CITY OF NANAIMO NANAIMO TRANSPORTATION MASTER PLAN

DISCUSSION PAPER #3 TRANSPORTATION POSSIBILITIES OCTOBER 2013

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Chapter 1 Introduction





The City of Nanaimo is a vibrant and growing city located on the east coast of Vancouver Island.

Nanaimo's services and amenities, combined with its strategic transportation connections and economic development opportunities position the City as a regional centre for central and north Vancouver Island. Over the past 25 years the City's population has nearly doubled to approximately 87,000 residents; population growth is expected to continue with an additional 38,000 residents anticipated to live in Nanaimo by the year 2041.

The Nanaimo Transportation Master Plan (NTMP) will shape transportation policy and investments to address growth-



related challenges and to shift the City towards a more balanced multi-modal transportation system. The benefits of long-term transportation planning go beyond the provision of roads, public transit, bicycle and pedestrian facilities and will help Nanaimo achieve its community goals and objectives related to environmental, economic, and social sustainability. The NTMP will support alternatives to the automobile, promoting a healthy environment and vibrant economy.

The NTMP is being developed through a process of project phases, including a series of Discussion Papers, this being the third. Discussion Paper #3 – Transportation Possibilities presents the range of possible long-term improvement options for each mode of transportation, and provides policies and actions for the City's transportation system. This document also incorporates findings and directions from the two previous NTMP Discussion Papers:

- Discussion Paper #1 Existing Conditions (April 2013) summarized existing transportation, demographic, and policy conditions that influence the transportation system and provide guidance for the City as it develops the NTMP. The report included a comprehensive assessment of Nanaimo's pedestrian, bicycle, and transit, and road networks, and summarizes key transportation issues and opportunities that emerged from the public consultation last fall.
- Discussion Paper #2 Setting Future Directions (August 2013) presented a vision with supporting guiding principles, and mode and topic-specific goals, objectives guide transportation decision-making in Nanaimo over the next twenty-five years and beyond. This report recommended mode share targets to measure progress towards achieving the goals and objectives of the NTMP.



Vision, Goals, and Targets

The NTMP will guide the City's transportation investments and programs over the next 25 years and beyond. The NTMP provides the City with a clear vision of how to shift towards a multi-modal transportation system that serves residents and businesses of Nanaimo over the long-term. A vision for the NTMP, developed through Discussion Paper #2, states:

"Nanaimo's **multi-modal** transportation system will connect the City's residents and businesses to each other, the rest of Vancouver Island and beyond. It will provide **inclusive transportation choices** that are safe, comfortable, and accessible for people of all ages and abilities. A system of **interconnected facilities and services** will provide **affordable mobility** while supporting a shift towards a **more sustainable mix of transportation alternatives**.

This vision is consistent with the Official Community Plan (OCP) - planNanaimo, the City's Strategic Plan and the Regional Growth Strategy – Shaping our Future. Successful application of the NTMP policies and actions will support and build upon these documents, and will help move Nanaimo towards a transportation system that is efficient, accessible, and provides improved mobility options for residents and visitors.

To achieve the long-term transportation vision the NTMP contains goals and objectives for each mode of transportation, along with specific and measurable targets for 2041.

Today in Nanaimo, approximately 250,000 trips are made each day, with approximately 88% of these trips made by private automobile and the remaining 12% of trips made by sustainable travel modes (walking, cycling, or public transit). With anticipated population and employment growth, the number of daily trips in the



City is anticipated to increase by 50% to 375,000 trips/day by 2041. This growth will place pressure on the City's transportation system in the coming years. In order to manage the City's transportation system and accommodate this increase in daily trips, the City requires a shift in its approach to transportation system.

By designing the transportation network to provide safe, convenient and attractive transportation choices for all modes of transportation, a significant shift towards walking, cycling and transit can be achieved while still accommodating some growth in vehicle travel. The Plan proposes to double the percentage of daily sustainable transportation trips from 12% today to 24% by 2041.

As is seen in **Figure 1**, specific targets are identified for walking, cycling, and transit. Similar to today, walking is projected to be the largest component of sustainable travel in the future, growing from 8% to 12% of all trips. Cycling trips are also positioned for a significant increase, with a target of 4% (or approximately 15,000 daily trips) by 2041.



Public transit, which can facilitate longer trips, is targeted for the most dramatic mode share increase, growing from 6,500 daily trips today to approximately 30,000 daily trips by 2041; a goal consistent with the RDN and BC Transit's Transit Future Plan.



Figure 1: Nanaimo Transportation Master Plan Mode Share Targets (2041)

Note: All trips / Over 24 Hrs

As the target proportion of daily sustainable mode trips increases over time, conversely, the proportion of vehicle trips is set to fall from 88% today to 76% by 2041. Nonetheless, this still represents an absolute increase in daily vehicle trips of 65,000 trips/day (**Figure 2**) a 30% increase over current conditions. Despite significant increases in walking, cycling and transit, vehicles are still projected to account for just over half of new trips between 2012 and 2041.



Existing Trips	Existing / Future Trips	Target Trip Growth	Target Future Trips
21,000	\dot{x}	+24,000	55,000
trips/day		trips/day	trips/day
3,000	50 50 50 50 50 50 50 50 50 50 50 50 50 5	+12,000	15,000
trips/day		trips/day	trips/day
6,000		+24,000	30,000
trips/day		trips/day	trips/day
220,000		+65,000	285,000
trips/day		trips/day	trips/day
250,000		+125,000	375,000
trips/day		trips/day	trips/day

Figure 2: Existing and Future Target Transportation Mix

These targets represent a significant and bold change in direction for the City; however, based on experience from other cities, they are achievable (**Figure 3**). In recent years, many North American peer cities (cities with a comparable population and density as Nanaimo) have achieved sustainable transportation mode shares between 15 and 20% (i.e. Bellingham WA and Eugene OR) while others (Victoria BC, Boulder CO) have exceeded 25%. Ambitious mode-share targets are necessary to ensure that Nanaimo's transportation system develops in a way that achieves the vision and goals of the NTMP and actively supports alternatives to the private vehicle.





Figure 3: Peer City Comparison of Existing Sustainable Mode Shares

Land Use Integration

Integration of transportation with land use is a key element to the success of the NTMP. The NTMP builds off a key strategy identified in planNanaimo, the creation of high-density, mixed-use *urban nodes* within key centres of the City. Urban nodes are areas where future growth and development in Nanaimo will be encouraged, and where a growing mix and intensity of land uses will emerge over time. Mirroring this concept of dense, mixed use nodes, the NTMP is structured around a framework of *mobility hubs*, areas that integrate land use and transportation. Described in more detail in **Chapter 2**, seven mobility hubs were identified: Downtown, Country Club, Vancouver Island University, Nanaimo Regional General Hospital, Woodgrove, North Nanaimo, and South Nanaimo. Many NTMP policies and actions support the development of mobility hubs as a way to shift towards a more sustainable transportation mix.

Report Overview

Discussion Paper 3 – Transportation Possibilities presents a range of proposed long-term improvement concepts, policies and actions for each major component of the City's transportation system. Within each of the following chapters, the following four sections are included:

- **Issues and Opportunities** summarizes the key themes that emerged from NTMP public engagement and consultation activities;
- **Shaping Influences** describes the various factors that have influenced the development of concepts for each mode in Nanaimo;
- What are Others Doing which summarizes some best practices and innovative strategies used in other communities to support transportation approaches; and
- **Policies and Actions** which propose a range of concept, policies and actions that the City and its partners can undertake to achieve the vision, goals, and targets of the NTMP.

Although the policies and actions have been presented separately for each chapter, it should be emphasized that each chapter is inter-related and has been developed in parallel with each other. For example, the Major Roads section describes projects that include improvements for vehicles, but also for pedestrians, transit, cyclists, and goods movement. This approach ensures that the resulting transportation system improvements are seamless and that the overall vision is achieved. The key policies for each theme of the Nanaimo Transportation Master Plan are shown in **Figure 5** and a



comprehensive summary of the directions, goals, policies and supportive actions for each chapter is provided in **Appendix A**.

A final Transportation Master Plan document will be assembled based on elements of all three Discussion Papers and feedback received from the public, stakeholders, the Transportation Advisory Committee and City Council over this fall's consultation process.

Transportation Master Plan Framework

The Plan includes eight chapters, each covering one component of the overall transportation system:

- 1. Land Use
- 2. Walking
- 3. Cycling
- 4. Transit

- 5. Major Roads
- 6. Neighbourhood Transportation
- 7. Parking
- 8. Strategic Connections

For each chapter, the plan includes an overarching **Strategic Direction** statement that outlines what the future aspirations are for that component of the transportation system. This is supported by more specific **Goals**, which are simple, succinct statements that are easily remembered and referenced. Finally, each mode of transportation has a series of specific **Actions**, grouped under general **Policies** which provide direction on how to achieve the goals and objectives of the Plan. This framework is shown below in **Figure 4**.

Figure 4: Nanaimo Transportation Master Plan Framework



WHAT do we want to achieve?

HOW will we achieve it?



Figure 5: Summary of Nanaimo Transportation Master Plan Policies



LAND USE

- L1: Focus more people, jobs, and services in mobility hubs over time
- L2: Create mobility hubs that support walking, biking and transit
- L3: Develop complete mobility hubs

WALKING

- W1: Focus sidewalk improvements in areas with high pedestrian demand and potential
- W2: Develop quality, accessible crossings
- W3: Ensure supportive urban design features
- W4: Support walking initiatives

CYCLING

- C1: Develop and expand the bicycle network
- C2: Develop comfortable bicycle infrastructure
- C3: Integration of bicycle facilities
- C4: Support cycling education and awareness
- C5: Promote marketing and communication for cycling

TRANSIT

- T1: Create more attractive transit services
- T2: Enhance frequent and rapid bus transit services
- T3: Undertake transit-supportive initiatives

MAJOR ROADS

- R1: Undertake spot improvements to improve intersection safety and operations
- R2: Develop streets for everyone
- R3: Undertake Major Road Network Improvements
- R4: Manage impacts of vehicle transportation
- R5: Update Nanaimo's designated truck route network

NEIGHBOURHOOD TRANSPORTATION

- N1: Develop a flexible approach to neighbourhood traffic calming on new and existing neighbourhood streets
- N2: Provide improved standards for the design of safe, multi-modal streets
- N3: Ensure that neighbourhood site design promotes a fine-grained, wellconnected street network that encourages walking and cycling
- N4: Develop neighbourhood transportation networks that reflect land use and development

PARKING

- P1: Manage parking in Downtown and emerging mobility hubs
- P2: Develop a strategic approach to neighbourhood parking management
- P3: Manage parking city-wide

STRATEGIC CONNECTIONS

- S1: Strengthen connections to other Vancouver Island communities
- S2: Strengthen connections to Metro Vancouver, the rest of British Columbia and beyond
- S3: Support Nanaimo's role as a commercial gateway for Vancouver Island
- S4: Considerations for the future of the E&N Railway



Chapter 2 Land Use





STRATEGIC DIRECTIONS

LAND USE

Integrate land use and transportation planning to support the development of compact, dense, mixed use mobility hubs that create shorter trips and promote walking, cycling and public transit.

	LAND USE
LS LS	L1: More people and more jobs in mobility hubs and near frequent transit
GOA	L2: Support land use policies that will reduce travel demands
	L3: Create great public spaces

Land use and the built environment have a significant influence on travel patterns, mode split and transportation choices. The land uses that surround where we live, work and shop have as much influence on how we travel as the transportation network. The reverse is also true, with transportation facilities influencing neighbourhoods and development patterns. Along busy streets, with no on-street parking and little pedestrian traffic, businesses tend to turn inward towards parking lots and residential buildings are set back to create space between themselves and the street edge. Where streets are comfortable for all road users, they can become the focal points of neighbourhoods with surrounding businesses and buildings actively integrating into the street space. A combination of land use and transportation initiatives has the greatest potential to shift travel patterns towards a more sustainable transportation mix over the next 25-30 years and is an important component of the City's transportation plan.

Five built environment characteristics (also known as the 5 D's) - destinations, distance, density, diversity, and design – are key factors that influence how people travel to and from their daily destinations. An effective transportation plan considers land use integration, and can, with emphasis on these characteristics change travel choices through land use choices:

- The presence of **destinations** that meet daily needs and are reachable by walking, cycling or riding transit are required to allow us to reduce our dependence on the car.
- Distance matters; destinations must be close enough such that they can be conveniently reached by walking or cycling, and where they can't, be accessed by transit.
- Higher residential, employment and service **densities** are required to keep distances within reach, and ensure sufficient population is present to allow businesses and services to be successful.
- A greater diversity in housing types, services and employment within a neighbourhood will increase the chances that residents and employees within are able to meet their needs without traveling to other parts of the City.
- Design characteristics of the road network, buildings, and public realm has a large influence on the attractiveness of walking, cycling and transit. The more attractive, convenient and comfortable the street environment and transit system is; the more people will be willing to travel farther and longer within it.







5D's of Transportation / Land Use Integration

Downtown Nanaimo includes many examples of built environment "5 D" features that support walking, cycling, and transit. The concentration of services and amenities in Downtown make it easier to live, work, shop and play without having to travel far, and Downtown will remain Nanaimo's most prominent centre into the future. Outside of Downtown, many of Nanaimo's key activity centres are lower-density, with longer distances between destinations that encourage automobile use, placing other modes at a disadvantage. Activity areas focus too much on vehicle mobility, and not enough on connecting people to services and amenities by more sustainable modes. Where higher density sites do exist they are often isolated within lower-density development; reducing their ability to change travel behavior.

To enhance integration between Nanaimo's transportation and land use systems, the NTMP introduced the concept of *mobility hubs* within Discussion Paper #2. Mobility hubs are envisioned as extensions of the *urban nodes* land use concept introduced within the City's OCP. Mobility hubs would combine land use and transportation policy, emphasizing the "5 D" characteristics to support walking, cycling and transit. Through higher densities, land use mix, and connected street networks, sustainable transportation modes can become more attractive options for travel within and between these key activity hubs. Where appropriate, these strategies can be extended to neighbourhoods and smaller commercial centres to improve walking, cycling, and transit connections throughout the City.

2.1 Issues & Opportunities

Issues and challenges concerning land use and transportation were mentioned throughout the NTMP public consultation and engagement process, including:

- Sprawling developments throughout the City that are detrimental to efficient transportation system, making it difficult to travel from A to B;
- Environmental impact of land use and car-dependent lifestyles;
- Destinations spaced far apart were identified as a key deterrent to walking and cycling;
- Low population density and city's linear layout create challenges for mobility;
- Inefficient development of transportation infrastructure;
- Ad hoc development not consistent or coordinated; and
- **Connectivity gaps** in the transportation system, attributable in part to high volume corridors and highways, which isolate neighbourhoods.





Opportunities were also identified related to coordinating land use more closely with the transportation system, such as:

- Need more concentrated land use density, throughout the city and at neighbourhood cores;
- Integrate land use and transportation decisions;
- Create central places to work, for recreation, and to access amenities;
- **Ensure that the directions of NTMP** are aligned with planNanaimo objectives; and
- Link residential and commercial developments to other modes of transportation.

2.2 Shaping Influences

Focussing future development into mobility hubs can support population growth expected in Nanaimo. With Nanaimo projected to grow by almost 38,000 people by 2041, there will need to be an expansion of housing, job and transportation options. By concentrating higher density residential and commercial development, and providing greater transportation options within mobility hubs, these areas can meet the needs of future residents with less future transportation infrastructure.



- The ability of mobility hubs to support many transportation modes inherently relies on the design of the built environment. Walking, cycling, and transit opportunities can only be enhanced in mobility hubs if urban form is dense and diverse, placing many residential, employment, and amenity destinations in close proximity to one another. Otherwise, the automobile will likely continue to be the most attractive option for residents and visitors to get from A to B.
- Combining residential and employment destinations can encourage sustainable transportation as a way to access daily needs. As long as employment and services remain segregated from residential areas, trip distances will remain long and walking, cycling, and transit will continue to be unattractive travel options. By ensuring that residential, service and employment growth is focussed in mobility hubs, it will become increasingly convenient for residents to choose sustainable modes to access their jobs.
- Transit service can be supported by mobility hubs. Concentrated urban development can generate employment and population densities that can support improved transit service. Mobility hubs should serve as focal points for transit for trips between hubs and with links to walking and cycling networks within hubs that transit passengers to their final destinations.







Downtown is Nanaimo's most well-developed mobility hub, with higher densities, a mix of land uses, supportive grid street network, and parking restrictions that effectively integrate land use and transportation and to support alternative transportation modes. Downtown streetscapes make it an attractive place to live and work, and walking, cycling, and transit mode shares in the Downtown are significantly higher than any other part of the City. Downtown will likely continue to be the primary focal point of Nanaimo, and enhancing the density and diversity of Downtown can ensure it remains an enjoyable and attractive place to live, work, and visit.

2.3 What Are Others Doing?

Other cities throughout the world are implementing policies and initiatives that seek to integrate land use and transportation systems more effectively. Cities such as Santa Monica, San Francisco, and Toronto are actively pursuing approaches at a community-wide scale that encourage denser, mixed-use, and connected neighbourhoods. While the cities detailed below may have different land use contexts than Nanaimo, the concepts and approaches towards integrating land use and transportation provides some valuable best practice insight into how to continue development of the City's mobility hubs.

City	Program Name	Brief Description	NTMP Direction
Toronto, ON	The Big Move	The Regional Transportation Plan for Greater Toronto area calls for a system of connected mobility hubs, to provide travelers with seamless access to the regional transit system and to support high density development. Mobility hubs are seen as a transformative land use and transportation approach, which will shape regional and provincial policies into the future.	L3: Walk/Bike/ Transit Centres
Arlington, VI	Transportation Demand Management for Site Plan Development	This program, run by County Commuter Services (CCS), seeks to coordinate the design and implementation of large building projects with commuter and transit infrastructure and services. CCS works with developers and property managers to mitigate the transportation impacts of residential and commercial development by increasing the availability, awareness, and use of transit, ridesharing, car sharing, cycling, bike sharing, and walking.	L1: Focus people and jobs
Hume, AUS	Integrated Land Use and Transport Strategy (HILATS)	HILATS outlines land-use and transport initiatives aimed at improving mobility options throughout the City. HILATS aims to create a city that manages transportation based on land use patterns, promotes walking and cycling, and provides fast and affordable public transit.	L3: Walk/Bike/ Transit Centres
San Francisco, CA	Land Use & Transportation Integration	San Francisco recognizes that the integration of land use and transportation planning is essential to supporting a growing and vibrant city. The City focuses on ensuring that new developments are provided with the right transportation infrastructure to meet travel demand.	L1: Focus people and jobs
Fort Collins, CO	Level of Service Standards for	The City provides guidance that LOS standards should not exist as stand-alone measures but instead should be	L2 : Complete Mobility Hubs





	future Land Uses	part of a larger system of land use goals, objectives and other standards. In Fort Collins, LOS standards provide a mechanism to test the City's plan for future land uses against defined transportation and quality of life goals.	
Santa Monica, CA	Land Use and Circulation Element (LUCE)	LUCE is the overreaching policy framework for all planning in the City, with an aggressive "No Net New Vehicle Trips" policy, focusing on ensuring that walking and cycling are prioritized. LUCE locates future activity centres on existing or proposed transit corridors and identifies the creation of complete neighbourhoods.	L3: Walk/BikeTrans Centres









2.4 Land Use Policies and Actions

Moving forward, it is important that the City's transportation system considers the context of surrounding land uses when approaching transportation issues and decisions. An integrated approach towards land use and transportation investments is needed. This section describes the overarching land use policies and supportive actions that can guide the City to focus more people and jobs in mobility hubs and near frequent transit, support development patterns that will reduce travel demands, and create great public spaces. The three land use policies are:

	LAND USE
CIES	L1: Focus more people, jobs, and services in mobility hubs over time
POLIG	L2: Create mobility hubs that support walking, biking and transit
	L3: Develop complete mobility hubs

L1 Focus more people, jobs, and services in mobility hubs over time

Over the next 25+ years Nanaimo is expected to grow by approximately 50%, the equivalent of 5-600 new households per year. Success of the mobility hub concept will be influenced by to what degree future commercial and residential development can be encouraged to locate within mobility hubs. With sufficient residents, jobs and services, mobility hubs can be efficiently served by transit, and in turn, place more people, jobs, services, and amenities closer to one another and within reach of fast, convenient transit.

	L1: Fo	ocus more people, jobs, and services in mobility hubs over time
SNC	L1A	Develop incentives to encourage a greater proportion of future residential, employment and commercial development to locate within mobility hubs.
ACTIO	L1B	Include targets, within the OCP, for the proportion of future development occurring within mobility hubs.
	L1C	Locate future public services within or within walking distance of mobility hubs.

L2 Create mobility hubs that support walking, biking and transit.

To create strong mobility hubs, the City must work over time to make walking and cycling the best way to travel within hubs, and transit a time competitive travel option between hubs. Shaping future development is also required to increase densities, redevelop surface parking lots and add services, employment and population. As access to sites shifts from car only, to a mix of transportation modes, development review processes should consider all transportation modes. Reduced car parking requirements should be considered in concert with creation of shared parking spaces, increased bicycle parking, improved pedestrian access and transit stop amenities. Street network improvements should strive to develop "complete streets" that better balance the needs of all road users. Streets should





include on-street parking to support street-front access to adjacent land uses. Since all transit trips require a walk to their final destination, an improved pedestrian network, along with more frequent service and improved stop amenities, will help make transit more attractive.

	L2: Cr	eate mobility hubs that support walking, biking and transit
	L2A	Support medium to high-density development forms to create consistently higher densities within mobility hubs.
	L2B	Require future development to implement street-oriented design formats that create vibrant and accessible streetscapes. Consider access by all modes during development review processes.
SNO	L2C	Develop transit, bike routes, and pedestrian-friendly routes within mobility hubs to support sustainable transportation trips.
АСТІ	L2D	Provide transit and cycling connections to link mobility hubs to each other and other activity centres throughout the City.
	L2E	Consider varying parking requirements within mobility hubs; reducing general parking while increasing shared and bicycle parking and providing better pedestrian access and transit amenities. Support development of on-street parking where possible and support park once and walk concept.
	L2F	Within mobility hubs develop new or rehabilitated streets with a strong focus on making them enjoyable places to walk and ride.

Each of the City's mobility hubs are at different stages in their development. All have both opportunities for improvement, as well as, existing strengths that are already in place. **Table 1** provides a general comparison of the overall character of each mobility hub, evaluating the current presence of the 5 key built environment features (destinations, density, distance, diversity, and design) and transit accessibility. South Nanaimo has been identified as a mobility hub based on the future village centre plans presented within the Sandstone Master Plan; if this Plan does not proceed, development adjacent to the intersection of Lawlor and Tenth streets could support an alternative mobility hub within South Nanaimo. The evaluation below provides an indication of each hubs strengths and weaknesses, identifying opportunities to best support development of each hub.



Table 1: Characteristics of Mobility Hubs



	Destinations	Residential Density	Employment Density	Distances	Diversity	Design	Access to Transit
Country Club	•	0	•	•	•	•	•
Downtown	•	•	•	J	•	٠	J
North Nanaimo	•	•	•	•	•	•	•
NRGH	•	\bullet	•	•		•	•
South Nanaimo	O	0	٢	0	O	0	٢
VIU	•	٩	•	•	•	O	•
Woodgrove	•	٩	•	O	•	O	•
	•	•	0	O	0		
	Highest	High	Moderate	Low	Lowest		
	Presence	Presence	Presence	Presence	Presence		

A brief description of each mobility hub is provided below:

- Downtown is the City's centre, with arts and culture, commercial, entertainment and government services located within its historic central business district and waterfront. It contains some of the City's highest population and employment densities, including office and apartment buildings. The combination of a grid-like network and interesting streetscapes make walking comfortable and enjoyable. Opportunities exist for improvement; increased residential and commercial densities could help to support a wider range of businesses and services and improvements to the transportation network, including, a new Downtown Transit Exchange, cycling facilities and streetscape improvements along Terminal Ave and Front St will help make Downtown a more successful mobility hub.
- Country Club is a commercial centre in located central Nanaimo. Anchored by the Country Club Centre Mall, it contains a mix of high, medium and low density residential development, a significant amount of commercial development, a secondary school and a transit exchange. Due to its central location within the City, and access to transit, residents of Country Club already tend to drive less than in other parts of the City. A key opportunity for the Country Club mobility hub could include the redevelopment of the transit exchange along Norwell Dr and its integration with future redevelopment of buildings, including Country Club Centre, to create a more comfortable pedestrian-friendly streetscape.
- **Nanaimo Regional General Hospital** is the primary centre for health services in the Nanaimo region and beyond and is one of the City's largest employers. The mobility hub is anchored by the





hospital campus and surrounded by mixed density residential neighbourhoods and commercial development along the Bowen Road and Boundary Ave corridors. While concentrations of commercial and hospital related services exist, the range of basic services available within walking distance is limited. Areas of opportunity include development of more professional offices, senior's facilities, community services, services and medium to high residential uses to enhance the area as a neighbourhood to live, work and support services. As many services are not immediately adjacent to residential areas, the provision of a strong cycling and transit network can help residents travel beyond walking distances. The high concentration of employment creates opportunities for working with a single employer to shift commuting travel patterns to transit and cycling and reduce parking demand.

- North Nanaimo is anchored by two commercial centres (North Nanaimo Centre/Longwood Station) with a mix of medium to high density residential development located between them along the Upland Dr corridor. Recent development has focused on seniors, increasing the proportion of residents with limited access to personal automobiles. Surrounding the intersection of Uplands Drive and Turner Road, improved streetscape design has created a good pedestrian realm; however, major roadways still present barriers to residents walking or cycling. Further south, North Nanaimo Centre Mall is a traditional mall with a large central building surrounded by surface parking; opportunities over time to create more street presence and pedestrian access should be pursued. As the area continues to develop, focusing on improving pedestrian/cyclist mobility and comfort while breaking down barriers formed by major roads will help increase the amount of walking and cycling occurring within the hub. Improved future transit services within the hub and to adjacent hubs will help make the area an even more attractive place to live and work.
- South Nanaimo is a future mobility hub envisioned within the Sandstone Master Plan. The Sandstone Plan outlines a village centre, located to the south-east of the Cedar Road / Island Hwy / Parkway interchange with a mix of commercial and medium to high density residential. The village is located adjacent to a future regional commercial centre, light industrial areas and residential neighbourhoods providing a wide range of services and employment. Currently the area has limited development, low connectivity, and minimal active transportation linkages, however, as development occurs connections will be improved. The opportunities for South Nanaimo include establishing a fine-grained development form and street network, where mixed land uses support people to live, work, and shop in south Nanaimo. Transit-oriented community design, and a future transit exchange, will facilitate transit service to connect residents to central and north Nanaimo, while enhancing active transportation links.
- Vancouver Island University is the city-wide and regional centre for educational services, and is a major employment destination within the City. Transit service has been identified as a way to reduce travel to campus by car and has resulted in significant service improvements between VIU and other major transit exchanges over the last five years. Challenges within the area include distances between the VIU campus and services and amenities, lower density residential neighbourhoods, limited active transportation linkages, and parking demand. With the population of the campus and surrounding neighbourhood expected to nearly double by 2041, opportunities to integrate transport and land use include more medium to high residential developments, campus parking management, stronger walking and cycling connections especially to Downtown, and enhancing existing transit links from the campus exchange. The expansion and diversification of services would allow residents to access more of their daily needs within their neighbourhood.





Woodgrove is a regional destination commercial centre with one of the widest ranges of services within central/northern Vancouver Island. A transit exchange, located within the Woodgrove Mall site, provides excellent access to employment and services but limited access to other parts of the Woodgrove area. Low-density / car-oriented commercial developments create long travel distances and high volume arterial roadways create barriers for those walking to nearby sites. While Woodgrove has an extensive number of services and employment with strong transit services, the built environment is not supportive of walking or riding and only limited residential development exists within the mobility hub area. Through redevelopment, opportunities include enhancing the proximity of commercial and residential land uses, adding medium to high residential development, supporting development or redevelopment activities that manage parking, develop complete streets within a finer grained grid network, and provide connections for alternate modes.

	L3: D	evelop complete mobility hubs
TIONS	L3A	Develop plans for each mobility hub that identify missing elements within each mobility hub and work to fill gaps through future infrastructure improvements and development.
AC	L3B	Encourage a mix of land uses and services that provide a wide range of housing, employment and services; identify and work to address missing land uses that necessitate travel outside of the hub.







Chapter 3 Walking





NS IC	WALKING
STRATEG DIRECTIO	Make walking a safe, comfortable, convenient, accessible, and enjoyable experience for residents of all ages and abilities within Nanaimo's neighbourhoods and mobility hubs.
	WALKING
R	W1: Make walking safer, more comfortable, and more accessible
X	
U U U U U	W2: More and better places to walk

Walking is the most fundamental form of transportation and forms part of almost every trip in Nanaimo, whether that trip is made by car, transit, or bicycle. Walking can be an attractive and convenient alternative to driving for short trips, especially where destinations are close and connections between them are convenient. Just like any mode of transportation, many people will choose to walk if it is a comfortable and convenient way to travel.

The NTMP sets out a target to increase the walking mode share from 8.5% to 12% by 2041. Walking is a more popular travel mode in areas which have higher residential and employment densities, a number of destinations, a well-connected street network, and safe and comfortable pedestrian facilities, such as sidewalks, trails, and crossings. Where these conditions exist, such as in the Downtown and its surrounding neighbourhoods, observed walking rates are higher. By encouraging higher densities, increased land use mix, street network connectivity, and high quality pedestrian infrastructure, walking can become a more popular transportation choice in Nanaimo's existing and emerging mobility hubs.

The City is committed to promoting walking, and has invested significant resources in pedestrian facilities in recent years. In fact, between 2010 and 2012 the City spent nearly \$1.7 million on new sidewalks and crossing improvements. Despite these investments, however, the City has seen limited increases in walking mode share. There remain several challenges to encourage more people to walk in Nanaimo, including fragmented sidewalk networks, uncomfortable walking environments, and services and amenities that are not within walking distance from neighbourhoods. Even within the City's mobility hubs, accessing services and amenities on foot can be unappealing, as auto-oriented developments, long trip distances, high traffic volumes and speeds can make walking uncomfortable and inconvenient.

To address these challenges and to see a greater return on investment in terms of increased walking activity, future improvements to the walking environment in Nanaimo should be strategically oriented towards areas with the highest potential for increased walking. In this regard, one of the key strategies of the NTMP pedestrian plan focuses on enhancing the pedestrian environment in areas with high pedestrian demand, such as in Downtown, other mobility hubs, schools, parks, and key commercial areas. A range of treatments can be used to enhance walkability, including providing streetscape improvements (i.e. landscaped boulevards, street trees, public art, lighting, and pedestrian amenities), enhancing crossings and accessibility, and converting lower-density centres to more dense, mixed-use developments.





3.1 Issues & Opportunities

There were many commonly raised issues and challenges regarding walking that emerged throughout the NTMP public consultation and engagement process, including:

- Lack of sidewalks, pathways and crossings make for a fragmented and disconnected walking network.
- **Poor quality, uneven, and inaccessible sidewalks** make for uncomfortable walking conditions, and can be problematic for seniors and those using wheelchairs and strollers.
- More priority and space for pedestrians is required to improve the comfort of the walking environment.
- Unsafe crossings or lack of crossings, including in the Downtown and the Harewood area, were cited as a concern by respondents. There was a desire for more crosswalks and pedestrian-activated signals.

Opportunities to improve the pedestrian network and environment identified through the consultation and engagement process included:

- Improved sidewalk network, with more complete sidewalk networks provided in Fairview, Harewood, the University area, and Hammond Bay.
- **More walkable areas**, including safe route to school treatments, and more attractive and pedestrian friendly streetscapes, within neighbourhoods and Downtown.
- More short-cuts and neighbourhood connections were identified, which could make walking trips shorter, and more convenient and time-competitive with other modes.
- Well maintained and high quality sidewalks that are more comfortable to use.
- Better street and trail lighting for pedestrians using on and off-street routes.
- More separation between pedestrians and vehicle traffic, including wider sidewalks, more barrier landscaping, and more separated pathways/trails.

3.2 Shaping Influences

- Walking is the most popular type of sustainable travel in Nanaimo, accounting for 8.5% of all trips made in the City over a typical weekday. In comparison 2.5% of daily trips are made by transit and 1% by cycling. With many residents already walking, there is less of a barrier to attract more people to walk more often, as long as attractive and comfortable walking conditions are provided.
- Most walking trips in Nanaimo are short, local trips with 90% of daily trips less than 2 km in length, representing a 20 to 25 minute walking trip. Interestingly, over one-third of motor vehicle trips, or approximately 80,000 daily driving trips are less than 2 km in length, indicating a



significant opportunity to convert some short-distance driving trips to walking. These patterns indicate that the City should focus pedestrian improvements on short distance walking trips in and around key activity areas such as Downtown and other mobility hubs, major commercial areas, parks and schools.





- Making walking attractive for youth and seniors will result in better facilities for all ages and abilities. Many of the walking, cycling, and transit trips generated in key activity hubs, such as in Downtown and around VIU, are made by youth and young adults (less than 24 years old), and in some cases, seniors (65 years and older). Targeting improvements to ensure these demographics feel safe and comfortable, and ensuring facilities are designed to be universally accessible, benefits all users.
- The number of aging residents and those with mobility challenges is increasing, as the 65 years and older age cohort will more than double over the next thirty years. As residents retire and move into older age groups, they will have new and varied transportation needs, more mobility challenges, and increased demand for accessible pedestrian facilities. Ensuring pedestrian infrastructure is appropriate for users of all ages will improve opportunities for older residents to walk, and can result in better infrastructure for everyone.
- Areas with higher land use mix generate more walking trips, as seen in Downtown which has high walking activity (as well as more cycling and transit trips). The online walkability assessment tool Walkscore¹ corroborates this trend and identifies areas with high land use mixes as being 'somewhat walkable' to 'very walkable'. Neighbourhoods with higher levels of walking include Downtown, Newcastle, Vancouver Island University, Northfield,



Within Downtown more than one in four residents walk to work, far higher than any other part of the City.

Townsite, and Woodgrove. Alternatively Hammond Bay, rural neighbourhoods, much of south Nanaimo, and Duke Point are identified as being more car dependent areas. Focussing pedestrian improvements in areas with high land use mixes and high walking potential will maximize the City's investments in walking infrastructure.

- Completing the sidewalk network would require significant levels of investment, so future improvements should be focused on areas with the highest pedestrian potential. While the City's street standards require that sidewalks be provided on both sides of all streets, excluding rural and industrial roads 80% of Nanaimo streets have either no sidewalks or sidewalk on only one side. Building the sidewalk network to the full standard would require significant resources, likely beyond the short-term ability of City to fund. As such, the City should focus sidewalk and pedestrian improvements on areas where walking activity and potential benefits are highest, which positions mobility hubs, major commercial centres, schools, parks, and transit facilities as strong candidates for improvements.
- Design and construction standards should incorporate features that support those with mobility challenges. Uneven and inaccessible sidewalks and crossings can make walking uncomfortable, and especially problematic for those using wheelchairs and strollers. Features such as wider sidewalks to accommodate wheelchairs / mobility aids, appropriate paving materials, accessible curb letdowns, wider landings, and audible and accessible crossing signals are key to improving walkability for people of all ages and abilities.

¹ Walkscore is an on-line tool that assesses the walkability of an address based on the number and variety of services located within walking distance. <u>www.walkscore.com</u>



walking

pleasant to both travel through and spend time in should be a priority for streets within Downtown and other mobility hubs. Attention to sidewalk width, landscaping, street trees, street furniture and maintenance plays an important role part in improving the walking experience. Although these amenities can help create attractive areas, they require significant investment, and should be used in areas of higher pedestrian demand.

direct

active

and

- Walkability is good for liveability and local economic development. Many studies have found that walkable environments often perform well economically, with linkages to increased pedestrian activity, revenues, and property values. Walkability is also associated with downtown revitalization and tourism-related development. important considerations as Nanaimo's Downtown and other neighbourhoods host cruise ship passengers and visitors.
- Context-sensitive solutions can improve safety and accessibility within financial means. It is important to provide walking solutions that fit neighbourhood context and character, while still

ensuring safety for pedestrians. For example, while Nanaimo's rural roads may not require sidewalks, shoulders can be provided to ensure a safe space for pedestrians and cyclists. Where other pedestrian facilities are present, such as along the E&N Trail, sidewalks may not be required.

shop and visit.

Walkway are popular walking routes for both travel and recreation.

Facilities such as the Harbourfront



Active uses such as street front seating make

Commercial Street a more interesting place to walk





assets.

walkability throughout Nanaimo.

The E&N trail and the Harbourfront Pathway are strong

transportation routes from north to south that are physically separated from automobile traffic. These existing pathways are a key component of the walking network. Enhancing these linkages means high quality, continuous,

convenient walking routes, and is an important way to improve

Safe and high quality pedestrian realms can create great

places. Streetscape improvements can improve the aesthetics

providing

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3.3 What Are Others Doing?

City	Program Name	Brief Description	NTMP Direction
Santa Monica, CA	Land Use and Circulation Element (LUCE)	Santa Monica, an inner suburb of Los Angeles, has actively prioritized sidewalk maintenance needs, and installation of innovative pedestrian improvements. Today, 99 percent of streets have sidewalks on both sides of the street, and nearly all of the City's sidewalks have accessible ramps on all intersection corners. The City has instituted a sidewalk repair reporting process that requires the City to respond within 10 days of the initial request. Currently, work on a pedestrian design guide and pedestrian strategies are underway.	 W1 Sidewalk Network W2 Quality Crossings
Bristol, UK	Legible City	Legible City is a comprehensive wayfinding program that seeks to improve the pedestrian experience. Over 40 wayfinding elements have been installed, such as direction signs, on-street information kiosks, printed walking maps, heritage plaques, and art projects that communicate the city's identity and provide information about how to get around the city on foot, by bicycle, or on transit.	 W3 Urban Design W4 Support Initiatives
Charlotte, NC	Find Your Way Charlotte	This project improves access to Uptown Charlotte and is part of an overall Wayfinding and Parking Guidance System. The wayfinding signage is designed to help all transportation modes easily identify entertainment attractions, sports venues and places to park.	 W3 Urban Design W4 Support Initiatives
Minneapolis, MN	Open Streets Minneapolis	This initiative involves temporarily closing streets to automobiles and organizing public activities that encourage healthier transportation and living habits. Open Street occurs on 4 different major streets, and for one day a year the street is closed to traffic so residents can gather, exercise, participate in spontaneous play activities, and socialize.	 W1 Sidewalk Network W4 Support Initiatives

3.4 Walking Policies and Actions

The focus of the City's efforts in the coming years will be on completing elements of the pedestrian network that support and encourage walking in activity areas, including mobility hubs. These areas not only have high activity levels today, but will increase over time with continued growth and development. Within mobility hubs, treatments should exceed minimum standards to make walking not just safe, but comfortable, convenient and enjoyable. Outside of mobility hubs, improvements should be targeted in areas with high pedestrian demand and/or safety issues, such as major roads, schools, parks, and neighbourhood commercial areas.

This section describes the walking policies and supportive actions that can guide the City to get more people walking, provide safe and more accessible walking environments, and better places to walk. The four walking policies are shown below:





POLICIES	WALKING
	W1: Focus sidewalk improvements in areas with high pedestrian demand and potential
	W2: Develop quality, accessible crossings
	W3: Ensure supportive urban design features
	W4: Support walking initiatives

W1 Focus sidewalk improvements in areas with high pedestrian demand and potential

A key message heard throughout the NTMP consultation was the need to fill in gaps in the sidewalk network, as fragmented sidewalks can discourage walking, even for short trips. The fragmented network is a result of roads built when sidewalks were not required² or required on only one side of the street. The Pedestrian Plan provides guidelines on where to prioritize infill sidewalk projects to complete the sidewalk

network along existing streets. Where new road infrastructure is constructed, or as part of new development, the NTMP recommends that all roads be developed with sidewalks. The guidelines below identify where sidewalks on existing streets should be prioritized, as determined by proximity to mobility hubs and other pedestrian generating destinations.

Recommended priorities for sidewalk network infill **within mobility hubs**:

- Mobility Hub Core: Sidewalks on both sides of all roads.
- 0-200m/less than 5min walk from Core: Sidewalks on both sides of all *major* and *commercial* roads with sidewalk on one side for all other roads.
- 200-600m/up to 10min walk from Core: Sidewalks on both sides of all *major* and *commercial* roads or where a commercial/retail use, transit stop, school, or senior facility is present.

Recommended priorities for sidewalk network infill **outside of mobility hubs**:

In Downtown Nanaimo many streets have sidewalks on both sides of the street, boulevards and street trees, making walking a comfortable way to travel. Similar treatments in other parts of the City could encourage more walking in other places.

- Urban areas
 - Sidewalks on at least one side of all *major roads* or where a commercial/retail use, transit stop, school, or senior facility is present.
 - Where traffic conditions make crossing streets difficult³, consider sidewalks on both sides.

² Before amalgamation in 1975, the current City of Nanaimo was composed of several smaller communities. Variable road and sidewalk standards between communities resulted in many parts of the City not having sidewalks.

³ Pedestrian crossings may be challenging where average daily traffic exceeds 7500 vehicles/day.





Rural areas

- Paved shoulders on at least one side of all *major roads*.
- Where traffic conditions make crossing streets difficult, consider shoulders on both sides.
- No pedestrian facilities are required on *local, neighbourhood, commercial, or industrial roads.*

	W1: Focus sidewalk improvements in areas with high pedestrian demand and potential				
ACTIONS	W1A	Prioritize expansion of the sidewalk network in areas where there will be the most benefits, where walking levels are high, there is high residential and employment density, existing facilities are poor and future growth is expected.			
	W1B	Consider concentrations of vulnerable road users (i.e. children, youth, seniors) when evaluating new pedestrian links.			

W2 Develop Quality, Accessible Crossings

Providing a quality walking environment includes the provision of accessible, safe, and visible crossings. Features that enhance the safety of crossings can make walking more comfortable, particularly for more vulnerable road users such as children, youth, seniors and those with physical and cognitive disabilities. Considerations for developing a high quality and accessible crossings include:

- The provision of curb letdowns, with preference for accessible curb letdowns which are aligned directly with crosswalks where possible.
- Narrow crossings with curb extensions and median islands, improving visibility and reducing the time spent within the roadway. Curb extensions can be implemented by extending the sidewalk across the curbside parking lane while tighter corners at intersections can reduce vehicle speeds.
- Accessible pedestrian signals at signalized intersections to assist pedestrians with disabilities. Accessible signals can provide a higher degree of confidence to pedestrians crossing major streets and generally receive positive support among all age groups. Accessible signals communicate when to walk or not walk in non-visual formats, such as through audible tones, speech messages, or vibrating surfaces. The use of braille on pedestrian signals can also enhance the accessibility of intersection crossings.
- Countdown timers at key intersections to provide timing information to all users. Other strategies such as longer pedestrian phases and leading pedestrian signals can also improve the safety of pedestrian crossings in some cases.
- Marked crossings or raised crosswalks to enhance the visibility and safety of crossing pedestrians, where warranted.
- Enhanced pedestrian crossings, including flashing pedestrian warning beacons, two-stage crossings and pedestrian half signals, where warranted.





W2: Develop quality, accessible crossings

	W2A	Increase pedestrian safety and visibility by reducing pedestrian crossing distances through use of curb extensions, reduced curb radii, and marked crossings where feasible.
ACTIONS	W2B	Implement signal measures to prioritize safe pedestrian movement across intersections, considering measures such as pedestrian activated signals, longer pedestrian phases, leading pedestrian intervals, and special crosswalks or pedestrian half signals where warranted.
	W2C	Install accessible pedestrian signals, at locations prioritized in consultation with representatives from the mobility and visually-impaired community.

W3 Ensure Supportive Urban Design Features

A number of urban design features and treatments should be considered to improve the attractiveness of key areas of the City for pedestrians. Urban design features that enhance and improve pedestrian

infrastructure and crossings are already seen in much of Downtown. Improvements can include street trees, benches and café seating, curb extensions, street furniture, transit shelters and street lighting to further encourage walking, focussing on mobility hubs and other main pedestrian areas. Urban design features that could be considered include:

- Enhanced sidewalk width to make walking more comfortable for all, particularly at transit stops, along commercial frontages and high activity areas within and outside of mobility hubs.
- Boulevards between the sidewalk and the roadway provide a buffer between pedestrians and moving vehicles and space for street lights, poles and furniture. This treatment is recommended for mobility hubs or other areas where walking activity is concentrated; where pedestrian activity levels are highest, the City should consider hardscaped boulevards.



Landscape/Furniture Zone Pedestrian Zone Frontage Zone

When sidewalks are sufficiently wide they can support different uses; the Frontage Zone for street-front cafes, retail or other active uses, the Pedestrian Zone for travel and the Furnishings Zone, as a buffer between the street and pedestrians for trees, signs and street furniture.

Street lighting to ensure pedestrian comfort as well as safety and security at all times of day. Street lighting is especially important in the winter for off-street pathways that are part of the pedestrian network.





- Ensure sidewalks and entrances to pedestrian crossings remain free from obstructions, in order to ensure that people of all abilities can safety navigate the sidewalk clear width and access the crossing areas.
- Considerations for surface material. Sidewalk material choice can be an important contributor to promoting long-term walkability, both as a comfort, accessibility, and aesthetic consideration. A combination of asphalt and concrete sidewalks are currently used in Nanaimo, with concrete sidewalks the city standard for new construction, and asphalt sidewalks used for temporary installations. While concrete can be more expensive in comparison to asphalt, concrete is more durable, experiences a longer service life, and has a higher aesthetic appeal in urban areas. Concrete surface material can also support a smoother surface quality in comparison to asphalt, particularly are let downs.

Enhanced urban design treatments for mobility hubs in particular can include:

Pedestrian amenities that improve the attractiveness and comfort of the pedestrian environment in mobility hubs, such as garbage cans, planters, and benches. These amenities should be located outside of the travelled portion of the sidewalk, and are essential to making people places and creating

environments within commercial areas that are comfortable and interesting for pedestrians.

- Street trees should be included within all street cross sections, particularly those with high pedestrian demand and where parking does not provide a buffer between the road and sidewalk. As a buffer street trees can play an important role in increasing pedestrian comfort and safety. In addition, trees improve the street aesthetics and value of neighbourhoods over time as they mature.
- Weather protection provides protection from rain, snow and sun and creates more inviting and sheltered outdoor spaces year round.



Urban Design Elements that encourage walking; (A)Street Furniture, (B)Street Trees /Boulevard, (C)Lighting, (D)Weather Protection




	W3: Si	upportive Urban Design Features
	W3A	Provide pedestrian amenities, such as weather cover, within public and private spaces through development processes.
TIONS	W3B	Use street trees, landscaping and boulevards to enhance streetscapes and provide a buffer between vehicles and pedestrians.
AC	W3C	Provide wider sidewalks in high activity areas with higher pedestrian volumes to support active uses such as on-street cafes and retail.
	W3D	Provide street lighting in and around key walking destinations to increase pedestrian visibility and security at night.

W4 Support Walking Initiatives

Other walking initiatives such as events, education and encouragement initiatives should also be in place to shift travel behaviors. Often, supportive programming targeted at walking is combined with information for cycling, as the two modes both provide alternatives to driving for short-distance and local trips. Spreading information and awareness about walking and cycling is a cost-effective initiative that can enable people to feel more safe and comfortable using active modes to get around Nanaimo. Specific support programs could include:

- Mobile applications for people to to access information such as a walking route map identifying main destinations, trails, short-cuts, and/or recommended routes. The app could be combined with a cycling application, with interactive features that allow people to identify routes or comment on favorite or preferred places to walk in Nanaimo.
- Dedicated City website providing general information about the benefits of walking and cycling in Nanaimo, a description of the current pedestrian and cyclist routes, and a link to the pedestrian and bicycle maps and other education/safety resources. The website could potentially be a combined 'walking and cycling in Nanaimo webpage.
- Walking education & awareness initiatives, as promoted through the City and/or partnerships with

ICBC, RCMP, and school district. The City and School District should continue to work together to promote safe walking and cycling to school programs.



The closure of streets can provide temporary public spaces for community events. The 2013 Nanaimo Harvest Festival used Wesley Street as a venue.

• Events: Host and/or promote events such as Bathtub Days, Sunday Street Closures, World Walking Day, iWalk, Move for Health, and Active Month.





- Develop a parklet / street activity program, which promotes and manages active uses within streets such as conversion of on-street parking into public spaces, restaurant patios or seating areas.
- Wayfinding to guide people around activity areas (i.e. within and between mobility hubs). Enhanced wayfinding signage can benefit residents and visitors, helping to orient pedestrians to major destinations and commercial areas of Nanaimo. Signage standards may support a theme or community 'brand', and should be designed to meet the needs of visually impaired.



Initiatives such as parklets, streets events, and wayfinding can support walkability

	W4: Sı	upport Walking Initiatives
	W4A	Create a dedicated active transportation website, including online mapping that educates residents and visitors on the City's walking/cycling network and facilities.
CTIONS	W4B	Explore partnership opportunities with other agencies and organizations on initiatives such as road safety campaigns, walking and cycling education programs, and skills building.
4	W4C	Continue to support events and initiatives that support walking and street vibrancy. Create a process for managing street use activities.
	W4D	Seek the implementation of wayfinding that is consistent, legible, and user-friendly to support pedestrians as they navigate through Nanaimo.



Chapter 4 Cycling



GOA



NS IC	CYCLING
STRATEG DIRECTIO	Make cycling a safe, comfortable, enjoyable, and normal experience for residents of all ages and abilities within and between Nanaimo's neighbourhoods.
	CYCLING
(0	C1: More places to cycle to
Ľ	

C2: Encourage and promote cycling as a normal, everyday transportation choice

- C3: Make cycling safer and more comfortable
- C4: More people cycling more often

Cycling is an important mobility option in Nanaimo for both commuting and recreation. Cycling is a good alternative for driving, especially for short and medium-distance trips where cycling can be time-competitive with driving. Although cycling is legally permitted on almost all streets in Nanaimo, there are a limited amount of dedicated on-street bicycle facilities. A network of signed on-street bicycle routes exists but facilities provided along them are variable and in many cases are shared lanes on roads with higher traffic volumes and speeds. Through consultation many residents have indicated that they would consider cycling more if better on-street facilities were provided. In contrast, the City does have an extensive off-street pathway network, including the E&N Trail, the Parkway Trail, and parts of the Harbourfront Pathway, which provide high quality, comfortable bicycle connections.

Recognizing the current barriers that prevent more people from cycling, the City is committed to developing a safe and attractive bicycle network that will make cycling in Nanaimo a more viable and attractive option. Developing a safe and attractive network is critical to shifting the City's bicycle mode share from 1% today to a target of 4% in 2041. To achieve these targets, bicycle network improvements must focus on creating a complete network, connecting high-quality routes such as the E&N Trail with major destinations and emerging development areas. With this approach, the City seeks to develop a network of high quality cycling routes throughout Nanaimo, with supportive facilities, policies, and programming in place that will encourage more cycling trips. These actions will make cycling a safe, comfortable and convenient mobility option for both residents and visitors to the City.

4.1 Issues & Opportunities

Through the NTMP consultation process, Nanaimo residents identified the top cycling-related issues or challenges facing the community today and in the future. Key themes that emerged included:

- Lack of dedicated bicycle facilities, with cyclists often required to share the road with motorists which feels dangerous and uncomfortable;
- Limited network coverage, with neighbourhoods and key areas of Nanaimo lacking bicycle routes or facilities;
- Limited network connectivity, with a need for safer, more connected bicycle routes;
- Unsafe roadways due to traffic volumes and speeds, such as Hammond Bay Road, Terminal Avenue, and Bowen Road; and
- Lack of **wayfinding** and information to get around Nanaimo by bicycle.





Key opportunities for the cycling network that were identified included:

- More bicycle network coverage and connectivity, including in south Nanaimo, Harewood, Hammond Bay, Downtown, and around Vancouver Island University;
- **More bicycle lanes and paved shoulders**, to separate cyclists from other road users;
- Separated bicycle lanes to further separate cyclists from motor vehicle traffic, and increase safety; and
- **More off-street multi-use pathways**, including an extension of the E&N trail and other key linkages.

4.2 Shaping Influences

- Most cycling trips in Nanaimo are short, local trips with the average bicycle trip 2 km in length (90% are less than 4km), or approximately a 5 to10 minute journey. Considering that over half of driving trips in Nanaimo are less than 4 km in length, there is a significant opportunity to shift some of these short-to-medium distance driving trips to cycling trips, provided that connected, safe, and convenient bicycle routes are provided.
- Comfortable routes to mobility hubs can encourage short, local cycling trips, as mobility hubs are expected to become significant population and employment centres, and thus major destinations for Nanaimo residents and visitors over time. Ensuring the long-term bicycle network incorporates convenient and direct bicycle route connections within and between mobility hubs can facilitate more local trip-making by bicycle to nearby jobs, services, and amenities.
- Nanaimo's existing pathways, such as the E&N Trail, Nanaimo Parkway Trail, and portions of the Harbourfront pathway are significant assets to developing a complete and comfortable bicycle network. These existing pathways are comfortable for most cyclists, as they are physically separated from automobile traffic. The City will work to enhance these routes and expand the network of off-street pathways to develop continuous pathway 'spines'.
- There is a significant opportunity to increase ridership by focussing investments on those who are interested in cycling but concerned about safety. Studies have shown that a large demographic of people are interested in cycling, but are deterred because of safety and traffic Most of the City's on-street cycling network is concerns, often associated with routes where cyclists must share the roads with high vehicle volumes and speeds. Currently, most bicycle routes in Nanaimo require cyclists to share the lane with motorists, which can be



composed of signed routes, with shared lanes. Many residents feel uncomfortable on these facilities and suggest that with better facilities, they would cycle more.

uncomfortable for many people interested in cycling. Shifting cycling improvements to address the needs and interests of the 'interested but concerned' demographic can result in significant benefits and increases in bicycle ridership. This can include separated multi-use pathways, bicycle lanes, and bicycle routes on streets with lower traffic volumes and speeds that are comfortable for more cyclists.





- The greatest potential for increasing bicycle use in Nanaimo is in the Downtown and its surrounding neighbourhoods. An assessment was conducted to identify areas of Nanaimo currently with the highest potential for increased bicycle use, evaluating the presence of several factors that make cycling more attractive, such as road network density, connectivity, land use mix and density, and topography. Areas bounded by and surrounding VIU, Downtown and the Hospital form a rough triangle within the centre of the City with many of these traits. By targeting initial improvements in these areas, more residents can be attracted to travel by bicycle sooner.
- Bicycle facilities should be integrated with transit, as the ability to 'bike-and-ride' can make medium to long distance bicycle trips more attractive. The linear nature and dispersed land uses of Nanaimo result can result in trip distances that may be too far for some riders to comfortably cycle. However, transit can extend cyclists' range, making medium and long-distance distance trips more feasible. Continued support for bicycle racks on

buses, bicycle parking and secure lockers at major transit stops and exchanges and all make riding transit with a bicycle easier.

Improve bicycle network coverage, as key areas of the community lack dedicated bicycle routes, making for challenging connections to many major destinations within



Transit can help extend the range of those traveling by bike while having a bike can help transit riders reach their final destinations once off the bus. RDN transit buses can currently carry up to two bikes, additional facilities such as bike parking or bike share stations at transit exchanges could help make both modes more attractive.

the City. North-south cycling mobility spines need to be extended to connect Nanaimo's linear neighbourhoods from the South End, Harewood, VIU, and Downtown through to Woodgrove. East-west routes are needed to provide connections to and between these spines to form a comprehensive network.







4.3 What Are Others Doing?

City	Program Name	Brief Description	Relevant NTMP Policy
Santa Monica, CA	Bike Action Plan	Adopted in 2011 with the intent of establishing the City as a world class bicycling community, a major initiative of the Plan is the Santa Monica Bike Centre, one of the largest bicycle parking facilities in the US. It provides secure bicycle parking, showers and lockers, bicycle repairs, bicycle rentals, bicycle sharing programs, and guided bicycle tours.	 C2 Comfortable Infrastructure C3 Bicycle Integration
Long Beach, CA	"Best Bicycling City in the US" Initiative	The city implemented innovative bicycle infrastructure, including cycle tracks, green shared lanes, and bicycle boulevards. These improvements have resulted in an increase in ridership of 33% on new facilities, decrease in cycling accidents by 80%, and decrease in the number of cyclists on sidewalks by 30%.	 C1 Expand Cycling Network C2 Comfortable Infrastructure
Vancouver, BC	Local Street Bikeways	Vancouver's bicycle network is based on traffic- calmed bikeways, which are parallel to major corridors but designed to encourage low vehicle volumes and speeds, to make safer conditions for cyclists. Many bikeways are 'branded' with route names and wayfinding measures that support a more comfortable user experience.	C2 Comfortable Infrastructure
Madison, WI	Bicycle and Pedestrian Program	Through this program, the City provides an interactive map and information on trails, local bikeways, and bicycle-transit integration. The City also has innovative bicycle parking ordinances that require secure off-street bicycle parking for new structures in specific districts in the City.	 C2 Comfortable Infrastructure C3 Bicycle Integration C5 Marketing & Communication
Long Beach, CA (also: San Diego and NYC)	Business Friendly Bicycle Districts (BFBDs)	BFBDs welcome cyclists to shop and dine locally. These districts provide access to bicycle-related businesses, bicycle racks and corrals, and have bicycle facilities and wayfinding. BFBDs are usually located along major transportation corridors	 C4 Education & Awareness C2 Comfortable Infrastructure C5 Marketing & Communication
Chicago, II	Bicycle Corral Program	The City is committed to promoting on-street bicycle parking corrals as a low-cost way to provide parking for ten bicycles in the same space occupied by a single car. Corrals provide parking space for bicycles, keep bicycles off the sidewalk, and communicates that the City values cyclists.	 C1 Expand Cycling Network C2 Comfortable Infrastructure





Montreal, QC / Ottawa, ON	BIXI Bicycle Share Program	Capital BIXI provides public bikes, accessible 24 hours a day 7 days a week through April to November in Ottawa & Gatineau. The program was launched in May 2011 and has 250 bikes and 25 stations.	•	C2 Comfortable Infrastructure C5 Marketing & Communication
Seattle, WA	Seattle Interactive Bicycle Map	The online interactive bicycle map is designed to help foster positive energy as it relates to cycling in Seattle. The map is designed to allow individuals of various comfort levels information on route options. There are three maps tailored to different types of cyclists.	•	C5 Marketing & Communication
Calgary, AB	City of Calgary Pathways and Bikeways App	This free mobile app developed by the City of Calgary makes it easy for residents and visitors of Calgary to plan their trip through the City's pathway, bikeway and LRT routes focusing on active transportation modes as opposed to motorized vehicles.	•	C5 Marketing & Communication

4.4 Cycling Policies and Actions

This section describes the cycling policies and actions that can guide the City in achieving the cycling goals of more and safer cycling, making biking a normal way to get around, and connecting more places with bicycle routes and facilities. The five key cycling policies are shown below:

	CYCLING
	C1: Develop and expand the bicycle network
CIES	C2: Develop comfortable bicycle infrastructure
OLIC	C3: Integration of bicycle facilities
	C4: Support cycling education & awareness
	C5: Promote marketing & communication for cycling

C1 Develop and Expand the Bicycle Network

The recommended bicycle network for Nanaimo seeks to provide safe, convenient and comfortable connections within and between Nanaimo's mobility hubs and other major destinations throughout the community. The proposed bicycle network should leverage and expand upon key north-south cycling facilities including the E&N Trail and portions of the Harbourfront Pathway and Parkway Trail. East-west bicycle connections should also be established between these key spines.

To develop a complete and well-connected bicycle network, the City should strive for dense network of bicycle facilities, particularly in areas with high potential. The bicycle plan recommends a bicycle route spacing of 400 metres or less in areas with the highest cycling potential, including Downtown and surrounding neighbourhoods as well as in mobility hubs, with bicycle route spacing of 400 to 800 metres





recommended elsewhere in the City. The proposed long-term cycling network provides comprehensive coverage over the entire City and is shown in **Map 5** and developed using the following considerations:

- Provide a grid network of high quality mobility spines, focusing primarily on the E&N Trail but also portions of the Harbourfront Pathway and Parkway Trail. The City should enhance the quality of these existing facilities by ensuring they are paved, well-lit, and in particular by improving intersection treatments. Over time they should be extended to the south and north, providing better connections to destinations along the full length of the City.
- Target areas with high cycling potential, namely Downtown, Harewood, NGRH and Vancouver Island University. Within these



The E&N Trail is the City's most popular cycling facility. Running along the City's spine it accesses many of the City's most important destinations.

areas the bicycle network should have more frequent route spacing and include higher quality facilities to create an attractive and convenient cycling network. Other cycling infrastructure such as bicycle parking, wayfinding, and repair centres should also be prioritized within these areas.

- Create a dense bicycle network in mobility hubs, as these are areas with growing cycling potential, will have significant transit connections, and are expected to have significant density and mixed use development. As such, the bicycle network within mobility hubs should support bicycle route network spacing of less than 400 m and preferably all roads within mobility hubs should be bicycle-friendly. In Downtown, a loop of cycling facilities along Front, Victoria and Wallace streets connects with radial routes lining to the rest of the network along streets such as Albert, Haliburton and the E&N trail.
- Provide connections between mobility hubs. The long-term bicycle network is designed to provide at least one or two key bicycle routes between neighbouring mobility hubs, supporting medium-long distance trips between Nanaimo's major activity areas. For example, bicycle lanes along Uplands Drive could provide a direct connection between mobility hubs at Country Club and North Nanaimo.
- Provide connections outside of mobility hubs, with bicycle routes spaced 400 to 800m apart or along major routes, providing access between residential areas, neighbourhood centres, and key connections to major cycling facilities.
- Create cycling facilities within new development areas as street infrastructure is constructed so that neighbourhood residents can travel easily by bicycle from when they move in. Consider cycling travel patterns when planning parks and multiuse pathway connections within neighbourhoods.
- Create cycling gateways, as identified at key entrance points to the community in north and south Nanaimo, and at the Duke Point and Departure Bay ferry terminals. These gateways could include kiosks that provide information for cyclists about bicycle routes within Nanaimo, as well as information





on bicycle serving businesses, key destinations, access to transit and external linkages to other communities. Key bicycle routes should connect to these gateways.

The cycling network shown in **Map 5** provides a vision for a long-term comprehensive cycling network across the entire City. This network can assist the City creating new cycling facilities, through development, capital road projects or other opportunities as they present themselves. Specific facility types are indicated as a guide only.

It is recognized that long-term network bicycle network will take many years to develop, and as such, a smaller priority network is proposed for development over the short term. The priority network provides a system of new and existing routes (**Map 6**) that connect the City's largest destinations. The priority cycling network has been based on the following principles:

- Develop bicycle networks within mobility hubs;
- Develop bicycle routes between mobility hubs;
- Connect to key employment, activity and commercial centres;
- Develop key north and south off-street routes; and
- Use interim facilities where necessary to bridge gaps in the network.

	C1: De	evelop and Expand the Bicycle Network
	C1A	Implement the priority cycling network, connecting within and between mobility hubs over the short term.
TIONS	C1B	Implement the long-term cycling network over the long-term or through capital projects, development and other opportunities as they arise.
AC	C1C	Consider cycling improvements as part of all street capital projects, installing and upgrading cycling routes through road construction and rehabilitation.
	C1D	Create cycling gateways at key entry points to the City to provide information and wayfinding for visitors.





Discussion Paper #3: Transportation Possibilities

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C2 Develop Comfortable Bicycle Infrastructure

In order to attract people to bicycle for shorter, local trips, higher quality bicycle facilities should be provided on primary cycling routes. In order to develop these facilites we need a larger toollbox of bicycle facility types and intersection treatments to deal with the large range of conditions within the City. Key elements of a comfortable bicycle network are listed below, including:

- Develop high quality cycling mobility spines that have a high quality and standard of design and that are perceived as safe and comfortable by people of all ages and abilities. With a core 'spine' cycling network of comfortable facilities, this can encourage more bicycle ridership and increased perceived and actual safety within the network. Higher quality facilities are also recommended within mobility hubs and other areas with high cycling potential. Outside of mobility hubs, facilities such as bicycle lanes and local street bikeways should be provided.
- Consider a range of different bicycle facility types for different contexts, which have varying levels of appeal for different users. Figure 6 below shows a hierarchy of bicycle facilities, in which facilities physically separated from motor vehicle traffic (i.e. off-street pathways and cycle tracks), are generally the most comfortable, while the least comfortable facilities are those on busier roads with limited separation from high volume and high speed traffic. All of these facilities can be used to create cycling routes. Different facilities perform better in different situations and form a tool box to select from as cycling networks are developed. A more detailed description of each facility type is provided below.



Figure 6: Bicycle Facility Hierarchy

- **Off-street pathways** are physically separated from motor vehicles, typically away from the road right-of-way and designed to support cyclists, pedestrians, and other non-motorized users. The E&N Trail and Parkway Trail are examples of this type of facility.
- **Cycle tracks** are physically separated from motor vehicle travel lanes but are located within the road right-of-way. Cycle tracks combine the experience of an off-street path with the on-street infrastructure of a conventional bicycle lane. Cycle tracks can be separated from vehicles by barriers, delineators, parked cars, painted buffers, or elevation. Connections between cycle tracks and off-street pathways can be challenging.



- Bicycle lanes are lanes designated by painted markings, designated exclusively for bicycle travel, with curb and gutter. An example of a bicycle lane in Nanaimo is found on Fourth Street in Nanaimo, connecting Downtown to VIU.
- Local street bikeways are on streets with low vehicle speeds and volumes, and include treatments ranging from signage and pavement markings, to traffic calming measures that improve safety for cyclists and other road users.
- Shoulder bikeways, or paved shoulders, are typically found on streets without curb and gutter with shoulders wide enough for bicycle travel. Shoulder bikeways often, but not always, include signage alerting motorists to expect bicycle travel along the roadway.



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In the last three years, the City has started to use bike lanes to better accommodate cyclists within major roads. Here on Dover Rd a short section of bike lane was installed as part of a sidewalk infill project.

- **Wide shared use lanes** provide additional width for cyclists and vehicles to share the outer lane of a roadway; currently used on many on-street bicycle routes in Nanaimo.
- Apply intersection treatments at critical locations on bicycle routes where facilities intersect with major roads. New and potential cyclists can be deterred to cycle or use a route because of unsafe intersections and crossings. In fact, most bicycle collisions occur at intersections of driveways, so consideration of these locations can have a large impact on cyclist safety. Crossing treatments are used to assist cyclists crossing major roads, and to minimize potential conflicts with motor vehicles. Intersection treatments that should be considered in the bicycle network include:
 - Coloured pavement is used at intersections and conflict zones to position cyclists appropriately with respect to other traffic, especially right turning vehicles and motorists, and to highlight the area of potential conflicts. Green is the preferred colour.
 - Bicycle lane markings through intersections. Dashed bicycle lane markings may be provided through complex intersections to guide cyclists through these locations and to alert motorists to the presence of a bicycle route through the intersection.



Coloured green pavement is often used within intersections to highlight potential conflict zones between cyclists and drivers.

- Bike boxes can provide cyclists an opportunity to proceed through an intersection when the signals turn green in advance of vehicles. This reduces conflicts between cyclists and motorists and improves safety for cyclists. Bike boxes are beneficial where cyclists turn left from a traffic lane shared with left-turning and through traffic, and where cyclists travel straight through an intersection in a traffic lane shared with through and rightturning traffic.
- Bicycle detection at signalized intersections to increase the safety and comfort of bicyclists crossing the road. With detection technology in place, bicycles should be able to activate a traffic signal using a bicycle loop detector, pushbutton, or video detection at traffic signals.



- Bicycle Left-Turn Pocket Lane. Using a standard-width bicycle lane adjacent to the lefthand turn lane, bicycle left-turn pocket lanes "or launch pads" reduce conflicts with turning motor vehicles.
- Shared Crosswalks for cyclists and pedestrians. Current crosswalks designed for pedestrians require cyclists to dismount and walk while crossing. Shared crosswalks with enhanced pavement markings and signage can allow





Cyclists need to be able to activate and use signals to navigate thru busy intersections.

cyclists to legally remain on their bikes while crossing cross streets.

- Update the City's Bicycle Facility Design Guidelines to include safe and comfortable bicycle facility types and intersection treatments. Currently, the City's Bicycle Facility Design guidelines provide direction on the design of shared bicycle routes, marked wide curb lanes, bicycle lanes, multi-use pathways, and a limited number of signalized crossing treatments. Shared bicycle routes and marked wide curb lanes are not likely to attract new cyclists, so these design guidelines should be expanded to include other more comfortable cycling facilities, including separated bicycle lanes (cycle tracks) and local street bikeways. Guidance on intersection treatments such as conflict-zone markings, bike boxes, launch pads, and bicycle pushbuttons and loop detectors should also be provided.
- Update the City's Street Design Standards to better accommodate cyclists in all new roads. The City's street design standards (Manual of Engineering Standards and Specifications) have historically accommodated cyclists within wide shared lanes on major roads. This treatment will not likely attract additional cyclists and should be replaced on major roads. The City should review all its standard road cross sections to better accommodate cyclists in the construction of new streets. For crossing treatments and other street design elements, cycling should be explicitly considered and addressed. As new best practices appear, the City should consider and include them within its standards.

	C2: Develop comfortable bicycle infrastructure			
	C2A	Introduce new bicycle facilities and crossing treatments as routes are developed.		
TIONS	C2B	Update the City's Bicycle Facility Design Guidelines to provide direction on the design of safer more comfortable bicycle facilities and intersection crossings.		
AC	C2C	Update the City's Street Design Guidelines to ensure cyclists are better accommodated within standard street cross sections.		
	C2D	Implement a cycle track pilot project within the Downtown.		

C3: Integration of Bicycle Facilities

Beyond on-street and off-street cycling routes, other bicycle infrastructure and programs should be integrated into areas of Nanaimo that have high cycling potential. Providing supportive bicycle



infrastructure in areas such as Downtown, transit exchanges, intercity bus services, and BC Ferries terminals, can enhance the appeal of using a bicycle to get around Nanaimo, and can establish the City as a bicycle friendly destination. Opportunities for cycling supporting infrastructure and programs, includes:

Establishing a Bicycle Friendly Business District, particularly in Downtown Nanaimo, where there are existing bicycle racks, bicycle-friendly conditions such as low volume and low-speed streets, popular community destinations, and a concentration of population, services and employment. A Bicycle-Friendly Business District is where a community or agency (i.e. the Downtown Business Improvement Association - DNBIA) seeks to encourage residents, visitors, and employees to cycle to shops and restaurants. This often entails the integration of bicycling into a business district's operations, events, and promotions and bicycle facilities within the BIA area. Similar approaches can be used at larger commercial developments within the City to promote both onsite bicycle parking and improved site access.



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The Downtown Nanaimo Business Improvement Association recently funded bike racks within the downtown, making it a more attractive place to visit and shop by bike. Similarly, many of the City's malls and businesses include bicycle parking on-site to attract cyclists to their facilities.

Enhance Opportunities for Bicycle Parking. Recognizing that the fear of bicycle theft or vandalism is a deterrent to cycling, it is important to provide safe and secure on-street bicycle

parking at key locations throughout the City. Safe and secure bicycle parking is recommended in key areas of Nanaimo, such as:

- Mobility Hubs;
- Shopping areas;
- Community centres and parks;
- Schools; and
- Transit exchanges.

Ideally, a range of bicycle parking facilities should be offered throughout Nanaimo, based on the type of facility that bicycle parking is serving. For example, bicycle racks and on-street bicycle corrals are often suitable for where there is shortterm bicycle parking such as in commercial areas (i.e. Downtown), community centres, and parks. Longer term bicycle parking, such as bicycle shelters, cages, or lockers, are more suitable for key employment and visitor destinations such as universities and schools, hospitals, and transit exchanges.

An opportunity exists for the City to leverage regulatory tools to ensure more bicycle parking is provided by private developers. One option is amending the Zoning Bylaw to



The provision of high quality centralized bike parking should be encouraged where bicycle parking demand is high. At VIU several types of bicycle parking have been developed.

provide requirements for bicycle parking and also developing design guidelines to regulate the overall quality and design of bicycle parking facilities. These requirements may also consider flexible





parking requirements that allow for reductions in automobile parking if the number of bicycle parking spaces provided exceeds the City's minimum requirements.

- Enhance Transit Integration. Transit provides cyclists with the ability to make trips that are farther than they may wish to ride. Conversely, being on bike allows transit riders to quickly reach destinations that are not immediately adjacent to a transit route. Integrating cycling and transit can have benefits for users of both modes. Existing BC Transit low-floor busses are equipped with bicycle racks, but increased demand may exceed the 2 bicycle capacity of existing racks. At exchanges short and long term parking would allow cyclists to "park and ride" on transit. In the future, transit exchanges could also form good locations for bike share stations, allowing riders without a bike to extend their trips beyond a quick walk from the transit drop point.
- Explore Better Bicycle Integration with BC Ferries. Recognizing that the BC Ferries are an important regional transportation provider, ensuring good cycling integration for ferry users can enhance regional cycling connectivity. The City should work with BC Ferries to encourage the provision of visible, safe, and secure bicycle parking facilities at the BC Ferry terminals, encourage the provision of secure bicycle facilities on board (i.e. lock-up areas) and improve way-finding an cycling routes to/from terminals. At Departure Bay terminal, development of better bicycle routes to/from the terminal should be a priority. For Gabriola Island, good cycling connections and bicycle parking within Nanaimo may allow Islander's to travel to the City without their vehicles for shopping, employment or school.
- Explore development of a Bikeshare Program. Bikeshare programs provide affordable access to bicycles for short-distance trips, and are often seen as a way to encourage cycling, and as a way to solve the 'last mile' problem for users of public transportation. Areas such as Downtown Nanaimo, Vancouver Island University, the Stewart Ave corridor (including Departure Bay terminal), and future mobility hubs are areas within the community that could potentially support a bike

share system in the future. Accessible and convenient bike share systems can be attractive to the most casual riders and could encourage more Nanaimo residents and visitors to try out cycling in and around the City.



Several modern bike share programs have been recently launched in larger North American Cities (including Ottawa, Montreal and Toronto) providing a quick and easy way to travel distances too far to walk.





	C3: Int	tegration of bicycle facilities		
	Citywide			
	C3A	Require bicycle parking in office, commercial, and medium-high density residential developments.		
	C3B	Develop bicycle parking around key trip generators (i.e. employment areas, shopping districts, parks, schools).		
SNC	C3C	Work with BC Ferries to improve bicycle routes to/from terminals, parking at terminals and on facilities on ferries.		
ACTIO	C3D	Work with BC Transit to provide secure and convenient bicycle parking at transit exchanges.		
	C3E	Explore development of a bike share program.		
	Mobility Hubs			
	C3F	Continue efforts to create a Bicycle Friendly Business District in Downtown Nanaimo.		
	C3G	Develop on-street bicycle parking within mobility hubs and other high activity streets.		

C4: Support Cycling Education & Awareness

In addition to infrastructure and facilities, supportive education and awareness initiatives are required to make cycling a more convenient transportation option. Support initiatives are critical to spreading

awareness about the bicycle network and to educating residents on cycling skills and road safety. For those who do not currently cycle, these programs can make it easier to start riding. Initiatives could include:

Promoting Education. To ensure that residents have the skills, information, confidence and support they need to cycle more, there are a number of education initiatives that the City can develop and support with its partners, including supporting cycling skills programs, and continued support of the Safer School Travel Program and Ride to Work/Bike to



Cycling education programs can instill good habits in young riders and break down barriers to non-riders starting to ride.

School Week and Bike Month. The City should continue to collaborate with agencies and organizations such as the Greater Nanaimo Cycling Coalition, ICBC and RCMP traffic safety programs.





- Host Festivals and Events. In addition to as annual events such as Ride to Work and Bike to School week the City should consider supporting bicycle accessibility/parking at community events such as Bathtub Days.
- Improved Wayfinding. Signage and wayfinding is an important feature to integrate into the bicycle network. Signage is a cost effective measure to make cycling more convenient and comfortable, assisting cyclists as they navigate to their destinations. While most residents know how to travel through the City by car, it may not be obvious which routes are the best by bicycle. For both experienced and inexperienced cyclists, signage can help riders to find the best routes that match their cycling abilities and comfort levels and to find new routes as they become more confident. Bicycle route signage can also highlight for drivers and other road users where they should expect to see greater concentrations of cyclists.



	C4: Sı	upport cycling education & awareness
SNC	C4A	Continue to support Bike to Work and Bike to School events.
ACTIO	C4B	Encourage travel to community events by walking, cycling, and transit.
	C4C	Develop and implement consistent, legible wayfinding system on all bicycle routes.

C5: Promote Marketing & Communication for Cycling

The City can actively market and promote its bicycle network, policies and programs using various media, through the following initiatives:

- Develop an online interactive bicycle user map for Nanaimo residents which could display information tailored to the different comfort levels of bicyclists. For example, the City of Seattle's online interactive bicycle map allows users to identify as either a *frequent, average* or occasional rider, with bicycle routes suggested according to their identified comfort level. Occasional riders are recommended to use multi-use trails and other dedicated bicycle paths, while bicycle lanes and other dedicated facilities are recommended to *average* riders. An online interactive map should highlight major destinations, bicycle amenities, transit exchanges and bus stops, bicycle parking locations, and bicycle retailers.
- Utilize QR Codes for display on bicycle racks, bus shelters, and other public spaces for cyclists to scan with their mobile phones to link them to the online interactive cycling map, the app location, and other pertinent information on cycling in the City.





The City could also expand on its current **dedicated website** through providing links to cycling-related social media tools (i.e. the cycling app and online interactive map) to promote and market cycling initiatives. The website could potentially be a combined 'walking and cycling in Nanaimo' webpage, used to provide general information about the benefits of walking and cycling in Nanaimo, a description of the current pedestrian and cyclist routes in Nanaimo, and a link to the pedestrian and bicycle maps and other resources. Provision for the reporting of maintenance issues and deficiencies could also help residents participate in improving their cycling network.

S	C5: Promote marketing and communication for cycling		
ACTION	C5A	Produce and regularly update citywide cycling map (printed and online).	



Chapter 5 Transit





S S	TRANSIT
STRATEGI DIRECTION	Make transit a more economical, convenient, reliable, accessible, and practical way to move within and beyond the City by enhancing transit services and facilities and the overall customer experience.
(0	T1: Enhance transit service quality
0AL\$	T2: Develop a transit-supportive public realm
Q	T3: Enhance the transit customer experience
	T4: More people taking transit more often

Longer trips required to connect between many of the City's important destinations may be too long for many to walk or cycle. Therefore, transit service is an important part of developing a sustainable transportation system and providing options to travel without a vehicle. Transit in Nanaimo is planned and operated by the RDN, with support from BC Transit. The City works with these partners as representatives of the community, as well as, providing space within City streets for bus stops and exchanges and amenities at stops. Currently, there are approximately 15 bus routes that serve Nanaimo, providing connections between Nanaimo's neighbourhoods, transit exchanges, schools, retail and employment centres, and adjacent RDN communities.

With a mode split of 2.5% transit supports many people in their daily travels, particularly older residents, students and those without access to cars. However, frequency and coverage limitations prevent transit from being a convenient travel mode for more people. Low-density and dispersed land uses in many parts of the City make transit costly to provide, less attractive to riders, and generates lower ridership. Where higher residential, employment and service densities are present, such as within Country Club, Downtown and Woodgrove, or at key community institutions, such as VIU and NRGH, ridership is significantly higher. To increase transit ridership significantly, transit must be competitive with other modes and attract riders that have access to vehicles, but choose to take transit. This will require both the right land uses conditions and attractive transit service to shift travel patterns over time.

Recognizing these challenges, BC Transit and the RDN are developing a 25-year Transit Future Plan for Nanaimo to guide and prioritize future transit investments. The Transit Future Plan will guide future transit investments, such as, key transit corridors, service hours, and infrastructure improvements over the long-term. The City, RDN and BC Transit are working together to ensure that both plans are consistent and supportive.

The Transit Future Plan has set a regional mode share target of 5% by 2036 and sub-regional target of 8% within the City of Nanaimo. As the densest and most populace portion of the RDN, Nanaimo already accounts for the majority of transit ridership and service within the RDN and thus is projected to generate a larger portion of future ridership relative to other parts of the Region.



The NTMP provides the City with an important opportunity to articulate its vision for transit service, guiding policy and infrastructure improvements that ensure the transit system supports the City's overarching goals and objectives. While transit forms a relatively small part of the Nanaimo's current transportation mix, it is growing, and will play an increasingly important role in connecting Nanaimo's neighbourhoods and mobility hubs in the future. Consistent with the Transit Future Plan, the NTMP outlines actions and policies that the City can adopt to support the RDN's goals of achieving an 8% transit mode share. The provision of strong transit services will also support the City's goal to develop mobility hubs while mobility hubs and other large trip generators will provide the ridership required to support higher quality transit services.

5.1 Issues & Opportunities

Through the NTMP consultation residents identified transit issues and challenges facing Nanaimo today and in the future. Commonly identified issues emerged throughout the feedback, with key themes summarized below:

- Infrequent service especially during the evenings and weekends, where schedules involve long transit headways. Many people commented that infrequent service was problematic for those taking transit outside the standard 9-5 working day. Infrequent transit service was cited as making driving a more appealing option than taking transit.
- Slow bus travel times with indirect routes reduce the competitiveness of transit, and make driving a more appealing transportation option.
- Unreliable service including busses not staying on schedule, with passengers waiting longer than anticipated at stops and missing transfers.
- Underserved areas including Duke Point, the Airport, South Nanaimo (Cinnabar and Chase River) and outer rural areas.
- Bus times not integrated with the BC ferry schedule at Departure Bay terminal.
- Bus stop conditions, such as the need for shelters and accessible bus stops.
- Better regional connections are needed to nearby communities Parksville, Lantzville, Ladysmith, and Duncan.
- Improved service and U-Pass fares for Vancouver Island University students.



Existing transit routes within the City of Nanaimo and adjacent communities (2013)





Based on the feedback from the survey and public consultation activities, residents indicated that transit in Nanaimo could be improved by providing the following:

- Improved scheduling and frequency especially outside of peak hours
- Improved direct connections between key destinations such as Downtown, Vancouver Island University, BC Ferries, civic facilities and mobility hubs.
- Improved route coverage to underserved neighbourhoods, particularly in the south of the City.
- Better passenger amenities such as bus stops with shelters and lighting
- Transit options to connect Nanaimo to nearby communities.

5.2 Shaping Influences

Transit service must be attractive to generate sufficient ridership, be cost-effective, and justify more resources. Attractive transit service requires direct, frequent routes between key destinations. Significant improvements to these connections are required to ensure the retention of existing



customers and the ability to attract new customers. To achieve significant growth, transit services must attract riders that have access to vehicles.

- The layout of the transit network impacts the attractiveness of taking transit. Circuitous transit routes, while providing good coverage, can significantly increase travel time and reduce transit's attractiveness. Some circuitous routes are a direct result of road layouts and development patterns, however, many routes are indirect even where more direct route options exist. Opportunities to rationalize transit routes such that they can be more time competitive with driving should be pursued.
- Land use patterns influence the overall pattern of travel in a region and also the success of transit. Conversely, low-density and single-use areas with curvilinear street patterns generate few transit trips, and are expensive to service. These characteristics can make transit costly to provide, less attractive to riders, and generate low ridership, discouraging the provision of higher frequency service. However, directing higher densities and land use mixes along transit corridors and mobility hubs can increase transit demand and support more frequent service, making transit more competitive. The City can support a shift to more transit use by focusing future growth and development in mobility hubs and transit corridors, and by making these areas more walkable and bikeable.







Curvilinear streets without pedestrian connections make accessing transit difficult: reducing ridership and making service expensive. Higher densities and street networks that allow direct connections support higher levels of transit ridership and service.

The location of population and employment strongly influence travel patterns and the success of transit service. Transit planning needs to be informed by current patterns of travel to be effective, including understanding how, why, when, and where people use transit. The On-Board

Travel Survey found that two-thirds of daily transit rides start at VIU, Downtown, Woodgrove, or Country Club exchanges. Surveyed bus passengers were primarily commuting to work or school, or using the bus to go shopping. Most transit trips averaged between 5-6 km, just slightly below the average driving trip length. It is important to align transit planning with the travel needs of current and future transit markets, recognizing that areas of emerging population growth and development will require transit moving forward. Major community institutions such as NGRH and VIU are strong transit markets with large amounts of employment and limited High school and university students are parking supplies. VIU and high school students are already heavy users of transit services, focusing on these transit markets results in significant ridership.



already make good use of transit services. Here NDSS students catch the bus on Wakesiah Ave after school.

Demographic and socio-economic factors influence the attractiveness of transit in Nanaimo.

The City's On-Board Travel Survey found that many of Nanaimo's transit passengers are 'transit-captive', with primarily younger or older residents (i.e. 75 years and older) using transit. Future planning for the transit network should accommodate the unique travel patterns and demands from these groups, but should also be designed to attract riders from other age groups that currently have lower transit usage.

Transit services and facilities must be accessible in order to serve a growing population of people with mobility challenges. The City can help make transit more accessible by developing universally accessible stops and connecting stops to the surrounding pedestrian network. This is



particularly important as Nanaimo's population ages and more residents have mobility challenges and/or lose convenient access to vehicles.





Passenger comfort and safety at transit stops are important ingredients to make transit an attractive alternative to driving. Customer amenities such as seating, weather protection, shelters, lighting and customer information at bus stops make transit use more appealing. Providing strong pedestrian linkages to transit is also a determinant of transit success, and should be prioritized along with providing customer amenities at high activity bus stops.

5.3 What Are Others Doing?

City	Program Name	Brief Description	NTMP Direction
Bellingham, WA	Public Transit System (Whatcom Transportation Authority)	Developed a new brand, high frequency Go Line service, including the BLUE, RED, GREEN, and GOLD lines. Ridership grew quickly, more than 20% in 2007, and increased again in 2008 by 32%. This gain was in part due to a significant increase in the number of service hours and the launch of the GO Lines that run every 15 minutes.	 T1 Enhance Transit Service (FTN) T3 Transit Support Initiatives
Boulder, CO	Community Transit Network	Improvements in service and the development of a unique universal bus pass program resulted in significant ridership growth. Boulder implemented a Community Transit Network using small, locally designed, and branded buses to provide high frequency, direct local service. Within 13 years ridership increased by 500%. Today, there are six bus routes: HOP, SKIP, JUMP, BOUND, DASH, and STAMPEDE each with unique identities and branding.	 T1 Enhance Transit Service (LTN, FTN) T3 Transit Support Initiatives
Eugene, OR	Bus Rapid Transit System	Eugene's BRT system named the Emerald Express runs on a fully separated right-of-way with transit signal priority. The system connects downtown Springfield to downtown Eugene, and key educational centres. Ridership increased 75% in the year after the system was initiated and now has more than 10,000 daily riders. An integrated station area plan has cultivated nodal development along the routes.	 T1 Enhance Transit Service (LTN, Regional) T3 Transit Support Initiatives
New York City, NY	Safe Routes to Transit	This program focuses on improving pedestrian conditions in and around transit stops by addressing unsafe bus stops under elevated subway structures, congested sidewalks next to subway entrances, and incomplete pedestrian infrastructure at bus stops.	 T3 Transit Support Initiatives
Portland, OR	Pedestrian Access & Bus Stop Improvements	Portland developed an integrated vision for enhancing transit access through placemaking, wayfinding, and new shelters. By creating transit facilities that were pedestrian friendly Portland created an environment that appealed to both transit users and pedestrians.	 T2 Transit Facilities T3 Transit Support Initiatives





Vancouver, BC Main Street Transit and Pedestrian Priority This was a comprehensive approach to improve Main Street for transit passengers, pedestrians, and cyclists. Priorities included improving bus travel time, reduce pedestrian street crossings, improve sidewalks, real-time transit arrival information, more shelters, additional bike racks, placement markings, public art and streetscape improvements.

T3 Transit Support Initiatives

5.4 Transit Policies and Action Areas

Feedback from residents and stakeholders indicates support for transit service improvements in Nanaimo. This section describes the overarching transit policies and supportive actions that can guide the City to achieve the NTMP goals of increased transit ridership, enhanced service quality, development of a transit-supportive public realm, and enhanced customer experience.

POLICIES	TRANSIT
	T1: Enhance frequent and rapid bus transit services
	T2: Improve and expand transit facilities
	T3: Undertake transit-supportive initiatives

These policies and actions are intended to provide strategic direction to the City, the Regional District of Nanaimo, and BC Transit with respect to transit planning, decisions, and investments into the future.

T1 Enhance frequent and rapid bus transit services

The NTMP public consultation process identified residents' desire for improved transit service, frequencies, coverage, and enhanced transit links to throughout the system. As growth and development is concentrated in Nanaimo's mobility hubs, ensuring that the transit system addresses both user needs and changing land use patterns is essential to the systems future success. Overall, the network must be designed to be more competitive with automobile travel by improving the speed, frequency and directness of transit services. Service improvements should be targeted on improvements that result in the largest increases in ridership.

Transit service enhancements in Nanaimo should be focused primarily on the development of a core **frequent transit network of direct routes with frequent service** that serve the City's largest destinations and areas of highest transit potential. Along these routes, frequent service throughout the day should allow users to casually use transit without reference to schedules. Although the frequent transit network is the City's priority, since the FTN will not reach all destinations, consideration should also be given to supporting the frequent transit network by improved **local services** that provide wider coverage to all areas of the City, Lantzville and Cedar. Additional improvements to **regional connections** should be considered between by BC Transit to RDN communities, regional gateways such as Duke Point, YCD and Ladysmith. This framework mirrors the key themes and directions from the Transit Future Plan for Nanaimo.



Though still focused on Downtown, the proposed network emphasizes stronger connections between the City's four major exchanges, mobility hubs and the key institutional and employment destinations within. Directions for the frequent, local, and regional transit networks in Nanaimo are described below:

• Establishment of a Frequent Transit Network (FTN) that provides

frequent, direct and reliable transit connections between Nanaimo's largest destinations. With a target frequency of less than 15 minutes throughout the day, transit riders will be able to travel the FTN without consulting a service schedule. Carrying a significant share of the transit system's total ridership, the FTN should include enhanced stop amenities and corridor branding along its routes; over time transit priority measures may be added as warranted. The FTN would connect the City's four major exchanges and provide connections to major destinations along the Bowen Road and Island Highway corridors where current transit ridership is the highest and future population and employment growth is expected.

Along the Island Highway corridor, a higher level service or **rapid bus transit** would be developed. With service frequencies similar to the FTN, this service would have limited stops, allowing for faster travel times between Downtown, Country Club, Woodgrove and key destinations in-between. Over time transit additional features such as branding, enhanced stations and transit priority measures would make the service even more attractive.

The FTN and rapid bus transit along the Island Highway corridor are key elements of the RDN/BC Transit Future Plan to attract choice users and make transit a more viable option for travel within Nanaimo.

Considerations for providing frequent transit service include: • Connect areas of the City with the highest

- transit demand i.e. Vancouver Island University, Woodgrove, Downtown, Country Club with fast, frequent and convenient transit services;
- Develop Frequent Transit Corridors between Downtown-Country Club-Woodgrove and Downtown-VIU-Country Club;
- Provide limited stop rapid bus transit on the proposed Downtown-Country Club-Woodgrove corridor; consider extending this corridor south to support future development;
- Improve transit accessibility along Bowen Road through the proposed Downtown-VIU-Country Club transit corridor, extend this corridor further north via Uplands Dr over time;



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Branding of rapid bus routes can attract more discretionary riders.



Transit priority measures can help make buses faster and more reliable.





- **Consider Route15** as a potential frequent transit network route for certain periods of the day; and,
- Support frequent transit routes through **transit-supportive land use policies** and bus stop and road improvements along both corridors.

SN	T1: Create more attractive transit services Frequent and Rapid Bus Transit			
	T1A	Support the development of a frequent transit network (FTN), with 15 minute headways or better provided through the majority of the day connecting Downtown, Woodgrove, VIU, and Country Club.		
ACTIO	T1B	Support the development of a rapid bus transit corridor along Island Hwy connecting Downtown, Woodgrove and key destinations along the way.		
	T1C	Support core transit services with supporting land use policies.		
	T1D	Support transit priority measures in partnership with BC Transit along Island Highway and future/frequent rapid bus transit corridors where warranted.		

The Local Transit Network (LTN) extends the reach of the frequent transit network and forms connections between neighbourhoods, local destinations and to the rest of the transit system. Although the City's priority is to focus on developing the Frequent Transit Network, LTN service is also important as it allows customers to plan a trip to work, school, local shopping centre, or personal trips by transit. In some cases smaller transit vehicles can be utilized to better match customer demand and operating conditions to local roads. The LTN is envisioned to provide relatively frequent service (30 minutes or better during peak periods) with more focus on coverage running all day and into the evening. Considerations for the structure of local transit services in Nanaimo include:

- Support local service connections between neighbourhoods, major transit exchanges and key destinations;
- Allow more flexibility on routing/coverage with less focus on speed, to get riders closer to their destinations;
- Work towards a basic level of service, targeting 30 minute headways throughout most of the day, but recognizing that certain routes may support more or less service;
- As development occurs extend routes to provide new neighbourhoods local transit services;
- Where local and frequent transit services overlap, such as in Harewood, routes should be rationalized to provide both better coverage and faster travel times;
- As new development occurs, reroute Route 12 to provide better coverage to new neighbourhoods in the North;
- Consider creating separate Cinnabar Valley and Cedar local transit routes with connections between services at a possible southern transit exchange or Downtown.
- Consider extending Route 15 south from VIU as a local service to improve transit coverage in Harewood and Chase River/Cinnabar.





ACTIONS	T1: Create more attractive transit services Local Transit			
	T1E	Support more frequent service on local routes, where warranted, that connect neighbourhoods to the frequent/rapid bus network.		
	T1F	Collaborate with BC Transit and RDN to rationalize routing and coverage to reduce trip times and increase service levels.		
	T1G	Support improvements that fill in network coverage gaps, particularly in new development areas and South Nanaimo.		

Regional Transit Connections. Expanded regional transit connections are would make transit a more viable option for residents making trips between Nanaimo adjacent communities. As proposed within the Transit Future Plan, extended inter-regional connections could link Nanaimo, Parksville, Qualicum Beach, Lantzville, Ladysmith and the Cowichan Valley over the long term. In addition, transit can also be linked to long-distance transportation links via at Nanaimo Airport and BC Ferry terminals. Opportunities for enhancing regional connections to and from Nanaimo include:

- Consider a hybrid rapid bus-regional transit route serving both Nanaimo and adjacent communities. This hybrid route would operate as a rapid bus transit service along the Island Hwy corridor within Nanaimo, with some busses extending to Parksville and Qualicum Beach as regional connections. This would reinforce the regional nature of the transit system and allow riders to travel between Nanaimo, Parksville and Qualicum Beach on one bus, making it easier to access destinations in all three communities. The route could be further extended to the south over time;
- **Explore extending transit service connections** to the Nanaimo Airport, Duke Point Ferry Terminal, and the Town of Ladysmith in the long term;
- Improve transit and pedestrian connections between Nanaimo and the BC Mainland via Departure Bay Terminal. Better integrate bus and schedules to make transit a more attractive option for travel to and from the ferry; and
- Support further collaboration between BC Ferries, Translink and RDN Transit to foster development of transit-ferry through-tickets or other measures to make non-auto riders' trips more seamless across all three systems. Support improved transit links with faster more direct connections to Downtown Vancouver from Horseshoe Bay terminal.





	T1: Create more attractive transit services Regional Transit Connections			
	T1H	Explore with the RDN and BC Transit the potential for operating a hybrid regional- rapid bus transit route within Nanaimo and connecting to adjacent communities		
CTIONS	T1I	Support stronger integration of transit with BC Ferry service at Departure Bay ferry terminal.		
4	T1J	Encourage BC Ferries, Translink and RDN Transit to develop more seamless travel options for those traveling to Vancouver via transit.		
	T1K	Consider future transit service to Duke Point Ferry Terminal, Nanaimo Airport and Ladysmith over the long term.		










T2 Improve and Expand Transit Facilities

The attractiveness of transit is based not only on transit services, but also on passenger facilities provided at transit exchanges and bus stops.

Transit exchanges are both key destinations and transfer points between bus routes; just under 50% afternoon transit activity occurs at the City's four main exchanges. Where properly planned and designed, transit exchanges can become multi-modal transportation hubs, with connections to transit and other modes, and commercial service centers for transit riders. Current major transit exchanges are located on Prideaux Street in Downtown, at Woodgrove Centre, Country Club and VIU. A number of secondary exchanges are located throughout the system with transfers between bus route pairs and/or access to key destinations (i.e. NGRH, Brooks Landing, and University Village). To accommodate future growth and development, and the emergence of mobility hubs over time, the City will need to explore the role of transit exchanges in the transportation system.

Some key considerations for transit exchanges in Nanaimo are as follows:

- Downtown Transit Exchange. The City supports the relocation of the Prideaux Transit Exchange to the Assembly Wharf area where a new exchange could form part of a multimodal transportation hub with potential integration to other transportation modes as well as direct access to the Downtown. Both public and private investment in the area is important to developing a safe, comfortable and attractive facility with a strong mix of modes and uses. Since the Assembly Wharf area is on the edge of Downtown, higher boarding/alighting activity will likely occur at the stops before and after the exchange; careful consideration of future transit routing approaching the Downtown exchange will be important;
- Woodgrove Transit Exchange. Develop a long-term exchange plan in conjunction with Woodgrove Mall to ensure that this facility can be maintained and grow with the transit system;
- Country Club Transit Exchange. Located along Norwell Drive, explore opportunities to improve the exchanges bus operations, passenger amenities and streetscaping. Consider how the transit exchange can support development of Country Club as a mobility hub;
- Vancouver Island University.
 Continue to support the long-term plan for the exchange, and the improvements for transit services to VIU and its long term objective to reduce personal auto use;
- Future South Nanaimo Exchange. Consider the development of an exchange in the south of the City in the long-term, with potential locations at Southgate Mall or within the planned future Sandstone area. This exchange could allow transfer between routes from the north and



Today the VIU transit exchange is well used by students. Recognizing its important role within the VIU campus, it forms a key element of the University's 2009 Campus Master Plan.

local services in the south. Services from this exchange would support future planned population and employment growth in the south of the City; and





- **Secondary exchanges and stops** should be identified and reinforced as key exchange points, and connections to and amenities within these areas improved over time.
- Passenger Amenities. Passenger amenities at bus stops can have a significant impact on attracting new users. Considerations for passenger amenities should be as follows:
 - Work with Regional District to update transit passenger facility guidelines;
 - Seek to provide seating, shelters, lighting, and customer information at all stops along frequent transit routes and other high activity stops;
 - Provide better passenger amenities and information at **transit exchanges**;
 - Provide more **accessible bus stops**, and accessible transit exchange designs;
 - Develop prioritization methodology for bus stop improvements, taking into consideration certain evaluation criteria such as:
 - Frequent Transit Network routes;
 - Within/proximity to a mobility hub;
 - Proximity to a commercial area;
 - Proximity to a school; and
 - Regional transit routes.



Transit users spend a lot of time at stops; making them comfortable and pleasant places will make transit more attractive.





	T2: Im	prove and expand transit facilities
	T2A	Support the relocation of the Downtown Transit Exchange from its current Prideaux St location to the Assembly Wharf area as part of a future Downtown multi-modal transportation hub.
	T2B	Encourage BC/RDN Transit to develop master plans for all major exchanges.
ACTIONS	T2C	Work with BC/RDN Transit and the public and private sector to provide passenger amenities at and around major transit exchanges, frequent transit network stops and other high-activity stops.
	T2D	Explore strategies to replace existing transit shelters as part of a comprehensive street furniture program.
	T2E	Create a universally accessible transit system, through the provision of accessible waiting and boarding areas at all transit stops and sidewalk connections to stops.
	T2F	Work with the Regional District to update passenger facility guidelines and create standard, attractive and comfortable designs for stops, shelters and street furniture.

T3 Transit Support Initiatives

While improvements to transit service and facilities are key strategies to help expand use of Nanaimo's transit system over the next 25 years, other improvements that make the system easier to use and effective are also important. Travel data can help the City better understand rider's travel patterns and needs allowing new services to be more effectively deployed. Conversely, better customer information can make the transit system easier to use for existing and new riders and help travelers move more efficiently making transit competitive with other travel options. The following support initiatives are of particular interest for Nanaimo's transit system:

- Consistent monitoring of transit usage and transit travel patterns can better inform planned transit improvements. This could include undertaking on-board travel surveys, ridership counts, farebox data collection on a regular basis to ensure that future service improvements maximize ridership and other performance measures;
- Consistent bus stop signage to provide a recognizable transit 'brand' at bus stops (currently there are many different types of bus stop signage used in Nanaimo), which can make it easier for passengers to identify bus stops, exchanges, and additional transit resources;
- Enhanced transit information at bus stops, including route maps, schedules, accessibility and bus stop ID numbers;
- Enhanced passenger wayfinding and resources, such as transit scheduling and routing information available at transit exchanges and key destinations;
- Online trip planner and mobile applications that allow customers to plan their transit trip by entering an address, intersection, bus stop number, or bus route;
- Utilize online travel planners as provided through Google Transit Trip Planner, or others;





- Real-time transit information that tells passengers the actual wait time until the next bus arrival;
- Corridor and vehicle branding standards for high activity transit corridors to ensure a recognizable brand for transit service; and
- Develop a social media presence allowing customers to keep up-to-date via Twitter, Facebook, and other social media tools.

Initiatives that enhance the transit customer experience include (from left to right): online or mobile tools, consistent signage and branding, real-time transit information, and wayfinding.



	T3: Tra	ansit support initiatives
ACTIONS	ТЗА	Work with BC Transit to apply consistent and legible bus stop signage throughout Nanaimo, including enhanced wayfinding and transit information at key locations.
	Т3В	Support the development of corridor and vehicle branding standards for frequent transit corridors.
	тзс	Support the development of online transit trip planning tools, access to transit schedules, routes, 'next-bus' information, and bus stop locations.
	T3D	Work with BC Transit to support the provision of real-time information at transit stops and along key transit corridors (i.e. frequent transit corridors).
	T3E	Develop protocols to better inform Council of impacts to the City associated with changes to RDN Transit services.



Chapter 6 Major Roads





MAJOR ROADS

The Plan should identify investments required in the road network to meet the mobility needs of current and future residents while encouraging a shift from personal auto travel to other more sustainable modes. At the same time future street investments should aim to create more complete streets that better balance the needs of all road users.

Enhance the mobility and access of residents and visitors traveling within and throughout the City by maximizing the use of the existing road network before building new facilities, and by supporting initiatives which reduce the need to travel by single occupancy vehicle while recognizing that travel by personal vehicles is and will be for the life of the plan, the dominate mode of travel within the City

	MAJOR ROADS	
	R1: Reduce the environmental impact of vehicle trips	
	FS	R2: Make the street network safer and more comfortable for all users
GOA	R3: Manage the road network in an efficient, cost-effective manner	
	R4: Ensure the efficient movement goods and services now and into the future	
	R5: Fewer single occupant vehicle trips	

Travel by private vehicle is the dominant mode of transportation within Nanaimo today with 88% of all trips made by car. Travel by car currently provides the most effective way for residents, visitors, services and goods to access destinations throughout the City. For many residents and businesses, travel via the road network is currently their only viable travel option. Most vehicle travel within the City occurs within the City's **Major Road Network** or on Provincial Highways managed by the Ministry of Transportation and Infrastructure.

While travel by car provides many benefits, our dependence on cars impacts our health, our economy and our environment. Through a series of strategies and actions the NTMP seeks to reduce future demand for travel by personal vehicle over the next 25 years. Chapters 1-5 presented strategies and actions to shift travel patterns away from the car towards walking, cycling and transit. In Chapter 6, we explore how to manage future traffic growth, plan for an effective but sustainable road network for residents and businesses, make roads safer and mitigate the negative impacts of travel by car. While shifting to alternative modes is a key theme of the Plan, actions and strategies to manage the City's major road network are also required.

Car trips will still be an important part of our transportation mix in the future. Under the NTMP's targets, the proportion of total trips accommodated by car is projected to fall from 88% to 76% by 2041 and just under half of new trips between now and 2041 would be accommodated by sustainable travel modes. Over the same time period, population and employment growth is projected to increase the total number





of trips in the City from 250,000 to 375,000 per day resulting in an additional 65,000 vehicle trips on Nanaimo's roads by 2041; a 30% increase over current conditions.

Moreover, while the road network is important to residents and visitors moving through the City, it is critical to businesses moving goods and services. Commercial vehicles deliver and distribute goods between stores, warehouses and producers throughout Nanaimo and beyond. As a regional centre and gateway to Vancouver Island, the City also has a larger role in supporting intra-provincial movements of commercial goods. Providing strong connections between Provincial Highways and major commercial and industrial areas will help support local businesses and the economy.

Accommodating future growth while meeting the goals and objectives of the NTMP will require a balanced approach to developing our road network. By developing the network strategically, planning for future expansions in advance but deferring improvements until they are required, the Plan seeks to minimize future road network improvements and costs while maintaining mobility. Moreover, the Plan recognizes that not all road network improvements are driven by capacity and congestion and many improvements; target existing safety issues; complete missing links in the road network; are part of new neighbourhoods; or seek to upgrade existing streets, making them better places for pedestrians, cyclists and other road users; these improvements are also important.

The following chapter provides discussion, strategies and actions for Nanaimo's major roads, supporting a shift towards a more sustainable transportation mix while working to pragmatically and economically accommodate future vehicle trips within the road network.

Nanaimo's Major Roads

Nanaimo's road network is organized into a functional road classification hierarchy. This classification system helps organize our roads by their primary function. Chapter 6 addresses the major roads, which provide mobility through and around the City, local streets, that primarily provide access are described in Chapter 7. **Map 6** shows Nanaimo's major roads, including the City's Major Road Network and Provincial Highways and Routes.

Jurisdiction	Network	Classification / Type		
Province	Provincial Highway Network	Provincial Highways and		
		Routes		
		Arterial		
	Major Road Network	Major Collector		
		Minor Collector		
	Local Street Network	Neighbourhood Collector		
City of		Local Street		
Nanaimo		Commercial Street		
		Industrial Street		
		Lanes		
	Non-Automobile Network	Multi-use Pathways		
		Pedestrian Pathways		
Drivete	Drivete Deed Network	Private Roads		
Privale	Private Road Network	Shared Driveways		

 Table 2: City of Nanaimo Transportation Network Hierarchy





Key components of the Major Road Network are described below:

- Provincial Highways (Highways 1/19/19A, Brechin Rd, Stewart Ave, Nicol St, Terminal Ave (south of Stewart)) are important components of the City's road network but are not under City jurisdiction and rather fall under the jurisdiction of the Ministry of Transportation and Infrastructure.
- The Major Road Network with a focus on mobility is made up of three road classifications: Arterial, Major Collector and Minor Collector. These roads carry significant amounts of traffic between neighbourhoods and through the City. A large range of vehicles including trucks and buses should be expected as well as vulnerable road users such as cyclists and pedestrians.
 - Arterials connect principle areas of traffic generation and are intended to carry large volumes of all types of traffic, including transit and trucks. Their primary role is mobility with significant restrictions on direct access to adjacent development. Access should be provided by adjoining streets, lanes, and rights-of-ways. Examples of Arterials include Bowen, Mostar and Aulds Roads.
 - Major Collectors connect principle areas of traffic generation and are intended to carry significant volumes of all types of traffic, including transit and trucks. Their primary role is mobility with some provision for direct access to development. While limited movement access is generally supported, full movement access will generally be provided via adjoining streets, lanes, and rights-of-ways. Examples of Major Collectors include Hammond Bay, Departure Bay and Extension Roads.
 - Minor Collectors connect areas of traffic generation, higher classification roadways and neighbourhoods carrying moderate volumes of all types of traffic including transit and some trucks. There role and function is a mix of mobility and access. Minor collectors include provision for on-street parking, bike lanes and improved pedestrian environment to support sustainable transportation modes and adjacent land uses. While direct access to adjacent development is generally supported, it will be restricted near intersections and other conflict areas. Examples of Minor Collectors include, Turner Road, Dufferin Crescent and Park Avenue.

Key Corridors

The Nanaimo Parkway (Route 19), the Island Highway / Terminal Ave / Nicol Street (Route 19A/1) and Bowen Road form the backbone of the City's road network. Drawing a virtual line across the City just south of Northfield Road and along Northfield Creek, these three routes carry over 80% of all north-south traffic. Future travel patterns are projected to reinforce this distribution, with traffic volume growth concentrated along these routes. While the City manages Bowen Road and parts of Terminal Avenue, the rest of this core network is managed by the Ministry of Transportation and Infrastructure. Since the City does not have direct control of these facilities, the NTMP seeks to set out a vision for each corridor and identify potential improvements along them, even where they would be undertaken by the Ministry of Transportation and Infrastructure.





Table 3: Average Weekday Traffic Volumes – Departure Bay / Northfield Screenline (Spring 2012)

Мар	Station	Traffic Volume / % (vehicles/weekday/%)
A PARTIEL BAR	Departure Bay Road	9,486 / 9%
and the first	Island Highway (19A)	27,154 / 27%
ATA	Boundary Avenue	5,890 / 6%
	Duggan Road	1,235 / 1%
ours Bar / Normania Scienting (S)	Spencer Road	1,300 / 1%
	Bowen Road	19,251 / 19%
	Boxwood Road	2,724 / 3%
ensumation and me	Nanaimo Parkway	33,767 / 33%
The second	(19)	
The state of the s	Total	100,807 / 100%

- Nanaimo Parkway (Route 19) The NTMP supports maintaining the Nanaimo Parkway as the primary route through the City and recommends that the Ministry of Transportation and Infrastructure undertakes safety and capacity improvements, as required, to maintain travel time and reliability performance along the corridor. Development of interchanges along the Nanaimo Parkway over the long term is also supported, but may not occur within the timeframe of this Plan; in the interim, other capacity improvements to existing intersections would be supported.
- Island Highway / Terminal Ave / Nicol Street Corridor (Route 1/19A) was developed in the 1950's and runs along the length of Nanaimo connecting several of the city's largest commercial centres and future mobility hubs. The corridor includes a mix of street types varying from urban arterial around Downtown to rural highway north of Northfield Road and south of Nicol Street.

The City supports the route's existing role as a key north-south mobility corridor, but envisions a transition over time to an urban arterial streetscape, particularly within or near to mobility hubs. By better accommodating non-auto road users, including commercial vehicles, transit, cyclists and pedestrians and creating a street that supports adjacent businesses, residents and land uses, the corridor can become more integrated with surrounding neighbourhoods.

Where future high-capacity transit services are proposed, the City would support projects that improve transit performance. Future capacity improvements along the corridor should prioritize improving travel times for transit, high-occupancy vehicles, and commercial vehicles or support the goals and objectives of the NTMP.

Where safety issues exist, the City supports working with the Ministry to improve safety performance.





Bowen Road is one of the busiest streets in the City and is the historical connection between Downtown and neighbourhoods to the north. While it is and will continue to be a key north-south mobility corridor the NTMP would seek to shift Bowen Road over time to create a more walkable, transit accessible corridor. The formation of commercial nodes at major intersections with a mix of commercial and residential development in between supported by frequent transit would create a strong linear mixed-use corridor anchored by the NRGH and Country Club mobility hubs at each end. Beyond improved transit accessibility, other potential strategies such as time of day on-street parking, improved sidewalks, street trees, pedestrian crossings, street-facing buildings could help to create a more pleasant, walkable street.







6.1 Issues & Opportunities

Issues and challenges concerning vehicle travel, traffic flow, and the road network in Nanaimo were mentioned throughout the NTMP consultation, including:

- Traffic signal quantity and signal timing along Island Highway and Nanaimo Parkway ;
- Impact of ferry traffic on the road network and surrounding neighbourhoods;
- Connectivity between Hammond Bay, in terms of east-west routes and the rest of City's road network;
- Neighbourhood livability affected by shortcutting and traffic volumes on local roads; and
- **Improved safety** at intersections.

Based on the feedback, residents also indicated that the road network in Nanaimo could be improved by providing the following:

- Road improvements to Northfield Road, Departure Bay Terminal, Linley Valley Drive, Bowen Road, and Stewart Avenue;
- Intersection Improvements at Hammond Bay and Departure Bay Road, Northfield and Boundary Road;
- Road safety improvements;
- Better enforcement of speeding vehicles; and
- Provisions of more attractive alternatives to driving, such as improved transit service and safer walking and cycling routes.

6.2 Shaping Influences

This section describes some of the key facts and shaping influences for the management of the road network in Nanaimo:

- For the foreseeable future, driving is and will continue to be the most convenient and flexible mode of transportation in many areas of Nanaimo. Driving accounts for the majority of trips in Nanaimo, as 88% of trips made by Nanaimo residents are made by automobile, with 12% of all trips made by walking, cycling or transit. While the NTMP targets a decreased mode share for automobile trips, vehicle use will remain the predominant transportation choice for many years.
- Traffic volumes in Nanaimo are expected to increase by approximately 30% by 2041 throughout the City. The number of daily vehicle trips in Nanaimo will increase from 220,000 trips today to 285,000 trips by 2041, meaning that Nanaimo's road network will need to accommodate an additional 65,000 daily automobile trips. Recognizing that vehicle travel is here to stay and will continue to be the most predominant transportation mode choice into the future, it is important that Nanaimo's road network is planned to manage growing vehicle demand and congestion.
- Most traffic growth is concentrated on the Nanaimo Parkway and Island Highway, as local, regional and Vancouver Island population growth is resulting in significant increases in vehicle travel along these primary corridors. The City's traffic modeling has found that in the north segments of Nanaimo Parkway and Island Highway, afternoon peak hour traffic is anticipated to increase between 30-45% on these corridors. In the south segments of Nanaimo Parkway and Island Highway, traffic





growth is expected to increase 50-55% during the afternoon peak period. This indicates where the impacts of traffic growth will be concentrated, and where future improvements need to be focussed.

- There are several key areas of delay and congestion today and in the future. The overall performance of an urban roadway is typically measured by the delays experienced at major intersections, also referred to as Level of Service (LOS). The level of service is a measure of vehicle delay where LOS A suggests that there is no delay and LOS F indicates that there is significant delay and the intersection is experiencing significant queuing. Currently, most intersections in Nanaimo are operating with minor or modest delays, with the primary areas with identified congestion during peak periods occurring on the Nanaimo Parkway (at Northfield Road, Jinglepot Road, Hammond Bay) and Island Highway intersections (at Bowen Road, Norwell Drive, Mostar Road). Disembarking ferry traffic also causes delays along Terminal Avenue, Island Highway, and Brechin Road with platooning ferry traffic. Future growth and development will heighten areas of congestion and delay at many of these intersections with more intersections anticipated to experience LOS F at peak periods, such as:
 - Nanaimo Parkway (intersections of Jinglepot Road, Northfield Road, Mostar Road);
 - Island Highway (intersections of Tenth Street, Bowen Road, Norwell Drive, Jinglepot Road, Mostar Road, Turner Road, and Hammond Bay Road); and
 - Northfield Road at Bowen Road.
- Several key intersections within the City have safety concerns, indicating areas where the City can target future safety-related improvements. ICBC collects and maintains statistics for all reported collisions in British Columbia. The highest collision locations throughout the City are generally found at various intersections along major traffic corridors. Collision rates were also calculated which identify the relative number of collisions based on the traffic volumes through the intersection, as well as the societal cost which indicates the economic cost of the collisions. Many of the areas of the City with the highest collision rates are generally similar to those locations which also experience congestion and delay, as noted previously.
- The City's transportation system is influenced by decisions and directions from other jurisdictions and other levels of government, including the Provincial Ministry of Transportation and Infrastructure. Both the Island Highway and Nanaimo Parkway, Nanaimo's two primary north-south roadway corridors, are under the jurisdiction of the Ministry of Transportation and Infrastructure. The majority of the issues identified along the roadway network, including traffic volumes, areas of congestion, and safety, are located on roadways that are under MOTI jurisdiction.
- New roads need to support all other modes of transportation, not just cars. The road network represents a critical component of Nanaimo's transportation system, not only for supporting automobile traffic, but also walking, transit, cycling, and local and regional goods movement. It must be recognized that many of the shaping influences for vehicle travel such as high collision locations and areas of delay also impact all other modes.





- It is important to protect roadway corridors beyond the horizon of the NTMP, recognizing that road network issues and opportunities will change over time. As such, while there may not be clear need for improvements today, protecting roadway corridors today will allow future generations to make road network improvements as required.
- Minimizing the negative impacts of vehicle growth can take shape through transportation demand management initiatives that encourage less vehicle trips overall. This can include policies and programs that encourage City residents to use sustainable modes (as discussed in previous chapters). Incentives to reduce single occupant vehicle travel include improving infrastructure and services for non-automobile modes, transit pass programs, employer assistance programs, incentives for low emission vehicles and car share.

City	Program Name	Brief Description	NTMP Direction
Waterloo, ON	Complete Streets Policy Framework (2011)	Implemented as part of the City's Transportation Master Plan. The intent of the policy was to shift the focus of streets from cars to providing streets where people in all modes can interact and move easily. The policy integrates well with other City plans and provides a network of routes specifically for active modes of transportation. City developed guidelines for the pedestrian environment.	• Complete Streets
Boulder, Colorado	Multimodal Corridors Strategy	This strategy identified key multimodal corridors to receive major facility improvements for all modes. These high activity corridors that provide connections to bicycle and pedestrian networks and commercial activity. Improvements include: completing missing segments of the network, enhancing street crossings, high frequency transit networks, enhance transit stops, and coordinate traffic signals.	 Complete Streets Safety & Operational Improvements
New York City, NY	Safe Routes for Seniors	Seniors make up 12% of the NYC population, but 39% of all pedestrian fatalities. As there will be greater numbers of seniors using the streets, this program involves studying current conditions, high collision areas, data analysis, public consultation, and site visits to identify areas where safety is a concern for seniors. Street improvements to make safer conditions for seniors include leading pedestrian signal phases, improved curb let-downs, and narrowing streets.	 Walking Support Programs Complete Streets Safety & Operational Improvements

6.3 What Are Others Doing?





Redwood City, CA	Level of Service General Plan	The City has outlined a goal of using Complete Streets to enable safe, comfortable and attractive travel for pedestrians, bicyclists, motorists and transit users. To support this goal, Redwood City has stated in its General Plan that maintaining LOS D or better is acceptable in all areas of the City. However, in Downtown Redwood City, no minimum vehicular LOS standard has been established.	•	Complete Streets
San Francisco, CA	Better Streets	The City of San Francisco has implemented policies that encourage the design and development of <i>Better</i> <i>Streets</i> . Streets in San Francisco are designed for all types of transportation, but there is particular focus on walking and transit use. The City has created a comprehensive set of guidelines that balance the needs of all street users	•	Complete Streets Safety & Operational Improvements

6.4 Major Road Directions

With the vast majority of trips occurring within the road network, now and into the future, the direction below will assist in the management of this critical piece of the City's infrastructure. Recommendations for major roads have been broken down into the following sections.

	MAJOR ROADS
POLICIES	R1: Undertake spot improvements to improve intersection safety and operations
	R2: Develop streets for everyone
	R3: Undertake Major Road Network Improvements
	R4: Manage impacts of vehicle transportation
	R5: Update Nanaimo's designated truck route network

R1 Undertake spot improvements to improve intersection safety and operations

Based on analysis of current and future conditions a number of intersections throughout the City have been identified as potential candidates for spot improvements. Spot improvements are typically small scale targeted projects that address specific safety and operational issues. Even small improvements can often mitigate existing safety issues and extend the life of infrastructure; delaying larger more expensive improvements. Table 4 below lists intersections that may have safety and/or operational issues and should be reviewed for spot improvement opportunities.





Table 4: Nanaimo Intersections with Potential Safety and Operational Issues

Primary Street	Cross Street	Jurisdiction	
Island Highway	Boundary Ave / Northfield Road	Province	
Island Highway	Bowen Road / Norwell Drive	Province	
Island Highway	Rutherford / Mostar Roads	Province	
Island Highway	Hammond Bay Road	Province	
Island Highway*	Brechin Road / Departure Bay Road*	Province	
Island Highway	Turner Road	Province	
Island Highway	Tenth Street	Province	
Island Highway	Norwell Drive / Jingle Pot Road	Province	
Island Highway	Enterprise Way	Province	
Nanaimo Parkway	Aulds Road	Province	
Terminal Avenue	Comox Road	Province	
Nanaimo Parkway	Northfield Road	Province	
Island Highway	Cedar Road	Province	
Bowen Road	Northfield Road	City	
Comox Road	Machleary Street	City	
Bowen Road	Wakesiah Avenue	City	
Norwell Drive	Departure Bay Road	City	
Wakesiah Avenue	Third Street	City	
Bowen Road	Labieux Road	City	
Wakesiah Avenue	Jingle Pot Road	City	
Bowen Road	Meredith Road	City	
Third Street	Howard Ave	City	
*Following ferry arrival at Departure Bay			

*Following ferry arrival at Departure Bay.

Many of the intersections identified are along the Island Highway corridor reflecting high volumes of traffic travelling along and turning onto the highway. As Island Highway is a provincial route, improvements along the corridor would be a led by the Ministry of Transportation and Infrastructure. Opportunities also exist for improvements within the City's road network, with intersection of Bowen and Northfield Roads currently having the highest collision rate.

With the assistance of ICBC, the City currently undertakes projects that improve road safety; over the last 5 years ICBC has contributed over \$450,000 to the City for road safety improvements in Nanaimo. It is recommended that the City continue to invest in road network safety improvements through its partnership with ICBC and the Ministry of Transportation and Infrastructure.





	R1: Ur	ndertake spot improvements to improve intersection safety and operations
SNC	R1A	Work with the Ministry of Transportation and Infrastructure to identify potential safety and operational spot improvements on Island Highway, Nanaimo Parkway, and Terminal Avenue.
ACTI	R1B	Implement spot improvements to address localized safety and mobility issues within City of Nanaimo intersections.
	R1C	Continue to collaborate with partners (i.e. ICBC, RCMP) to promote and educate about road safety in Nanaimo.

R2 Develop Streets for Everyone

Streets are the largest public space in the City, and directly influence how we travel, the form, character and vibrancy of street-front businesses and neighbourhoods and the way visitors see our City. To shift our travel behavior we need to create streets that are comfortable places for all road users; places that feel safe are interesting and convenient to travel by car, foot, bike or bus. The concept of **Complete Streets** encompasses many of these ideas and seeks to make streets comfortable for users of all ages, abilities and transportation modes. By including complete streets principles into future design guidelines and standards, future infrastructure will support the NTMPs overall goals and objectives.

The design of new streets is guided by the City's street standards (Manual of Engineering Standards and Specifications - MOESS). While the MOESS provides for utilitarian facilities for all users there is room for improvement. Through consultation we heard from the public that for many, cycling on major roads is uncomfortable when sharing a lane with traffic, that some sidewalks and crossings don't feel safe and that many streets are not enjoyable places to spend time. Making better streets means addressing these issues.

Strategies that could be used to address these issues include:

- Provide separation between cyclists and moving vehicles; typically through bike lanes, but where warranted, through the development of cycle tracks, separated bike lanes or multiuse pathways.
- Create separation between pedestrians and moving vehicles by providing on-street parking, boulevards and street trees.
- Improve street crossings easier by making pedestrians, and where applicable, cyclists, more visible (marked cross-walks, pedestrian warning flashers), by making crossings shorter (narrower travel lanes, curb extensions) or by other crossing features such as pedestrian signals, tunnels or overpasses.
- Consider transit as part of the street design.





Make streets that are active and interesting; the addition of street trees, furniture, public art, buildings that front the street and sidewalk retail can create active enjoyable spaces. Street trees have the benefit that they have a larger positive impact as they grow as other street features begin to age.

The City's Minor Collector has recently been updated to address some of the issues raised above. **Figure 7** below shows the current and proposed cross sections. Both provide the same basic functionally (one lane in each direction plus on-street parking) but the second includes elements of a *complete street* and seeks to better accommodate all road users.

Revising road sections is a technical process that must balance the needs of all road users as well as utilities such as water, sewer, storm drain, cable telephone, hydro, street lighting. The City should review both its street standards (MOESS) and road network classifications within the first year of the Plan.

Figure 7: Complete street elements within the City's new Minor Collector street cross-section.



Minor Collector - Cross Section - Future







	R2: D e	evelop streets for everyone
ACTIONS	R2A R2B	Update the City's road standards and cross-sections to support all modes and based on Complete Street principles. Undertake a review of the City's road network classifications in conjunction with the update of the City's road standards and cross-sections.

R3 Major Road Improvement Plan

Over the next 25 years travel demand on the City's road network will continue to grow. The road network will need to accommodate the future travel needs of new businesses and residents as the City expands with traffic volumes expected to grow by 30% by 2041 even with a major shift to sustainable transportation modes. New roads will be developed, not only to reduce congestion, but to support new neighbourhoods and complete missing links within the existing road network. Existing roads will be redeveloped to make them better places for pedestrians, cyclists and transit riders and to reduce collisions and improve safety.

As with any major infrastructure network, strategically planning for the future is critical. A well planned network can be developed strategically by protecting for future improvements early, before development occurs, and by developing new infrastructure only as it's required. This section presents a series of road improvement projects that could occur over the next 25 years. By anticipating and planning for these projects we can deliver a better road network, for less money and leave improvement options available for future generations.

The projects shown on **Map 7** represent a comprehensive list of road improvement projects proposed for the City over the next 25 plus years. The drivers behind each project and its priority/time frame are given in general terms.





Project Rationale

Road improvement projects can be initiated by a wide range of issues. Existing roads can suffer from poor safety performance, poor accommodation for alternative modes or congestion, impacting some or all road users. Streets can also negatively impact surrounding neighbourhoods, and opportunities may exist to better support adjacent businesses and land uses. New roads are often required to support future development areas or to complete missing links in the road network.

In many cases projects have one or two key drivers, reflecting a specific issue and solution while other projects have a much wider range of benefits. The number of drivers does not reflect the relative benefits of each project, rather, provides a sense of why the project is required. Projects are flagged with the following drivers where they apply:

С	Capacity. Current or projected traffic conditions will create significant delays; the project will seek to reduce delays and congestion by expanding road network capacity.
Ν	Network Completion. The current network is missing links (or restricts turns) that will be completed through development of the project
S	Safety. Current conditions result high numbers of collisions or collision rates; the proposed improvements are expected to reduce collisions significantly.
Α	Alternative Transportation and Land Use. Improvements develop a key link within an alternative transportation network or alternative transportation issues form a major component of the project rationale. Improvements support better integration between the street and surrounding land uses.
D	Development . The project will be constructed by or to support future development; the project would likely not proceed without future development.

Project Timing

The development of the City's road network is an ongoing process and while the Plan identifies a large number of road improvements projects, many of them are strategic in nature, and will only be developed over the long term. General time frames for each project have been included below; notes where projects are tied to development, are phased or are to be developed by or with outside agencies have been included.

Short-Term	Project is scheduled to advance within the next 5 years.
Medium-Term	Project is expected to advance within the next 5-15 years.
Long-Term	No specific schedule, project is expected to advance at some point in the future, project is a strategic.
Phased	The project will occur over an extended duration in phases.
External Agencies	The project would be developed by or with an agency other than the City; in most cases the Ministry of Transportation and Infrastructure.
Development	The project will be constructed by or to support future development; the project schedule is linked to future development.







Project Key	Ø
Existing Intersection Upgrade Proposed New Traffic Signal Proposed New Roundabout	4 = 0
Short-Term Project Medium-Term Project Long-Term Project Development Related Project Project by Others	≣

"Mixed colours indicate multiple time frames or contributing parties.







Key	Project Drivers	Time Frame	Project Description
Α		Development	Mary Ellen / Mall Access Intersection Improvements. During peak shopping periods congestion and safety issues are present at the mall accesses mid-way between Highways 19/19A. A proposed single lane roundabout is proposed in conjunction with adjacent future development. A divided median, bike lanes and on-street parking along Mary Ellen is also proposed to moderate speeds along the corridor.
В	С	Long-Term	Dover / Uplands Intersection Improvements. Signalization or development of a roundabout is proposed for this intersection over the long term to accommodate future traffic volumes.
С	CND	Development	Green Thumb Nursery - Future Road Network. Development of road network connections between Enterprise Way, Calinda St and Uplands Dr are proposed in coordination with the future development of the Green Thumb Nursery Site.
D	C	Long-Term / Development	Green Thumb Nursery - Uplands Drive. Completion of Uplands Dr between Turner and Hammond Bay Roads may proceed as a long- term project or in coordination with development of Green Thumb Nursery Site.
E	C	Long-Term	Hammond Bay Road - Turner Rd to Rutherford Rd. Widening of Hammond Bay Road between McGirr and Rutherford Roads to four lanes is proposed in the long term to accommodate future traffic volumes.
F	S	Long-Term	Rutherford Road Hill. Improvements to the two-lane alignment of Rutherford Road Hill are proposed to improve safety performance between Hammond Bay and Vanderneuk Roads.
G		Phased / Development	Linley Valley Drive. Linley Valley Drive is designed as the major road network supporting future development within the Linley Valley and connecting to the City's existing road network at Turner and Rock City Roads. Portions of the roadway have already been constructed within recent developments and the westernmost approach to Turner Road will be constructed in 2014. Development of portions either side of Rutherford Road expected in the next 5-10 years. In the far east, the corridor will be constructed as development occurs, eventually linking to Rock City and Burma Roads.

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н	SA	Phased	Hammond Bay Road - Morningside to Departure Bay Road. The
			Hammond Bay Mobility Study undertaken by the City in 2005
			proposed an improved two lane road cross section for Hammond
			Bay Road between Morningside and Departure Bay Roads. The
			proposed improvements retained the existing two lane cross-section,
			but added shoulders, a sidewalk, left-turn bays at key intersections
			and transit pull-outs to improve safety for all users along the corridor.
			Due to the high cost of implementation, this project will be
			constructed over time in segments.

- ICPhased /
External
AgencyNanaimo Parkway (Highway 19) Intersection Improvements.
While traffic projections for the Nanaimo Parkway indicate
improvements will be required at intersections in central Nanaimo
(Jingle Pot, Northfield and Mostar) in the medium term they do not
suggest traffic volumes will be large enough to support interchanges
in the time frame of the Plan. Initial improvements could include the
extension and/or addition of left turn lanes. The Nanaimo Parkway
is a provincial highway and improvements would be led by the
Ministry of Transportation and Infrastructure.
- J CS Long-Term/External Agency Norwell Dr (North) and Island Highway. A lack of left turn bays on Norwell Drive and Jinglepot Road approaching this intersection leads to delays and collisions. Long-term Improvements would widen both approaches to improve intersection operations. Island Highway is a provincial highway and improvements would be in collaboration with the Ministry of Transportation and Infrastructure.
- K SA Medium-Term/External Agency Club Mobility Hub High Street and Transit Exchange Redevelopment. In conjunction with future improvements at the Country Club Transit Exchange; this project envisions developing a more comprehensive streetscape plan for Norwell Dr, improving conditions for pedestrians, cyclists, transit buses and riders while encouraging street-orientated development and the evolution of the Country Club mobility hub. This project would be completed in cooperation with RDN and BC Transit.
- LCNSPhased/Extern
al AgencyRock City Road Corridor. Initial proposed improvements include a
signalized intersection and extension of Rock City Road south
across Island Hwy connecting to Labieux, Kenworth and Bowen
Roads. This will improve access to the adjacent neighbourhood,
particularly exiting to the south, reduce congestion at Island Hwy
and Bowen Road and formalize a strong pedestrian/cycling desire
line. Intersection improvements at Departure Bay Rd and extension
of Rock City Rd north to the east end of Linley Valley Dr is proposed
over the long term in coordination with future development. Island
Highway is a provincial highway and improvements would require
support from the Ministry of Transportation and Infrastructure.





Μ		Long- Term/External Agency	Island Hwy / Bowen Road - Intersection Improvements. Congestion at the intersection of Bowen Road and Island Hwy is projected to increase over the long-term. The widening of Bowen Road/Norwell Dr could increase capacity of the intersection, improve crossing conditions for E&N Trail users and improve the overall intersection safety performance. Island Highway is a provincial highway and improvements would require cooperation from the Ministry of Transportation and Infrastructure.
Ν		Phased	Northfield Road Corridor. Northfield Road forms a major link between Island Hwy, Bowen Rd and the Parkway. Improvements between Bowen and Boxwood Roads (in coordination with the Boxwood Connector) will likely occur in the short-term. Longer term improvements would see intersection improvements at Dorman Rd and road widening from Boxwood Rd towards the Parkway. Future development west of the Parkway could see Northfield Rd extended to East Wellington Road.
0		Short-Term	Boxwood Connector, Bowen and Northfield Roads. Complementary to improvements along Northfield Road, the Boxwood Connector includes development of a new road from the intersection of Northfield and Boxwood Roads to Bowen Road at the south entrance to Beban Park. These planned improvements will reduce congestion and collisions at the intersection of Bowen and Northfield Roads; improve access to Beban Park and the pedestrian and cycling network.
Ρ	SA	Short- Term/External Agency	Northfield / Boundary / Island Hwy - Intersection Improvements. Improvements at the intersection of Island Hwy / Northfield Road / Boundary Ave are proposed to address existing safety and operations issues, as well as, improve crossing conditions for E&N Trail users.
Q	C	Long- Term/External Agency	Brechin Hill Intersection Improvements. Projected increases in future traffic volumes combined with ferry traffic will require increased capacity and reliability for this important node within the City's road network. The complexity of the intersections will require further analysis to identify potential improvement concepts. Island Highway and Brechin Road are provincial highways and improvements would be lead by the Ministry of Transportation and Infrastructure.

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R	SDA	Phased/Extern al Agency	Terminal Ave Corridor Improvements. Terminal Ave is one of the City's most important streets but has a number of safety, operational and development issues along its length. A joint study of the corridor with the Ministry of Transportation, DNBIA and the City is proposed to better define improvements to support both vehicle mobility and safety, but also adjacent businesses and neighbourhoods. Portions of Terminal Ave are a provincial highway and improvements would require support from the Ministry of Transportation and Infrastructure.
S		Short-Term / Development	Estevan Road Streetscape and Access Improvements. Consistent with the proposed vision within the Brechin Hill - Newcastle Neighbourhood Plan, this project could include reducing travel lanes from four to two, providing left-turn bays, bike lanes and through future development improved pedestrian features and on- street parking.
Τ	SA	Medium- Term/External Agency	Stewart Avenue Streetscape Improvements. Consistent with the proposed vision within the Brechin Hill - Newcastle Neighbourhood Plan, this project would study options for reallocating space within the existing Stewart Avenue cross-section to create bike lanes, add left-turn bays and shorten cross-walks along the corridor. A joint study with the Ministry of Transportation, BC Ferries and the City is proposed as a first step. Stewart Ave is a provincial highway and improvements would require support from the Ministry of Transportation and Infrastructure.
U		Long-Term	Westwood Road / East Wellington Road - Intersection Improvement. Proposed improvements would include widening of Terminal Avenue at its intersection with Townsite Road to facilitate the addition of left-turn bays on Terminal Ave. This would improve the safety performance of the intersection and create better options for access to the Newcastle neighbourhood from the north. As additional road right-of-way is required for these improvements, they would likely not proceed until re-development occurred on several corners of the intersection.
V		Medium-Term	Boxwood Road - South Extension to East Wellington Road. The extension of Boxwood Road from Dufferin Crescent to East Wellington Road will complete the Boxwood corridor and provide an alternate route to Bowen Road for vehicles and cyclists.
w	CSA	Long-Term	Departure Bay Beach Corridor Improvements. This project would seek to improve conditions for all road users along the Departure Bay beachfront including pedestrians, cyclists and vehicles accessing the beach while supporting future access to Hammond

Bay via Departure Bay.

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- X CNS Long-Term Wall-Holly Connector. Traffic volumes crossing the Millstone River are projected to grow in the future resulting in increased traffic on the City's five road crossings of the river. Proposed long-term improvements to Wall, Holly and Bradley Streets are proposed to improve the safety and capacity of this corridor.
- Y Medium-Term Westwood Road / Jingle Pot Road Intersection Improvements. To improve existing safety performance and capacity at the intersection of Westwood and Jingle Pot Road; signalization of the intersection is proposed over the medium term.
- Z Long-Term Bowen/Wakesiah/Third Corridor Improvements. A series of longterm projects to widen Bowen Road, Wakesiah Avenue and Third Streets to accommodate future projected traffic volume increases within the central portion of the City.
- Long-Term Wallace / Comox and Comox / Island Hwy Intersection Α AA **Development** / Improvements. A long-term project to improve the intersection of External Comox Rd and Terminal Ave and Comox Rd approaching from the Agency west. This project would seek to improve capacity at the improve traffic safety and provide space to intersection. accommodate cyclists. Improvements may be coordinated with redevelopment of adjacent parcels. Terminal Avenue is a provincial highway and improvements would require cooperation from the Ministry of Transportation and Infrastructure.
- **BB NOA Medium-Term / Development Front Street Corridor Improvements.** Improvements along the Front Street corridor would seek to make the street a better place for vehicles, pedestrians, cyclists and transit riders consistent with the vision of the Front Street Comprehensive Plan. Extension of Front Street south, as part of future possible development within the Assembly Wharf area, may provide an additional southern access point for the Downtown.
- CC Medium-Term Commercial / Wallace / Albert / Victoria Intersection Improvements. Improvements to this atypical intersection within the Downtown would seek to improve safety and operations for pedestrians, cyclists and vehicles.
- DD NA External Agency VIU Road Network Improvements. Identified within the 2008 VIU Campus Master Plan, improvements to Fourth Street west of Wakesiah Ave and development of a new road connection and intersection with Third Street will improve access for transit and vehicles to the VIU Campus and reduce traffic volumes on Wakesiah Ave. Improvements will be undertaken by VIU.
- **EE** Medium-Term Howard Ave / Third St Intersection Improvements. The proposed signalization of the intersection of Howard Ave and Third Street to improve safety at this intersection.





FF	CSA	Medium-Term	Fourth Street Corridor and Intersection Improvements. Improvements would help better facilitate cyclists on this important connection between VIU and Downtown while addressing improving safety performance within the corridor. In the long-term signalization of Fourth and Bruce Ave is also expected.
GG	CS	Medium-Term	Bruce Ave / Fifth St - Intersection Improvements. The proposed signalization of the intersection of Bruce Ave and Fifth Street will help increase capacity and improve safety at this intersection.
нн	N D	Development	Park Ave Completion. The southern extension of Park Street to Tenth Avenue will complete the major road network in the area, reducing traffic volumes on Ninth Ave and Douglas St to the east.
II	SN	Short-Term / External Agency	Island Highway / Victoria Road / Haliburton Road Intersection Improvements. Signalization of the intersection of Island Hwy / Victoria Rd / Haliburton Rd will improve safety performance and access to and across Island Highway for residential and industrial traffic. This project would be lead by the Ministry of Transportation and Infrastructure with funding support from the City.
JJ		Medium-Term / Development	Cranberry Connector. Proposed improvements would connect Cranberry Avenue with Lawlor Street via a new roadway in front of Fire Hall #4 creating a connection between the Cinnabar Valley and the Southgate Commercial without the need to use Island Hwy. Timing of this project is correlated to future development within the Cinnabar Valley.
KK	C	Medium-Term / Development	Cranberry Ave / Island Hwy - Intersection Improvements. Proposed intersection improvements and expanded left-turn capacity would seek to reduce congestion for vehicles entering or leaving the Cinnabar Valley via Cranberry Ave. Timing of this project is correlated to future development within the Cinnabar Valley.
LL		Long-Term / Development	Maki-Fielding Connector. Proposed improvements would connect the ends of Maki and Fielding Roads via a new roadway creating a connection between the Cedar Rd and the Southgate Commercial Area without the need to use Island Hwy. This project would be advanced in coordination with future development and would form part of the future road network for Sandstone.
ММ		Development	Sandstone Road Network. A number of new roadways are proposed as part of the Sandstone Master Plan. These new connections will be constructed as the development proceeds. While most improvements are contained within the development site, improvements to Extension Rd, Cranberry Ave, Cedar Rd and the Duke Point Highway are proposed.





	R3: Ur	ndertake Major Road Network Improvements
	R3A	Integrate the Future Road Network Improvements Plan into other City polices and processes (e.g. OCP, DCCs, Development).
SNO	R3B	Implement short term major road network improvement projects over the next five years.
ACTI	R3C	Monitor major road congestion, operations and safety performance to identify future priority projects.
	R3D	Include the principles of Complete Streets in future network improvement projects.
	R3E	Work with fire, police and ambulance services to maintain emergency response times.

R4 Manage Impacts of vehicle transportation

Recognizing the significant role that vehicles play and will continue to play in the City's transportation network, there are a number of strategies that the City can use to reduce the impacts of trips vehicles, including:

- Transportation Demand Management strategies. Travel Demand Management (TDM) is the term used to represent a broad range of policies and programs used in many communities throughout North America to shift travel patterns to reduce the number of trips, change the time of day that trips are made, and to encourage people to walk, bicycle, use transit and rideshare, as well as to discourage individuals from driving alone. Attractive alternatives must be in place in order to make TDM policies and programs more effective. In support of the City's overall goal for a sustainable and balanced transportation system, the City should promote TDM strategies that can influence travel behaviour in the three overarching ways:
 - Reduce the amount of travel by encouraging trip-makers to combine two or more purposes into a single trip, by avoiding commute trips, and by reducing the length of trips by encouraging growth and development in mobility hubs, as noted in previous chapters.
 - **Change the time of travel** to reduce the growth in peak period travel by encouraging shifting the time in which people travel to outside peak periods.
 - **Change the mode of travel** by encouraging the use of non-SOV modes, such as walking, bicycling, carpooling, and transit, and/or by discouraging people from driving alone.
 - Change vehicles to reduce the amount of emissions and energy used per kilometer of travel. Transitioning from a mix of large vehicles and truck/SUVs today to a fleet of smaller vehicles could significantly reduce the City's GHG emissions.



Through a combination of these strategies, the City can reduce the impact of vehicles on the road network and minimizing the impacts of congestion. Major employers, small businesses, and schools can also play a role for shifting travel behaviour and reducing travel demands. This can include employer-led programs and incentives for car sharing and transit that encourage employees to change travel behaviours, company car-sharing programs, and school-led TDM strategies that encourage students and parents to walk or cycle to school. As such, the City should work with major employers, businesses and agencies to promote TDM strategies to change travel patterns.

- **Change the amount of travel** by encouraging trip-makers to combine two or more purposes into a single trip, by avoiding commute trips, and by reducing the length of trips.
- Promote Car Sharing Programs. Car sharing is a model of car rental where people rent vehicles for short periods of time, often by the hour. They are attractive to customers who make only occasional use of a vehicle, as well as others who would like occasional access to a vehicle of a different type than they use day-to-day. Car sharing programs can reduce the impact of vehicle travel by reducing the number of vehicles that are purchased and owned by Nanaimo residents. Although this may not necessarily reduce the number of trips, this does reduce the number of vehicles in the City. The Nanaimo CarShare Cooperative, a non-profit community cooperative car sharing program. The City should continue to support car sharing programs in the City to provide a cost-effective transportation option for residents.
- Low or Zero Emissions Vehicles. On-road transportation is one of the significant contributors to community-wide Greenhouse Gas (GHG) emissions in Nanaimo, and a significant proportion of transportation-related GHG emissions are from private vehicles. A number of innovations have been made in recent years in working towards low or zero emissions vehicles (ZEV). Promoting the use of low or zero emissions vehicles can help reduce the community-wide GHG emissions throughout the City. The City can encourage these vehicles through incentive programs and by updating its parking requirements in the Zoning Bylaw to provide electric vehicle charging stations throughout the City.
- Education & Awareness. TDM is all about changing people's travel patterns and behaviours; however, many residents are not aware of the options available to them. Consequently, an important part of a TDM program and initiative is marketing and education efforts intended to encourage a shift in travel patterns and greater use of sustainable modes of transportation. Strategies to improve education and awareness generally fall into two categories: distributing existing information from other groups and agencies, and developing and running more locally generated programs. This can include mode-specific approaches such as:
 - Transit information and resources, including online and user-friendly information and resources surrounding how to use/access transit service in Nanaimo, delivery of customer outreach initiatives, and promotion/advertising of transit services.
 - Active transportation promotion such as cycle skill-building workshops and opportunities, mobile applications, on-line tools, education & awareness initiatives such as events, safe routes to school, street closures, and parklet programming.





- Support of carpooling and ridesharing programs.
- Private Sector & Other Agency Initiatives. Major employers, small businesses, and schools can also play a role for shifting travel behaviour and reducing travel demands. This can include employer-led programs and incentives for car sharing and transit that encourage employees to change travel behaviours, company car-sharing programs, and school-led TDM strategies that encourage students and parents to walk or cycle to school.

	R4: Manage impacts of vehicle transportation				
CTIONS	R4A	Develop and promote Transportation Demand Management programs designed to encourage combining vehicle trips, making shorter trips, shifting travel to less congested time periods, buying more efficient vehicles, carpooling and using more sustainable travel modes.			
Ă	R4B	Promote the continued use and expansion of car sharing programs in Nanaimo.			
	R4C	Support of the use of low and zero emissions vehicles. (e.g. providing electric vehicle charging stations, priority parking).			

R5 Update Nanaimo's designated truck route network

As a gateway to Vancouver Island and a regional distribution hub, a significant part of the local economy in Nanaimo is dependent on the transportation of goods, services and people moving through and within the City. The City's Strategic Plan supports this role and seeks to "position Nanaimo as the transportation and service hub for Vancouver Island". As such, the City has designated a truck route network through Nanaimo, with the intention to provide rules that balance the needs of business with the desire to minimize the impact of truck traffic on sensitive land uses. As such, the truck route network effectively restricts truck traffic from using certain streets and roads in Nanaimo to limit the impact of commercial vehicle traffic on City streets, neighbourhood and other road users. The provincial routes of Island Highway and Nanaimo Parkway are major truck routes, while the municipal routes of Bowen Road, Terminal Avenue and Bruce Ave/Tenth Street are key spines in the network. In some cases, trucks need to make longer journeys through the City to remain on the truck route system.

Generally, the existing truck route network functions well, but some modifications can improve the efficiency of connections for goods movement, as well as to further reduce conflicts between different road users. It is recommended that the City update its truck route as shown in **Map 8**, which is designed to link Nanaimo's regional gateways and 'truck special generators' (specific transportation, logistic, or industrial facilities that generate significant volumes of truck traffic) with commercial and industrial land uses. Special generators include the Departure Bay and Duke Point ferry terminals, Seaspan and Harmac Pacific facilities, Assembly Wharf, Coastland Mill and the Regional District's Landfill site. The proposed truck route network will facilitate better connections between Nanaimo's commercial and industrial centres, major highways while minimizing impacts on residents and neighbourhoods. New truck routes have only been designated on appropriate road classifications (i.e. highway, arterial, major





collectors, industrial roads), and have been chosen to avoid roads with steep slopes and roads that form part of the bicycle network.

Proposed extensions of the truck route network into commercial and industrial areas include Northfield Road, Boxwood Road, Wakesiah Avenue, Norwell Drive, and Uplands Drive. Network changes are expected to reduce overall truck travel distances and associated impacts on residents, emissions, and costs. Adopting the proposed truck network would require amending the City's Traffic and Highways Regulation Bylaw.

ACTIONS	R5 Update Nanaimo's designated truck route network	
	R5A	Review and update the City's truck bylaw based on changes identified within Map 8.




Chapter 7 Neighborhood Transportation





STRATEGIC DIRECTIONS

NEIGHBOURHOOD TRANSPORTATOIN

Develop neighbourhood street networks (including streets, laneways and pedestrian / multiuse pathways) that provide access within neighbourhoods and to/from the larger road network, support adjacent land uses, walking and cycling.

NEIGHBOURHOOD TRANSPORTATION

GOALS

N1: Improve neighbourhood livability and quality of life

N2: Manage the traffic impacts on neighbourhood streets

planNanaimo, the City's OCP describes neighbourhoods as the building blocks of the community; that the unique character, diversity and identity of each neighbourhood contributes to the vitality of the City as a whole. Neighbourhood street patterns, layouts and streetscapes influence the character and identity of the City, resident travel behaviours and mode choices. Neighbourhoods with gridded street patterns, small blocks, boulevards, sidewalks and street trees encourage more sustainable trip patterns.

Neighbourhoods are serviced by the **Local Street Network** and form one of the City's largest public spaces. Policies and actions governing these streets can help to improve the livability and sustainability of new and existing neighbourhoods.

Within the City of Nanaimo's road classification system three street types are commonly found in neighbourhoods including, Neighbourhood Collectors, Local Streets and Lanes while Commercial and Industrial streets provide local access to specific land uses. Multiuse pathways and pedestrian linkages are also part of neighbourhood transportation networks, providing connections to schools and parks and forming links between neighbours where streets are missing. The primary function of the Local Street Network is to provide access to residents and facilities within the neighbourhood. Neighbourhood streets generally carry smaller volumes of traffic and provide access for emergency and utility services; excessive through traffic is discouraged.

Jurisdiction	Network	Classification / Type
Province	Provincial Highway Network	Provincial Highways and Routes
		Arterial
	Major Road Network	Major Collector
		Minor Collector
		Neighbourhood Collector
City of		Local Street
Nanaimo	Local Street Network	Commercial Street
		Industrial Street
		Lanes
	Non-Automobile Network	Multi-use Pathways
	Non-Automobile Network	Pedestrian Pathways
Drivete	Driveto Dood Network	Private Roads
Filvale	Filvale Road Network	Shared Driveways

Table 5: City of Nanaimo Transportation Network Hierarchy





Key components of the Local Street Network are described below:

- Neighbourhood Collectors connect local streets and destinations such as parks and schools to the Major Road Network. These collectors tend to be the 'gateways' to neighbourhoods, carrying more traffic than other streets within the neighbourhood. While in some cases they accommodate buses; truck and other large vehicle use is low. Pedestrians are accommodated on sidewalks and cyclists share travel lanes with vehicles. On-street parking is typically provided on both sides of the street.
- Local streets provide direct access to residential properties and help distribute traffic to other parts of a neighbourhood. Pedestrians are accommodated within sidewalks on both sides of the street and cyclists share wider travel lanes with vehicles. Large vehicle use is rare and typically on-street parking is provided on both sides of the street. Where very low traffic volumes are expected, such as in cul-de-sacs, a narrower local street with a single travel lane may be provided.
- Commercial and industrial streets, located within industrial and commercial areas, are local streets that provide access to specific land uses. They tend to carry more traffic and trucks, and on-street parking is provided on both sides.



A typical local street in the Dover neighbourhood. The primary functions of local streets are access and parking; but they also influence how neighbourhoods look and feel and how we choose to travel through them.

Commercial streets can support the mixed land uses and higher densities envisioned within mobility hubs.

- Laneways provide direct access to parcels, typically at the rear of the property, with little or no through traffic. Expected travel speeds and volumes are low; with vehicles, cyclists and pedestrians operating in a mixed environment.
- Multiuse and pedestrian pathways provide linkages between different parts of the local street network, provide access to schools, parks and other destinations. These connections are often provided to shorten walking or cycling trips where road networks are circuitous or disconnected.
- Private roads are not public streets and are maintained by land owners, often within surrounding strata corporations. Public access may be limited and at the discretion of the owners. Private roads are often designed to a lower standard than City streets and are more akin to driveways.



Pedestrian and cycling linkages are part of a neighbourhood's transportation network.

Common/shared driveways are private common accesses that service multiple parcels; they are designed and operate similar to driveways to individual parcels.

Although transportation issues and opportunities vary within each neighbourhood, a number of common issues identified through consultation included short-cutting traffic, speeding, uncomfortable and automobile-oriented street environments, poorly connected streets, and missing sidewalks that





discourage walking and cycling. These conflicts can be addressed by creating streets that better balance the needs of all road users.

7.1 Issues & Opportunities

Key themes that emerged through public engagement and consultation feedback on the topic of neighbourhood transportation include:

- Short-cutting traffic occurring on local streets, generating more traffic on local streets as drivers seek to avoid congestion on major corridors and to cut down on travel time;
- Truck and construction traffic on neighbourhood streets;
- Excessive speeding on local streets, particularly those with wide cross-sections and lower traffic volumes;
- Neighbourhood livability impacted by more vehicle traffic; and
- Implementing traffic calming measures in order to reduce vehicle volumes and speeds, including treatments such as speed humps and traffic circles.

7.2 Shaping Influences

- The shape, environment, and character of neighbourhoods are influenced by how their streets are designed and function and directly influence quality of life of residents within them. With a length of over 380km, the Local Street Network forms a significant public space within the City. Where streets are uncomfortable or unsafe, resident quality of life is reduced and alternatively, where safe and comfortable conditions exist, cycling, walking, socializing and recreation opportunities are encouraged and livability is improved.
- Speeding, volumes, and traffic safety were identified by residents as issues that negatively impact the quality of life and use of their local streets. Typically, traffic volumes on local streets should not exceed 1,000 vehicles per day, with 3,000 vehicles per day for neighbourhood collectors. Speeds should generally be moderate with limited through traffic. To ensure neighbourhood streets maintain these characteristics, the City has developed a traffic calming program which has implemented several traffic calming projects over the last ten years, including stop sign reversals, traffic circles and speed hump installations (i.e. Brechin Hill Neighbourhood, Place Rd, Opal Rd). However, improvements have been primarily reactive in nature and do not provide a pro-active approach to prevent neighbourhood traffic issues from the onset.
- There has been limited uptake of the existing traffic calming process. The City's traffic calming guidelines, adapted from national guidelines, result in some requests for traffic calming not being supported. Other assessment tools





Existing traffic calming projects on Place Road and Beringer Blvd.

may provide a more flexible system for considering more traffic calming requests and allow more projects to be supported. Traffic calming has both positive and negative impacts and is not always supported by all residents. In some cases, traffic calming requests that have met technical requirements have not gained sufficient support from neighbourhood surveys to be implemented.

- The City's current road designs for local streets can be enhanced to provide improved streetscapes and walkability. The City's existing road standards provide basic pedestrian facilities, including sidewalks. However, in most cases, standards do not require landscaping, street trees, boulevards, or traffic calming as part of new road construction. As a result, the pedestrian realm is more utilitarian and often not attractive to walking. However, several recent subdivisions (i.e. Hawthorne) and neighbourhood plans (i.e. Chase River) have included enhanced streetscaping and pedestrian realm improvements which improve walkability and neighbourhood livability.
- Many older neighbourhood streets do not have sidewalks. Despite sidewalk requirements for new construction, over 50% of neighbourhood collectors and 75% of local streets do not have sidewalks present on either side. While many neighbourhood streets can be comfortable to walk on, a fragmented sidewalk network can impact the safety, comfort and convenience of walking.
- Neighbourhood road network layout can significantly influence travel patterns. Traditional suburban development with curvilinear roads and cul-de-sacs force residents to take long circuitous routes to reach their homes. This makes

walking and cycling less attractive, resulting in more driving, increased vehicle emissions and more traffic on neighbourhood streets. Neighbourhoods designed with a grid-like street networks, with links between blocks, support short distance trips for pedestrians and cyclists and those connecting to transit. This type of street network results in a degree of redundancy in the street network such that all streets accommodate a bit of traffic, instead of pushing all traffic to a few streets. Grid networks also reduce distances between the major road network and individual homes, reducing speeding, trip lengths and emergency response times.

- In many cases, local street design that incorporates traffic calming elements from the onset can avoid long-term traffic concerns. Neighbourhoods with traffic calming elements included in the original street design such as curb extensions, on-street parking and street trees narrow the perceived width of streets and reduce speeds. Once a neighbourhood has been built, retrofitting to address traffic issues is much more difficult and costly.
- Improving neighbourhood livability requires addressing
 Nanaimo's existing neighbourhood streets, as well as
 future streets that will be built as growth occurs. Retrofit opportunities for existing streets, such



While current design standards provide basic walking facilities, they are not necessarily pleasant places to walk.



Many older local streets in Nanaimo don't have sidewalks and pedestrians, cyclists and cars operate in the same space.



Curb extensions at this intersection slow traffic by creating a narrowing of the street.







POLICIES



as infilling sidewalks can revitalize existing neighbourhood streets and improve walkability. Standards that require more bicycle and pedestrian accommodation on new streets, as well as more 'livable' street design components, can enhance streetscapes for future neighbourhood residents.

7.3 Neighbourhood Transportation Policies and Actions

The responses received from the NTMP engagement process indicated the need for a refreshed approach towards neighbourhood transportation in Nanaimo, particularly in regards to traffic calming and neighbourhood design. This section outlines the overarching policies and actions that can guide the City to achieve the goals of improved neighbourhood quality of life and liveability, and managing traffic impacts at the neighbourhood level. The four neighbourhood transportation policies are shown below:

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- N1: Develop a flexible approach to neighbourhood traffic calming on new and existing neighbourhood streets
- N2: Provide improved standards for the design of safe, multi-modal streets
- N3: Ensure that neighbourhood site design promotes a fine-grained, well-connected street network that encourages walking and cycling
 - N4: Develop neighbourhood transportation networks that reflect land use and development

N1 Develop updated neighbourhood traffic calming guidelines

Many Nanaimo residents are concerned about speeding, traffic volumes, and short-cutting traffic through their neighbourhood – concerns which can be addressed through the development of traffic calming plans. Though the City has traffic calming guidelines in place, a more flexible tool is required for residents and the City to work together to develop traffic calming improvements where warranted. The City should develop updated neighbourhood traffic calming guidelines which outline a process to develop neighbourhood traffic calming plans. These updated guidelines can provide guidance on proactively identifying and prioritizing neighbourhoods for traffic calming plans and solutions. This would involve identifying where issues such as high vehicle speeds, high vehicle volumes, short-cutting, and/or conflicts between street users are actively occurring. Considerations for the updated traffic calming guidelines can include:



Often traffic issues can be better addressed at a neighbourhood level rather than on a street by street basis.

Incorporate a proactive approach to identify traffic calming considerations. The initiation of a neighbourhood transportation project may be either reactive, responding to traffic calming requests from residents or business owners, or it may be proactive, with staff identifying problems and issues. In general, neighbourhood transportation improvements on a localized basis or street-by-street basis would be initiated by residents, whereas improvements on an area-wide basis (i.e. with multiple streets or a whole neighbourhood) would be initiated by staff.





- Identify and prioritize traffic calming improvements. To assist staff in identifying areas where there is needed traffic calming, and to prioritize existing requests, a number of criteria can be used to evaluate different locations, as described below:
 - Reported Collisions to understand safety issues in the neighbourhood/corridor, evaluating certain data such as total reported collisions within a certain time frame, collision severity, and whether a pedestrian or cyclist was involved;
 - Vehicle Speeds to measure if the speed of traffic is typically in excess of the posted speed limit. This could involve examining the difference between the average 24-hour 85th percentile speeds in each direction against the posted speed limit;
 - **Traffic Volumes** to evaluate the level of actual daily traffic volume travelling through a residential street, in comparison with the thresholds for local and neighbourhood collectors (1,000 and 3,000 vehicles per day, respectively);
 - Pedestrian Activity to understand the number of destinations which attract pedestrian trips within the study area, such as commercial areas, schools, recreation centres, parks, and trails; and
 - **Cyclist Activity** to provide a measure of the number of bicycle facilities within the study area, including both on-street or off-street bicycle routes.
- Consider several types of treatments appropriate for local and neighbourhood streets, and provide information to residents on the range of treatments. This can include a description of the design and impacts of:
 - Vertical deflections, such as speed humps (existing streets/lanes), directional closures, diverters;
 - Horizontal deflections, such as curb extensions, traffic circles, median islands, chicanes;
 - Pedestrian and cycling accommodation measures, such as sidewalks, crosswalks, crossings; and
 - Education and enforcement initiatives, such as road safety, Speed Monitoring Awareness Radar Trailer and display boards.
- Consider traffic calming in new neighbourhood designs. The inclusion of traffic calming elements within new subdivision road design, and development of street networks that support efficient movement of vehicles, pedestrians and cyclists can help to prevent future traffic related issues.
- Easy to access informational material should be made available to the public to describe the process for



In the Hawthorne Neighbourhood, traffic calming was integrated into the original development plan.

neighbourhood traffic calming, and the range and impact of available traffic calming treatments.



	N1: D	evelop updated neighbourhood traffic calming guidelines
SNC	N1A	Develop updated traffic calming guidelines outlining a flexible and proactive process to develop neighbourhood traffic calming plans.
ACTIC	N1B	Develop guidelines for the inclusion of traffic calming in new neighbourhood streets.
	N1C	Provide public information on traffic calming treatments to increase awareness of the neighbourhood traffic calming process and potential treatments.

N2 Provide improved standards for the design of safe, multi-modal neighbourhood streets

Many of Nanaimo's neighbourhood streets have been designed to accommodate motor vehicles with less focus on pedestrian and cycling treatments and connections. This type of street design can make walking, cycling, or even transit less attractive to get around, and can make street environments less liveable and enjoyable for residents. Providing standards that guide the development of safe and multi-modal neighbourhood streets can positively influence the design and character of new neighbourhood developments. Some changes have already occurred, with many recent neighbourhood plans requiring street trees and boulevards on local streets, and in some cases traffic calming, as part of the original street design. Some actions to improve the design of new residential streets include:

Amending the City's street standards for local and neighbourhood streets to provide for

enhanced streetscapes in road cross-sections. Changes can include features such as boulevards between the sidewalk and curb, street narrowing at crossings and intersections, enhanced sidewalk widths, on-street parking, street furniture, and street trees, to create a more balanced streetscape. These features, while not explicitly traffic calming treatments, can have a calming impact by cueing drivers to slow down and make pedestrians and cyclists more visible. These types of elements can make neighbourhood streets more safe and

comfortable for all road users.

Work with developers to incorporate traffic calming features at the outset of developments, including curb



On Poets Trail Drive street trees, onstreet parking and boulevards make walking a pleasent way to move through the neighbourhood.

extensions, traffic circles, street trees, roundabouts and other traffic calming treatments into neighbourhood site designs.

Adopt a complete street design approach when revising street design guidelines that make walking and cycling more convenient and comfortable within the context of revising the City's street design standards.





	N2: Pr streets	rovide improved standards for the design of safe, multi-modal neighbourhood s
ACTIONS	N2A	Amend City standards for local and neighbourhood collector streets to incorporate elements such as boulevards, street trees, curb extensions and on-street parking that can make streets nicer places to walk.
	N2B	Work with developers to provide traffic calming treatments to new residential streets as development or redevelopment occurs.
	N2C	Incorporate complete street design elements for local and neighbourhood streets.

N3 Ensure that neighbourhood site design promotes a fine-grained, well-connected street network that encourages walking and cycling

Even where streets have comfo0rtable features for walking or cycling, such as wide sidewalks, boulevards, good crossings and traffic calming elements, residents may be deterred from doing so if the street network is difficult to navigate and requires longer trip distances. In existing City neighbourhoods,



Neighbourhoods that follow traditional street layouts are easier to navigate and typically have higher pedestrian and cycling activity.

areas with few sidewalks and limited pedestrian facilities still exhibit higher pedestrian trip making where strong grids road patterns are present. It is important to encourage the development of residential neighbourhoods that promote connectivity and permeability for users other than motor vehicles. Connectivity and permeability may be attained through moving away from conventional suburban neighbourhood design, to a style of site design that follows a more traditional or fine-grained networks. This can result in an easy to navigate street network for all users, with direct access to the surrounding road network. Alternatively, where grid networks cannot be achieved, a hybrid traditional-suburban neighbourhood layout (sometimes called a 'fused grid' or 'hybrid' layout) can provide some of the same benefits, though with longer vehicle trip distances. The hybrid or fused-grid approach to neighbourhood design supplements suburban street layouts with pathways and pocket parks to provide connectivity for pedestrians and cyclists between different parts of the network.



ACTIONS



N3: Ensure that neighbourhood site design promotes a fine-grained, well-connected street network that encourages walking and cycling

- N3A Support land use and development policies that encourage grid road network approach to neighbourhood street layout. Where grids can't be achieved, use pathways and parks to provide enhanced pedestrian and cyclist connectivity.
- N3B Support the development of permeable block layouts, with small block sizes (block perimeter < 600m or <400m within mobility hubs), limited use of cul-de-sacs and that are easily navigable by pedestrians and cyclists via streets and other public passageways.
 - N3C Discourage the use of cul-de-sacs except where necessary; where cul-de-sacs are used include a minimum of one pedestrian connection, consistent with the fused grid concept.
 - N3D Develop "Neighbourhood Street Design Guidelines" for the development of future neighbourhood streets and street networks.

N4 Develop neighbourhoods' transportation networks that respond to surrounding land use and development

As the density and mix of land uses within neighbourhoods change, so will the demands on neighbourhood streets. In residential neighbourhoods, lot sizes are falling and secondary suites are increasing the number of households per home. As lot and home sizes have shrunk, the space available to park vehicles off-street has decreased, and available space for on-street parking has also dropped as closer driveway spacing leaves less parkable frontage per home.

On-street parking can resolve potential conflicts by providing a shared parking resource for the neighbourhood. Street designs should accommodate parking on both sides, and strategies to improve parking supply can include parking bays, combined driveways or lane access. In addition, by explicitly designating street edges as parking, curb lanes can be narrowed at intersections, calming traffic speeds and creating pedestrian friendly intersections. By combining driveways of

adjacent lots, or developing lanes with access in the rear, more street frontage is available for parking. This street use pattern is common in many traditional neighbourhoods, with parking creating a comfortable barrier between pedestrians and moving traffic. In mobility hubs, where mixed land uses may become more



In this high-density neighbourhood on-street parking is in high demand, while curb extensions and street trees maintain a narrow street feeling.

common, commercial local streets should be designed to better serve neighbourhood needs and high density development. In industrial development, industrial roads should be used to provide local access.





	N4: D land u	evelop neighbourhood transportation networks that respond to surrounding se and development
CTIONS	N4A	As densities increase, develop more robust neighbourhood networks and increase on-street parking supplies.
A	N4B	In mobility hubs, use commercial streets to serve higher density mixed use development.







Chapter 8 Parking





 PARKING

 To manage the City's supply of on-street and off-street parking to support the economic vitality of the City while managing impacts of parking on neighbourhoods, recognizing that parking policy and availability can influence people's transportation choices.

 PARKING

 P1: Support economic vitality of commercial areas and development of mobility hubs.

 Device on the city of the commercial areas and development of mobility hubs.

P2: Manage on-street parking in neighbourhoods

The cost, availability and convenience of parking influence our choices to drive, take transit, walk, bike, or travel to a destination. Traditionally, cities have used abundant and free parking supplies to improve vehicle access to commercial districts and other key land uses. Unfortunately, too much parking supply promotes auto dependency, creates development patterns that are difficult to access by other modes, and incur construction and maintenance costs associated with parking facilities.

A more progressive approach to parking management was identified in the 2009 Parking Management Strategy, which recommended approaches to parking regulations, parking security and enforcement, and non-residential parking within Downtown, Vancouver Island University, Nanaimo Regional General Hospital, and the BC ferry terminals. However, issues of parking spillover, limited parking availability, and inefficient land use remain a challenge in many neighbourhoods, indicating that a more comprehensive and strategic approach to parking is needed in Nanaimo.

Parking is an important municipal asset that should not be viewed as a source of revenue, but rather as a

tool to shape and support development patterns, street environments and surrounding land uses. Strategic parking policies and strategies can be applied to encourage the use of other transportation modes, to encourage efficient land-use, and reduce overall parking demand.

This is particularly important in mobility hubs where higher densities and mixes of services will require a more efficiently managed parking supply. Approaches such as parking supply restrictions, shared parking facilities, and pricing techniques can enable the development of successful mobility hubs.

Over the long term, greater walking, cycling and transit accessibility will reduce parking demand, allowing for a reduction in parking supply. However, limiting the parking supply too quickly can undermine the balanced transportation system and negatively impact residents and businesses. Parking management should work to reduce supply over time while considering the needs of all stakeholders.



The use of pay parking is currently limited in Nanaimo to VIU, NRGH and Downtown





8.1 Issues & Opportunities

There were many commonly raised themes and ideas regarding parking that emerged throughout the NTMP public consultation and engagement process, which are summarized below:

- Parking demand within Downtown, where businesses and residents are competing for space, and sometimes not enough spaces are available;
- High parking demand at Vancouver Island University and Nanaimo Regional General Hospital, creating spillover into adjacent neighbourhood streets and residential areas;
- Parking prices too expensive in certain areas;
- More land being allocated to parking lots;
- Parking pressures within new residential areas, as more households have more than one vehicle; and
- Limited parking availability in certain locations.

8.2 Shaping Influences

- The City's 2009 Parking Management Strategy provides a framework for managing parking pressures in high demand areas. Many of the Strategy's recommendations concerning parking spillover, consistency of parking regulations, and parking security have been initiated and are at various stages of completion. Moving forward, these recommendations can inform parking strategies in Nanaimo's mobility hubs moving forward.
- Parking management will contribute to compact and livable mobility hubs. Mobility hubs will be large trip generators, and are envisioned as high density, mixed-use neighbourhoods with livable and complete streets. If the provision of parking is not carefully managed in mobility hubs, excessive parking and inefficient land use (i.e. surface parking lots) will persist, potentially undermining the ability of mobility hubs to be dense, compact centres that support alternate modes. Parking regulations can be used to manage parking supplies to prevent an excess of private parking and to ensure parking policies support the desired land use form and mix within mobility hubs.
- Parking supply and pricing influences the decision to drive to a destination, making parking either an attractive or unattractive option, and thus impacting the appeal of using other types of transportation. There are key destinations throughout Nanaimo, including Downtown and other mobility hubs, that are (or will become) easily accessed by transit, walking, or cycling. Parking supply and pricing techniques can be applied to influence the attractiveness of driving while ensuring that strategies keep mobility hubs economically competitive with other activity centres that have more and/or free parking.
- Neighbourhood parking spillover from large institutional trip generators is currently creating parking conflicts in nearby neighbourhoods. Currently, there is a need for the City to



Parking supply can influence how we choose to travel to a destination.

explore measures to alleviate and manage parking demand in neighbourhoods adjacent to the Hospital, VIU, and Downtown, as drivers look for free and available parking on residential streets. In





the future, similar spillover issues may emerge as other mobility hubs grow and develop and attract more vehicle trips and parking demand. A coordinated effort towards managing spillover through parking restrictions and promoting alternative modes will need to be proactively applied over time.

- Shared parking facilities and enforcement are important to ensure adequate parking supply and customer access to businesses. Many commercial areas could benefit from denser, compact, and walkable streets, so on-street parking and shared parking facilities must be encouraged in high demand areas. Parking enforcement is critical to ensure availability, turn-over and convenience of parking in commercial areas.
- The costs of building, operating and maintaining parking infrastructure are significant. It is important to recognize the cost of a parking space in order to understand a portion of the hidden subsidies for automobiles and to appreciate the impact of high parking requirements. There are generally four major components of parking facility cost: construction; operation and maintenance; land value; and for most projects debt service. Although the land value portion of parking will vary between developments, the other three components are relatively consistent. The cost of developing parking varies significantly depending on the type of parking; surface/on-street (\$3-7000), structure (\$30-40,000) or underground (>\$45,000). Operating costs for a paid parking stall are typically in the order of \$500 to \$700 per year. Beyond these direct costs, there are external costs associated additional traffic congestion and pollution that are more difficult to quantify.
- Parking policies must be complementary on a city-wide basis to ensure that parking strategies applied within mobility hubs, neighbourhoods, and beyond work together to support overall NTMP goals and objectives. Consistent and complementary parking strategies will be needed to manage neighbourhood parking demands, support economic activity within mobility hubs, and encourage sustainable transportation modes.





8.3 What Are Others Doing?

City	Program Name	Brief Description	NTMP Direction
Redwood City, CA	Demand responsive parking pricing strategy	This strategy was implemented to maintain a utilization parking rate of 85% at "front-door" curb spaces along the City's primary commercial street. The program is revisited four times a year by evaluating occupancy and adjusting pricing by increments of \$0.25. The City recently utilized meter revenue to fund other transportation areas including providing pedestrian and cycling facilities.	 P1 Mobility Hubs
Montgomery County, MD	Shared Parking	Zoning ordinance in Montgomery County allows for shared parking when any land or building is under the same ownership or under a joint use agreement and is used for 2 or more purposes. The shared uses must be within a 500 feet walking distance of the shared parking facility.	 P1 Mobility Hubs
Boulder, CO	Parking Management Strategy	The City uses innovative funding mechanisms and parking pricing to increase the parking supply for short-term parking while at the same time installing additional bicycle parking. By focusing on specific areas Boulder launched a subsidized transit bus pass program.	P3 Citywide
Portland, OR	Parking Maximums	The City of Portland has implemented parking maximums to complement parking minimums. The zoning ordinance focuses on the efficient use of land. In areas zoned for more intense development and are easily reached by alternative modes of transportation have lower maximums than areas of less intense development and fewer transportation options.	 P1 Mobility Hubs P3 Citywide
Seattle, WA	Reduced Minimum Requirements for TDM Programs	Seattle Municipal Code states that for office or manufacturing uses that require 40 or more parking spaces, the minimum parking requirements may be reduced up to 40% by substituting transportation demand management programs. For example: if transit passes are provided to all employees and transit service is within 800 feet of the development the total parking requirement may be reduced up to 10%.	• P1 Mobility Hubs

8.4 Parking Policies and Actions

The directions received from residents and stakeholder input, as well as from the key community policy documents, indicate the need for a comprehensive approach towards parking management within Nanaimo. This section describes three key parking policy areas, and the supportive actions that can





guide the City in achieving the overarching parking goals to promote economic health of commercial areas, and to manage neighbourhood parking. The three parking policies are:

	PARKING
POLICIES	P1: Manage parking in Downtown and emerging mobility hubs
	P2: Develop a strategic approach to neighbourhood parking management
	P3: Manage parking city-wide

P1 Manage parking in Downtown and mobility hubs

The effective management of parking supply throughout Downtown and other mobility hubs will encourage their development and help the City shift to a more sustainable transportation mix. Many of Nanaimo's mobility hubs will change over time, evolving from a predominantly suburban character today, to higher density mixed use areas in the future. A variety of parking strategies will be needed as they develop to manage parking demands. Potential parking strategies to manage parking in Downtown and Nanaimo's other mobility hubs include:

- As is currently done in Downtown and its surrounding neighbourhoods, **consider reduced parking** requirements or exemptions within mobility hubs.
- Introduce limits on parking supply within future developments to discourage the excess provision of parking. Combined minimum/maximum parking requirements can be applied to both new and existing developments. Additional parking, beyond the maximum, should be supported through parking studies. Maximums can be a beneficial tool to reduce the proportion of land used for parking and to encourage development that is compact, and conducive to walking, cycling, and transit use.
- Set parking occupancy targets for parking in high demand areas at 85% occupancy during peak hours. This level of occupancy creates a balance between ensuring users can find available parking while avoiding development of an excessive parking supply and the associated costs. Supply can be managed through the creation of new parking spaces or by varying parking prices. Monitoring of parking occupancy will be required to evaluate parking demand over time, establish/adjust target pricing and identify the need for parking supply changes. Where parking demand falls significantly below 85% occupancy, reduction in parking fees or relaxation of parking restrictions can be considered.
- Move to a revenue-neutral parking management model so to emphasize the use of parking as travel demand management tool, which can be strategically regulated to shape land uses, development patterns, and street environments.





Consider applying designated cash-in-lieu parking areas to mobility hubs. As has been the practice in Downtown Nanaimo, developers have been able to opt to pay a fee per off-street parking space in lieu of providing that required space. Cash-in-lieu incentives are often used in areas where there are many destinations and users in close proximity, and where the cost of developing private parking is high. Typically, fees collected fund public parking facilities that act as a shared

parking resource available to all users at a lower cost than if parking was developed for each site. Pay-in-lieu rates should reflect the cost of maintaining existing and/or developing new parking spaces.



Cash in lieu parking charges help fund City Parkades that then provide shared parking facilities within the Downtown.

- Encourage development in mobility hubs to provide shared and preferential parking resources. This can include providing parking spaces that are shared by more than one user, and where preferential parking areas are designated for ridesharing participants, car sharing programs, or electric vehicles.
- Public parking systems. The City should consider establishing on-street time limits and parking pricing in mobility hubs, similar to metered parking and parking restrictions that are commonly used in Downtown. The City could take on a greater role in managing and/or providing centralized public off-street parking facilities in key activity areas, and encourage developers to provide cash-in-lieu fees to fund shared parking facilities as an alternative to minimum requirements for off-street parking.
- Encourage improved wayfinding and signage to locate parking facilities (such as parking lots and parkades) in order to reduce the amount of time drivers spend searching for parking.
- Allocate the highest parking restrictions and pricing to parking spaces with greatest demand, in order to ensure availability, promote turnover and improve access to businesses. Where demand is lower, reduce parking costs and relax restrictions.
- Explore the use of parking technologies to make pay parking in high demand areas more convenient, including meters that accept credit card and cell phone payment, and are easy to 'top up' if the stay is lengthened. This can also include the use of electronic signs outside public parking lots/parkades to indicate parking availability.
- Incorporate bicycle parking requirements into Nanaimo's Zoning Bylaw to require bicycle parking in office, commercial, and medium-high density residential developments.





Explore parking initiatives that transform street parking into activity spaces. Where parking spaces can be better utilized by permanently or temporarily changing their use, parking can be retasked to create more interseting streetscapes and support surounding businesses. City or

community-led initiatives throughout the US and Canada have transformed on-street parking spaces into temporary parks, café/restaurant seating areas, gardens and other active uses. The City of Vancouver's ongoing VIVA program initiated within Downtown parklets Vancouver while the City of Surrey's PARKit program created a pop-up park in Surrey City



Centre. Recently two Downtown Nanaimo on-street parking

Parking spaces can be used for more than parking cars.

spaces were converted into a widened sidewalk for café seating. The City should devleop processes to assess, manage and support active street uses on sidewalks and within the street.

	P1: Ma	nage parking in Downtown and emerging mobility hubs
ACTIONS	P1A	Consider reduced parking requirements and cash-in-lieu options within Downtown and mobility hubs. Use parking variances and cash-in-lieu funds to undertake projects that reduce parking demand.
	P1B	Encourage development of structured or underground parking within mobility hubs and other areas of higher density.
	P1C	Identify and encourage opportunities to develop shared parking. Prioritize parking spaces for sustainable vehicle types (i.e. electric/hybrid vehicles, car-shares, charging stations) and use way finding and real-time parking supply information to help maximize utilization of existing parking facilities.
	P1D	Use parking pricing as a management tool, moving towards a revenue-neutral parking management model in Downtown and mobility hubs. Price parking by demand with the highest prices reserved for areas of the highest demand or where turnover is desired.
	P1E	Incorporate major parking destinations in way finding programs within Downtown and mobility hubs.
	P1F	Implement parking meter technologies such as pay-by-space, pay-by-display and incorporation of different payment methods beyond cash.





P2 Develop a strategic approach to neighbourhood parking management

Parking management is important for neighbourhoods that experience non-residential parking demand from nearby high parking generators. These locations include schools, Nanaimo Regional General Hospital, Vancouver Island University and will increasingly include neighbourhoods around growing mobility hubs. While several major employers, such as the Hospital and University have on-site transportation demand management projects to encourage sustainable commuting, nearby neighbourhoods still often experience non-residential parking on



VIU

at

impacts

demand

surrounding neighbourhoods.

local streets as drivers seek to avoid paying for parking, or because there is no parking availability on site.

In addition, neighbourhood design can also put pressure on local parking dynamics. For example, subdivisions designed with smaller narrower lots result in less space for resident parking as the demand for on-street parking rises. In mixed use high-density residential areas, multiple parking generators and users can lead to parking conflicts. Some considerations for neighbourhood parking management in Nanaimo include:

Consider residential parking permits and restrictions in neighbourhoods around major

institutions, mobility hubs, and the Departure Bay ferry terminal, so on-street parking is restricted or time-limited on local streets. Restrictions must balance the parking needs of residents and external users; overly strict restrictions result in empty streets and shift parking demand elsewhere while no restrictions may result in 100% of on-street parking being consumed by non-residents.

- Encourage institutions and employers to implement (or continue to implement) transportation demand management programs in order to reduce the number of people driving to site and impact of parking spillover. This can include provision of subsidized transit passes, rideshare incentives, and encouraging cash-in-lieu parking subsidies.
- Ensure parking enforcement is effective where parking restrictions on local streets are in place.

Encourage institutions to monitor on-site parking supply



Parking restrictions around large institutions will need to balance the needs of residents and institution users.

and demand, in order to increase knowledge of travel trends and parking needs, and surrounding impacts on neighbourhoods. Parking fees should be structured to ensure use of on-site parking supply is maximized (i.e. target 85% or higher utilization throughout the day) and spill over into neighbourhoods is minimized. Where demand varies over the day or week, pricing and restrictions should be varied to reduce spill over to peak periods.





	P2: Ma	anage parking in Downtown and emerging mobility hubs
CTIONS	P2A	Work with private employers and developers to encourage and create incentives for walking, cycling, rideshare, and transit commuting and reduce parking demand.
	P2B	Explore parking restrictions on local streets adjacent to the VIU, NRGH and other high parking destinations that balance the needs of facility users and residents.
٩	P2C	Provide sufficient enforcement to ensure on-street parking regulations are effective.
	P2D	In small-lot subdivisions, maximize on-street parking though the narrowing/combining of driveways, use of laneways or other measures.

P3 Manage parking City-Wide

There are a number of other parking initiatives the City should consider outside of neighbourhoods and mobility hubs to create a comprehensive City-wide parking strategy, including:

- Provide parking spaces along Nanaimo Parkway to allow residents to participate in informal car pools for long distance trips,
- Encourage neighbouring communities to create park & ride and carpool parking for trips destined to Nanaimo.
- Utilize the City's website to identify on-street parking areas, parking lots and parkades, parking restrictions and regulations throughout the City, as a resource to help residents and visitors locate parking facilities in Downtown and in mobility hub areas. Consider the development of a mobile application to allow users to locate public parking facilities throughout Nanaimo, as well as parking costs and on-street parking restrictions.

	P3: Manage Parking City-Wide		
	P3A	Support and develop informal park and ride facilities along the Nanaimo Parkway.	
ACTIONS	P3B	Work with BC Transit to provide park-and-ride facilities for bus services bound to Nanaimo.	
	P3C	Enhance information available on the City's website in regards to available parking areas city-wide, parking restricted areas, and parking regulations.	



Chapter 9 Strategic Connections





STRATEGIC DIRECTIONS

STRATEGIC CONNECTIONS

To strengthen connections outside Nanaimo for residents, businesses and tourism to support the City's position as a transportation and service hub; providing good connections to regional trading areas; cost effective shipping connections to the BC mainland; and frequent, affordable and reliable service to the mainland via air and water.

STRATEGIC CONNECTIONS

GOALS

E1: Reinforce the City's role as a hub for central Vancouver Island for movement of people and goods by road, rail, water and air.

Nanaimo's strategic location positions the City as an important service centre and transportation gateway for central and northern Vancouver Island. The City's road, air, rail, and water-based transportation networks connect Nanaimo to the rest of Vancouver Island, Metro Vancouver, elsewhere in British Columbia, and beyond. The strategic connections within Nanaimo for people, goods and services are important components of the City's transportation system and play a strong role in supporting the local economy. However, not all of the strategic connections to and from Nanaimo are under the City's jurisdiction, and the NTMP focuses on the City within its larger regional and provincial transportation context to ensure linkages are strengthened moving forward.

The City's existing strategic connections by road, air, water and rail are summarized in **Map 9** and are described below:

- BC Ministry of Transportation & Infrastructure maintains the provincial highway network, connecting Nanaimo to the rest of Vancouver Island via the Nanaimo Parkway (Route 19) to the north and the Trans-Canada Highway (Route 1) to the south. Providing road connections to the Departure Bay and Duke Point Terminals, it also maintains Island Highway (Route 19A), Brechin Road, Stewart Avenue and the Duke Point Hwy (Route 19).
- BC Ferries has three terminals within the City, two major terminals providing service to Metro Vancouver at Departure Bay and Duke Point and local ferry service to Gabriola Island via the Nanaimo Harbour Terminal in Downtown. Major route services to Metro Vancouver make Nanaimo one of two major gateways to Vancouver Island, and strengthen the City's function as a regional service centre and tourism gateway. Gabriola Island service is used by island residents to access goods, services and employment within Downtown Nanaimo and beyond.
- Inter-City Bus Services connect residents and visitors to destinations north, west and south of Nanaimo via Greyhound and Tofino Bus; regional connections are also provided to Cedar, Parksville and Qualicum Beach by RDN transit.
- Seaplane terminals located in Downtown Nanaimo Harbour and Departure Bay provide scheduled flights to Downtown Vancouver, Richmond/YVR and Sechelt, through a number of carriers, including Seair, Harbour Air, and Tofino Air.





- Nanaimo Airport is located south of the City of Nanaimo and provides scheduled flights to Vancouver, Victoria, Abbotsford and Calgary.
- The E&N Railway is an active freight railway, connecting Nanaimo with Courtenay and Victoria and to the rest of the North American rail network via barge service from Nanaimo Harbour. Currently passenger service is suspended, but proposed services could see 2 return trips/day to Victoria, and 1 return trip/day to Comox.
- The E&N Trail multi-use pathway runs adjacent to the E&N Railway for approximately 8 km from Downtown to north Nanaimo and is one of the City's most popular trails. The City's long term objective is to extend the trail the full length of the City and connect to other regional trail segments within the RDN and District of Lantzville.
- Passenger Ferry Service has historically operated between Downtown Nanaimo and Vancouver during several periods over the last 30 years. The Strategic Plan and OCP both identify support for re-establishment of passenger ferry service between Nanaimo and Vancouver.

9.1 Issues & Opportunities

Throughout the public consultation process, residents provided a significant amount of feedback and input regarding strategic connections, including rail, the airport, and the ferries. Commonly identified issues are summarized below:

- More connections to the ferry and airport to major business centres in Nanaimo, including improved transit connections.
- Ferry service, which was cited as being expensive, having infrequent schedules, limited service, and being too inefficient and slow (need for a rapid or fast ferry to BC Mainland). Many respondents also identified the need for improved integration with bus transit at the Departure Bay and Duke Point terminals.
- Regional bus connections to adjacent communities were identified as a way to connect residents and visitors to communities within the Regional District of Nanaimo such as Parksville, Qualicum Beach, and Lantzville and south to Ladysmith/YCD.
- Providing rail connections/rapid transit connections to communities such as Victoria, Duncan, Parksville, Qualicum Beach, and Ladysmith. The E&N Railway was identified as an opportunity for future rail services within the City and to external destinations.

9.2 Shaping Influences

Nanaimo is one of two primary gateways for Vancouver Island and functions as a major regional service centre for central/north Island, requiring strong transportation connections within and beyond the city. The City provides services and amenities to a wider regional population of nearly 300,000 Vancouver Island residents living within, around and north of Nanaimo. This population uses the City as a transportation hub and service centre. Some residents form adjacent communities, such as, Ladysmith, Parksville, Qualicum Beach, and Lantzville also commute to/from the City while further north residents travel to Nanaimo to access services and facilities unavailable elsewhere.







The Nanaimo Strategic Plan envisions the city as a Harbour City, a Business Centre and Service Hub, and a Quality Lifestyle Centre. Located centrally within the Island, Nanaimo is a key centre connecting to Vancouver and the world, attracting and retaining youth, families and seniors, and attracting and retaining creative and entrepreneurial talent. Promoting strategic local and regional transport connections must incorporate the need to connect Nanaimo and beyond, while supporting neighbourhood quality of life and the local economic development.

In addition to the provincial highways Nanaimo is connected in several ways. Significant amount of people and goods movement occurs by air, rail and water and provide alternative

transportation options. This range of mobility options is a strategic advantage to Nanaimo, as the community is connected via air, road, and rail to Vancouver Island, Capital Regional District, the BC Lower Mainland, Sunshine Coast, and Alberta. Importantly, local and regional growth, will likely increase air, water, and road-based travel within and through Nanaimo; creating opportunities for new and expanded services. It is important to ensure that these strategic connections remain reliable, frequent and affordable.



Nanaimo Airport provides connections to Victoria, Metro Vancouver and the rest of the North American air network via Vancouver (YVR) and Calgary.

Economic development in Nanaimo is closely
 related to the transportation connections by road, air, water, and rail. The local and regional road network, Nanaimo Airport, Port of Nanaimo, BC Ferries terminals, and rail corridor all support significant people and goods movement that benefit the local economy. Continuing to build on these connections and ensuring their affordability will foster economic development opportunities as the City grows.

Key External Transportation Links

Nanaimo Transportation Master Plan





Travel time estimates assume efficient connections between travel modes and should be considered a best case travel time scenario for comparison purposes only.

While different travel modes depart from different locations within Nanaimo, all travel time estimates start at zero at the departing Nanaimo terminal

South of Fraser trips are assumed to end at the Tsawwassen (BC Ferries) or Tilbury Island (Seaspan Ferries) ferry terminals. Personal Auto:

Travel times estimated for mid-day weekday travel. Cost of travel based on Canada Revenue Agency vehicle allowance of

\$0.50/km. **BC** Ferries

Assumed arrival at terminal 10 minutes-auto/15 minutes-passenger

			TRANIPORTATION MANERS
ers			
	Frequency	Time	Cost
aimo - Tofin	0		
imo > Port Albe	rni > Tofino / Uclu	elet	
		3h	\$90
	1 trip/day	4h	\$45
aimo - Como	ox/Courtenay		
imo > Comox/C	ourtenay		
		1h 15min	\$55
	6 trip/day	1h 30min	\$25-40
	1 train/day	2h 15min	
aimo - Sech	elt		
imo > Sechelt			
	5 flights/day	40min	\$70-80
aimo - Calga	nry		_
imo > Calgary			
	1 flight/day	2h 20min	\$180+

before sailing and 10 minutes to unload.

Fare estimate based on passenger or driver+passenger, where car

Fares based on range of typical fares available on weekdays in October 2013.

Assumes arrival at the terminal 20 min before departure. At YVR 20min added for transfer from South to Main terminal

Air (YCD):

Fares based on range of typical fares available on a weekday in October 2013.

Assumes arrival at terminal 45 min before departure.

Public Transit:

Travel times estimated based on posted schedules Cost of travel based on peak period (2 zone) transit fare.

E&N Railway:

Passenger service on the E&N Railway is currently suspended; the schedule presented is based on a proposed service plan by the Island Corridor Foundation.





9.3 Strategic Connections Policy and Action Areas

The NTMP seeks to reinforce Nanaimo's role as a transportation hub for central and northern Vancouver Island by strengthening regional connections that move people, goods and services to, from and through the city by rail, road, water and air. While the City has limited jurisdiction over these connections, it can support and influence future decisions, and has an important role to play in developing our long-term regional transportation network.

The policies and actions described below reflect a desire to better connect the city with its neighbors on Vancouver Island, the BC Mainland by automobile and other more sustainable modes. Moreover, these transportation linkages can support the City's economy through expanded goods movement and logistics services. Proposed policies and actions for strategic connections within the NTMP include:

	STRATEGIC CONNECTIONS
POLICIES	S1: Strengthen connections to other Vancouver Island communities
	S2: Strengthen connections to Metro Vancouver, the rest of British Columbia and beyond
	S3: Support Nanaimo's role as a commercial gateway for Vancouver Island
	S4: Considerations for the future of the E&N Railway

S1 Strengthen connections to other Vancouver Island communities

Strengthening and providing options for connecting to Vancouver Island communities is an important objective of the NTMP. As with other parts of British Columbia, most goods, services and people travel between major centres by road and maintaining good road connections between Nanaimo and other Island communities via the provincial highway network is a priority for the City. Due to the range of travel options in Nanaimo, people and goods movement do not solely rely on the road network; air travel, ferries, trucks and inter-city bus provide strategic connections for goods and businesses, and for those who do not have access to, or choose not to use a private automobile. Overall, fast, efficient and reliable goods movement connections between Nanaimo and other Vancouver Island communities facilitate the

City's role as a regional distribution centre, port and gateway. Ensuring that Nanaimo's commercial and industrial land uses are well connected to regional highway and ferry facilities will support their expansion within the city, and strengthen the local/regional economy.

The Provincial Highway Network, including the Nanaimo Parkway (Route 19), the Trans-Canada Highway (Route 1), the Island Highway (Route 19^A), as well as, Stewart Avenue and Brechin

Road are key elements of Nanaimo's transportation network that provide links to other



Highways 1 at the Duke Point Highway interchange.





communities in central and north Vancouver Island. These highways carry a significant portion of the local and regional traffic, and influence development patterns along them. As part of the provincial highway network, these corridors fall under the jurisdiction of the Ministry of Transportation and Infrastructure, whose primary objectives include providing north-south connectivity through Nanaimo and providing connections to the BC Ferry terminals at Departure Bay and Duke Point. Consideration for ensuring these corridors continue to support connections to other Island communities include:

- Nanaimo Parkway / Duke Point Highway. Developed in the late 1990's, the Nanaimo Parkway and the Duke Point Highway are modern highways that convey traffic travelling to, from and through Nanaimo along the east coast of the Island. The NTMP supports maintaining these highways as the primary routes through the City and recommends that the Ministry of Transportation and Infrastructure undertakes safety and capacity improvements, as required, to maintain travel time and reliability performance along the corridor. Development of interchanges along the Nanaimo Parkway over the long term is also supported but may not occur within the timeframe of this Plan. Where informal carsharing is occurring along the Parkway, support with the provision of parking facilities.
- Trans-Canada Highway / Island Highway. Developed in the 1950's, the Trans-Canada / Island Highway runs along the length of Nanaimo and connects several of the city's largest commercial centres and future mobility hubs; access to Departure Bay Ferry Terminal is provided via Brechin Road and Stewart Avenue. The corridor includes a mix of street types varying from urban arterial around Downtown to rural highway north of Northfield Road and south of Nicol Street. The City supports the route's existing role as key north-south mobility corridor but envisions a transition over time to an urban arterial streetscape. The City would seek greater connectivity between the corridor and the rest of the road network and better accommodation of non-auto road users, including commercial vehicles, transit, cyclists and pedestrians with support for adjacent businesses, residents and land uses. Where future high-capacity transit services are provided the City would support transit priority measures to improve transit performance.
- Inter-City Bus Services. The City supports intercity bus services as a cost-effective and sustainable way to connect Nanaimo to other Island communities. Bus services can be an important sustainable and cost-effective travel option for those without access to a personal vehicle. Intra-regional transit

connections within the RDN, as well as consideration of future service to Nanaimo Airport/Ladysmith are also supported. Inter-city bus connections to BC Ferries terminals, particularly at Departure Bay, could improve connections for visitors to Vancouver Island without a vehicle. Establishing a Downtown Nanaimo intermodal transportation hub would be an opportunity for inter-city bus services to connect with other transportation modes, providing a single high-quality facility to service users across multiple transportation modes.

E&N Trail. In addition to developing the E&N trail through Nanaimo, the City should continue to support development of a

regional E&N trail system in cooperation with the RDN and



An inter-regional E&N Trail would be an asset to the City.





District of Lantzville. As an active transportation corridor, a regional trail corridor would create a major recreation asset that would promote cycling to, from and within the City and could help develop a stronger cycling based tourism industry within the region.

- Gabriola Ferry. BC Ferries provide service between Gabriola Island and Downtown Nanaimo, with many Gabriola Island residents using the ferry to access jobs and services in Nanaimo. Many passengers walk on and off the ferry to access areas in Downtown Nanaimo, and others use transit and personal vehicles to travel around Nanaimo. The City supports maintaining the ferry terminal in Downtown Nanaimo, or at a minimum, supports a passenger ferry connection. While the Gabriola Island ferry connection benefits the City, there are a number of traffic impacts associated with ferry traffic that require mitigation, including:
 - o Examine terminal expansion to reduce the impact of ferry queues on Front Street;
 - Explore shifting to pre-paid ferry tickets to reduce queues of traffic waiting to board the ferry;
 - Improve walking and transit connections within Downtown services to reduce the need for Gabriola residents to bring vehicles into Nanaimo; and,
 - Explore opportunities for car or bike share programs that operate near the Downtown ferry terminal.

	S1: Strengthen connections to other Vancouver Island communities		
ACTIONS	S1A	Support maintaining Nanaimo Parkway and Duke Point Highway as the primary routes through Nanaimo, and work with the Ministry of Transportation and Infrastructure to undertake safety and capacity improvements to maintain performance along these corridors.	
	S1B	Support development of interchanges along the Nanaimo Parkway over the long term with intersection capacity improvements over the short/medium term.	
	S1C	Support a transition of Island Highway in the long-term to an urban arterial streetscape with better accommodation for pedestrians, cyclists and transit, particularly within or adjacent to mobility hubs. Improve access and connectivity between Island Highway and the City's road network.	
	S1D	Support intercity bus services to connect Nanaimo to other Island communities and integration with the proposed Downtown multi-modal transportation hub.	
	S1E	Work with the RDN and District of Lantzville to establish the E&N trail as a regional trail system.	
	S1F	Retain the Downtown Ferry terminal for ferry connections to Gabriola Island but work to reduce impacts on Front St from ferry queues.	





S2 Strengthen connections to Metro Vancouver, the rest of British Columbia and beyond

As a gateway between Vancouver Island and Metro Vancouver, Nanaimo's transportation network plays a key role in connecting residents and visitors between these areas. There is a significant opportunity to improve economic ties between Metro Vancouver and Nanaimo through enhanced water, air, and road transportation connections. Considerations for strengthening these transport connections include:

Ferry connections to Metro Vancouver (Departure Bay to Horseshoe Bay / Duke Point to Tsawwassen) provide an economical travel link between Nanaimo and the BC Lower Mainland, attracting business and tourism dollars. This connection positions Nanaimo as a gateway to Vancouver Island, an advantage to businesses and residents relocating within Nanaimo versus other

Vancouver Island communities. Despite the benefits associated with the ferry connections, traffic activity related to the ferries can be problematic in Nanaimo, with periods of delay often occurring around ferry terminals after arrivals. Potential steps to mitigate these impacts, that the City can support and encourage BC Ferries to undertake, could include:

- **Scheduling.** Encourage BC Ferries to shift ferry arrivals to avoid peak travel times within the City's road network.
- Shift truck traffic, through incentives from Departure Bay Terminal to Duke Point Terminal to reduce their impact on the road network around Departure Bay Terminal and other parts of the City.
- Manage parking in neighbourhoods adjacent to Departure Bay Terminal to reduce non-residential parking pressures.



- Fares. Explore shifting to a pre-paid ticketing service, to reduce queues to access the ticket booths at Departure Bay Terminal. Support limiting future fare increases to CPI⁴ and improving transit>walk-on>transit connections between Nanaimo and Vancouver as a lower cost alternative to driving.
- Improve cycling facilities in and approaching Departure Bay and Gabriola Terminals such as access and exit ways, parking and way-finding.
- **Terminal Improvements.** Support the expansion of the ferry terminal vehicle storage capacity, and parking areas of Departure Bay Terminal. Establish Departure Bay as a gateway to Vancouver Island for alternative modes, through strong transit, intercity bus, and bicycle connections.
- **Consultation.** Continue consultation with BC Ferries and local neighbourhoods to understand ferry activities, travel trends and other issues.
- The Nanaimo Airport (YCD) provides daily flight connections to Calgary, Victoria, Abbotsford, and Vancouver (YVR). Though a more costly travel option than ferry or inter-city bus, flight connections offer considerable time-savings, as a flight to Downtown Vancouver takes 25 minutes in comparison to more than two hours by ferry. Where travellers are connecting to Vancouver International Airport, savings can be even greater as they connect directly to the airport at YVR. The City can strengthen the provision of competitive air connections through supporting YCD's efforts to increase the number of daily flights and destinations, enhance flight reliability and improve passenger facilities. The City

⁴ Statistics Canada Consumer Price Index





should continue to support connecting intercity bus to YCD and as part of possible future connections to Ladysmith, transit bus services.

Seaplane connections between Nanaimo Harbour and coastal destinations provide a fast and convenient travel options for residents, visitors and particularly businesses. Seaplane passengers can connect directly to the Province's primary business centre in Downtown Vancouver and via SkyTrain/transit much of Metro Vancouver region. While seaplanes provide great connections to these destinations when running, service is limited by weather and daylight, and can be costprohibitive to some travelers.



- A passenger ferry service to Metro Vancouver is not currently offered in Nanaimo, but many residents have identified the benefits of such a service. As such, the City supports the development of a high-speed pedestrian-only ferry between Downtown Nanaimo and Vancouver.
- The cruise ship terminal, located at the Port of Nanaimo, is an important economic and tourism development opportunity. The City supports the continued expansion of cruise ship terminal activities, as well as enhancing transportation services provided in Downtown to allow cruise ship passengers to explore Nanaimo by a variety of travel modes.





	S2: Strengthen connections to Metro Vancouver, the rest of British Columbia and beyond		
	S2A	Work with BC Ferries to maintain the reliability, frequency and affordability of ferry services to Metro Vancouver.	
	S2B	Work with BC Ferries, the RDN and Translink to improve the quality of service for non-automobile ferry users (walk-ons, cyclists and transit riders); providing lower cost connections between Nanaimo and Metro Vancouver.	
lions	S2C	Work with BC Ferries to encourage scheduling, fare technologies, and terminal improvements that mitigate the impact of ferry traffic on Nanaimo's road network and neighbourhoods.	
ACI	S2D	Support efforts to expand the number of daily flights and destinations served by YCD, and to improve flight reliability and passenger facilities. Support land connections to YCD including improved intercity bus service and future transit bus services to YCD/Ladysmith.	
	S2E	Support seaplane services from Nanaimo Harbour, including integration with the proposed Downtown multi-modal transportation hub.	
	S2F	Support the development of a high-speed pedestrian-only ferry between Nanaimo and Vancouver, including integration with the proposed Downtown multi-modal transportation hub.	

S3 Support Nanaimo' s role as a commercial gateway for Vancouver Island

Nanaimo is an important economic and goods movement gateway for commercial operations throughout the Island, and enhancing the ability of Nanaimo's transportation network to support businesses and industries will strengthen economic ties between the City, the rest of the Island and Province. Key actions that can support Nanaimo's role as a commercial gateway for the Island include:

- Revise the City's truck route network to better connect commercial and industrial areas of City to each other, the provincial highway network and ferries.
- Support greater use of the Duke Point-Tsawwassen ferry route by commercial vehicles.






Support continuing early morning and late evening ferry departures over an extended day that can attract more truck traffic, as well as, considerations of ferry rate adjustments for commercial vehicles.

- Support continued industrial port activities within the Port of Nanaimo to facilitate the efficient movement of goods on/off Vancouver Island.
- Support private commercial vehicle ferry services, such as Seaspan's trailer transfer service, to provide alternatives for the transfer of goods on/off the Island.

ACTIONS	S3: Support Nanaimo's role as a commercial gateway for Vancouver Island		
	S3A	Update the City's truck route network to enhance connections between Nanaimo's commercial and industrial areas, the provincial highway network and ferries.	
	S3B	Support incentives that would shift more commercial vehicles to the Duke Point- Tsawwassen route.	
	S3C	Support private commercial ferry services as alternatives for the transfer of goods between Vancouver Island and Metro Vancouver.	

S4 Considerations for the future of the E&N Railway

The E&N Railway currently operates as a freight railway between Nanaimo, Victoria and Courtenay with rail barge service connecting to the BC Mainland via Nanaimo Harbour. While passenger service has been suspended since 2011 due to track maintenance issues, funding is currently being sought from the federal and provincial governments to undertake necessary maintenance and restart passenger services. Under a proposed service plan, two return trips per day to Victoria and one return trip to Courtenay could be provided by Nanaimo-based trains. Uncertainty surrounding the future of the E&N Railway limits the ability to provide specific recommendations; however, general principles can be used to assist the City in considering future options for the E&N Railway:

Cost and benefits associated with rail transportation should be assessed and considered as part of future corridor



decisions. The presence of the E&N Railway within Nanaimo comes with both benefits and costs to the community in the form of rail services for passengers and freight and costs associated with accommodating railway infrastructure within the City. An evaluation and comparison of costs and benefits could help inform future decision-making.

The City should seek to preserve the E&N Railway as a contiguous corridor regardless of how the route is used in the future. Linear transportation corridors are valuable assets that can be used for a wide range of purposes but are difficult to recreate within an urban landscape. While rail based transit services within the city may not be viable in the short term (such as Light Rail Transit/LRT or





regional rail connections), they may become viable in the future. While interim uses of the corridor should be encouraged, the City should ensure that future uses of the E&N do not permanently preclude the development/expansion of future rail transit.

ACTIONS	S4: Considerations for the future of the E&N Railway			
	S4A	Evaluate costs and benefits associated with using the E&N Railway as an active railway to inform future decision-making.		
	S4B	Ensure the E&N Railway remains a contiguous transportation corridor and future uses of the E&N do not prevent development of future rail-based transit services (i.e. LRT).		

Appendix A Summary of Plan Directions





Land Use

ပ် လိ	LAND USE
STRATEG	Integrate land use and transportation planning to support the development of compact, dense, mixed use mobility hubs that create shorter trips and promote walking, cycling and public transit.
	LAND USE
ALS	L1: More people and more jobs in mobility hubs and near frequent transit
GOA	L2: Support land use policies that will reduce travel demands
	L3: Create great public spaces
	LAND USE
CIES	L1: Focus more people, jobs, and services in mobility hubs over time
POLIC	L2: Create mobility hubs that support walking, biking and transit
	L3: Develop complete mobility hubs
	L1: Focus more people, jobs, and services in mobility hubs over time
ACTIONS	L1A Develop incentives to encourage a greater proportion of future residential, employment and commercial development to locate within mobility hubs.
	L1B Include targets, within the OCP, for the proportion of future development occurring within mobility hubs.
	L1C Locate future public services within or within walking distance of mobility hubs.



	L2: Cr	eate mobility hubs that support walking, biking and transit
ACTIONS	L2A	Support medium to high-density development forms to create consistently higher densities within mobility hubs.
	L2B	Require future development to implement street-oriented design formats that create vibrant and accessible streetscapes. Consider access by all modes during development review processes.
	L2C	Develop transit, bike routes, and pedestrian-friendly routes within mobility hubs to support sustainable transportation trips.
	L2D	Provide transit and cycling connections to link mobility hubs to each other and other activity centres throughout the City.
	L2E	Consider varying parking requirements within mobility hubs; reducing general parking while increasing shared and bicycle parking and providing better pedestrian access and transit amenities. Support development of on-street parking where possible and support park once and walk concept.
	L2F	Within mobility hubs develop new or rehabilitated streets with a strong focus on making them enjoyable places to walk and ride.
	L3: D	evelop complete mobility hubs
ACTIONS	L3A	Develop plans for each mobility hub that identify missing elements within each mobility hub and work to fill gaps through future infrastructure improvements and development.
	L3B	Encourage a mix of land uses and services that provide a wide range of housing, employment and services; identify and work to address missing land uses that necessitate travel outside of the hub.



Walking

NS IC	WALKING		
STRATEG DIRECTIOI	Make walking a safe, comfortable, convenient, accessible, and enjoyable experience for residents of all ages and abilities within Nanaimo's neighbourhoods and mobility hubs.		
	WALKING		
ALS	W1: Make walking safer, more comfortable, and more accessible		
GOA	W2: More and better places to walk		
	W3: More people walking more often		
	WALKING		
ល	W1: Focus sidewalk improvements in areas with high pedestrian demand and potential		
LICIE	W2: Develop quality, accessible crossings		
P.	W3: Ensure supportive urban design features		
	W4: Support walking initiatives		
	W1: Focus sidewalk improvements in areas with high pedestrian demand and potential		
SN	W1A Prioritize expansion of the sidewalk network in areas where there will be the most		
ACTIO	benefits, where walking levels are high, there is high residential and employment density, existing facilities are poor and future growth is expected.		
	W1B Consider concentrations of vulnerable road users (i.e. children, youth, seniors) when evaluating new pedestrian links.		



	W2: D	evelop quality, accessible crossings
ACTIONS	W2A	Increase pedestrian safety and visibility by reducing pedestrian crossing distances through use of curb extensions, reduced curb radii, and marked crossings where feasible.
	W2B	Implement signal measures to prioritize safe pedestrian movement across intersections, considering measures such as pedestrian activated signals, longer pedestrian phases, leading pedestrian intervals, and special crosswalks or pedestrian half signals where warranted.
	W2C	Install accessible pedestrian signals, at locations prioritized in consultation with representatives from the mobility and visually-impaired community.
	W3: S	upportive Urban Design Features
ACTIONS	W3A	Provide pedestrian amenities, such as weather cover, within public and private spaces through development processes.
	W3B	Use street trees, landscaping and boulevards to enhance streetscapes and provide a buffer between vehicles and pedestrians.
	W3C	Provide wider sidewalks in high activity areas with higher pedestrian volumes to support active uses such as on-street cafes and retail.
	W3D	Provide street lighting in and around key walking destinations to increase pedestrian visibility and security at night.
	W4: S	upport Walking Initiatives
	W4A	Create a dedicated active transportation website, including online mapping that educates residents and visitors on the City's walking/cycling network and facilities.
ACTIONS	W4B	Explore partnership opportunities with other agencies and organizations on initiatives such as road safety campaigns, walking and cycling education programs, and skills building.
	W4C	Continue to support events and initiatives that support walking and street vibrancy. Create a process for managing street use activities.
	W4D	Seek the implementation of wayfinding that is consistent, legible, and user-friendly to support pedestrians as they navigate through Nanaimo.



Cycling

NS	CYCLING
STRATEG DIRECTIO	Make cycling a safe, comfortable, enjoyable, and normal experience for residents of all ages and abilities within and between Nanaimo's neighbourhoods.
	CYCLING
0	C1: More places to cycle to
GOALS	C2: Encourage and promote cycling as a normal, everyday transportation choice
	C3: Make cycling safer and more comfortable
	C4: More people cycling more often
	CYCLING
	C1: Develop and expand the bicycle network
POLICIES	C2: Develop comfortable bicycle infrastructure
	C3: Integration of bicycle facilities
	C4: Support cycling education & awareness
	C5: Promote marketing & communication for cycling



	C1: De	evelop and Expand the Bicycle Network	
ACTIONS	C1A	Implement the priority cycling network, connecting within and between mobility hubs over the short term.	
	C1B	Implement the long-term cycling network over the long-term or through capital projects, development and other opportunities as they arise.	
	C1C	Consider cycling improvements as part of all street capital projects, installing and upgrading cycling routes through road construction and rehabilitation.	
	C1D	Create cycling gateways at key entry points to the City to provide information and wayfinding for visitors.	
	C2: Develop comfortable bicycle infrastructure		
	C2A	Introduce new bicycle facilities and crossing treatments as routes are developed.	
ACTIONS	C2B	Update the City's Bicycle Facility Design Guidelines to provide direction on the design of safer more comfortable bicycle facilities and intersection crossings.	
	C2C	Update the City's Street Design Guidelines to ensure cyclists are better accommodated within standard street cross sections.	
	C2D	Implement a cycle track pilot project within the Downtown.	



	C3: In	tegration of bicycle facilities		
	Cityw	Citywide		
	C3A	Require bicycle parking in office, commercial, and medium-high density residential developments.		
	СЗВ	Develop bicycle parking around key trip generators (i.e. employment areas, shopping districts, parks, schools).		
ACTIONS	C3C	Work with BC Ferries to improve bicycle routes to/from terminals, parking at terminals and on facilities on ferries.		
	C3D	Work with BC Transit to provide secure and convenient bicycle parking at transit exchanges.		
	C3E	Explore development of a bike share program.		
	Mobility Hubs			
	C3F	Continue efforts to create a Bicycle Friendly Business District in Downtown Nanaimo.		
	C3G	Develop on-street bicycle parking within mobility hubs and other high activity streets.		
	C4: Si	upport cycling education & awareness		
SNC	C4A	Continue to support Bike to Work and Bike to School events.		
ACTIO	C4B	Encourage travel to community events by walking, cycling, and transit.		
	C4C	Develop and implement consistent, legible wayfinding system on all bicycle routes.		
(0	C5: Pi	omote marketing and communication for cycling		
ACTIONS	C5A	Produce and regularly update citywide cycling map (printed and online).		



Transit

ဂ လီ	TRANSIT
STRATEG	Make transit a more economical, convenient, reliable, accessible, and practical way to move within and beyond the City by enhancing transit services and facilities and the overall customer experience.
	TRANSIT
(0	T1: Enhance transit service quality
OAL	T2: Develop a transit-supportive public realm
Ö	T3: Enhance the transit customer experience
	T4: More people taking transit more often
	TRANSIT
CIES	T1: Create more attractive transit services
POLIC	T2: Enhance frequent and rapid bus transit services
	T3: Undertake transit-supportive initiatives
	T1: Create more attractive transit services
	Frequent and Rapid Bus Transit
	T1A Support the development of a frequent transit network (FTN), with 15 minute
SNC	headways or better provided through the majority of the day connecting Downtown, Woodgrove, VIU, and Country Club.
АСТІС	T1B Support the development of a rapid bus transit corridor along Island Hwy connecting Downtown, Woodgrove and key destinations along the way.
	T1C Support core transit services with supporting land use policies.
	T1D Support transit priority measures in partnership with BC Transit along Island Highway and future/frequent rapid bus transit corridors where warranted.



	T1: Create more attractive transit services Local Transit		
ACTIONS	T1E	Support more frequent service on local routes, where warranted, that connect neighbourhoods to the frequent/rapid bus network.	
	T1F	Collaborate with BC Transit and RDN to rationalize routing and coverage to reduce trip times and increase service levels.	
	T1G	Support improvements that fill in network coverage gaps, particularly in new development areas and South Nanaimo.	
	T1: Cr Regio	eate more attractive transit services nal Transit Connections	
ACTIONS	T1H	Explore with the RDN and BC Transit the potential for operating a hybrid regional- rapid bus transit route within Nanaimo and connecting to adjacent communities	
	T1I	Support stronger integration of transit with BC Ferry service at Departure Bay ferry terminal.	
	T1J	Encourage BC Ferries, Translink and RDN Transit to develop more seamless travel options for those traveling to Vancouver via transit.	
	T1K	Consider future transit service to Duke Point Ferry Terminal, Nanaimo Airport and Ladysmith over the long term.	



	T2: Improve and expand transit facilities			
	T2A	Support the relocation of the Downtown Transit Exchange from its current Prideaux St location to the Assembly Wharf area as part of a future Downtown multi-modal transportation hub.		
	T2B	Encourage BC/RDN Transit to develop master plans for all major exchanges.		
ACTIONS	T2C	Work with BC/RDN Transit and the public and private sector to provide passenger amenities at and around major transit exchanges, frequent transit network stops and other high-activity stops.		
	T2D	Explore strategies to replace existing transit shelters as part of a comprehensive street furniture program.		
	T2E	Create a universally accessible transit system, through the provision of accessible waiting and boarding areas at all transit stops and sidewalk connections to stops.		
	T2F	Work with the Regional District to update passenger facility guidelines and create standard, attractive and comfortable designs for stops, shelters and street furniture.		
	T3: Tra	ansit support initiatives		
	T3A	Work with BC Transit to apply consistent and legible bus stop signage throughout Nanaimo, including enhanced wayfinding and transit information at key locations.		
S	T3B	Support the development of corridor and vehicle branding standards for frequent transit corridors.		
ACTION	T3C	Support the development of online transit trip planning tools, access to transit schedules, routes, 'next-bus' information, and bus stop locations.		
	T3D	Work with BC Transit to support the provision of real-time information at transit stops and along key transit corridors (i.e. frequent transit corridors).		
	T3E	Develop protocols to better inform Council of impacts to the City associated with changes to RDN Transit services.		



Major Roads

STRATEGIC DIRECTIONS

MAJOR ROADS

The Plan should identify investments required in the road network to meet the mobility needs of current and future residents while encouraging a shift from personal auto travel to other more sustainable modes. At the same time future street investments should aim to create more complete streets that better balance the needs of all road users.
Enhance the mobility and access of residents and visitors traveling within and throughout the City by maximizing the use of the existing road network before building new facilities, and by supporting initiatives which reduce the need to travel by single occupancy vehicle while recognizing that travel by personal vehicles is and will be for the life of the plan, the dominate mode of travel within the City

IDENTIFY IDENTIFY

 R1: Reduce the environmental impact of vehicle trips

 R2: Make the street network safer and more comfortable for all users

 R3: Manage the road network in an efficient, cost-effective manner

 R4: Ensure the efficient movement goods and services now and into the future

 R5: Fewer single occupant vehicle trips

 MAJOR ROADS

 R1: Undertake spot improvements to improve intersection safety and operations

 R2: Develop streets for everyone

 R3: Undertake Major Road Network Improvements

 R4: Manage impacts of vehicle transportation

 R5: Update Nanaimo's designated truck route network



	R1: Undertake spot improvements to improve intersection safety and operations		
ACTIONS	R1A	Work with the Ministry of Transportation and Infrastructure to identify potential safety and operational spot improvements on Island Highway, Nanaimo Parkway, and Terminal Avenue.	
	R1B	Implement spot improvements to address localized safety and mobility issues within City of Nanaimo intersections.	
	R1C	Continue to collaborate with partners (i.e. ICBC, RCMP) to promote and educate about road safety in Nanaimo.	
	R2: D e	velop streets for everyone	
ACTIONS	R2A	Update the City's road standards and cross-sections to support all modes and based on Complete Street principles.	
	R2B	Undertake a review of the City's road network classifications in conjunction with the update of the City's road standards and cross-sections.	
	R3: Undertake Major Road Network Improvements		
ACTIONS	R3A	Integrate the Future Road Network Improvements Plan into other City polices and processes (e.g. OCP, DCCs, Development).	
	R3B	Implement short term major road network improvement projects over the next five years.	
	R3C	Monitor major road congestion, operations and safety performance to identify future priority projects.	
	R3D	Include the principles of Complete Streets in future network improvement projects.	
	R3E	Work with fire, police and ambulance services to maintain emergency response times.	



	R4: Ma	anage impacts of vehicle transportation
CTIONS	R4A	Develop and promote Transportation Demand Management programs designed to encourage combining vehicle trips, making shorter trips, shifting travel to less congested time periods, buying more efficient vehicles, carpooling and using more sustainable travel modes.
4	R4B	Promote the continued use and expansion of car sharing programs in Nanaimo.
	R4C	Support of the use of low and zero emissions vehicles. (e.g. providing electric vehicle charging stations, priority parking).
<i>(</i>)	R5 Up	date Nanaimo's designated truck route network
ACTION	R5A	Review and update the City's truck bylaw based on changes identified within Map 8.



Neighbourhood Transportation

ဂ လီ	NEIGHBOURHOOD TRANSPORTATOIN		
STRATEG	Develop neighbourhood street networks (including streets, laneways and pedestrian / multi- use pathways) that provide access within neighbourhoods and to/from the larger road network, support adjacent land uses, walking and cycling.		
GOALS	NEIGHBOURHOOD TRANSPORTATION		
	N1: Improve neighbourhood livability and quality of life		
	N2: Manage the traffic impacts on neighbourhood streets		
v	NEIGHBOURHOOD TRANSPORTATION		
	N1: Develop a flexible approach to neighbourhood traffic calming on new and existing neighbourhood streets		
LICIE	N2: Provide improved standards for the design of safe, multi-modal streets		
IOd	N3: Ensure that neighbourhood site design promotes a fine-grained, well-connected street network that encourages walking and cycling		
	N4: Develop neighbourhood transportation networks that reflect land use and development		
	N1: Develop updated neighbourhood traffic calming guidelines		
SNO	N1A Develop updated traffic calming guidelines outlining a flexible and proactive process to develop neighbourhood traffic calming plans.		
ACTI	N1B Develop guidelines for the inclusion of traffic calming in new neighbourhood streets.		
	N1C Provide public information on traffic calming treatments to increase awareness of the neighbourhood traffic calming process and potential treatments.		



	N2: Provide improved standards for the design of safe, multi-modal neighbourhood streets		
ACTIONS	N2A	Amend City standards for local and neighbourhood collector streets to incorporate elements such as boulevards, street trees, curb extensions and on-street parking that can make streets nicer places to walk.	
	N2B	Work with developers to provide traffic calming treatments to new residential streets as development or redevelopment occurs.	
	N2C	Incorporate complete street design elements for local and neighbourhood streets.	
	N3: E street	nsure that neighbourhood site design promotes a fine-grained, well-connected network that encourages walking and cycling	
	N3A	Support land use and development policies that encourage grid road network approach to neighbourhood street layout. Where grids can't be achieved, use pathways and parks to provide enhanced pedestrian and cyclist connectivity.	
ACTIONS	N3B	Support the development of permeable block layouts, with small block sizes (block perimeter < 600m or <400m within mobility hubs), limited use of cul-de-sacs and that are easily navigable by pedestrians and cyclists via streets and other public passageways.	
	N3C	Discourage the use of cul-de-sacs except where necessary; where cul-de-sacs are used include a minimum of one pedestrian connection, consistent with the fused grid concept.	
	N3D	Develop "Neighbourhood Street Design Guidelines" for the development of future neighbourhood streets and street networks.	
	N4: D land u	evelop neighbourhood transportation networks that respond to surrounding ise and development	
ACTIONS	N4A	As densities increase, develop more robust neighbourhood networks and increase on-street parking supplies.	
	N4B	In mobility hubs, use commercial streets to serve higher density mixed use development.	



Parking

STRATEGIC DIRECTIONS	PARKING		
	To manage the City's supply of on-street and off-street parking to support the economic vitality of the City while managing impacts of parking on neighbourhoods, recognizing that parking policy and availability can influence people's transportation choices.		
GOALS	PARKING		
	P1: Support economic vitality of commercial areas and development of mobility hubs.		
	P2: Manage on-street parking in neighbourhoods		
POLICIES	PARKING		
	P1: Manage parking in Downtown and emerging mobility hubs		
	P2: Develop a strategic approach to neighbourhood parking management		
	P3: Manage parking city-wide		



	P1: M	anage parking in Downtown and emerging mobility hubs
ACTIONS	P1A	Consider reduced parking requirements and cash-in-lieu options within Downtown and mobility hubs. Use parking variances and cash-in-lieu funds to undertake projects that reduce parking demand.
	P1B	Encourage development of structured or underground parking within mobility hubs and other areas of higher density.
	P1C	Identify and encourage opportunities to develop shared parking. Prioritize parking spaces for sustainable vehicle types (i.e. electric/hybrid vehicles, car-shares, charging stations) and use way finding and real-time parking supply information to help maximize utilization of existing parking facilities.
	P1D	Use parking pricing as a management tool, moving towards a revenue-neutral parking management model in Downtown and mobility hubs. Price parking by demand with the highest prices reserved for areas of the highest demand or where turnover is desired.
	P1E	Incorporate major parking destinations in way finding programs within Downtown and mobility hubs.
	P1F	Implement parking meter technologies such as pay-by-space, pay-by-display and incorporation of different payment methods beyond cash.
	P2: M	anage parking in Downtown and emerging mobility hubs
ACTIONS	P2A	Work with private employers and developers to encourage and create incentives for walking, cycling, rideshare, and transit commuting and reduce parking demand.
	P2B	Explore parking restrictions on local streets adjacent to the VIU, NRGH and other high parking destinations that balance the needs of facility users and residents.
	P2C	Provide sufficient enforcement to ensure on-street parking regulations are effective.
	P2D	In small-lot subdivisions, maximize on-street parking though the narrowing/combining of driveways, use of laneways or other measures.



	P3: Manage Parking City-Wide		
ACTIONS	P3A	Support and develop informal park and ride facilities along the Nanaimo Parkway.	
	P3B	Work with BC Transit to provide park-and-ride facilities for bus services bound to Nanaimo.	
	P3C	Enhance information available on the City's website in regards to available parking areas city-wide, parking restricted areas, and parking regulations.	

Strategic Connections

STRATEGIC DIRECTIONS	STRATEGIC CONNECTIONS
	To strengthen connections outside Nanaimo for residents, businesses and tourism to support the City's position as a transportation and service hub; providing good connections to regional trading areas; cost effective shipping connections to the BC mainland; and frequent, affordable and reliable service to the mainland via air and water.
	STRATEGIC CONNECTIONS
GOALS	E1: Reinforce the City's role as a hub for central Vancouver Island for movement of people and goods by road, rail, water and air.
POLICIES	STRATEGIC CONNECTIONS
	S1: Strengthen connections to other Vancouver Island communities
	S2: Strengthen connections to Metro Vancouver, the rest of British Columbia and beyond
	S3: Support Nanaimo's role as a commercial gateway for Vancouver Island
	S4: Considerations for the future of the E&N Railway



	S1: Strengthen connections to other Vancouver Island communities		
ACTIONS	S1A	Support maintaining Nanaimo Parkway and Duke Point Highway as the primary routes through Nanaimo, and work with the Ministry of Transportation and Infrastructure to undertake safety and capacity improvements to maintain performance along these corridors.	
	S1B	Support development of interchanges along the Nanaimo Parkway over the long term with intersection capacity improvements over the short/medium term.	
	S1C	Support a transition of Island Highway in the long-term to an urban arterial streetscape with better accommodation for pedestrians, cyclists and transit, particularly within or adjacent to mobility hubs. Improve access and connectivity between Island Highway and the City's road network.	
	S1D	Support intercity bus services to connect Nanaimo to other Island communities and integration with the proposed Downtown multi-modal transportation hub.	
	S1E	Work with the RDN and District of Lantzville to establish the E&N trail as a regional trail system.	
	S1F	Retain the Downtown Ferry terminal for ferry connections to Gabriola Island but work to reduce impacts on Front St from ferry queues.	



S2: Strengthen connections to Metro Vancouver, the rest of British Columbia and beyond

- S2A Work with BC Ferries to maintain the reliability, frequency and affordability of ferry services to Metro Vancouver.
- S2B Work with BC Ferries, the RDN and Translink to improve the quality of service for non-automobile ferry users (walk-ons, cyclists and transit riders); providing lower cost connections between Nanaimo and Metro Vancouver.
- S2C Work with BC Ferries to encourage scheduling, fare technologies, and terminal improvements that mitigate the impact of ferry traffic on Nanaimo's road network and neighbourhoods.

S2D Support efforts to expand the number of daily flights and destinations served by YCD, and to improve flight reliability and passenger facilities. Support land connections to YCD including improved intercity bus service and future transit bus services to YCD/Ladysmith.

- S2E Support seaplane services from Nanaimo Harbour, including integration with the proposed Downtown multi-modal transportation hub.
- S2F Support the development of a high-speed pedestrian-only ferry between Nanaimo and Vancouver, including integration with the proposed Downtown multi-modal transportation hub.

S3: Support Nanaimo's role as a commercial gateway for Vancouver Island

- S3A Update the City's truck route network to enhance connections between Nanaimo's commercial and industrial areas, the provincial highway network and ferries.
- S3B Support incentives that would shift more commercial vehicles to the Duke Point-Tsawwassen route.
 - S3C Support private commercial ferry services as alternatives for the transfer of goods between Vancouver Island and Metro Vancouver.



ACTIONS	S4: Considerations for the future of the E&N Railway		
	S4A	Evaluate costs and benefits associated with using the E&N Railway as an active railway to inform future decision-making.	
	S4B	Ensure the E&N Railway remains a contiguous transportation corridor and future uses of the E&N do not prevent development of future rail-based transit services (i.e. LRT).	