access for residents (primarily within the Albert Crescent Precinct), addressing excess road width and roadway design, and efficiencies along the main truck corridors. The overall intent is to prioritize sustainable transportation and ensure comfort and safety for people walking, cycling, and accessing transit.

Right Sizing Roads and Roadway Design to Support City Priorities

There are a number of streets throughout Downtown that are wider than necessary. Staff anticipates that, when adjacent properties are redeveloped, the cycling network is built out, and through other capital investments and community initiatives, many roads throughout the neighbourhood will be right-sized and excess road width will be reallocated for other priority uses. Figure 45 and Figure 46 outline the general characteristics of the roads within New Westminster as shown in the MTP; this is the starting point for determining the function and roadway design within Downtown.

In general, roadway design technical details are outlined in the Subdivision and Development Control Bylaw. The Design Criteria section describes the minimum standard for the roadway components, including sidewalks, boulevards, cycle lanes, vehicle travel lanes, etc. Through the MTP and this Plan, enhancements to the pedestrian network and public realm have been identified that build upon these base standards. Figure 51 summarizes proposed roadway standards for Downtown based on objectives outlined for Great Streets within the MTP and the neighbourhood vision defined in the Guidelines and Master Plan.

Typical Roadway Preferred Standards within Downtown						
	Vehicle Lane (m)	On-street Parking/ Flex Lane (m) **(where applicable)**	Sidewalks (m): Unobstructed	Boulevard (m) & Street Furniture Zone (m)	Curb & Gutter (m) **(integrate into boulevard)**	Cycling (m) **(where applicable)**
Commercial Land Use Fronts street (incl. Great Streets)	3.1-3.5*	2.4**	3 m (2.5m min)	2 m (hard surface) (1.5m min.)***	*0.45*	2m (1.5m min.)****
Residential Land Use Fronts street (medium to high density) - Priority/Enhanced Corridors	3.1-3.5*	2.4**	2.5m (2m min)	2m (porous surface/ landscaping/ sod/ ISMP)	*0.45*	2m (1.5m min.)****
Residential Land Use Fronts street (low to medium density: local & collector streets, narrow streets)	3.0-3.3*	2.4	2.0 - 2.5m (1.8m min for narrow streets needing min. access)	2m (porous surface/ landscaping/ sod/ ISMP)	*0.45*	2m (1.5m min.)****
Exceptions:						
Agnes Greenway	varies	2.4	2.5 m	2m (1.5m min.)	*0.45*	Varies
Great Streets - Sixth Street - Columbia Street	3.1-3.5*	2.4	3 m	2m (1.5m min.)	*0.45*	2m (1.5m min.)****
Pedestrian Priority Streets - Carnarvon Street (Tenth - Sixth) - Eighth Street, Tenth Street - With transit routes	3.1-3.5*	2.4	3 m	2m (1.5m min.)	*0.45*	2m (1.5m min.)****

**3.5m in locations where road is designated truck or transit route.*
***Parking shall not be provided on arterials.*
****Trees in grates.*
*****Shall be at-grade with sidewalk and physically separated from vehicle lanes (0.9m).*

Figure 51 Table of Typical Roadway Preferred Standards within Downtown neighbourhood

The following considerations are outlined to increase the comfort and safety of the most vulnerable road users while supporting the vision for the neighbourhood:

Measure	Consideration
Design Speed of the Roadway	Design the roadway for the identified speeds to increase comfort and safety for people walking and cycling.
Reallocation of Excess Pavement	Consider reallocation of excess road width to support city priorities, referencing Figure 52 as the minimum road cross sections. Streets with excess road width include: Carnarvon Street, Merivale Street, Blackwood Street, Elliot Street, Lorne Street, Alexander Street, Eighth Street, Tenth Street, and Royal Avenue.
Enhanced Pedestrian Infrastructure	Implement enhanced pedestrian realm components (e.g., widened sidewalks, boulevards, parklets, and park streets) as outlined in Figure 51 as opportunities arise through city-initiated capital projects and at the time of redevelopment of adjacent sites, including items outlined in the Guidelines and Master Plan (where feasible).

Truck Routes and Corridors

One of the key transportation corridors impacting Downtown is Royal Avenue. The following considerations are identified to address efficiencies along the corridor as well as road design that overlaps with other key initiatives such as the Royal Avenue Multi-Use Pathway and Eighth Street Complete Street designs.

Measure	Consideration
Royal Avenue Corridor	Explore efficiencies along the Royal Avenue Corridor that prioritizes access and crossings for pedestrians and balances regional through travel for goods movement. Explore road design changes, signage, and markings at intersections that mitigates impacts to vulnerable road users (pedestrians and cyclists) including blocking crosswalks and bike facilities.

6.1.4 Right-Sizing Vehicles for Urban Context

As a commercial and retail hub, many destinations and locations in Downtown require access by large trucks, including Shops at New West, Anvil Centre, Douglas College, River Market, Columbia Square, and businesses along Columbia Street. Businesses and operations reliant on truck deliveries provide essential services and employment for the local economy. However, delivery activities may create friction with other land uses, such as residential and recreation areas. More recently, there has been an increase in volume of micro-deliveries that puts further pressure on the demand for access to the curb along commercial and retail frontages and residential areas.



Figure 52 Delivery vehicle unloading supplies for a business on Columbia Street

Current zoning bylaw (and future changes) require that all loading and servicing requirements be accommodated on-site. This includes commercial loading and servicing, and newly identified residential loading for development with 30 units for more. This helps to support the use of roadway and curb space for sustainable modes and mitigate impacts to other networks caused by vehicle volumes, maneuvering/turning of large trucks.

Amenity/Initiative	Consideration
Desired Routes to Locations	Ensure street and intersection design can accommodate the turning radius required along preferred routes. Limit impacts to curbside space for priority modes and accessibility.
Loading (on-site)	Ensure loading needs are accommodated on-site, designs are functional, and operations are managed to limit the impact to surrounding road and pedestrian networks.
Loading Small Business/Great Street Corridors (on-street)	Consolidate multiple on-street loading facilities as part of curbside management strategy. Limit impacts to curbside space for priority modes and accessibility. Balance curbside management within the different areas (commercial vs. residential area).
Loading Residential (on-site, on-street)	Consolidate multiple on-street loading facilities as part of curbside management strategy. Limit impacts to curbside space for priority modes and accessibility. Balance curbside uses within the different areas (commercial vs. residential area).
Waste Management and Services	Waste management operations (e.g., garbage and recycling) and activities occur on-site and on-street. Many operations require access to curb space to store and access bins. There are existing issues where bins are stored on sidewalks which impact available clear width of the sidewalks and/or in cycling facilities. Address bins stored on sidewalks and/or encroaching onto dedicated cycling facilities.
Delivery Truck Size	Work with property owners and business operators to right-size delivery vehicles and move toward smaller vehicles suited for a dense urban context. Explore right-sizing delivery trucks accessing future large-scale commercial redevelopments by limiting vehicle sizes to those more suited to dense urban context with constrained road space. Explore opportunities with large site redevelopment to support conversion to electric vehicles.
Construction and Development Related Impacts	Heavy truck vehicle movements related to construction can significantly impact local roads within a community including the degradation of road infrastructure. An influx of construction related vehicles and employees puts a strain on the road network, available curb space, and parking. - Ensure Transportation Management Plans are designed to keep heavy vehicles and trucks on the right routes for site access. - Limit impact to accessibility routes for persons with disabilities and accommodate walking and cycling routes (where feasible) and ensure proposed detours align with city guidelines. - Ensure construction sites have a parking management plan to manage parking needs for employees and contractors of the project in order to mitigate impact on on-street parking during construction. - Enforce construction related fee or deposit to ensure rehabilitation of the infrastructure.

6.1.5 Advance Warning Systems and Smart Corridors

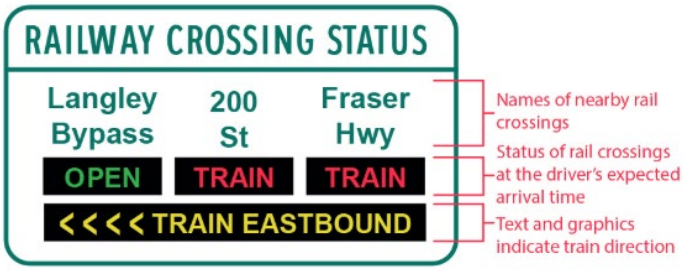
To ensure that the right traffic stays on the right roads, staff recommend that wayfinding signage, signal timing optimization, and informational signage at decision points be implemented to discourage short-cutting on neighbourhood streets and rerouting of trucks onto Columbia Street and other corridors not meant for through traffic.

Key locations that would benefit from these measures include where the rail line intersects Front Street. The at-grade rail crossing impacts east/northbound vehicle flow from Stewardson Way (in the west) to E. Columbia Street and west/southbound vehicle flow from Brunette



Figure 53 Truck traffic on Front Street looking east

Avenue, sometimes resulting in large trucks rerouting to Columbia Street to avoid travel time delays which result from having to wait for a train to pass.

Amenity/Initiative	Consideration
Advanced Warning System(s)	Consider implementing an advance warning system(s) to improve movement reliability through New Westminster, with specific emphasis on the impact of the rail crossing on Front Street, to help prevent truck traffic from rerouting to Columbia Street. For example, when a train approaches a crossing, a train detector will record its presence, direction, and speed and send it to a central control system. The system will then display the information on a Motorist Advisory Sign (Figure 54) to indicate the status of nearby crossings and the direction the train is moving in.  *Figure 54 Example of Railway Crossing Status. Source: Ministry of Transportation and Infrastructure*
Smart Corridor on Royal Avenue	Consider implementation of Intelligent Transportation Systems (ITS) along Royal Avenue corridor to maintain efficient movement of people and goods across the city and to support keeping the right traffic on the right roads.

6.1.6 Rail Corridor and Whistle Cessation

A major rail corridor travels through Downtown connecting Coquitlam to the South Vancouver Industrial area and through Queensborough across the north arm of the Fraser River to Delta and Richmond. A major junction point to the line connection is under the Pattullo Bridge. The corridor serves Canadian National, Canadian Pacific, BNSF Railway, and Southern Railway of British Columbia.

The rail corridor runs along the Riverfront south of Columbia Street and adjacent to the majority of Front Street. Major at-grade crossings are located at Begbie Street, on Front Street, at Fourth Street, and Quayside Drive. There are several vehicle and pedestrian overpasses to provide continuous connectivity between the land side of Downtown and the Waterfront Precinct, including McInnes Street Overpass, Third Avenue Overpass, Fourth Street and Sixth Street pedestrian overpasses (from the parkade to Pier Park), and Hyack Square pedestrian overpass connecting Hyack Square to River Market. There is currently whistle cessation enacted at the Begbie Street, Front Street, and Quayside Drive crossings.

Prepare for a future of mobility, which is inclusive, shared, connected, electric, and autonomous.

– Council Strategic Plan

7 NEW MOBILITY

New transportation trends and technologies are emerging that are transforming how people and goods get around, including things like bike share, car share, ride-hailing, autonomous vehicles, and trip planning smartphone applications. The future of mobility is likely to include:

- autonomous vehicles,
- connected technology,
- electrification, and
- shared mobility services.

We do not know exactly how these technologies will develop, but we now have an opportunity to think about how to do things right to keep shaping the city we want. City staff regularly attend meetings coordinated by TransLink that focus on new mobility to ensure staff remain informed about emerging transportation technologies and to help support a regionally coordinated approach to new mobility.

Opportunities	Challenges
• Increased mobility options for safer, more convenient and more efficient travel. • Reduction in private motor vehicle ownership. • Accelerate a shift to sustainable transportation, and a reduction in private motor vehicle trips. • Decreased greenhouse gas emissions. • Complement transit with flexible, on-demand shared service. • Improved land use and transportation planning.	• More driving—longer commutes and induced sprawl. • Worsened health—decreased walking and cycling. • Insufficient investment in public transit. • Concerns about personal safety and cyber-security threats. • Increased access to curb space and unknown localized impacts at transit hubs and key destinations within the city.

Preparing for the Future of Mobility

The impacts of emerging mobility options on public rights of way need to be considered and managed at the macro and micro level to ensure that public space is used effectively and contributes to providing safe access for all transportation modes. To manage the use of road and public spaces in the future, the city needs to consider the following:

- planning and policy development,
- working with others,
- explore and test innovation, and
- planning for resilience.

Work is currently underway to identify the policies and strategies needed to plan for and implement new mobility opportunities within the city. This includes regional coordination for ride-hailing including inter-municipal business licencing and strategies for managing access to the curb space especially around transportation hubs and key destinations. Additional steps will be taken on a city-wide level as the landscape around new mobility opportunities expand, and operations and services become available.

7.1 Key Directions

7.1.1 Adapting to, and Supporting, New Mobility Options

The landscape associated with new mobility is evolving quickly. As such, the Plan has integrated a number of principles within it to capture the potential future needs of new mobility within Downtown. This includes reimagining our streets and reallocating road space for sustainable transportation, and prioritizing access to limited curb space in alignment with the city's priorities. Further to prioritizing road space, considerations for supporting technologies, including the future need for smart infrastructure is required. Many of the technologies being used to advance the mobility environment rely heavily on connectivity. As such, attention must be paid to the role of communications infrastructure in enabling emerging technologies. It will require a greater degree of connectivity with vehicles, infrastructure, and other devices.

The following considerations are outlined to further support the integration of new mobility within Downtown, especially at transportation hubs and key destinations:

Measure	Consideration
Adapting to New Mobility Options	- Prioritize the public transit system as the backbone of the transportation network. - Use new mobility to fill the gaps (e.g., the first and last mile, late night service) in service across space and time. - Maintain shared access to public spaces, for example by having designated passenger zones that support taxis and ride-hailing vehicles. - Prioritize quality over quantity in micromobility. - Sharing the road (and public space) across the new and the old. - Shift focus from managing parking to managing curb space. - Manage demand through incentives and disincentives such as pricing to address growing travel demands, the dilemma of dead-heading vehicles, and potentially zero-occupancy vehicles. - Consistent regional approaches for a regional transportation network.
Supporting Technologies and Connectivity	- Continued support for the expansion of a charging and alternative fueling network. - Work with regional partners (and the City Electric Utility) to prepare for growing energy demands including provisions of supply and infrastructures within the road network. - Expand city and regional capacity to identify data needs, collect and manage data including supporting the growth towards a smart future and better city planning (e.g., geofencing for ride-hailing and possible e-bike share at key nodes such as SkyTrain Stations, Anvil Centre, and River Market).

8 SUMMARY OF PROPOSED MEASURES

Below is a summary of the primary infrastructure improvements and other measures identified in the Key Directions throughout this Plan, as well as site-specific improvements to address issues identified through community consultation. This section briefly summarizes the rationale for each measure and the anticipated features, noting that further analysis and design will be done prior to implementation, so the notes provided below are subject to refinement and change.

The implementation approach is outlined in Chapter 9 Implementation Strategy and Monitoring Plan.

8.1 Agnes Greenway, Eighth Street, and Carnarvon Street Measures

The following section is a summary of measures and locations, for major components the Agnes Greenway, Eighth Street, and Carnarvon Street Complete Street visions.

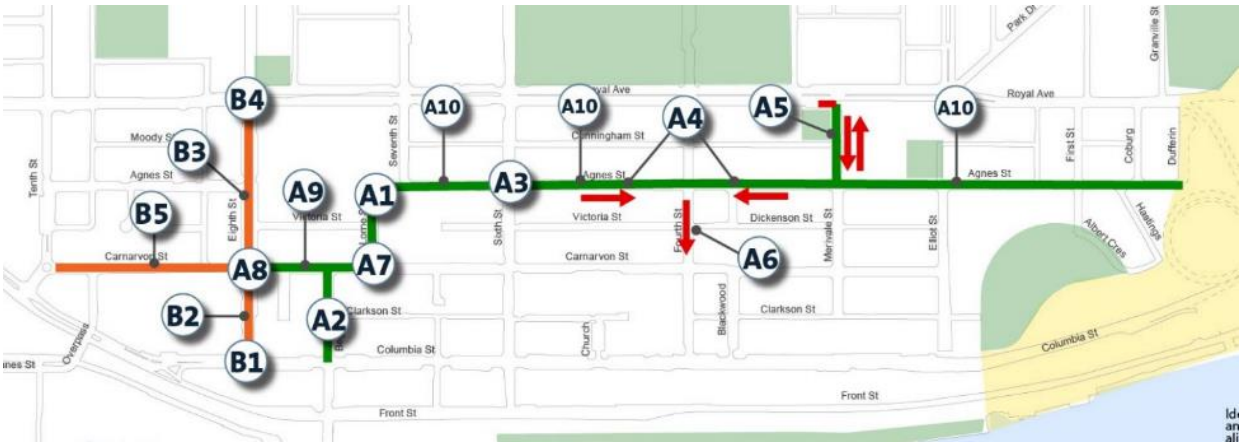


Figure 55 Map of Identified Measures for Agnes Greenway, Eighth, and Carnarvon Complete Streets

No.	Recommendation	Key Features
A1	**Agnes–Lorne Connector**	Wheelable connection between Agnes Street (corner of Seventh Street) and Lorne Street. **Key Elements:** Ramp connection between Douglas College and the Law Courts.
A2	**Begbie Connector**	Roadway redesign and reallocation of space for cycling facilities to connect the Agnes Greenway to the Riverfront. **Key Elements:** Separated cycling facilities, possible changes to vehicle travel and circulation, changes to on-street parking and other curbside regulations.
A3	**Sixth Street/Agnes Street Crossing Improvement**	Crossing improvements to allow safe crossing for pedestrians and cyclists on the Agnes Greenway. **Key Elements:** Potential new traffic signal or flashing lights, cycling facilities, improved pedestrian crossings, lighting, and seating.
A4	**Agnes Street: Sixth Street to Merivale Street**	Mitigate existing short-cutting, pedestrian safety and neighbourhood livability. **Key Features:** Reallocation of road space, cycling lanes, maintain some parking and loading, lighting, and greening. One-way vehicle travel westbound Merivale Street to Fourth Street and one-way vehicle travel eastbound Sixth Street to Fourth Street.

No.	Recommendation	Key Features
A5	**Merivale Street**	Better walking and cycling connections from Third Street to the multi-use pathway along the north side of École Qayqayt Elementary and reduce vehicle volumes. **Key Features:** Changes to vehicle travel direction, reallocation of road space, ensure necessary loading and vehicle movements adjacent to the school are preserved, close the connection from Royal Avenue to Merivale Street, and extend two-way vehicle travel from Cunningham to school parking lot driveway.
A6	**Fourth Street (Agnes Street to Carnarvon Street)**	Mitigate existing short-cutting traffic, pedestrian safety and neighbourhood livability. **Key Features:** Reallocation of road space and changes to curbside management and one-way vehicle travel southbound from Agnes Street to Carnarvon Street.
A7	**Lorne Street/ Carnarvon Street Crossing Improvement**	Crossing improvements for pedestrians and cyclists on the Agnes Greenway. **Key Elements:** Potential new traffic signal or flashing lights, cycling lanes, improved pedestrian crossings, lighting, and seating
A8	**Eighth Street/ Carnarvon Street Intersection Upgrade**	Intersection upgrades to improve cycling and pedestrian safety, comfort and convenience, and address operating inefficiencies and blocked crossings by turning vehicles. **Key Elements:** Cycling facilities and improved pedestrian crossings.
A9	**Carnarvon Street (Eighth Street to Lorne Street)**	Reallocation of space for cycling facilities to connect the Agnes Greenway to New Westminster Station. **Key Elements:** Separated cycling facilities on the south side of Carnarvon Street, changes to on-street parking and other curbside regulations, and improved pedestrian crossings.
A10	**Agnes Street (Seventh Street to First Street)**	Roadway redesign and reallocation of space for cycling facilities along Agnes Street. **Key Elements:** Separated cycling facilities (bi-directional cycling facilities on south side of Agnes Street), changes to on-street parking and other curbside regulations, improved pedestrian crossings, opportunities for greening, street trees, resting space, and lighting.
B1	**Columbia Street/ Eighth Street: Intersection improvements**	Improve pedestrian experience and comfort with intersection and crossing improvements to prioritize walking and cycling. **Key Features:** Curb extensions, updated curb ramps, adjustments to travel lane widths and configuration, signal phasing adjustments to prioritize walking and cycling, and explore gateway features.
B2	**Eighth Street (between Columbia Street and Carnarvon Street): New Westminster Station mid-block pedestrian crossing**	New mid-block pedestrian crossing to support existing desire line between the New Westminster SkyTrain Station and the Anvil Centre (under SkyTrain guideway). **Key Features:** Shortened pedestrian crossing, reallocation of road space, continue to accommodate truck access to loading docks, and Anvil Centre parking access.
B3	**Eighth Street Complete Street**	Roadway redesign and reallocation of space for walking, cycling, transit access, and quality people-centred public realm. **Key Features:** Reallocation of road space, changes to curbside uses, widened pedestrian routes, cycling infrastructure, floating bus stop, passenger zones, seating, greening, and bike parking.

No.	Recommendation	Key Features
B4	**Eighth Street/Royal Avenue Intersection Redesign**	Improve cycling and pedestrian facilities on Eighth Street and Royal Avenue including future cycling connections on Royal Avenue (Section 6.1.3) and Royal Avenue Corridor operation efficiencies. **Key Features:** Reallocation of road space, improved pedestrian crossings, right-sizing of travel and turn lanes, intersection configuration, signal timing adjustments, wayfinding, and signage.
B5	**Carnarvon Street: Road space reallocation for sustainable travel on Carnarvon Street between Eighth Street and Tenth Street**	Reallocation of road space for a quality people-centred public realm, including wider sidewalks and transit shelters, seating, weather protection, comfortable connection for cyclist between Eighth Street and Columbia Square, and prioritize access to curbside for priority uses. **Key Features:** Reallocation of road space, changes to curbside uses to align with priorities, widened pedestrian routes, and cycling infrastructure.

8.2 Site-Specific Measures

The following section summarizes other measures that have been identified at locations that fall outside the Agnes Greenway, Eighth Street, and Carnarvon Street Complete Street corridors.

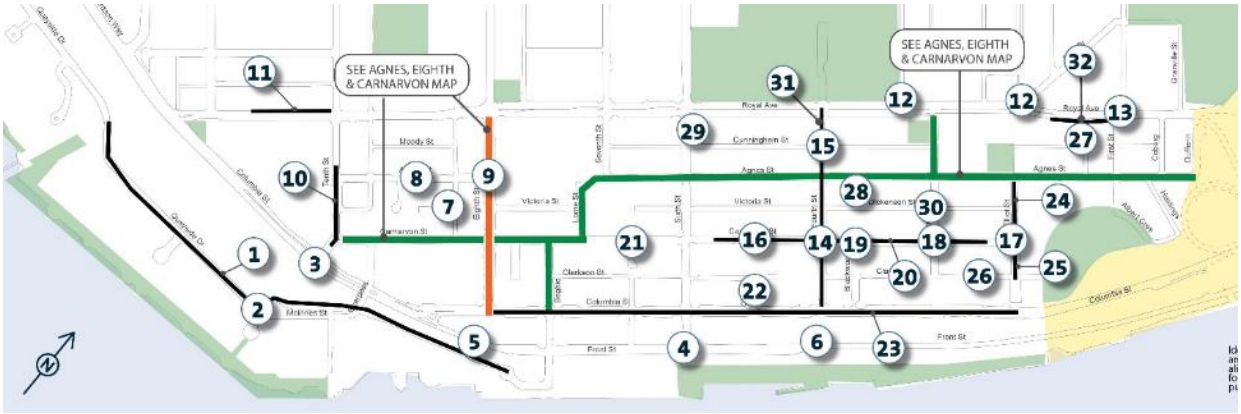


Figure 56 Map of Identified Measures for Downtown area

No.	Recommendation	Key Features
1	**Quayside Drive: Local street bikeway**	Complete the secondary cycling network along Quayside Drive and 3rd Avenue. **Key Features:** 30km/h regulatory signage and additional traffic calming, improvements to 3rd Avenue overpass for more comfortable cycling.
2	**Quayside Drive/ McInnes Street: Intersection changes**	Improve pedestrian experience and comfort with intersection changes to reduce pedestrian crossing distances, and reallocating excess road space for other uses and opportunities. **Key Features:** Curb realignments, reallocating excess road space, greening, ISMP, and other potential changes with further analysis.

No.	Recommendation	Key Features
3	**Tenth Street/ Columbia: Signal replacement**	Replacement of the traffic signal as it has reached end of service life, and left turn restriction to reduce short-cutting. **Key Features:** Transit bus detector, signage and pavement markings, vehicle left-turn restrictions except buses (from Columbia Street to Tenth Street), and maintain right-in right-out movement for vehicles to and from Tenth Street.
4	**Sixth Street: Parkade connection improvement (Columbia Street to parkade structure)**	Improve sidewalk and cycling connections from Columbia Street onto the parkade and new pedestrian and cycling overpass connecting to Pier Park. **Key Features:** Widened pathway for pedestrians and cyclists to provide continuous accessible connection.
5	**Hyack Square Accessible Crossing (Riverfront Vision)**	Improve connectivity over the railway with a fully accessible walking/cycling connection between Hyack Square and River Market/Quayside. See the Riverfront Vision for more details.
6	**Fourth St/ Front Street Staircase**	Improve pedestrian experience and comfort with upgrades to the pedestrian staircase on Fourth Street connecting the parkade and Columbia Street with Front Street.
7	**Victoria Street & Blackie Street: Pedestrian realm improvements**	Enhance the pedestrian realm and connections along Victoria Street and Blackie Street (between Agnes Street and Carnarvon Street) as part of adjacent developments. **Key Features:** New sidewalks, lighting, and landscaping.
8	**Agnes Street (Eighth Street to Tenth Street): Mid-block crossing**	Improve pedestrian connectivity with a mid-block crossing on Agnes Street that links to the future/proposed Chinese Benevolent Garden and SkyTrain. **Key Features:** Mid-block crossing with curb extensions, signage, removal of some on-street parking, and greening.
9	**Agnes Street/ Eighth Street: Intersection modifications**	Improve pedestrian crossings and future vehicle access with intersection modifications. Improvements may be required to support future development at nearby sites. Modifications should prioritize walking and cycling, in line with the Eighth Street Complete Street design. **Key Features:** Curb extensions, shortened crossings, signal upgrade, widened sidewalks, greening, and seating areas.
10	**Tenth Street (Royal Avenue to Columbia Street, including roundabout)**	Enhanced pedestrian facilities and crossings, new cycling facilities and connection to future on-site walking and cycling route (see Columbia Square), potential realignment of site access connections to Columbia Square (with future redevelopment), evaluation of the roundabout at Tenth Street and Carnarvon Street (in relation of proposed site access review to Columbia Square). **Key Features:** Reallocation of road space, changes to curbside management including parking design, improved pedestrian crossings, and cycling infrastructure to support secondary route.
11	**Royal Avenue: Removal of parking**	Increase safety and efficiency by removal of on-street parking on north side of Royal Avenue from Tenth Street to Eleventh Street.
12	**Royal Avenue/Third Street, Royal Avenue/Second Street**	Improve comfort for people walking and cycling by reallocation of road space and intersection upgrades on Second Street, Third Street, and along Royal Avenue to improve pedestrian crossings. **Key Features:** Road diet and reallocating excess road space, curb extensions, and crossing (paint and signage).

No.	Recommendation	Key Features
13	**Royal Avenue/First Street**	Improve comfort for people walking and cycling from Downtown and Agnes Greenway to Queen's Park with intersection upgrades including transit priority. **Key Features:** Pavement marking, signage, pedestrian and bike crossing, wider sidewalks (to be considered at the time of redevelopment of adjacent properties), and transit detection.
14	**Fourth Street/ Carnarvon Street: Intersection redesign**	Improve pedestrian experience and address short cutting through the neighbourhood. **Key Features:** One-way vehicle travel (southbound travel only) on Fourth Street between Agnes Street and Carnarvon Street, changes to traffic control, changes to the pedestrian crossings to address vehicle stopping compliance issues, sightlines and lighting. Potential for raised crossings (requires further analysis to confirm).
15	**Fourth Street/ Cunningham Street**	Improve pedestrian connection. **Key Features:** Potential curb extensions, curb ramps, and resting opportunities.
16	**Carnarvon Street:** **Mid-block pedestrian crossing on Carnarvon Street Between Sixth Street and Fourth Street (at Holy Trinity Cathedral)**	Improve pedestrian connectivity to the mid-block passage way that connects to Columbia SkyTrain Station and Columbia Street. **Key Features:** Narrowed raised crossing, lighting, greening, resting/bench, and potential crosswalk enhancements. Options under consideration include traditional pedestrian crossing, chicane, or pinch point.
17	**Carnarvon Street/Elliot Street: Intersection changes**	Improve pedestrian connectivity and comfort by narrowing crossings and updating traffic control. **Key Features:** All-way stop, narrowed crossing with curb extensions, lighting, and frontage improvements along Elliot Street (to be considered when adjacent property redevelops).
18	**Carnarvon Street /Merivale Street: Intersection design (potential)**	Improve pedestrian crossings, address vehicle speeds, increase public space, greening, and potential green infrastructure. **Key Features:** All-way stop, narrowed pedestrian crossings, curb extensions, lighting, greening, and green infrastructure (pending additional technical analysis).
19	**Carnarvon Street/Blackwood Street**	Improve pedestrian connectivity to the mid-block connection between Dickenson and Carnarvon by reallocation of road space to narrow crossings and provide opportunities to enhance the public realm and support other public/community uses or city priority. **Key Features:** Narrowing of travel lanes, narrow crossing, curb extensions, and curb ramps.
20	**Carnarvon Street: Speed tables between Sixth Street and Elliot Street**	Address vehicle speeds. **Key Features:** speed tables that accommodate transit (approximately two per block), pockets with plantings, bulges for greening, planters, resting, and parklet.
21	**Carnarvon Street: Mid-block pedestrian crossing at McKenzie Street (to Begbie Square)**	Improve pedestrian connections by narrowing the crossing and provide opportunities for public realm improvements and activation. **Key Features:** Mid-block crossing, signage, and removal of some on-street parking.

No.	Recommendation	Key Features
22	**Church Street: Pedestrian improvements between Clarkson Street and Columbia Street**	Improve pedestrian connections and crossings (at Clarkson Street). **Key Features:** New sidewalks, marked crossings, and changes to parking configuration. **Long Term Vision (with future adjacent redevelopment)**: shared pedestrianized space that accommodates vehicles and service access to the residential development, resting, and greening.
23	**Columbia Street: Upgrade to All Ages and Abilities cycling**	Upgrade cycling infrastructure to AAA design standard. This is considered a long-term project, and requires further analysis and functional design. **Key Features**: To be determined at time of design.
24	**Elliot Street: Local street bikeway designation**	Improve cycling connectivity between the Agnes Greenway and Columbia Street. **Key Features**: Designate as local street bikeway, signage, and other measures to reinforce 30 km/h speed limit.
25	**Elliot Street (Carnarvon Street to Clarkson Street)**	Complete enhanced pedestrian connection between Carnarvon Street to Clarkson Street. **Key Features:** Reallocation of excess road space on east side of the street: maintain on-street parking, new boulevard with street trees on east side of the street, and sidewalk replacement (if needed).
26	**Clarkson Street: One-way Vehicle travel (Elliot Street to Merivale Street)**	Address sightline and safety issues with changes to vehicle circulation. **Key Features:** One-way westbound vehicle travel, and signage.
27	**Multi-use Path Connection Between Agnes Street and Royal Avenue (via Cunningham Street)**	Provide convenient and accessible active transportation link connecting Downtown/ Agnes Greenway and Uptown via a gentle sloped route. **Key Features:** Wider pedestrian and cycling pathway, resting opportunities, and greening. Implementation is dependent on redevelopment including lot consolidation.
28	**Blackwood Street (Agnes Street to Dickenson Street): Pedestrian space**	Provide community space and public realm improvements by reallocating road space. **Key Features**: Partial closure (with the potential of complete) to vehicles, reallocation of road space for public and community uses (e.g. community gardens, park street), and marked crossing at Dickenson Street to the mid-block connection to the south.
29	**Sixth Street (Cunningham Street to Royal Avenue)**	Improve sidewalk condition to support accessibility and Great Street designs. **Key Features:** Sidewalk replacement and improved curb ramps.
30	**Merivale Street/Dickenson Street Intersection Improvements**	Improve pedestrian connections. **Key Features:** Narrow crossing, curb extensions, and curb ramps.
31	**Fourth Street**	Improve the pedestrian experience and public realm opportunities through reallocation of road spaces by vehicle circulation changes. **Key projects:** Intersection redesign, narrowed pedestrian crossings, changes to vehicle circulation, seating, greening, space for public and community driven initiatives.

9 IMPLEMENTATION STRATEGY AND MONITORING PLAN

9.1 Implementation

The infrastructure improvements and projects that have been identified in this Plan will be implemented over time, and through a variety of means, including:

- Local Area Servicing Improvements, at the cost of adjacent property owners.
- As city-funded capital improvements, with or without third-party funding support.
- At the time of redevelopment of adjacent properties, either as part of the necessary off-site improvements or funded through other means.

Construction of the proposed measures outlined in the Plan will occur over time. Basic infrastructure upgrades—updated and/or enhanced standards—are expected to be achieved at the time of redevelopment of adjacent properties, or as independent capital projects initiated by the city. Some elements may be delivered by the city sooner, subject to support from funding partners such TransLink.

The timeline for constructing improvements is dependent on a number of factors, including capital plan allocation, size and scale of developments in the neighbourhood, and prioritization with other neighbourhood improvements identified throughout the city. As such, staff have categorized specific projects in the Plan for immediate, near-, medium-, or longer-term implementation. Some items are identified for much longer-term, and it is anticipated that they will occur at the time of redevelopment of adjacent properties, with significant third-party partnerships, or through city programs coordinated and managed on a city-wide basis. Coordination with multiple departments or agencies may be required to initiate specific neighbourhood-wide improvements, which may include further consultation with the community.

The following table outlines the anticipated implementation approach for the key projects and priorities that have been identified in this Plan.

Timeframe	Projects/ Measures
Immediate **(within a few months)**	Work is underway for the following measures: - Downtown/Uptown cycling route— signage, pavement marking, and some minor traffic calming on one complete route linking Downtown to Uptown. - Carnarvon Street—more space for walking and waiting or queuing for the bus. - Front Street—weekend open streets on Front Street (pilot) throughout the summer of 2020 to enable walking and cycling between Westminster Pier Park and Sapperton Landing Park.
Near term **(within 6 to 12 months)**	Staff are developing plans, applying for partner funding, and advancing detailed design for the following measures: - Agnes Greenway— signage, pavement marking, and quick-build traffic calming, traffic circulation changes, and interim separated bike lanes on Agnes Greenway to support detailed design for the final alignment. - Secondary Bike Network – Signage, pavement marking, and quick-build traffic calming on other parts of the Secondary Bike Network to connect key destinations Downtown. - Eighth Street Complete Street - Quick-build basic elements of Eighth Street section south of Carnarvon Street, including improvements to the bus stop north of Columbia Street. - Rerouting of 106 – In coordination with TransLink and CMBC, routing of the outbound #106 to Carnarvon Street (Eighth Street to Sixth Street).
Medium term **(current 5-year plan)**	Within the current 5 year financial plan, the following projects are anticipated to be completed: - Agnes Greenway - final construction of the ultimate design, including tree planting.

Timeframe	Projects/ Measures
	- BC Parkway - improvements between Third Avenue and Fifth Avenue, including improvements to be managed by TransLink between Fifth Avenue and 14th Street. - Secondary bike network refinements and spot improvements along Columbia Street. - Pattullo Bridge Integration – improved connections for walking and cycling from Agnes Greenway and Central Valley Greenway to Victoria Hill, Central Valley Greenway to/from the new Bridge, and E. Columbia Street/McBride Boulevard intersection. - Riverfront Connection – walking and cycling route between Westminster Pier Park and Sapperton Landing Park.
Longer Term **(5 to 10 years)**	In the longer term, at the time of redevelopment of adjacent properties, and with significant City capital investment and contributions from funding partners, the following improvements are anticipated to be achieved: - Riverfront Connection – walking and cycling route between Westminster Pier Park and Sapperton Landing Park. - Columbia Street Cycling Facilities - Convert Columbia Street/Central Valley Greenway to all ages and abilities (AAA) cycling facilities. - Eighth Street Complete Street – final construction of the ultimate design. - Carnarvon Complete Street – final construction of the the ultimate design.
Much Longer Term **(at time of redevelopment of adjacent properties, third party partnerships, citywide programs)**	A number of measures in the Plan are visionary and are influenced by other factors, some of which are outside the City's direct control. These include: - Better connections from the BC Parkway to the Riverfront, and to Queensborough, including significant improvements to the Third Avenue Overpass, and a pedestrian and cyclist bridge to connect Downtown with Queensborough - AAA connection on the north side of Royal Avenue, between Third Street and Eighth Street. - A high-quality connection for walking and cycling through the property currently occupied by Columbia Square. - A high quality AAA bike route from Downtown to lower Twelfth Street and connecting to the BC Parkway at Third Avenue.

9.2 Monitoring Plan

The installation of infrastructure measures may be undertaken temporarily to provide staff the opportunity to assess and refine the geometric designs and to receive input from people who are using the facilities to inform the final design better. After a monitoring period, the temporary measures that are operating effectively may be installed permanently. Traffic calming measures, which can be installed temporarily, include median islands, curb extensions, and line-marking. Emergency Services will be involved in the design development stage to ensure that the measures do not limit or prohibit their ability to serve the community. It is anticipated that the implementation of the temporary measures could commence in mid- to late- 2020. Staff will continue to work with the community through the civic committees, stakeholder groups and other means of engagement to receive input and inform the final design.