City of Burnaby

Meeting 2020 January 28

COMMITTEE REPORT

TO:	CHAIR AND MEMBERS PLANNING AND DEVELOPMENT COMMITTEE	**DATE:**	2020 January 23
FROM:	DIRECTOR PLANNING AND BUILDING	**FILE:** *Reference:*	PL 94000 - 20 *Transportation Plan Update*

SUBJECT: NEW BURNABY TRANSPORTATION PLAN – PHASE 2

PURPOSE: To endorse proposals and authorize staff to initiate a process for Phase 2 public consultation towards the development of a new Burnaby Transportation Plan.

RECOMMENDATIONS:

1. **THAT** Committee recommend that Council endorse the draft Targets, Big Moves, Policies, and Networks as proposals for public consultation, as outlined in Section 6.0 of this report and the ***attached Appendix B***.

2. **THAT** Committee recommend that Council authorize staff to undertake the Phase 2 Public Consultation Program, as outlined in Section 7.0 of this report.

3. **THAT** this report be sent to the Environment Committee, Social Planning Committee, and Traffic Safety Committee for information.

REPORT

1.0 INTRODUCTION

The *Burnaby Transportation Plan* is the City's guiding policy document for transportation. It establishes the long-term vision for moving people, goods, and services in the City, while integrating and achieving environmental, social, economic, and community development goals.

This report provides an update to the process for the development of a new *Burnaby Transportation Plan*. It includes the background for why a new *Plan* is needed and provides an overview of the scope, phasing, and activities for developing the *Plan*. It highlights the approved Vision, Themes, and Goals from Phase 1 and provides the draft Targets, Big Moves, Policies, and Networks to be used as the basis for Phase 2 Public Consultation. The report also describes the Phase 2 Public Consultation Program.

2.0 POLICY

The new *Burnaby Transportation Plan* is aligned with and supported by a number of City policies, including the *Official Community Plan (OCP), Environmental Sustainability Strategy, Community Energy and Emissions Plan (CEEP), Economic Development Strategy,* and *Social Sustainability Strategy*. It is important to note that the *Plan* is also aligned with the City's Climate Emergency Declaration and new targets to reduce greenhouse gas emissions. The *Burnaby Transportation Plan* will be one of the key tools for the implementation of the City's climate actions.

In addition to the policies noted above, the *Plan* supports a number of goals and sub-goals of the *Corporate Strategic Plan*:

- ***A Safe Community***
  - Transportation Safety – Make City streets, pathways, trails and sidewalks safer
- ***A Connected Community***
  - Partnership – Work collaboratively with businesses, educational institutions, associations, other communities and governments
  - Geographic Connection – Ensure that people can move easily through all areas of Burnaby, using any form of transportation
- ***An Inclusive Community***
  - Serve a Diverse Community – Ensure City services fully meet the needs of our dynamic community
  - Create a Sense of Community – Provide opportunities that encourage and welcome all community members and create a sense of belonging
- ***A Healthy Community***
  - Healthy Life – Encourage opportunities for healthy living and wellbeing
  - Healthy Environment – Enhance our environmental health, resilience and sustainability
- ***A Dynamic Community***
  - Community Development – Manage change by balancing economic development with environmental protection and maintaining a sense of belonging
  - City Facilities and Infrastructure – Build and maintain infrastructure that meets the needs of our growing community
- ***A Thriving Organization***
  - Communication – Practice open and transparent communication among staff, Council and the community
  - Technology and Innovation – Support technology development and innovation to empower staff and to advance community objectives

To learn more about the City of Burnaby's *Corporate Strategic Plan*, please visit www.burnaby.ca/CSP.

3.0 BACKGROUND

Transportation is an essential component of everyday life. The decisions that are made about the transportation system have long-lasting effects and consequences on how the City is built and how it functions. Transportation policies and projects can assist in creating a desirable City that is more environmentally, socially, and economically sustainable. The transportation system goes hand-in-hand with land use in shaping the City and working towards overall sustainability. Land use decisions affect the way in which people travel and use their environment, while transportation decisions influence the location, rate, and form of development. Together, the ultimate role of land use and transportation is to connect people with goods, activities, places, and other people. The future of transportation planning in Burnaby will encompass not just the process of going to a place, but also the experience getting there.

The first edition of the *Burnaby Transportation Plan* was adopted in 1979 and the second in 1995. Much has changed in the City and Region since the adoption of the *1995 Burnaby Transportation Plan*. Challenges and changes related to growth, demographics, lifestyles, climate change, transportation and housing affordability, health, space constraints, economic development, the sharing economy, technology, policy, public expectations, and limited funding resources must be acknowledged and addressed.

Within this context, it is appropriate to prepare a contemporary policy framework for decision-making. A new *Burnaby Transportation Plan* will enable Burnaby to respond to these changes, plan for the challenges ahead, and coordinate investments to meet the City's strategic transportation goals. It provides an opportunity to think about the "big picture", consider innovative approaches, consider a broad range of solutions, and seek opportunities that best achieve multiple goals and objectives in alignment with the community's values.

4.0 SCOPE, PHASING, AND ACTIVITIES

This section outlines the scope, phasing, and activities for the new *Burnaby Transportation Plan.*

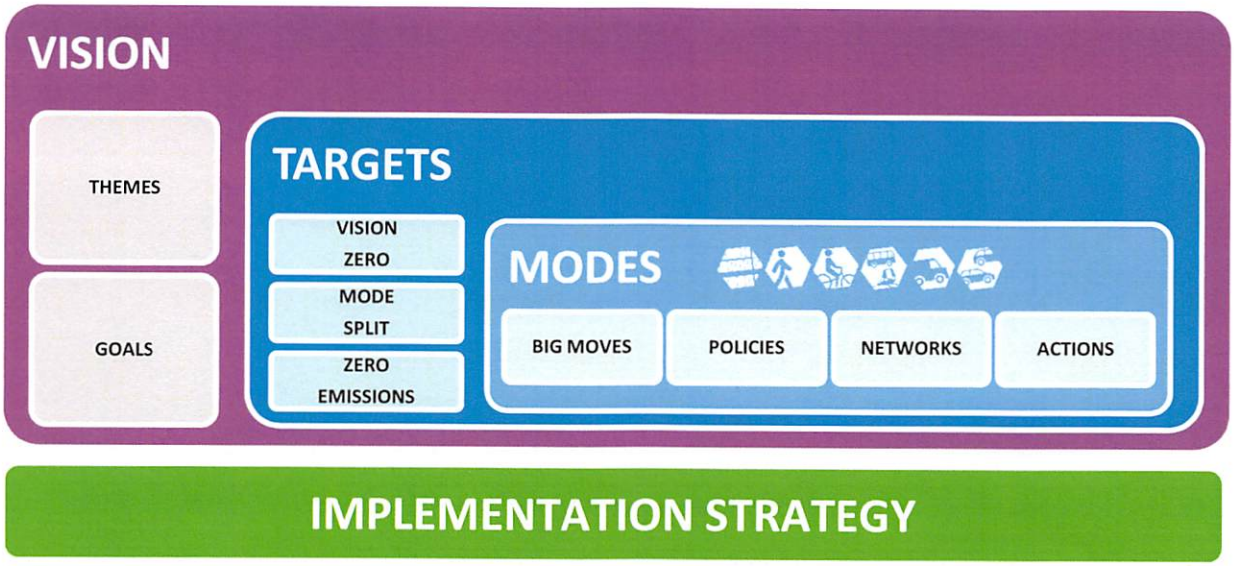
4.1 Scope

The new *Burnaby Transportation Plan* is proposed to be organized as follows:

Vision:	An aspirational statement that describes the long term future.
Themes:	Major topic areas to be addressed in the Plan.
Goals:	Succinct statements describing what is to be achieved under each Theme.
Targets:	Broad City-wide objectives that have measurable outcomes.
Big Moves:	Key projects or actions that offer the biggest opportunities to create change.
Policies:	Strategic statements that provide direction and demonstrate the approach to be undertaken.
Networks:	Maps illustrating the modal networks.

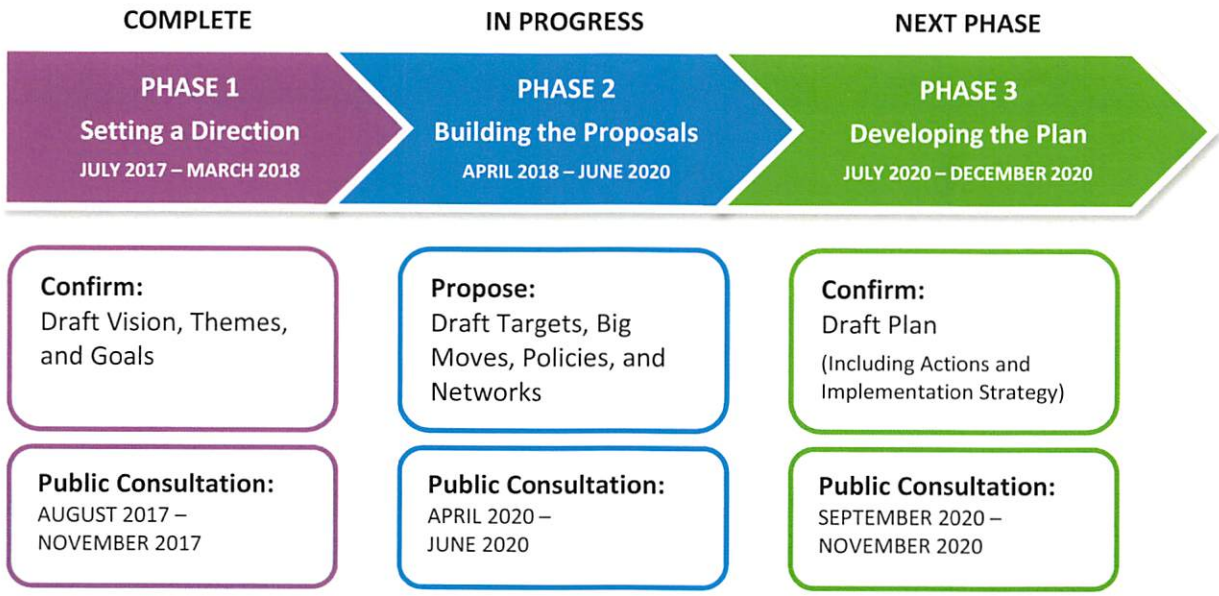
Actions: Tactical activities that are to be undertaken to implement the Plan.

Implementation Strategy: Outlines the high-level steps and processes required to achieve the Plan, including measuring, monitoring, resourcing, etc.



4.2 Phasing and Activities

The development of the new *Plan* is a multi-year process, divided into three phases:



Each phase includes the following activities:

1. ***Background Research and Analysis*** – Collecting and reviewing data on historical and existing conditions, reviewing existing policy, examining best practices, identifying challenges and opportunities, and comparing the merits of alternative courses of action.

2. ***Public Consultation*** – Developing a consultation strategy, creating materials and activities, engaging with the public and stakeholders, and analysing the consultation outcomes.

3. ***Policy and Plan Development*** – Using the background research, analyses, and public consultation outcomes to create and draft content for the new *Plan.*

4. ***Reporting*** – Preparing reports to Committee and Council summarizing the work completed, input received, and seeking approval on content and next steps.

5.0 PHASE 1 SUMMARY

The completion of Phase 1 of the *Burnaby Transportation Plan* work determined the Vision, Themes, and Goals to establish an overall direction for the new *Plan.* The Vision states:

> ***In Burnaby, all travel choices are enjoyable and the transportation system is the foundation of our thriving public spaces and our quality of life. The transportation system not only moves people and goods between destinations but provides places for people to meet and participate in city life. It is a balanced and inclusive system that offers accessible and safe mobility in support of a healthy, green, prosperous, and connected community.***

The resulting Council approved Vision, Themes, and Goals are ***attached*** in ***Appendix A***, for reference.

The Phase 1 Public Consultation Program raised awareness, built interest, and aimed to understand the issues of Burnaby residents, businesses, and stakeholder groups. The top six topics, issues, and opportunities that we heard during the Phase 1 Public Consultation were:

1. Transit Frequency and Service (Quantity, Quality, Reliability, Access)
2. Safety (All Modes, Rules, Enforcement, Signage, Design)
3. Sidewalks (Quantity, Quality, Design, Access)
4. Cycling Facilities (Quality, Bike Parking, Signals, New Opportunities)
5. Cycling Routes (Route or Location Specific Comments)
6. Automobile Routes (Route or Location Specific Comments)

The information and input from Phase 1 then fed into, or formed the basis of, the work in Phase 2 of the *Burnaby Transportation Plan.*

6.0 PROPOSED DRAFT TARGETS, BIG MOVES, POLICIES, AND NETWORKS

This section outlines the proposals for the draft Targets, Big Moves, Policies, and Networks for the new *Burnaby Transportation Plan.* These proposals are built upon the vision and public input received during Phase 1. Together, with research in best practises, the technical modelling analysis, and applied to the Burnaby context, the proposals establish a policy framework and provide directions that address the issues and opportunities identified in Phase 1.

The following sections provide a brief outline the draft proposals that are to be used as the basis for the Phase 2 Public Consultation Program. Detailed descriptions of the draft proposals are ***attached*** in ***Appendix B.***

6.1 Proposed Targets

The proposed City-wide Targets serve as measurable outcomes that help ensure that transportation activities in the City are working towards achieving the aspirational Vision, Themes, and Goals. While the *Plan* contains other items that can be measured, the Targets are different because achieving them requires the implementation of a number of actions. The intent is that the proposed Targets will motivate change, enable the City to measure and monitor its progress, and clearly indicate whether we are moving the right direction, or whether additional actions are necessary.

1. *Vision Zero:* *Zero deaths and serious injuries on Burnaby's transportation network.*

2. *Mode Shift:* *By 2030, half of all trips originating in the City will be by transit or active transportation.*
   By 2040, 2/3 of all trips originating in the city will be by transit or active transportation.
   By 2050, 3/4 of all trips originating in the city will be by transit or active transportation.

3. *Zero Emissions:* *By 2030, reduce emissions from transportation by 45%.*
   By 2040, reduce emissions from transportation by 75%.
   By 2050, zero emissions from transportation.

6.2 Proposed Big Moves

The proposed Big Moves are the key action items that the City would work to achieve under the new *Plan.* They offer the biggest opportunities to create change, and help to achieve the Targets, and the aspirational Vision, Themes, and Goals. There is one Big Move proposed for each major transportation topic area (Land Use, Public Realm, and Transportation; Walking and Accessibility; Cycling; Public Transit; Goods and Services Movement; and Driving).

1. *Land Use, Public Realm, and Transportation*
   Create and implement public realm and street standards for all areas of the City.

2. *Walking and Accessibility*
   Make walking and rolling the first choice for trips under 1km by building high quality pedestrian infrastructure and amenities.

3. *Cycling*
   Build the core of the cycling network by 2030.

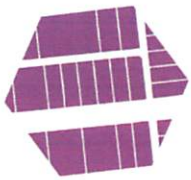
4. *Public Transit*
   Increase public transit ridership by enhancing service, providing amenities and installing transit priority measures.

5. *Goods and Services Movement*
   Support green movement of goods and services by encouraging the use of sustainable modes for local deliveries.

6. *Driving*
   Achieve no increase in total Vehicle Kilometres Travelled (VKT) by Burnaby residents by 2050.

6.3 Proposed Policy

The proposed Policies set clear direction for decision making and demonstrate the City's approach to transportation planning. For each major transportation topic area (Land Use, Public Realm, and Transportation; Walking and Accessibility; Cycling; Public Transit; Goods and Services Movement; and Driving) there are several Policies proposed, for a total of 36 Policies.



Land Use, Public Realm, and Transportation

1. Prioritize active transportation and public transit.
2. Increase the integration of land use and transportation planning, recognizing that land use is critically important to the City's mobility goals and targets.
3. Significantly increase wellbeing and the enjoyment of moving in the City by providing a high quality public realm (streets, sidewalks, and public spaces).
4. Make it easy to combine trips and navigate the City.
5. Incorporate green design and infrastructure in the public realm.
6. Enable and support creative uses of the street to promote a more vibrant public realm.
7. Support and incorporate Transportation Demand Management measures.
8. Continue to investigate emerging technologies that support the City's mobility goals and targets.

Walking and Accessibility

9. Complete and enhance the City's pedestrian network by 2050.
10. Make streets safe for pedestrians.
11. Make infrastructure accessible for all people.
12. Improve the quality and maintenance of pedestrian infrastructure and amenities.
13. Promote and inspire walkability in the City.

Cycling

14. Expand and enhance the City's cycling network.
15. Ensure existing and new cycle routes feel comfortable and safe for people of all ages and abilities.
16. Improve and maintain existing cycling facilities.
17. Provide ample high-quality bike parking and end-of-trip facilities.
18. Promote and support programs that increase cycling in the City.

Public Transit

19. Work with TransLink to provide new and enhanced transit service.
20. Provide transit-supportive amenities to increase ridership.
21. Improve the safety, security and comfort of public transit.
22. Make public transit universally accessible to all people.
23. Implement transit priority measures to improve reliability and speed of buses.
24. Work with TransLink to promote and advocate for transit improvements that will increase transit ridership.

Goods and Services Movement

25. Support the movement of goods and services in the Region.
26. Support strategic methods of goods and services movement and delivery that support the City's mobility goals and targets.
27. Continue to investigate operational opportunities to improve goods and services movement and delivery efficiency.
28. Consider emergency management in making transportation decisions.

Driving

29. Manage the road network through redesigning and reorganizing streets.
30. Manage and optimize road network operations.
31. Manage vehicle movement to reduce collisions and address safety issues.
32. Manage parking to reduce auto dependence.
33. Actively support the realization of infrastructure that enables the use of sustainable vehicles.
34. Significantly increase opportunities for car-sharing in the City.
35. Encourage and promote the use of car-pooling.
36. Continue to manage existing and investigate new people moving services.

As noted, Phase 3 is proposed to include the creation of a series of Actions for each Policy listed above, as well as an Implementation Strategy.

6.4 Proposed Networks

The proposed network maps illustrate the future state of the transportation system in Burnaby for each major transportation topic area.

1. *Land Use, Public Realm, and Transportation Map*
2. *Walking and Accessibility Network*
3. *Cycling Network*
4. *Public Network*
5. *Goods and Services Movement Network*
6. *Driving Network*

7.0 PHASE 2 PUBLIC CONSULTATION PROGRAM

The Phase 2 Public Consultation Program for the Burnaby Transportation Plan is based upon the Public Consultation Framework established in Phase 1, and outlined in the 10 July 2017 Council Report initiating the *Burnaby Transportation Plan* update. The Framework is based on a "graduated" approach which is organized around the three styles of communication:

- Process Awareness (Inform)
- Broad Public Consultation (Inform and Engage)
- Targeted Engagement (Inform, Engage, and Involve)

This approach enables citizens to participate at whichever level of detail they choose.

7.1 Phase 2 Public Consultation Objectives

The *general objectives* for Phase 2 public consultation are to:

- raise awareness of the process and opportunities for input;
- reach a broad audience including residents, employees, businesses owners, service providers, and other stakeholders;
- foster understanding of the draft proposals;
- illustrate proposed solutions to the issues and opportunities raised during Phase 1;
- highlight key relationships, trade-offs, and levers for change;
- address the needs of various stakeholders by providing a range of consultation formats;
- acknowledge and build upon existing and new partnerships; and,
- build support for the new *Burnaby Transportation Plan.*

The *specific objectives* for Phase 2 public consultation are to:

- receive feedback and input on the proposed draft Targets, Big Moves, Policies, and Networks; and,
- identify missing ideas and any changes required to the proposals.

7.2 Phase 2 Public Consultation Activities

This section provides a brief description of the major activities for Phase 2 for each of the three styles of communication already introduced:

1. *Inform - Process Awareness:*

   The intent is to use multiple platforms to provide more general information about the new *Plan* including the process, the transportation system, how the public can get involved, and the vision for the future.

   This phase will be supported by a variety of materials such as a website landing page, social media posts, postcards, posters, brochures, fact sheets, display boards, presentations, and other means to reach a broad audience.

2. *Engage - Broad Public Consultation:*

   The intent is to host and/or attend events and meetings to provide opportunities for feedback on the draft Targets, Big Moves, Policies, and Networks through surveys and conversations with staff.

   This phase will be supported by a variety of materials, as noted above, and events or activities such as:

- ***Phase 2 Launch Event:*** Host an initial launch event for Phase 2 to reveal the work completed so far, invite comment and discussion, and promote other opportunities to engage throughout Phase 2.
- ***Displays at Public Events:*** Go to where the people are by attending or hosting public events throughout the City with pop-up displays to provide information about the *Plan* update and to encourage citizens to get involved, fill out surveys, visit the webpage, and share their ideas and input.
- ***Trade-Offs and Solutions Survey:*** the survey (online and print) would be used to collect opinions about draft Target, Big Moves, Policies, and Networks.
- ***Coffee Conversations Workbook:*** Provide an education workbook that individuals or groups can use to share and discuss the proposals and provide feedback.

3. *Involve - Targeted Engagement:*

This phase will be supported by a variety of materials, as noted above, as well as opportunities for deeper, more detailed conversations such as:

- ***Stakeholder Meetings / Workshops:*** Host or participate in meetings and/or workshops with internal and external stakeholders.
- ***Targeted Community Outreach:*** Conduct traveller interviews with hard to reach and underrepresented groups within the community.
- ***Working Group Meetings and Networking:*** Hold working group meetings which would likely include roundtable discussions on trade-offs and solutions, "in-their-shoes" activities, and other activities on the details of the proposals.

Following the conclusion of Phase 2, a Public Consultation Summary Report summarizing the feedback received and providing next steps would be presented to Committee and Council. The input received during this phase is to be used to inform and refine the proposals leading to the creation of the draft *Plan.*

With Council approval of this report, the Phase 2 Public Consultation Program is anticipated to Commence in April 2020.

8.0 CONCLUSION

This report describes the process for the development of a new *Burnaby Transportation Plan.* It is recommended that Committee recommend that Council endorse the draft Targets, Big Moves, Policies, and Networks as proposals for public consultation, authorize staff to undertake the Phase 2 Public Consultation Program, and that a copy of this report be sent to the Environment Committee, Social Planning Committee, and Traffic Safety Committee for information. Staff believe the proposals put forth for consideration aim to achieve a balanced transportation system,

with a focus on the needs of Burnaby residents while acknowledging inextricable links to the boarder regional system. With Council approval of this report, the Phase 2 Public Consultation Program is expected to begin in April 2020.

E.W. Kozak, Director
PLANNING AND BUILDING

RDSC/sa
Attachments

cc: City Manager
Director Corporate Services
Director Public Safety and Community Services
Director Engineering
Director Parks, Recreation and Cultural Services
Director Finance
City Clerk

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APPENDIX A

Approved

Vision, Themes, and Goals

BURNABY
TRANSPORTATION
PLAN

VISION, THEMES AND GOALS

On March 12, 2018, Council approved a new Vision, Themes, and Goals for transportation in Burnaby.

The Vision is an aspirational description of what the City would like to achieve for its transportation system, and sets the direction for the new Plan. The vision narrative provides an expanded description of what the transportation system would look like in the future. The Themes identify the major topic areas to be addressed in the updated Plan, and the Goals are succinct statements describing what the City aims to achieve under each of the Themes.

The approved Vision, Themes, and Goals form the foundation for the development of an updated Burnaby Transportation Plan. They supersede the vision and goals of the 1995 Burnaby Transportation Plan, and now guide our day-to-day transportation decision making.

VISION:

In Burnaby, all travel choices are enjoyable and the transportation system is the foundation of our thriving public spaces and our quality of life.

The transportation system not only moves people and goods between destinations, but provides places for people to meet and participate in city life.

It is a balanced and inclusive system that offers accessible and safe mobility in support of a healthy, green, prosperous, and connected community.

VISION NARRATIVE

In Burnaby, the transportation system is an important part of the public realm. The streets not only move people between daily activities but provide places for people to meet, linger, and participate in all that the City has to offer.

Burnaby provides:

- a walking environment that makes it easy and delightful to get from place to place;
- a cycling environment that is comfortable and well-connected throughout the City;
- a transit environment that is efficient and pleasant;
- a driving environment that is predictable and reliable; and
- a safe environment for all users.

Burnaby's streets form an important gathering space within neighbourhoods and communities. A place where people greet their neighbours, enjoy shopping and dining, and are entertained and active. The system shapes where people live, work, play, learn, and shop, making it possible for citizens to carry-out their daily activities locally.

The transportation system moves goods and services efficiently and mindfully throughout the City. It includes the integrated use of multiple modes (walking, cycling, transit, cars, trucks, trains, and ships) to connect consumers with products and services. It supports the full range of goods movement from local delivery to importing and exporting in the international marketplace. It helps businesses of all sizes thrive and is part of building complete communities.

Burnaby's balanced and comprehensive transportation system is one that enables citizens to walk, cycle, take transit, drive, or any combination thereof to reach their destinations. It makes it possible to transport goods and services within local communities. It is a multi-modal system that provides access and choice, offers safe and secure mobility, encourages healthy and active communities, protects and enhances the natural environment, supports a prosperous and competitive economy, and builds vibrant, connected communities.

In Burnaby, moving in the City is not just an action, but an experience.

The approved Vision, Themes and Goals will guide our day-to-day transportation decision making.

THEMES:

ACCESSIBLE:

Access and Choice

SAFE:

Safe and Secure Mobility

HEALTHY:

Active People in Healthy, Livable Communities

GREEN:

A protected and enhanced environment

PROSPEROUS:

A thriving, sustainable economy

CONNECTED:

Integrated and well-designed places

THEMES AND GOALS:

THE GOALS FOR AN ACCESSIBLE TRANSPORTATION SYSTEM ARE TO:

- provide people with multi-modal access to their homes, jobs, shops and businesses, educational opportunities, extracurricular activities, and other destinations;
- provide travel options that are easy, reliable, and flexible; and,
- provide inclusive access and choice for people of all ages, abilities, socio-economic levels, and backgrounds.

THE GOALS FOR A SAFE TRANSPORTATION SYSTEM ARE TO:

- reduce deaths, injuries, and conflicts for all modes;
- reduce frequency and severity of crashes for all modes;
- reduce concerns about personal safety and security;
- reduce opportunities for crime and damage to property;
- provide for emergency access and response; and,
- promote safe and respectful behaviour by all mode users.

THE GOALS FOR A HEALTHY TRANSPORTATION SYSTEM ARE TO:

- increase the proportion of trips by active transportation modes (walking, cycling, and transit);
- increase the enjoyment of moving around in the City; and,
- increase the social opportunities for people to interact with each other and their community.

THE GOALS FOR A GREEN TRANSPORTATION SYSTEM ARE TO:

- increase the use of more sustainable transportation modes including walking, cycling, transit, car-share, low- or zero-emission vehicles, etc.;
- increase and support landscaping, biodiversity, and natural systems within street infrastructure;
- increase the resiliency and adaptability of the transportation system;
- reduce the environmental impacts of transportation (greenhouse gas emissions, pollution, and noise); and,
- reduce the distances driven overall.

THE GOALS FOR A PROSPEROUS TRANSPORTATION SYSTEM ARE TO:

- increase the convenience, cost-effectiveness, and reliability of all modes;
- increase the modal options for goods movement and other commercial services;
- increase opportunities for sharing (modes, resources, space, and infrastructure);
- consider opportunities for new technology and ways of traveling;
- improve City operations and maintenance for all modes;
- make investments to increase multi-modal accessibility and choice; and,
- increase the efficiency of finite road space.

THE GOALS FOR A CONNECTED TRANSPORTATION SYSTEM ARE TO:

- increase the integration of land use and transportation planning;
- increase north-south connectivity in the City;
- reduce the impacts of through-traffic within neighbourhoods;
- provide integrated transportation networks that connect the City's neighbourhoods and surrounding communities;
- provide well-designed and high quality streets and public realm;
- provide better information to help people use the transportation system; and,
- provide a balanced transportation system that works for all users.

APPENDIX B

Proposed Draft

Targets, Big Moves, Policy, and Networks

BURNABY
TRANSPORTATION
PLAN

CITY WIDE TARGETS

There are three City-wide targets for Burnaby's transportation system in Burnaby:

- Vision Zero
- Mode Split
- Zero Emissions

These targets serve as measurable outcomes that will ensure that transportation activities in the City are working towards achieving the adopted Vision, Themes, and Goals reflecting the outcome of Phase 1 of the public consultation. They are the link that provides clear and measurable direction for the Vision and are also the mechanism for driving accountability and action. They also serve as a foundation for creating the Big Moves, Policies, and Networks.

Each Target has some overlap with the others but individually has a clear and distinct focus. The following pages provide information and direction for each Target. The intent is that they will motivate change and enable the City to measure and monitor its progress over time.

VISION ZERO

TARGET	OBJECTIVE	MEASURE
Vision Zero	Zero deaths and serious injuries on Burnaby's transportation network	Downward trend toward zero transportation related fatalities and serious injuries

WHAT IS VISION ZERO?

Vision Zero is about transportation safety. It is a call to action that states:

> "No one should be killed or seriously injured while participating in the transportation system."

Vision Zero started as a road safety program in Sweden in 1997. It has since been adopted by many levels of governments around the world as an approach to safety. It is based on the principle that "life and health can never be exchanged for other benefits within the society".

WHY DOES VISION ZERO MATTER?

Safety matters. Safety was a top issue identified by Burnaby residents in the Phase 1 public consultation. When it comes to transportation, a person's choice of how to get around is often influenced by the real or perceived safety of that mode or route. Serious injuries and deaths are not an acceptable consequence of mobility. Instead, under this Vision Zero target, the protection of human lives is a priority and road safety is everyone's business and responsibility.

HOW DID WE SET THIS TARGET?

The target of zero deaths and serious injuries was set based on the principle that every life matters. The aim is the creation of a more forgiving transportation system, where mistakes are less common and when they happen they do not result in death or serious injuries.

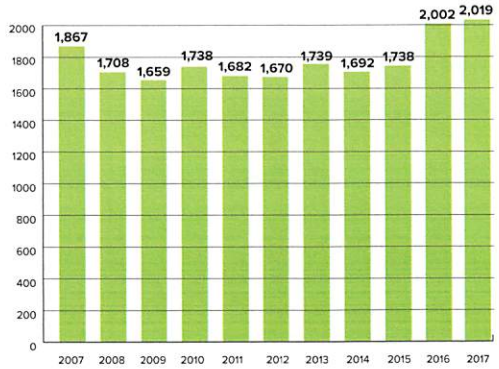
HOW IS VISION ZERO DIFFERENT FROM BEFORE?

TRADITIONAL APPROACH	VISION ZERO APPROACH
■ Traffic deaths are inevitable	■ Traffic deaths are preventable
■ Expects perfect human behaviour	■ Acknowledges that human behaviour is not perfect
■ Individual responsibility	■ Shared responsibility
■ Auto-focused	■ Vulnerable user focused
■ Auto movement approach to design	■ Holistic system approach to design

WHAT ARE THE CURRENT TRENDS?

In Burnaby, there are approximately 20,000 crashes per year, of which approximately 4,000 to 5,000 result in injury or, occasionally, death. Over the past decade, the number of injury crashes per 100,000 residents has remained fairly consistent, with a slight increase in 2016 and 2017.

INJURY CRASHES PER 100,000 POPULATION



WHAT IS BURNABY'S VISION ZERO APPROACH?

The Vision Zero Target enables a holistic systems approach to safety which contributes to achieving the City's transportation vision as well as its social, economic, and environmental sustainability goals.

It includes a two-point proactive and systematic approach:

VISION ZERO	
Safe Streets	**Safe Users**
Looks at the physical design and operations of the transportation system	Looks at the behaviour of people using the transportation system
This Plan includes opportunities to address designing, building, maintaining, and operating streets to improve the overall safety features of the physical street	This Plan includes opportunities to address and provide the education, encouragement, engagement, and enforcement programs to improve the safety of the user

This approach recognizes that to achieve safety as an outcome, it is dependent on both the physical design of the street and on the way people behave on and around the street.

To achieve Vision Zero, the City will work with partners to prioritize the safety of vulnerable street users and identify appropriate steps or pro-active measures to address issues. This will include:

1. **Prioritization of safety for vulnerable users:**

   Emphasis is placed on the safety of vulnerable road users, including people using active transportation modes and at-risk groups such as children, seniors, and those with mobility challenges. This includes prioritizing the design, provision, and maintenance of infrastructure that serves these users.

2. **Transformation of infrastructure to protect vulnerable users:**

   Emphasis is placed on redesigning and reorganizing existing infrastructure in addition to providing new infrastructure that gives more space to pedestrians and cyclists, and separates them from other modes of transportation through public realm improvements.

3. **Reducing speeds:**

   Reducing vehicle speeds on residential streets and speeds of all road and cycling facility users in locations where higher volumes of pedestrians and cyclists are expected to be, through reduction and enforcement of speed limits, appropriate signage, and other traffic calming measures.

Vision Zero is not something that will be accomplished overnight; it is something to strive for. The Big Moves, Policies, and Networks work together towards achieving this Target and accessible, safe, healthy, green, prosperous, and connected mobility for all.

MODE SPLIT

TARGET	OBJECTIVE	MEASURE
Mode split for all trips originating in the City: By 2030, half of all trips will be by public transit or active transportation. By 2040, 2/3 of all trips will be by transit or active transportation. By 2050, 3/4 of all trips will be by transit or active transportation.	Improved mobility for all users of the transportation network	Mode split for all trips by Burnaby residents

WHAT IS MODE SPLIT?

The mode split target represents the desire to have people shift from one mode of transportation to another.

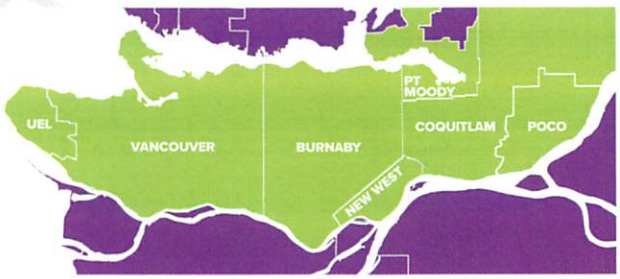
Mode split is a measure of the percentage of travellers using a particular mode of travel. It is measured by counting the proportion of trips made by walking or rolling, cycling, using public transit, or travelling by private vehicle. The mode split is a good indicator of overall land use patterns in a city or area, as well as the quality of choices available within the transportation system. It is the most common way to measure travel behaviour and provides a high level understanding of how people move in and through the City.

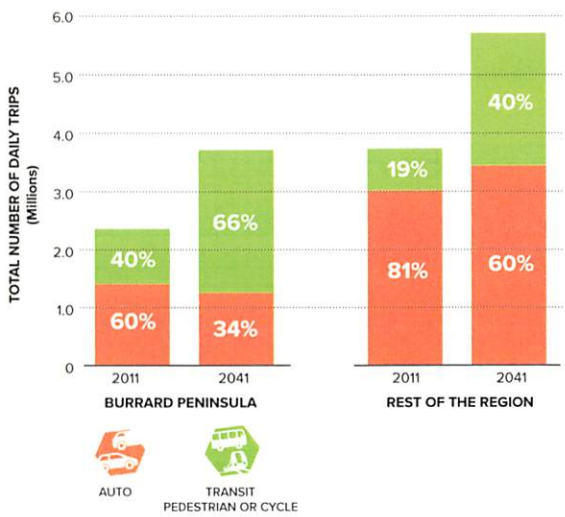
WHY DOES MODE SPLIT MATTER?

As the population and employment in the City and Region continue to increase, the corresponding number of trips will also increase. The street network is largely built out, and cannot accommodate additional trips by private vehicles – there is a fundamental space challenge. In order to move people in a sustainable manner without adding congestion, the share of trips on public transit and by active transportation needs to increase and vehicle use needs to decrease.

HOW DID WE SET THIS TARGET?

The July 2013 Strategic Framework for the Regional Transportation Strategy (RTS) in Metro Vancouver set out targets for the percentage of transit and active transportation on the Burrard peninsula (which includes Vancouver, Burnaby, New Westminster, Port Moody, Coquitlam, and Port Coquitlam) and the rest of the Metro Vancouver Region. Burnaby's mode split target was set in alignment with the Regional Planning and Transportation targets.



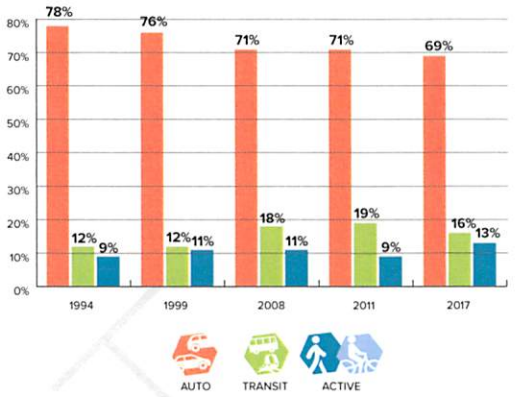


HOW IS MODE SHIFT DIFFERENT FROM BEFORE?

TRADITIONAL APPROACH	MODE SHIFT APPROACH
■ Monitored statistics ■ Focused on road infrastructure ■ Standard parking provisions	■ Prioritization of active transportation and public transit ■ Integration of land use and transportation planning ■ Infrastructure for active transportation and transit ■ Parking management

WHAT ARE THE CURRENT TRENDS?

In 1995, when the Burnaby Transportation Plan was adopted, approximately 21% of all trips were by transit and active transportation. Since then, the percentage mode split to sustainable modes has continued to increase, to just over 30% by 2017.



WHAT IS BURNABY'S MODE SPLIT APPROACH?

The approach to the mode split target focuses transportation decisions on people-moving capacity and enhancing the user experience to encourage a shift away from driving, which contributes to achieving the City's transportation Vision as well as its social, economic, and environmental sustainability goals.

To achieve the Mode Split target, the City will work with partners to:

1. **Prioritize modes – Walking, Cycling, Transit, Goods and Services Movement, and Driving:**

   Emphasis is placed on prioritizing active transportation and transit in terms of needs, investments, and safety measures. It consists of improving infrastructure to support and enhance the experience of all who use sustainable transportation modes.

2. **Better integrate land use and transportation:**

   Emphasis is placed on building complete communities with a diverse range of uses to support integration between where people live, work and play. It recognizes that land use and transportation are closely linked, and that denser, more diverse communities better support walking, cycling and transit.

3. **Build infrastructure that supports sustainable transportation modes:**

   Emphasis is placed on redesigning and reorganizing existing road infrastructure, and providing new infrastructure that gives more space to and separates pedestrians and cyclists from other modes through public realm improvements, and providing for more efficient transit service.

4. **Manage parking to support reduced automobile use:**

   Emphasis is on reducing and managing off-street and on-street parking to encourage a reduction in automobile ownership and use. It includes reviewing current off-street parking bylaws and developing a strategy to better manage access to curb space, including for on-street parking.

The Big Moves, Policies, and Networks work together towards achieving this Target and realizing accessible, safe, healthy, green, prosperous, and connected mobility for all.

ZERO EMISSIONS

TARGET	OBJECTIVE	MEASURE
By 2030, reduce GHG emissions from transportation by 45%. By 2040, reduce GHG emissions from transportation by 75%. By 2050, zero GHG emissions from transportation.	Achieve target of zero emissions from transportation by 2050	Percentage of passenger and commercial vehicles that are zero emissions by fuel source

WHAT IS ZERO EMISSIONS?

Greenhouse gas (GHG) emissions come from buildings, transportation, waste systems and industry. Zero emissions in transportation means moving away from the use of fossil fuels and moving away from the use of fossil fuels, particularly gasoline and diesel. The City will also continue to invest in restorative measures such as increasing greenspace and providing green infrastructure.

WHY DOES ACHIEVING ZERO EMISSIONS MATTER?

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) released a Special Report on Global Warming. The report highlighted the importance of maintaining the global temperature rise at a maximum of 1.5 Celsius in order to avoid the worst impacts of climate change, such as catastrophic sea level rise, more extensive wildfires, summer droughts, and more intense storm events. Historically, slow action on addressing carbon pollution, and its impacts on the climate, have led to the urgent requirement for a rapid transition from fossil fuels to zero emissions energy by 2050.

Many national, state/provincial and local governments around the world have responded to the recommendations in the IPCC report by declaring a climate emergency and tightening their carbon pollution targets. In 2019, the City of Burnaby added its support for GHG reductions by formally declaring a climate emergency to demonstrate its understanding of and commitment towards addressing the climate crisis and the necessity of reducing carbon emissions. It set new targets for a 45% reduction in emissions by 2030, a 75% reduction by 2040, and carbon neutrality by 2050. A number of local municipalities in Metro Vancouver and British Columbia have taken similar steps.

HOW DID WE SET THIS TARGET?

Transportation has a significant impact on GHG pollution. In 2010, approximately half of all emissions and energy use in Burnaby came from transportation.

The Target for zero emissions from vehicles by 2050 aligns with the Metro Vancouver Regional District's Climate 2050 Strategic Framework which commits to a carbon neutral region by 2050. It also aligns with TransLink's commitment to 100% renewable energy in the transit system by 2050.

HOW IS THE ZERO EMISSIONS TARGET DIFFERENT FROM BEFORE?

TRADITIONAL APPROACH	ZERO EMISSIONS APPROACH
■ Working towards better environmental outcomes ■ Little or no fixed targets or deadlines	■ Climate emergency ■ Building complete communities ■ Prioritize active transportation and public transit ■ Shift to low or zero emission vehicles ■ Green design and infrastructure

WHAT ARE THE CURRENT TRENDS?

According to information in the 2010 Community Energy and Emissions Plan (CEEP), the City of Burnaby had one of the lowest emission rates per person in the province (4.3 tonnes per person), which is below the BC average (5 tonnes per person).

WHAT IS BURNABY'S ZERO EMISSIONS APPROACH?

The approach to the Zero Emissions target focuses on reducing the impact of transportation on GHG emissions in the City. Despite the City's relatively low per-capita emission rates, the City needs to significantly reduce emissions by vehicles and continue to provide restorative measures.

To achieve the Zero Emissions target, the City will work with partners to:

1. **Build complete communities to reduce the distances travelled:**

   Emphasis is placed on designing communities that are compact, efficient and complete. Places where people can live, work, attend school, and have access to their daily needs close by, thereby reducing the need to travel longer distances and making it easier to walk, bike, and take public transit.

2. **Switch to low- and zero-emissions vehicles:**

   Emphasis is placed on supporting the use of more sustainable vehicles (this includes electric vehicles, e-bikes, etc.) and other mobility devices, for both personal travel and goods movement. Supports include providing infrastructure such as electric vehicle charging facilities, which encourage drivers to switch to zero-emission vehicles. It also encourages recycling and secondary uses of vehicles, or other mobility devices, when they reach the end of their lifespan (this includes battery recycling, material recycling and recovery, etc.).

3. **Incorporate green design and infrastructure in the public realm**

   Emphasis is on environmentally friendly and sustainable approaches to the public realm and streetscape design, focusing on enhancing ecosystems and beautifying the City. Actions such as establishing a minimum street tree canopy, and incorporating design features promoting increased tree planting, landscaping and the provision of storm water management measures all contribute to a greener public realm. A greener public realm helps to keep the City cooler in the summer, and makes active transportation more enjoyable, supporting the shift to active transportation and public transit.

The Big Moves, Policies, and Networks include measures to reduce and eliminate emissions from transportation activities in the City and work towards realizing accessible, safe, healthy, green, prosperous, and connected mobility for all.

BURNABY TRANSPORTATION PLAN

BIG MOVES

The proposed Big Moves are the main action items that Burnaby will achieve under the new Plan. They offer the greatest opportunities to create change and work towards achieving the aspirational Vision, Themes, Goals, and Targets. There is one big move for each major transportation topic area included in the new Plan:

LAND USE, PUBLIC REALM, AND TRANSPORTATION

Big Move:

Create and implement public realm and street standards for all areas of the City

PUBLIC TRANSIT

Big Move:

Increase public transit ridership by enhancing service, providing amenities and installing transit priority measures

WALKING AND ACCESSIBILITY

Big Move:

Make walking and rolling the first choice for trips under 1km by building high quality pedestrian infrastructure and amenities

GOODS AND SERVICES MOVEMENT

Big Move:

Support green movement of goods and services by encouraging the use of sustainable modes for local deliveries

CYCLING

Big Move:

Build the core of the cycling network by 2030

DRIVING

Big Move:

Achieve no increase in total Vehicle Kilometres Travelled (VKT) by Burnaby residents by 2050

LAND USE, PUBLIC REALM, AND TRANSPORTATION

BIG MOVE:

Create and implement public realm and street standards for all areas of the City

Burnaby has public realm and street design standards for the Town Centres that include wider sidewalks, separated cycling facilities, striking public art, colourful rain gardens, comfortable seating areas, and other enhancements that are making the Town Centre more enjoyable, functional, and beautiful.

But what about the rest of the City?

The big move is to create and implement public realm and street standards for all areas of the City that are based on current and future needs and uses. The new standards will integrate land use and transportation by specifying area-appropriate requirements for a high-quality public realm throughout the City. For example, in Urban Villages, wider sidewalks, cycling facilities, street furniture, and other public realm enhancements will be necessary to accommodate the land uses and densities. In lower-density residential areas, more modest public realm amenities will be required.

The standards will provide clear and concise technical requirements, policies, and processes. They will be developed specifically for the variety of streetscapes in the City to integrate pedestrian, cycling, transit, and driving networks, as well as providing for street trees, rain water management, lighting, public art, and place-making functions. They will incorporate Universal Design and All Ages and Abilities design. By creating and implementing these standards, we affirm that all areas of the City deserve to be pleasant, enjoyable, and functional places to travel and enjoy public life.

WALKING AND ACCESSIBILITY

BIG MOVE:

Make walking and rolling the first choice for trips under 1km by building high quality pedestrian infrastructure and amenities

The biggest challenge for walking and rolling in the City is the lack of high-quality pedestrian infrastructure and amenities with clear connections between destinations.

The big move is to provide high quality, safe, accessible, complete, and enjoyable pedestrian infrastructure and amenities to enable more people to walk to daily needs and activities. In order to encourage the use of the infrastructure and amenities, particularly for trips that are less than one kilometre, there need to be clear connections between destinations, such as schools, recreation centres, and other daily activities. In other words, the sidewalk has to lead somewhere in order for people to use it.

To make walking and rolling the first choice, investments in pedestrian infrastructure and amenities should prioritize key pedestrian corridors, Town Centres, Urban Villages, and around transit, as well as connections to and from local destinations (schools, recreation centres, etc.). The intent is to accelerate sidewalk construction to achieve completion by 2040.

CYCLING

BIG MOVE:

Build the core of the cycling network by 2030

The greatest challenge for cycling in the City is the lack of a clear, consistent, and complete "core" network for cycling, that provides a base level of access across the City: one that connects the four Town Centres, as well as major destinations, and neighbouring municipalities.

The big move is to build the core cycling network by 2030. The core network is a small group of key routes that connect across the City. These routes will be safe, high quality, clear, consistent, complete, and enjoyable for all users. They will be 'triple A' facilities (All Ages and Abilities) in order to encourage increased cycling in the City for both mobility and leisure activities.

To make cycling a viable option and choice for more users in the City, investments in the "core" network, including both its infrastructure and amenities, will be prioritized. The intent is to have the core cycling network completed by 2030.

PUBLIC TRANSIT

BIG MOVE:

Increase public transit ridership by enhancing service, providing amenities and installing transit priority measures

Enhancing transit service can take the form of increasing frequency and reliability of existing routes or providing new transit routes and infrastructure. While the City can advocate for improvements, the provision of transit is under the jurisdiction of TransLink.

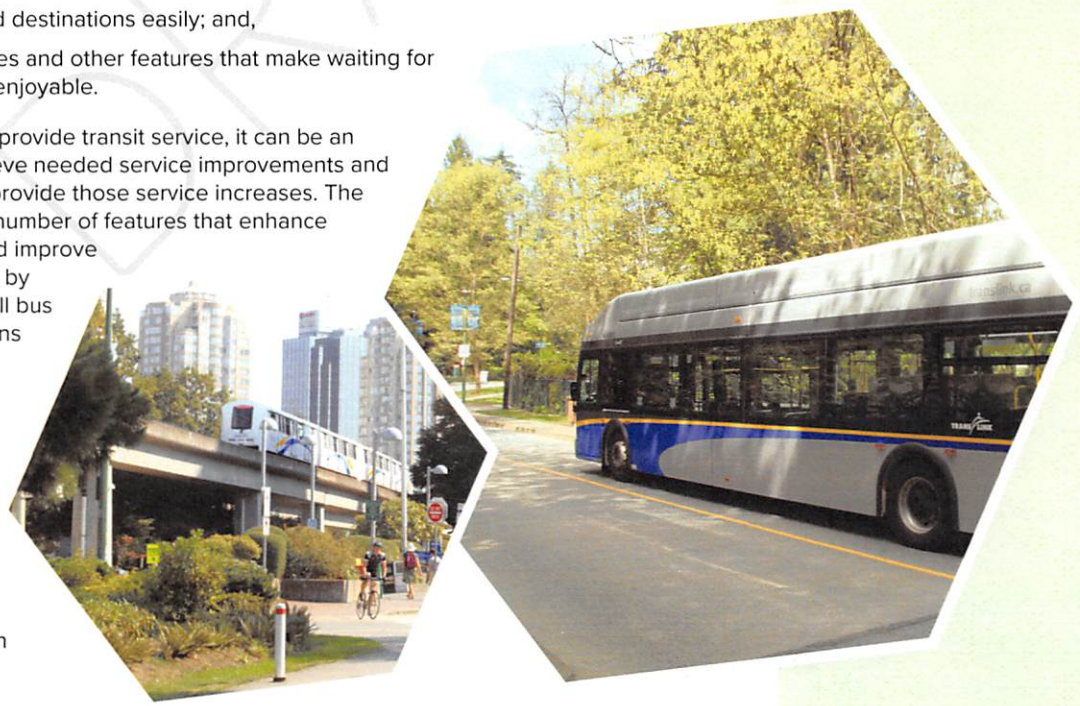
Apart from issues related to service and frequency of transit, there are three main challenges for transit in the City:

- not all stops have amenities such as bus shelters, lighting, etc.;
- not all stops are fully accessible; and,
- service schedules can be unreliable or disrupted due to congestion.

The big move is to increase transit ridership by advocating for improved service, and by enhancing the user experience. In order to attract more users, transit needs to go where and when people need it to go, as well as be reliable and enjoyable. People will choose and rely on transit as their preferred mode of travel if they are able to:

- walk or bike a short distance to the service;
- access the service safely and comfortably throughout the day;
- have a short, predictable, wait time for the service;
- have faster or comparable journey times to driving;
- reach desired destinations easily; and,
- have amenities and other features that make waiting for transit more enjoyable.

While the City does not provide transit service, it can be an active advocate to achieve needed service improvements and work with TransLink to provide those service increases. The City can also provide a number of features that enhance the user experience, and improve the desirability of transit by providing amenities at all bus stops and transit locations across the City. It can also work to improve the reliability of transit by supporting and providing transit priority measures ranging from intersection queue-jumpers to continuous bus lanes to reduce the impact of congestion on buses.



GOODS AND SERVICES MOVEMENT

BIG MOVE:

Support green movement of goods and services by encouraging the use of sustainable modes for local deliveries

In Burnaby, the challenge is how to facilitate and encourage more sustainable ways of moving goods and services.

The big move is to support more sustainable goods and services delivery, particularly for local pickup and deliveries. The demand for fast, direct delivery is increasing as online shopping for everything from clothes to food to large items and small gadgets increases. The increased number of individual deliveries to individual areas or addresses has the potential to create additional congestion. By supporting consolidated deliveries using sustainable modes, the impacts of increased demand for urban freight trips can be reduced. The City will support, encourage, and advocate for local goods and services movement to be made by more sustainable modes including:

- Walking to pick-up parcels and smaller items from nearby locations (eg. post boxes or e-commerce lockers);
- Cycling to pick-up or deliver goods and services that are smaller and are travelling shorter distances (eg. bike courier);
- Encouraging the use of low or zero emissions vehicles for larger heavier deliveries that travel longer distances;
- Encouraging deliveries to be consolidated based on destination and not on the carrier delivering in order to cut down on the number of individual delivery trips; and,
- Ensuring that new and emerging technologies, eg. drone delivery, do not result in excessive noise pollution or adverse impacts on the public realm.

The intent is to facilitate and encourage more sustainable ways of moving goods and services within the City to mitigate and reduce emissions, pollution, noise, and space challenges.

DRIVING

BIG MOVE:

Acheive no increase in total Vehicle Kilometres Travelled (VKT) by Burnaby residents by 2050

The population of the City and region is continuing to increase every year. By 2050, we are expecting approximately 140,000 new residents in the City. If these new residents continue to drive at the same rate as current residents and there is no shift in driving behaviour, there would be a significant increase in the number of vehicles on City streets. The challenge is that there will not be enough space to accommodate this increase in traffic. The solution is to move more people in the same amount of space using transit and active transportation modes (higher capacity people-moving methods).

The big move is to maintain or reduce the total number of kilometres people drive by vehicle despite increases in population. The distance travelled by automobiles is an important indicator of the level of sustainable land use patterns where people are able to live, work, study, shop, and access recreation and other services within shorter distances.

In order to have no increase in the total VKT by Burnaby residents, investments in walking, cycling, and transit infrastructure and amenities will be prioritized and land use policies will focus on creating compact mixed use communities to enable greater mobility choice. Road capacity will be enhanced for modes with greater people moving capacity and for goods and services movement. The focus is on reducing the total VKT of Burnaby residents; however, we will advocate for regional transportation policies that align with our values and result in a similar change in travel patterns regionally.

BURNABY TRANSPORTATION PLAN

POLICY

The proposed Policies set clear direction for decision making and demonstrate the approach to transportation planning in the City. There are Policies for each major transportation topic area to be included in the new Plan, for a total of 36 Policies:

LAND USE, PUBLIC REALM, AND TRANSPORTATION

Policies:

1. Prioritize active transportation and public transit
2. Increase the integration of land use and transportation planning, recognizing that land use is critically important to the City's mobility goals and targets
3. Significantly increase wellbeing and the enjoyment of moving in the City by providing a high quality public realm (streets, sidewalks, and public spaces)
4. Make it easy to combine trips and navigate the City
5. Incorporate green design and infrastructure in the public realm
6. Enable and support creative uses of the street to promote a more vibrant public realm
7. Support and incorporate Transportation Demand Management measures
8. Continue to investigate emerging technologies that support the City's mobility goals and targets

WALKING AND ACCESSIBILITY

Policies:

1. Complete and enhance the City's pedestrian network by 2050
2. Make streets safe for pedestrians
3. Make infrastructure accessible for all people
4. Improve the quality and maintenance of pedestrian infrastructure and amenities
5. Promote and inspire walkability in the City

CYCLING

Policies:

1. Expand and enhance the City's cycling network
2. Ensure existing and new cycle routes feel comfortable and safe for people of all ages and abilities
3. Improve and maintain existing cycling facilities
4. Provide ample high-quality bike parking and end-of-trip facilities
5. Promote and support programs that increase cycling in the City

GOODS AND SERVICES MOVEMENT

Policies:

1. Support the movement of goods and services in the Region
2. Support strategic methods of goods and services movement and delivery that support the City's mobility goals and targets
3. Continue to investigate operational opportunities to improve goods and services movement and delivery efficiency
4. Consider emergency management in making transportation decisions

PUBLIC TRANSIT

Policies:

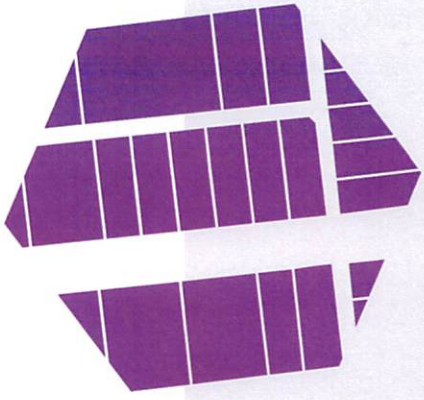
1. Work with TransLink to provide new and enhanced transit service
2. Provide transit-supportive amenities to increase ridership
3. Improve the safety, security and comfort of public transit
4. Make public transit universally accessible to all people
5. Implement transit priority measures to improve reliability and speed of buses
6. Work with TransLink to promote and advocate for transit improvements that will increase transit ridership

DRIVING

Policies:

1. Manage the road network through redesigning and reorganizing streets
2. Manage and optimize road network operations
3. Manage vehicle movement to reduce collisions and address safety issues
4. Manage parking to reduce auto ownership and dependence
5. Actively support the realization of infrastructure that enables the use of sustainable vehicles
6. Significantly increase opportunities for car-sharing in the City
7. Encourage and promote the use of car-pooling
8. Continue to manage existing and investigate new people moving services

LAND USE, PUBLIC REALM, AND TRANSPORTATION



The public realm and land use are two key components that influence transportation, including when, where, why, and how people move, in the City:

- The public realm is the space between buildings that is publicly accessible, such as streets, open spaces, and other public areas. It is the space that supports public life and social interaction.
- Land use planning involves the management and regulation of specific uses on properties and contributes to the types of activities that occur in the public realm.

Many transportation challenges can be addressed through good land use planning and by providing a high quality public realm. Burnaby's land use structure, for example, has been focused on building complete communities where people can access their daily needs (home, work, school, shopping, recreation, etc.) locally. In addition, Burnaby has placed greater emphasis on creating a high quality public realm, one that creates an enjoyable, safe, and convenient environment around walking, cycling, and transit. These efforts have improved transportation and mobility choices within the City of Burnaby.

A common way of thinking about these relationships is through the six "D"s of urban development. The following questions, using the six "D"s, further illustrate the relationship between transportation, public realm, and land use:

Diversity – are there a mix of land uses, including housing types and job types, which make it easier for people to live, work, play, shop, and learn within their neighbourhood or without having to travel far?

Density – are there higher density residential areas and employment districts within walking and cycling distance that support amenities and transit?

Destinations – are destinations located within walking or cycling distance and at or near frequent transit?

Distance – are the networks for walking, cycling, and transit well-connected and fine-grained enough to enable shorter and more direct connections, making these options easier and more convenient? Is it easy to navigate and combine trips?

Design – are there high quality and well-designed buildings and public realm that create interesting, active, and safe places for people to walk or cycle, as well as provide opportunities to linger and participate in public life?

Demand Management – is it worthwhile to walk, cycle or use transit? Are there incentives which make walking, cycling or transit more attractive choices than driving? Are there measures in place that make driving less attractive (such as traffic calming measures, parking costs, etc.)?

This section provides policies for prioritization, integration of land use and transportation planning, well-being and enjoyment, wayfinding, green design and infrastructure, creative street use, transportation demand measures, and emerging technologies.

Burnaby has increased the focus on creating a high quality public realm that makes walking, cycling, and transit more convenient, safe, and enjoyable. In doing this, transportation and mobility choices are continuing to improve.

POLICIES

1.0 Prioritize active transportation and public transit

People are more likely to use active transportation (walking and cycling) and transit if their routes are pleasant and convenient. Designing public spaces, streets, and trails that improve neighbourhood connectivity, and that also feel safe and interesting, will encourage people to walk, bike, and take transit more regularly. These active modes cost less from both a personal and a community perspective as they require less infrastructure, resources, and space than private vehicles while accommodating more people. Overall, prioritizing active transportation and transit results in a better city for everyone. When more individuals walk, cycle, and take transit, the transportation system better services everyone, including drivers. Prioritizing active transportation and transit will require the provision of facilities and amenities that improve the walking, cycling, and transit experience. The City will use the Prioritization Pyramid as a guide for decision making as it relates to transportation design, infrastructure, budgets, and more.

a) Walking and Rolling

b) Cycling and other Micro-Mobility

c) Public Transit

d) Goods and Services Movement

e) Private Vehicles

Note: *This approach does not mean that users at the top of the pyramid will always receive top priority on every street given the variety of constraints that can occur in urban environments. It does, however, require that the conditions be assessed in a manner that protects vulnerable users, and addresses the needs of each mode either on a specific street or on parallel streets.*

2.0 Increase the integration of land use and transportation planning, recognizing that land use is critically important to the City's mobility goals and targets

Integrating land use and transportation planning leads to better transportation options and choice for more people. Having a diversity of land uses, densities, and destinations in close proximity makes it easier to walk and cycle because the trips are shorter. Higher-density areas with a mix of housing and job types support and justify rapid transit options for longer-distance trips. Conversely, areas within easy access of good transit are well suited to higher density mixed-use development. The integration of the City's land use plans and transportation system has a significant influence on travel behaviour. The City will improve the integration of land use and transportation planning to enhance the overall livability of the City.

3.0 Significantly increase wellbeing and the enjoyment of moving in the City by providing a high quality public realm (streets, sidewalks, and public spaces)

When a public space is enjoyable or contributes to a person's wellbeing, that person is more likely to continue to use the space and participate in public life. Creating high quality, well designed spaces will encourage more people to not only use and participate in the public realm, but also contribute to greater enjoyment of the City and healthy lifestyles. High quality public spaces can reflect and enrich neighbourhood character and help create a sense of place as well as contribute to the variety and vibrancy of the urban fabric. When designing public realm, the City will base it upon universal design principles and to consider the needs of all who will use it.

4.0 Make it easy to combine trips and navigate the City

Wayfinding refers to the systems that provide information and guide people through their environments. The ability to navigate the City easily enables a better understanding and experience of public space. The provision of easy-to-understand wayfinding materials (maps, signage, trip-planning tools, etc.), including routing and other information is key to helping people understand and move through the City. In addition to wayfinding, it is important to be able to combine trips and modes to extend the distances that people can travel. For example, cycling is often combined with other modes of transportation, particularly for longer distances, where there are gaps in the cycling network, or where topography is challenging. Opportunities such as being able to bring a bike on transit or a car-share vehicle, and access safe and secure bicycle parking, greatly assist in the ability to combine trips. Providing clear and consistent wayfinding information will also help those using multiple modes navigate the different networks in the most efficient and effective manner. The City will continue to improve and support opportunities for improved navigation and wayfinding as well as make it easy to combine trips to provide the greatest level of choice and accessibility within the City.

5.0 Incorporate green design and infrastructure in the public realm

Green design and infrastructure focuses on environmentally-friendly and sustainable approaches to improve the public realm and streetscape with an emphasis on enhancing ecosystems. Providing rain and storm water management, more permeable surfaces, increased street-tree and overall tree canopy, more landscaping, and other low-impact public realm features contributes to a healthier environment, reduces flooding, beautifies the City and results in a more enjoyable, comfortable, and sustainable community.

6.0 Enable and support creative uses of the street to promote a more vibrant public realm

Within Burnaby, there are a variety of activities, festivals, parades, block parties, and other types of events that occur on streets. These activities range in scale from large city-wide events such as Hats-Off Day to Car Free day to small markets and other even smaller social activities like block parties. Burnaby's streets offer an opportunity to use space differently, in appropriate locations, for other activities in addition to serving transportation needs. Traditionally, streets have been social space – a gathering place to meet neighbours, for kids to play street sports and other games, and a place to build community. Therefore, this policy aims to enable and support these creative and community building uses to enrich livability in the City.

7.0 Support and incorporate Transportation Demand Management measures

Transportation Demand Management (TDM) is the use of policies, programs, services and products to influence whether, why, when, where, and how people travel. These can motivate people towards more sustainable travel choices by shifting modes, destinations, times, and frequencies. Supporting and incorporating TDM measures will effectively manage driving demand by making the alternatives to driving more appealing and providing incentives, disincentives, education, promotion, and encouragement. Examples of TDM measures include providing transit passes, car-share vehicles and parking, bicycle parking, mobility pricing, parking charges, reduced parking provision, and more. The aim is to reduce unnecessary vehicle trips, and the congestion they cause, while also improving transit, goods and services delivery, and active transportation options.

8.0 Continue to investigate emerging technologies that support the City's mobility goals and targets

New technology is developing and changing rapidly. It is difficult to predict what new technologies may emerge, and the impacts that they may have on the public realm and travel patterns. In many cases the technologies are still evolving, or are too new to have all the answers. It will be imperative for the City to investigate emerging technologies as they arise, in order to determine which ones will support and help to achieve the City's mobility goals and targets. The City will weigh the pros and cons of each technology as it arises in order to determine the best way forward.

WALKING AND ACCESSIBILITY

Everyone is a pedestrian, as all trips begin and end with walking or rolling. A pedestrian is defined as a person traveling by foot, as well as those traveling using mobility-assistance devices such as wheelchairs or walkers, people using strollers, people working with assistance animals such as guide-dogs, and those using other smaller devices to move or travel. It is an activity in which most of the population can participate, because it has the fewest barriers. It is the greenest, most affordable, and most space-efficient mode of travel and enables the widest variety and flexibility of routes for people to go places.

Walking is the greenest, most affordable, and most space-efficient mode of travel.

Pedestrian infrastructure and amenities include sidewalks, walkways, bridges, multi-use paths, park trails, crosswalks, intersection curb ramps, lighting, signals, signage, waste and recycling receptacles, seating, trees and landscaping, universal design, and other features that make travelling easier and more convenient, comfortable, enjoyable, and safe.

In Burnaby, there are places where being a pedestrian can be a challenge due to a lack of sidewalks, fewer direct routes between origins and destinations, or where the quality of the space makes it undesirable, uncomfortable, unsafe, or inaccessible. Providing infrastructure (such as sidewalks and curb ramps) and amenities (such as benches and lighting) that support walking and rolling is an important and critical part of enabling mobility, promoting public health, facilitating equity and choice, enhancing the environment, and encouraging community-building.

To prioritize and increase walkability and accessibility in the City, this section focuses on pedestrian infrastructure and amenities, safety, accessibility, quality and maintenance, and promotion.

POLICIES

1.0 Complete and enhance the City's pedestrian network by 2050

The Burnaby pedestrian network is highly variable. There are areas where sidewalks and pedestrian infrastructure are high quality and connect to destinations, and there are areas where the sidewalks and footpaths are incomplete, do not exist, or are of poor quality. This presents an opportunity to fill in the gaps, remove barriers, and improve connectivity for pedestrians by completing and enhancing a high quality network.

2.0 Make streets safe for pedestrians

Pedestrians are the most vulnerable users of the street and have much higher risk of injury or death if involved in a crash. Providing safe facilities is a key component of enabling and encouraging pedestrian travel. Both real and perceived safety concerns can be addressed through pedestrian oriented design. This includes providing lighting, clear and direct routes, separation from vehicles and cyclists, safe crossings, reducing speeds, and more. As sidewalks, multi-use paths, and other linkages are built or enhanced throughout the City, pedestrian safety will continue to be a top priority.

3.0 Make infrastructure accessible for all people

Accessibility in this context means that all people have physical and locational access to destinations. To use the example of walking: paths or sidewalks are a short distance from home or work, with curb cuts, benches and good lighting. The application of universal design guidelines will ensure that accessibility is achieved for all people. This means providing infrastructure that enables and encourages everyone, regardless of physical or cognitive ability, age, or background, to use the pedestrian network to participate in their daily activities. It also requires that alternative, accessible pedestrian facilities are provided when regular routes are blocked during construction.

4.0 Improve the quality and maintenance of pedestrian infrastructure and amenities

Walking has a number of benefits that are further enhanced by the quality of the space, including health and happiness, environmental benefits, social engagement and inclusion, safety and security, and economic vitality. By making walking enjoyable, the benefits multiply and so do the number of pedestrians. Walking is enjoyable when it's easy, flexible, safe, comfortable, includes universal design, and there are interesting surroundings. This requires both the provision of high quality infrastructure and amenities as well as prioritizing the maintenance of these facilities.

5.0 Promote and inspire walkability in the City

Influencing behavior and changing the way people move around the city requires the right infrastructure to be in place. It also requires other measures and programs aimed to educate people about the benefits of walking and rolling, encourage more people to try walking and rolling, and enforce safe and respectful behaviour by all street users.

CYCLING

Cycling is a great transportation option for many people and offers a number of benefits:

Health and Happiness:

Cycling is a great form of exercise. Exercise can improve health and happiness, thereby improving mental functions such as memory, reasoning, and planning, decreasing anxiety and stress, improving sleep, and lowering the risk of cardiovascular diseases, obesity, and premature death.

Environmentally Friendly:

Cycling requires less space and resources than most other modes. Bikes take less energy to make and they do not produce harmful emissions or noise pollution. Cycling is the most energy-efficient mode as it requires less than half the energy of walking to travel the same distance.

Cost Effective:

Cycling is relatively inexpensive in terms of personal costs (such as ownership, maintenance, storage, etc.) and infrastructure costs (such as bike facilities, bike parking, etc.). Bikes offer more efficient and affordable connectivity over longer distances than walking allows. Cycling also contributes to economic development by connecting people with jobs, increasing property values, and generating revenue for businesses outside the cycling industry.

Place Making Qualities:

Cycling encourages the use of community destinations and local amenities. It increases the catchment area for each transit stop, and having more people cycling increases the feeling of safety through natural surveillance and community interaction.

In Burnaby, the cycling network has grown gradually over the last two decades. However, it suffers from a lack of consistency in quality, connectivity between destinations, end of trip cycling amenities, and appropriateness for all ages and abilities. Burnaby's topography is another challenging factor. Steep hills and physical barriers like Burnaby Lake and Deer Lake add distance, time, and generally make it harder for people to move around by bicycle. Developing a cycling network that offers a safer and more enjoyable way of getting around for a broader range of people is an important part of growing cycle ridership and providing greater mobility choice. Advances in electric bicycle technology are making cycling a viable choice for people of a broader range of ages, abilities, and fitness levels, and is increasing the distances that people can travel. A bike's small size makes it a flexible mode of transportation. Lastly, cycling offers affordable connectivity.

To increase cycling in the City as a sustainable and affordable option, this section provides policies that focus on creating a core grid, as well as enhancing the broader cycling network, comfort and safety, improvements and maintenance, amenities, and promotion.

A cycling network that offers a safer and more enjoyable way of getting around for a broader range of people is an important part of growing cycle ridership and providing greater mobility choice.

POLICIES

1.0 Expand and enhance the City's cycling network

While the Burnaby cycling network has grown, many people are choosing not to ride because the routes are not direct, complete, or lack comfort and safety. To encourage more people to cycle, a cohesive and legible network includes routes that are direct, low stress, and comfortable for everyone. The network should provide convenient access to important destinations like schools, community centres, libraries, transit stations, employment areas, and shopping areas.

The cycling network will include:

- A core network of approximately 10 routes that provide clear, consistent, and continuous connections between the town centres, major destinations, and to neighbouring municipalities. This core network is to be fully constructed by 2030.
- A series of well-spaced routes throughout the City which provide an appropriate density of routes in addition to the core network will be added over time.

The City will expand and enhance the cycling network to increase cycling.

2.0 Ensure existing and new cycle routes feel comfortable and safe for people of all ages and abilities

Safety and comfort are the primary concerns for cyclists in the City. Both real and perceived safety and comfort issues must be addressed in order to grow cycling as a practical, enjoyable, healthy, green, and affordable way to travel. Building cycling infrastructure that is separated and feels comfortable and safe for people of All Ages and Abilities (AAA) will increase the appeal of cycling to a wider mix of people and relieve concerns about safety and comfort. In addition, introducing speed limits and other measures to limit conflicts between cyclists and pedestrians on shared facilities will increase safety and comfort for everyone.

3.0 Improve and maintain existing cycling facilities

Improving and maintaining existing cycling facilities is important for safety as well as for increasing the confidence of cyclists. Over time, existing cycling infrastructure will need to be improved as best practices for the design and regulation of cycling facilities evolve. It is important to properly maintain cycling infrastructure, and to provide suitable alternatives when cycling routes are blocked due to nearby construction. Cycling is more likely to be an everyday option if the facilities are kept in a good state of repair. Cyclists are particularly vulnerable to hazards such as uneven paving, potholes, pooling water, broken glass, snow, ice, and other debris that can be found on cycle facilities and streets. Regular maintenance helps keep the routes free of hazards, which improves comfort, safety, and the user experience.

4.0 Provide ample high-quality bike parking and end-of-trip facilities

Bike parking is necessary when cyclists reach their destination. It should be convenient, safe, and secure no matter the length of stay. There are a variety of different types of bike parking. Well-designed bike storage, parking areas, or sidewalk racks provide a basic level of security, and are typically used for shorter stops. Bike rooms, cages, lockers, or automated storage systems typically provide a higher level of bicycle protection while being more suited to longer term parking such as at school, home or work. End-of-trip facilities, such as change rooms and showers, are necessary amenities to encourage cycling.

5.0 Promote and support programs that increase cycling in the City

Influencing behavior and changing patterns requires more than just providing the right infrastructure and amenities. Cycling needs to be promoted and encouraged through education programs which empower people of all ages to feel comfortable riding bicycles. Programs such as bike-share provide convenient access to bicycles without the need for ownership, storage or maintenance. Together with providing infrastructure and amenities, these programs support and encourage increased cycling in the City,

PUBLIC TRANSIT

The best public transit is frequent, reliable, fast, accessible, safe, comfortable, and goes where people need and want to go. It is the most space-efficient, environmentally friendly, and affordable way to move large numbers of people. Transit is the primary alternative to vehicular travel for longer distance trips. It supports walking and cycling by extending the distances that a person can travel as well as complements driving by reducing congestion.

Transit supports walking and cycling by extending the distances that a person can travel as well as complements driving by reducing congestion.

Transit supports the social, environmental, and economic sustainability of the City. It connects people to local and neighboring communities, jobs, services, amenities, institutions, and other daily needs. It supports economic growth and development by increasing competitiveness, productivity and economic efficiencies for businesses, reducing the economic impacts of congestion, pollution, and collisions, and reducing personal transportation costs. It reduces greenhouse gas (GHG) emissions, and supports compact development and land uses, which conserve land and reduce the distances people need to travel.

TransLink is responsible for the region's transit planning and service delivery. While the City does not own or operate the transit system, it can provide transit-supportive measures on streets and in public spaces, make land use decisions that support transit, and protect corridors and sites for future transit improvements. The City can also work with TransLink and advocate to higher levels of government to build or provide higher orders of transit service.

Burnaby is generally well served by transit with 11 SkyTrain stations on two lines, 30 bus routes and over 650 bus stops. In order to meet the needs of the growing population in Burnaby and region, and to substantially increase transit capacity and encourage ridership, the City needs to continue to work with TransLink and advocate for improvements to transit service, including additional route choices, more frequent service, and network optimization.

This section provides policies that focus on things that the City can do to enhance the network, amenities, safety and security, accessibility, and support transit priority measures to make transit more attractive and desirable.

POLICIES

1.0 Work with TransLink to provide new and enhanced transit service

A good transit system needs to provide fast, frequent and reliable service, while being comfortable, safe, and accessible for all users. It also needs to be a complete network, enabling people to move easily from where they are to where they need or want to go, as quickly and reliably as possible. Providing new transit infrastructure, such as new rapid bus or other new services that are separated from congestion caused by general traffic, would result in faster, more reliable service, and attract more riders. In order to provide greater mobility freedom and increase ridership, the City will continue to work with TransLink to provide new and enhanced infrastructure and services.

2.0 Provide transit-supportive amenities to increase ridership

The provision of supportive amenities makes it more comfortable for more people to take transit. By providing transit stop amenities such as shelters, benches, lighting, and waste and recycling receptacles, waiting for the bus becomes more comfortable and inviting. Other amenities such as public Wi-Fi access, enhanced wayfinding maps, and real-time transit information (eg. signs displaying the actual arrival time of the next bus), enhance the user experience and make taking transit more predictable and enjoyable. Transit use can also be encouraged by providing a more walkable environment, which includes building sidewalks that are well-designed, spacious, safe, accessible, and provide direct access to transit stops and stations.

3.0 Improve the safety, security and comfort of public transit

The decision to use the public transportation system is influenced by perceived and actual safety and security concerns, as well as the user's overall comfort. Measures such as better lighting and security at transit stops can improve perceptions and reality of safety and comfort. If a person feels comfortable waiting at a bus stop or making their way through a SkyTrain station at any time of the day or night, then they are more likely to use transit. When locating and designing transit stops, the provision of amenities or commercial uses which make the location more vibrant, will contribute to increased safety, security, and comfort.

4.0 Make public transit universally accessible to all people

An effective and equitable transit system provides universal access for everyone. Transit access can be considered in three ways:

- Locational Access: refers to whether a person can get to their destination using the transportation system.
- Physical Access: refers to the concept that everyone, regardless of age or physical ability, has the mobility they need for their daily activities.
- Financial Access: refers to the notion that the transportation system is affordable for the majority of people, and that economic means is not a barrier to mobility.

The City will work with Translink and other partners to continue to improve the accessibility of the transit system.

5.0 Implement transit priority measures to improve reliability and speed of buses

Congestion has a significant impact on the reliability and travel time for buses. Giving priority to buses through physical and operational measures can reduce delay and increase reliability. The significant time savings and increased reliability realized by bus priority measures can help attract and maintain transit users. Bus priority measures include dedicated bus lanes, transit priority signals, bus queue jumper lanes, transit-only links, and other technologies and infrastructure. The City will work with TransLink and other partners to implement these measures to decrease the length of time buses spend in congestion and make bus travel more efficient.

6.0 Work with TransLink to promote and advocate for transit improvements that will increase transit ridership

A high quality public transit is system is achieved through partnerships. The City will work with TransLink to promote the use of transit in the City to increase ridership. This includes encouragement, education, enforcement, and promotional activities that motivate people to use transit more. The City will also work with TransLink to advocate for safe, reliable, frequent, and comfortable transit, as well as improved services, amenities, facilities, and more consistent funding sources to achieve the City's mobility goals and targets.

GOODS AND SERVICES MOVEMENT

The movement of goods and commercial services is essential and has a significant impact on Burnaby's economy. As consumers, the movement of goods is important because people expect to have food, clothing, furniture, and thousands of other products readily available. Workers are employed in the design, production, sale, and delivery of these goods and services. As the City continues to grow, it will be important to maintain the efficient movement of people, goods, and services, whether it's for local business and residents or on route to global destinations.

As the City continues to grow, it will be important to maintain the efficient movement of people, goods, and services, whether it's for local business and residents or on route to global destinations.

The movement of goods and services to, from, and through the City occurs in a variety of ways:

By Road:

A range of different vehicles from larger trucks to smaller delivery vehicles to bike couriers are used to transport goods and services in the City. At both the local and regional level, the majority of goods and services movement is by truck. The use of alternative delivery methods, such as electric bikes, smaller vehicles, centralized pick-up locations, and more, are increasing as businesses attempt to "right-size" their transport options. Each of these delivery methods has its own challenges for the road network and loading areas. For instance, the growing demand for express delivery of products ordered online is impacting the location and size of loading area needs for destination buildings. Trucks and delivery vehicles often compete with other vehicles on congested roadways, resulting in potential safety issues, impacts on air quality, and increased travel time for all.

By Rail:

There are four railway service providers in Burnaby: Canadian National Railway, Canadian Pacific Railway, Burlington Northern Santa Fe Railway, and the Southern Railway of BC. These railways carry a total of about 40 – 50 trains per day through Burnaby. The trains carry a variety of goods including containers and bulk commodities (coal, grain, chemicals, fertilizers, forest and petroleum products). The Federal Government regulates movement by rail. However, the City can work with other levels of government to manage the impacts of rail traffic including congestion and safety at at-grade crossings.

By Ship and Water:

On Burrard Inlet and the Fraser River, freight moves in vessels ranging from barges to ocean-going ships, or floats directly on the water in log booms. The Port of Metro Vancouver serves as the governing body for goods movement by water.

In Burnaby, factors such as the cost of fuel, globalization, changes in the supply chain, cost of food production, and other issues will continue to have impacts on how freight is moved within the City. The local, regional, provincial, national, and international economy relies on the efficient movement of freight to get goods and products to the businesses that sell or distribute them, and ultimately into the hands of consumers. Increases in green technology and e-commerce, such as on-line shopping and food delivery companies, are changing the way people purchase and receive products and services. It is important to enable the efficient flow of goods and services in more sustainable modes and systems, while also moving people and goods in and through the City.

In addition to goods and services movement, emergency services are of vital importance to the city. Emergency services including police, fire, ambulance, and other emergency providers need to be considered within the transportation system.

This section provides policies that support the movement of goods and services in the Region, strategic methods of movement and delivery, and operational improvements, as well as emergency services.

POLICIES

1.0 Support the movement of goods and services in the Region

Metro Vancouver is the third largest metropolitan area in Canada. It is home to a population of around 2.5 million (2016), and is expected to grow by one million over the next 30 years. Metro Vancouver also has the largest port in Canada's Asia-Pacific Gateway for goods movement to and from the west coast of Canada. Many of these regional and international movements of goods pass through Burnaby, whether it is via roads, rail, or water. Because of this, the City will continue to be an important link within the region and will need to continue to participate in the regional goods and services network.

2.0 Support strategic methods of goods and services movement and delivery that support the City's mobility goals and targets

It is critical to both the Region and the City that the needs of goods and services movement and of the community are balanced for the benefit of all. For example, heavy trucks are essential for moving goods, but they can negatively impact the livability of the communities they pass through by contributing to noise, vibration, emissions, and concerns about safety. Solutions to these issues include innovative measures that reduce the carbon footprint of delivery vehicles, such as the right-sizing of vehicles, the use of alternative fuel sources, low or zero emission vehicles, bike couriers, and more. The City needs to be flexible and resilient to meet the changing patterns of goods and services delivery.

3.0 Continue to investigate operational opportunities to improve goods and services movement and delivery efficiency

Major employment centres, industrial sites, construction projects, and other commercial businesses, as well as residents, depend on the City's transportation system for the delivery of goods and services. The movement of goods and services takes place in various forms ranging from the shipment of construction materials to a construction site, to the delivery of vegetables to a grocery store, to the delivery of a courier package to a residence, or a contractor attending a site. Each type of delivery serves a need and is important. The City has a designated Truck Route Network that ensures roadway design accommodates the operational needs of larger vehicles. The increased demand for delivery of individual goods and services to individual addresses or buildings has the potential to increase congestion on the City's streets. In order to address the impacts on congestion, the City will need to continue to find operational opportunities that improve the use of space and enhance efficiency of goods and services movement.

4.0 Consider emergency management in making transportation decisions

Emergency management has four phases or components which include mitigation, preparedness, response, and recovery. Each component must be considered when making transportation choices.

Mitigation refers to proactive steps that are taken to prevent a hazardous event from happening or reducing the severity and impacts of such an event before it occurs. For example, appropriate neighbourhood and street design, including sidewalks and traffic calming measures, can reduce the number and severity of crashes that would require emergency response. Preparedness includes those actions taken to ensure readiness to undertake emergency response and recovery. Response refers to the actions taken to address an imminent or occurring emergency in order to prevent, limit, and manage the impacts. For the transportation system, this means that emergency services, such fire, ambulance, police, or other emergency service providers, are able to reach their destinations in a timely and efficient manner. There needs to be a careful balance between neighbourhood design, the "right-sizing" of emergency vehicles, and response plans for the provision of emergency services. Lastly, the recovery component includes actions taken to re-establish social, cultural, physical, economic, personal, and community well-being through inclusive measures that reduce vulnerability to emergencies, while enhancing sustainability and resilience. The scope of these actions varies relative to the type and size of incident or situation that occurs.

DRIVING

Driving, whether by car, motorcycle, truck, or other motorized vehicle, is a common way people move in the City and across the Region.

Burnaby has jurisdiction over public streets in the City and the Provincial Government has jurisdiction over the Trans Canada Highway (Highway 1) and its interchanges. Highway 1 serves as a major commuter and truck route, and plays an important role in the regional and provincial economy. Burnaby's busiest roads, such as Marine Way, Hastings Street, and Kingsway, are included in TransLink's Major Road Network (MRN). This means that the City is provided with funding for the operation and maintenance of these streets, and must seek TransLink's support if making modifications that could decrease their people-carrying capacity.

Safety, efficiency, and community connectivity are the three core components of a successful street network. The aim is to increase safety and operational efficiencies, while ensuring transit mobility and reliability, timely emergency response, and efficient movement of goods and services, while also enhancing access for the local and regional economy, improving neighbourhood connectivity, providing mobility choice, and enabling people to drive less overall.

Historically, as the population and the number of jobs increase, so does vehicle ownership and driving. Vehicle trips result in congestion and delays, increased travel times, driver frustration, longer line-ups or queues, higher GHG emissions, noise, short-cutting through neighbourhoods, as well as delays and scheduling challenges for transit and goods and services movement.

Transportation in the City faces a fundamental space problem; streets are a finite resource. How the space is designed and used is key. Since the invention of the automobile, there has been a disproportionate focus on designing for its needs, rather than designing streets for people. The street network should enable mobility for all modes of transportation – walking, cycling, transit, goods and services movement, and cars. Moving forward, the intent will be to shift this focus so that the transportation system works better for all users, including those who must drive.

In Burnaby, congestion, fuel costs, vehicle ownership costs, time, safety, accessibility, convenience, weather, environmental impacts, and availability of other mobility options all influence whether driving is the mode of choice for people. By providing alternative mobility options that compete in most or all these areas, it will become easier and more enjoyable for people to drive less.

This section provides policies that focus on reducing the number of vehicle trips and the total number of kilometres driven each day on Burnaby's streets, through redesigning and reorganizing road space, managing and optimizing the road network, improving safety, managing parking, providing infrastructure that supports sustainable vehicles, providing car-share options, managing existing and investigating new people moving services as they arise, and encouraging and promoting car-pooling.

Congestion, fuel costs, vehicle ownership costs, time, safety, accessibility, convenience, weather, environmental impacts, and availability of other mobility options all influence whether driving is the mode of choice for people.

POLICIES

1.0 Manage the road network through redesigning and reorganizing streets

The City's streets are classified on the basis of their intended function. Typically, 'arterial' streets are for longer trips and cover longer distances across the City. 'Collector' streets provide access between and within neighbourhoods and serve as a connection between arterial streets and local streets. 'Local' streets provide local connectivity and access to properties. 'Laneways' only provide access to properties.

The City and its transportation system face a fundamental space challenge. Land and streets are finite resources that require careful management. The ability to expand or add streets is limited. However, existing streets can be reorganized or redesigned to accommodate different modes and numbers of people. They can be enhanced to make the public realm more enjoyable, safe, and accessible. In some places, there are missing links that may need to be completed or reconnected based on the merits of improving local access and connectivity. The City will focus on improving the existing network to increase the people-moving capacity of Burnaby's streets.

2.0 Manage and optimize road network operations

The City's responsibility for the network includes constructing and maintaining streets, as well as managing the movement of traffic on City streets. In addition to physical improvements, the City will manage infrastructure through measures that address capacity and safety issues at intersections in real-time, optimize traffic signal timings and minimize construction and incident disruptions to better manage traffic flow and efficiencies. By managing road network operations using modern technology and tools, the City will improve the way the street system functions, help reduce congestion, and facilitate the movement of people, goods, and services.

3.0 Manage vehicle movement to reduce collisions and address safety issues

The City's "Vision Zero" approach to transportation safety is focused on reducing transportation-related fatalities and serious injuries while increasing accessible, safe, healthy, green, prosperous, and connected mobility for all. It includes a two-point proactive and systematic approach:

- Safe Streets – refers to the designing, building, maintaining, and operating of safe streets.
- Safe Users – refers to limiting or preventing unsafe or risk-taking behaviours such as speeding, failing to yield at intersections, distracted or impaired driving, and other behaviours through enforcement, education, and engagement.

This approach recognizes that to achieve safety as an outcome, it is dependent on both the physical design of the street and on the way people behave on and around the street. The City will work with partners to prioritize the safety of vulnerable street users and identify appropriate steps or pro-active measures to address issues.

4.0 Manage parking to reduce auto ownership and dependence

Parking is typically grouped into two categories:

- On-street parking: Parking that is located on public streets within the road right-of-way. It is typically used for shorter periods of time and has more restrictions (hours of use and cost) as it is often in high demand. It is regulated through Burnaby Street and Traffic Bylaw.
- Off-street parking: Parking that is located anywhere but on the street, such as parking lots, parkades, garages, or driveways. It is typically used for longer periods of time, and is usually privately owned. It is regulated through Burnaby Zoning Bylaw.

The location, availability, and cost of parking can have a significant effect on the quality of the public realm, housing costs, transportation costs, viability of businesses, and travel behavior. In order to mitigate negative effects, parking supply and use needs to be carefully managed using transportation demand management (TDM), appropriate design, enforcement, and other regulatory and policy measures. The City will provide the right balance of well-planned, designed, and appropriately priced parking supply to reduce auto ownership and dependence, while supporting the needs of people and businesses, and minimizing impacts to local neighbourhoods.

5.0 Actively support the realization of infrastructure that enables the use of sustainable vehicles

Driving will continue to be a common way to move within the City, even with increases in active transportation and transit use. However, to meet the City's emission reduction targets, there needs to be a transition to more sustainable fuels, including low- and zero-emission vehicles. In order to encourage the use of these sustainable vehicles, the City will support the supply of infrastructure, such as electric charging stations, and other non-carbon re-fueling technology that makes the transition faster and easier.

6.0 Significantly increase opportunities for car-sharing in the City

Car-sharing is a growing mobility option in the Region. It is a system where registered members can rent a vehicle for a short period of time from a company with a fleet of communal vehicles. Members typically pay a yearly or monthly fee to cover some of the fixed costs, but most usage costs are paid on a per-kilometre and/or per-hour basis. Car-share companies provide added flexibility by providing a range of vehicles available for use, from small two-person cars to luxury vehicles and minivans.

Members of car-share programs typically benefit from cost savings compared to owning or leasing a vehicle. They have the convenience of using a vehicle when necessary, without the costs of full-time ownership (maintenance, insurance, fuel, and parking). Increasing the availability of car-share options can promote a reduction in vehicle use and ownership. For example, the Metro Vancouver Car Share Study Technical Report (November 2014) noted that car-sharing can result in a reduction of up to three existing privately-owned vehicles per car-share vehicle provided.

The City will continue to increase opportunities for both one-way and round-trip car-sharing to provide greater mobility choice to reduce overall vehicle ownership.

7.0 Encourage and promote the use of car-pooling

Burnaby's transportation system is focused on providing alternatives to driving and making those alternatives more attractive, comfortable, and convenient. When walking, cycling, transit, or other options are not available, the City will encourage the use of car-pooling which makes better use of available space and reduces congestion, emission, noise, and crash risk by carrying more people in fewer vehicles.

8.0 Continue to manage existing and investigate new people moving services

People moving services (Passenger-Directed Vehicles (PDVs)) such as taxis, ride-hailing, and private transit vehicles provide an alternative when walking, cycling, transit, or other options are not available. While these services can provide alternatives, it is important to recognize that they can also cause more vehicle trips and congestion, as well as loading space issues and other conflicts. Increased use of these services could result in a decline in active transportation and public transit trips, which would not support the City's mobility goals and targets. The City will manage and review these services as they evolve with other partners, to ensure they align with the City's mobility goals and targets.

BURNABY
TRANSPORTATION
PLAN

NETWORKS

The following pages describe the Networks:

LAND USE, PUBLIC REALM, AND TRANSPORTATION

WALKING AND ACCESSIBILITY

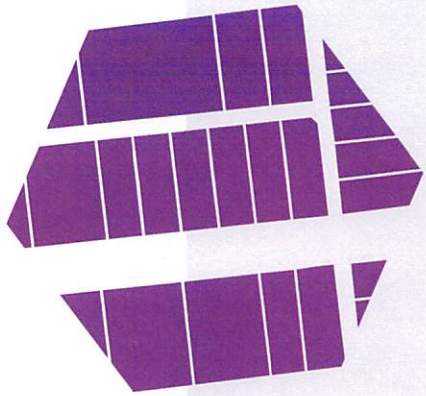
CYCLING

PUBLIC TRANSIT

GOODS AND SERVICES MOVEMENT

DRIVING

LAND USE, PUBLIC REALM, AND TRANSPORTATION NETWORK



The map illustrates the areas where a higher standard of public realm is being proposed. These are areas where there are, or expect to be, higher numbers of pedestrians and cyclists, thereby requiring facilities that offer more space and more amenities that make them more enjoyable and easier to use. The future City-wide public realm guidelines will provide direction on the types of improvements appropriate for the areas highlighted on the map. Within each of these areas, the enhanced standard would generally apply on streets with adjacent higher-density residential or commercial uses.

Town Centres

These are the City's most urban areas, where the highest concentration and mix of office, retail, residential and amenities are located. In 2015, Burnaby developed Public Realm and Street Design Standards for Town Centres, which include wider sidewalks, separated cycling facilities, public art installations, rain gardens, seating areas and other enhancements.

Urban Villages

Urban Villages are higher density mixed-use areas. The commercial areas within urban villages provide a focal point for convenient and close-to-home access to commercial facilities and services. The public realm guidelines would include wider sidewalks, cycling facilities, street furniture and other enhancements to support the land uses and densities of these areas.

Mixed-Use and Employment Areas

These are areas with complex multiple land use designations. They range from the predominantly civic facilities in the Burnaby Lake Sports Complex, to the mixed university and residential areas at Simon Fraser University. Public realm guidelines for mixed-use and employment areas would include consideration of the need for enhanced pedestrian and cycling facilities appropriate for the particular land uses in that area.

Suburban Multi-Family areas

These areas include a mix of lower density and multi-family housing within a predominantly residential area. Public realm guidelines for suburban multi-family areas would feature more modest public realm amenities than those in Town centres of Urban Villages.

Special Consideration Areas

These are areas which do not fall within any of the Community Plan areas listed above, but may warrant a higher standard of public realm, including pedestrian and cycling infrastructure and facilities, due to their proximity to Burnaby General Hospital or the institutional and research facilities by British Columbia Institute of Technology.

Corridor Study Areas

The three corridor study areas identified on the map are existing or future key transit corridors which warrant a higher standard of public realm to integrate the pedestrian, cycling, and transit networks. Proposed amenities would include wider sidewalks, cycling facilitates, and street furniture. Further study of these corridors will be part of the upcoming Official Community Plan update.

Commercial Nodes

These are small nodes of neighbourhood commercial development which would benefit from enhanced public realm standards such as wider sidewalks and other pedestrian-friendly or bike-friendly features. Where possible, the new standards would apply to the full block face adjacent to the commercial node.

Overall, the City-wide public realm guidelines are intended to provide clear, concise technical requirements, policies, and processes for the design and implementation of enhanced public realm features in each of the areas noted above. They will incorporate Universal Design and All Ages and Abilities design. By creating and implementing these standards, we affirm that all areas of the City deserve to be pleasant, enjoyable, and functional places to travel and enjoy public life.

LEGEND

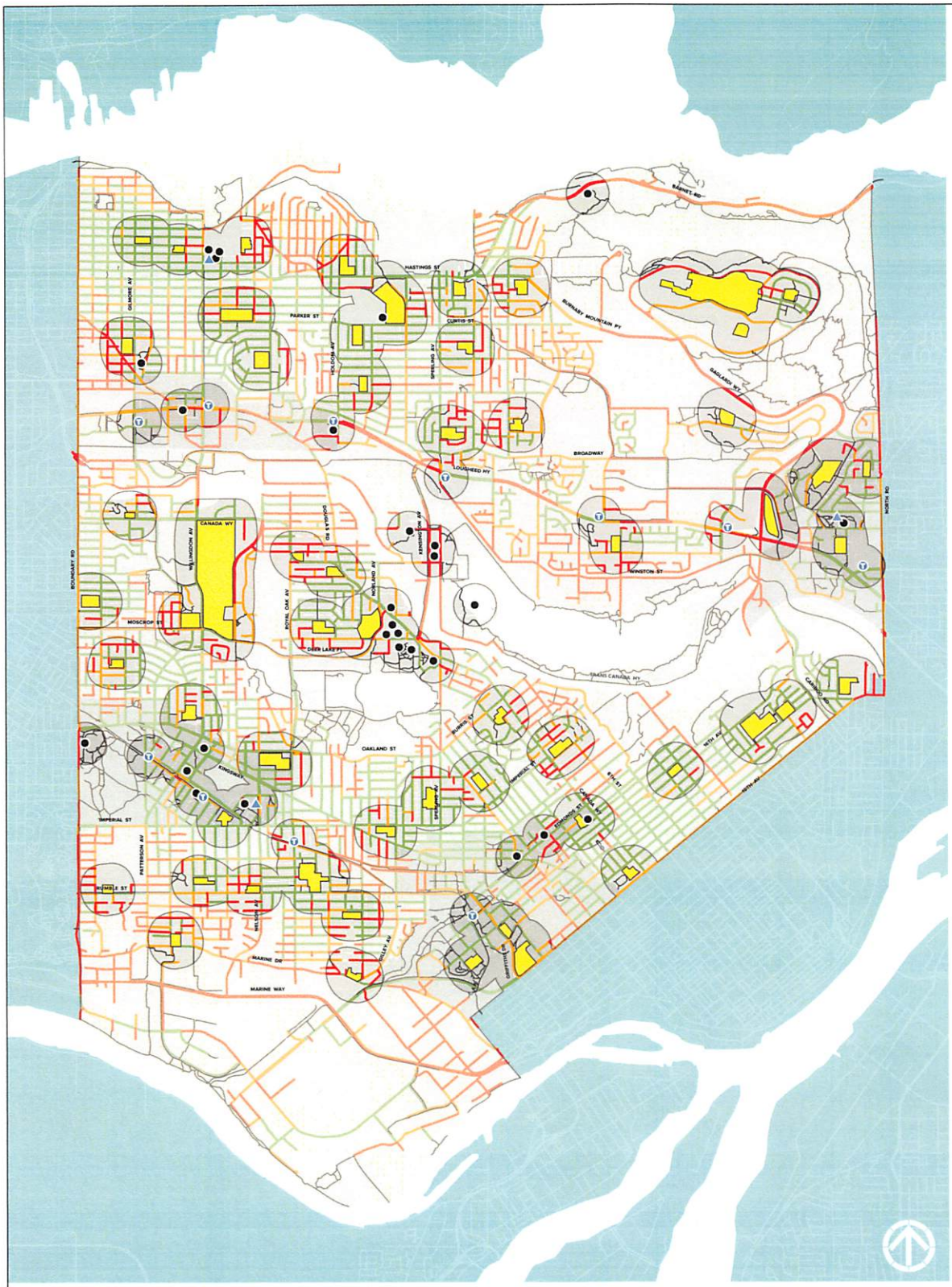
- Town Centre street
- Urban Village street
- Commercial street/node
- Residential street
- Rural street
- Trail or walkway
- Town Centre
- Urban Village
- Mixed-use area
- Suburban Multi-family area
- Special consideration area
- Corridor study area

PROPOSED LAND USE, PUBLIC REALM, AND TRANSPORTATION NETWORK

WALKING AND ACCESSIBILITY NETWORK

The map illustrates the walking and accessibility network in the City. Streets where there are currently no sidewalks are shown in red, those with sidewalks on one side of the street are identified in yellow, and streets with sidewalks are on both sides are shown in green. The intent is to build and complete those streets with only one or no sidewalks by 2050. In addition, the map highlights priority areas, which include sidewalks within 250m of schools, civic facilities, and transit facilities. These areas typically have a higher demand for pedestrian access, as well as a higher percentage of vulnerable users such as seniors and children.

The completion of the walking and accessibility network would provide high quality, safe, accessible, and enjoyable pedestrian infrastructure and amenities that would enable more people to walk to daily needs and activities in the City.



LEGEND

Existing conditions

- No Sidewalk
- Sidewalk one side
- Sidewalk both sides
- Walking trails

Sidewalk priority areas

- Senior's Centre with 250m buffer
- Civic Facility with 250m buffer
- School property with 250m buffer
- Transit station with 250 m buffer

PROPOSED WALKING NETWORK

CYCLING NETWORK

The map illustrates the City's cycling network. Construction of new cycling facilities will take place using a focused approach, beginning with completion of a core network. The green lines identify the core network, which includes approximately ten routes across the City. They provide key connections between the Town Centres, as well as both north-south and east-west links through the City, and align with cycling facilities in neighbouring municipalities. The core network will be built out as a high quality, complete, consistent, and clear cycling network that is comfortable for people of all ages and abilities.

The dotted lines on the map represent the entire cycle network that will be added over time, resulting in a comprehensive cycling grid throughout the City. In addition, the Town Centres will include cycle facilities as determined by the Public Realm and Street Design Standards.

The completion of the core cycling network, and eventually, the entire cycling network, will make cycling a viable option and a first choice for transportation for more people.

LEGEND

- Core Network
- Cycle Network
- Town Centres

PROPOSED CYCLING NETWORK

PUBLIC TRANSIT NETWORK

The map illustrates the public transit network in Burnaby. It shows the current bus routes, the Frequent Transit Network, the two SkyTrain lines, and the West Coast Express commuter train, which are not expected to see significant changes in the future. The map also shows the location of potential enhancements to the transit network. These enhancements include:

- A future gondola serving Simon Fraser University and UniverCity. The alignment of the gondola will be determined through further study, and is indicated as an area between the university and the Millennium SkyTrain line.
- "RapidBus or better" routes along Hastings Street and Willingdon Avenue/ Central Boulevard/Imperial which are intended to have the highest order of transit service possible.
- Transit Priority Measures such as bus lanes, queue jumper lanes, and other measures to improve bus reliability on key streets.
- Future Bus Service Upgrade Areas are locations that were identified as needing further study. These are areas where improvements to transit access and travel time to major destinations should be considered and studied.
- Consideration of a new stop on the West Coast Express commuter rail to serve trips to and from Burnaby. A potential station location is identified at the foot of Penzance Drive by Berry Point.
- Potential Future Passenger Rail use of the existing railway through the Big Bend for travel between New Westminster, Burnaby, and south Vancouver.

The completion of the transit network will enhance the experience and convenience of transit by providing more reliable, frequent and faster transit service which takes people where and when they need and want to travel.

LEGEND

Existing Transit

- Bus Route
- Frequent Transit Network (bus)
- SkyTrain
- West Coast Express

Future Transit Improvements

- Gondola Study Area
- Rapid Bus or better service
- Transit Priority Measures
- Bus service upgrade study area
- Potential West Coast Express station
- Potential passenger rail

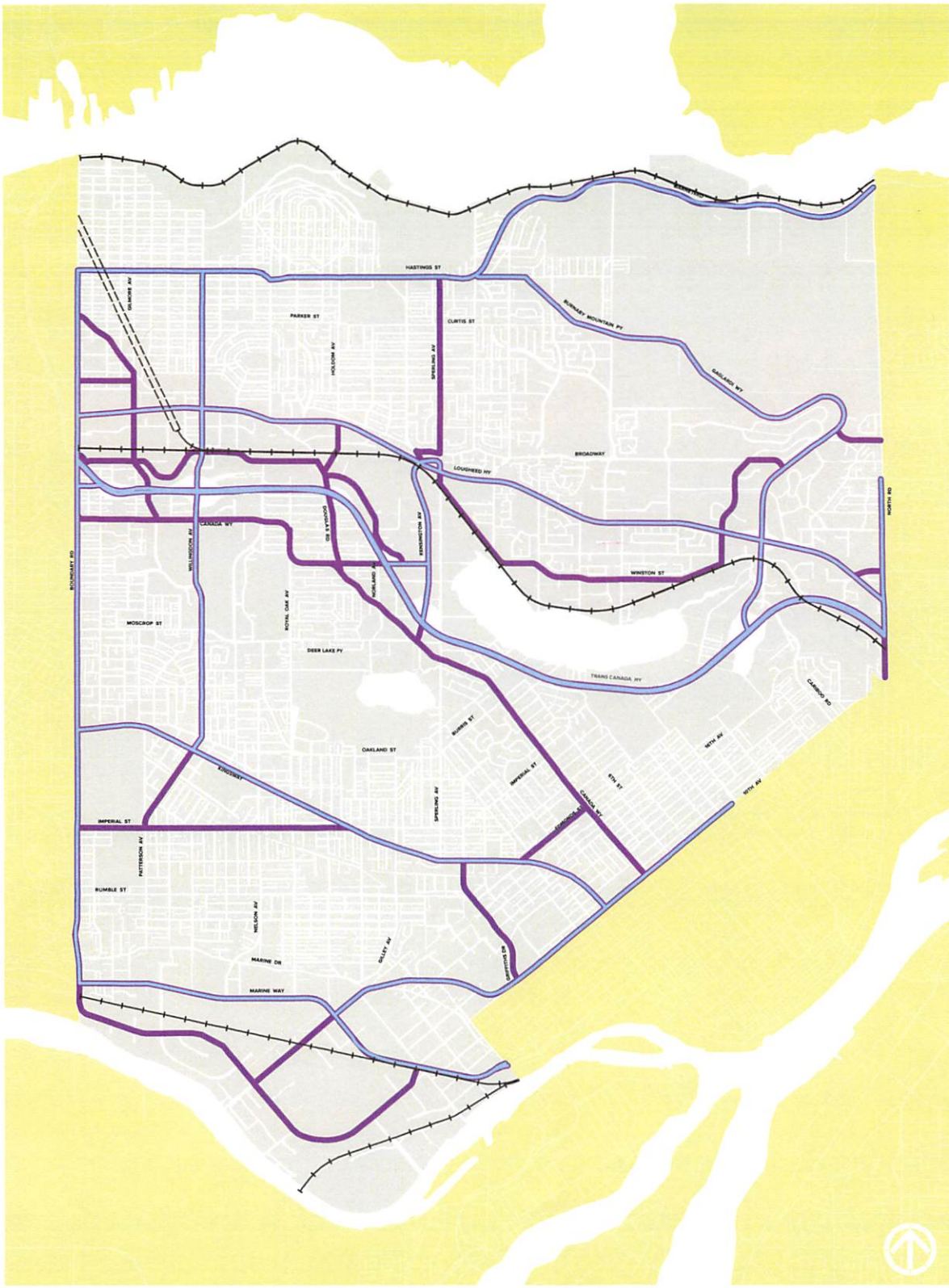
PROPOSED TRANSIT NETWORK

GOODS AND SERVICES MOVEMENT NETWORK

The map illustrates the location of truck routes, hazardous goods routes, and the railway lines used for goods movement within and through the City. Truck routes are typically major streets and highways designated to accommodate larger trucks. Trucks which exceed 13,600 kilograms (30,000 pounds) gross vehicle weight are restricted to these designated truck routes shown on the map. Trucks are permitted to use other streets in the City in order to access businesses or work sites, but must travel there via the shortest possible route to and from the closest designated truck route network.

The hazardous goods network comprises of streets designated to accommodate the small percentage of trucks carrying hazardous goods, so named because they can harm people, living organisms, property or the environment. Where possible, these streets avoid residential areas.

The intent of the network is to designate appropriate streets for truck travel in order to reduce impacts of truck traffic in the City while also providing for efficient movement of goods and services.

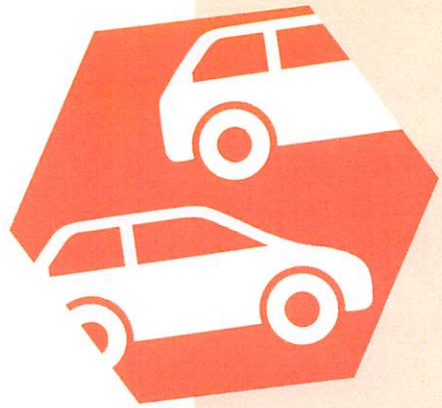


LEGEND

- Truck Routes
- Hazardous Goods Truck Network
- Railway
- Railway tunnel

PROPOSED GOODS AND SERVICES NETWORK

DRIVING NETWORK



The map illustrates the classifications for all streets in the City. The classification describe the intended design and use of each street. The City's driving network consists of the following classifications:

Freeway

The freeway is a limited access facility running through the Region, with access permitted at 4 interchange locations within Burnaby. It is intended for predominantly inter-regional and inter-municipal traffic.

Major Arterial

The major arterials provide mobility for traffic through and within the City, between Town Centres and major destinations. They carry both inter-regional and inter-municipal traffic. Major arterials accommodate up to 6 lanes of moving traffic plus turning lanes at intersections, where appropriate.

Minor Arterial

The minor arterials provide mobility between major activity centres within the City. They carry both inter-municipal and local traffic. Minor arterials accommodate up to 4 lanes of moving traffic plus turning lanes at intersections, where appropriate.

Major Collector

The major collectors provide mobility and access between major industrial, commercial, high-density residential, and major activity centres. They carry traffic between minor collectors and arterial streets. Major collectors accommodate 2 lanes of moving traffic plus parking on both sides. Parking may be restricted to permit construction of left turn lanes, where necessary.

Minor Collector

The minor collectors provide mobility and access between residential areas and activity centres within the City. They carry predominantly local traffic and carry 2 lanes of moving traffic and accommodate parking.

Local Street

The local street provides access to individual properties. In single family areas, it accommodates two lanes of moving traffic with parking on one side, or one lane of moving traffic with parking on both sides.

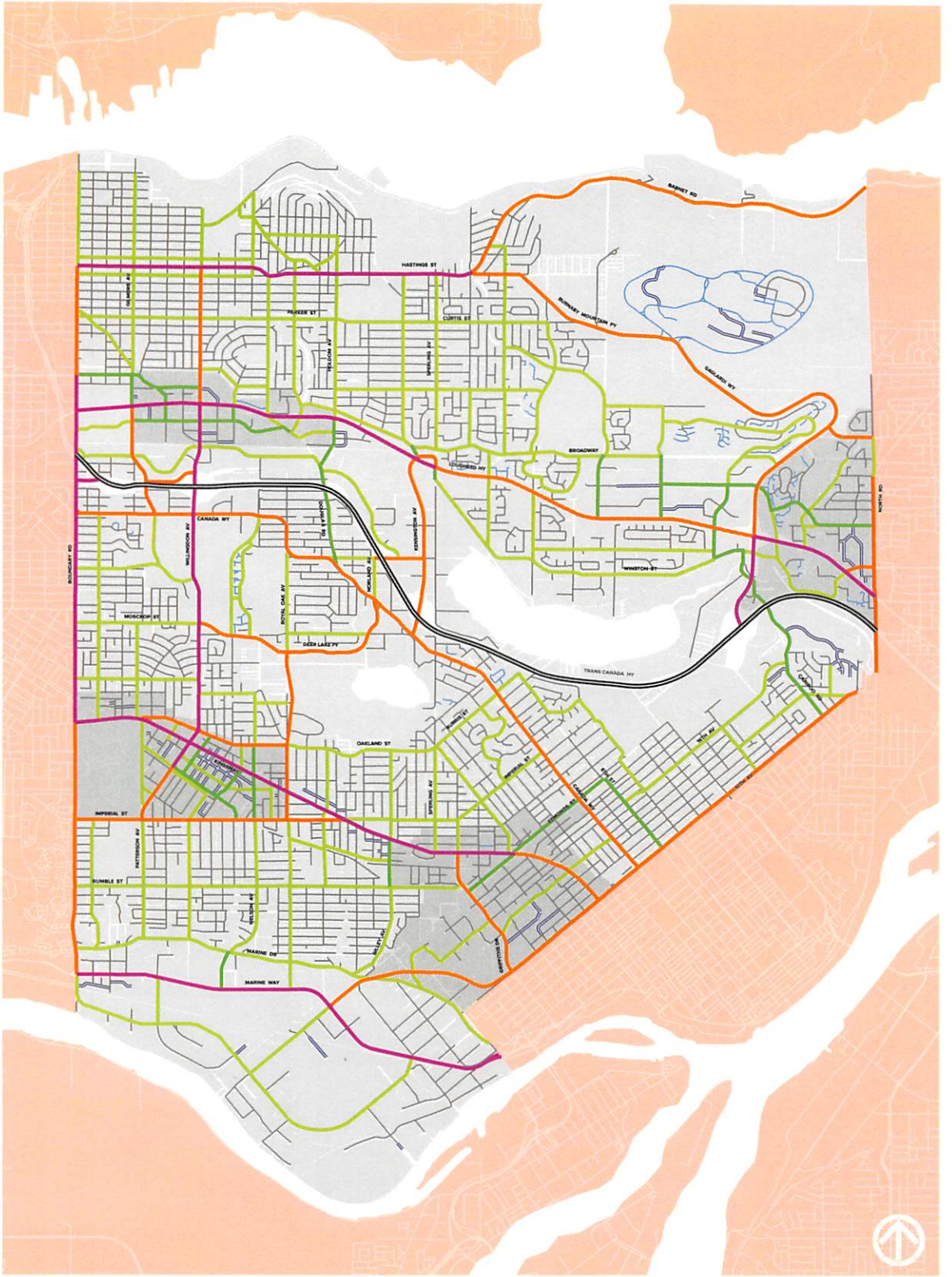
Potential New Street

The potential new streets shown on the map have been identified as possible future streets in Community Plans or Master Plan Development applications, but have not yet been classified under the above categories.

Private Streets

The private streets shown on the map are within private developments and are not maintained by the City.

The network defines a hierarchy of streets which differ in function, from providing access to adjacent land uses to providing mobility through the City.



LEGEND

- Freeway
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Street
- Potential New Street
- Private Street
- Town Centre

PROPOSED DRIVING NETWORK