City of Nelson

Sustainable Waterfront and Downtown Master Plan

Submitted to the City of Nelson

by IBI Group

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Rendering showing potential build-out of Waterfront Central and West

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Executive Summary

This Master Plan for Nelson's Downtown and Waterfront envisions broad and exciting changes to these neighbourhoods over the next twenty or so year time horizon. The downtown will be strengthened by the addition of residential uses and better connections to the waterfront, while the waterfront will have vibrant new neighbourhoods that are comprised of a rich mix of uses and enhanced job base. The water's edge will have additional parks and a continuous waterfront trail, and it will become more accessible to the public by additional connections from upland neighbourhoods.

The Downtown, with Baker Street as its focus, will continue to be the core of the City's commercial and administrative activities with shops and services defining the street edges of important streets like Baker, Vernon, Victoria, Ward and Hall. Up to 200 residential housing will be added over time in floors above new and redeveloped commercial spaces in order to make the downtown a more complete neighbourhood where new residents will benefit from convenient accessibility to services.

The area surrounding the newly renovated CP Rail Station will become a new hub of activity within the Railtown district. In immediate proximity to Downtown, and with amenities such as Cottonwood Creek Falls, this important neighbourhood will see increased vitality with up to 100 additional housing units, some as live / work units, and approximately 50-100 new jobs as a result of new and intensified development of the existing zoned light industrial lands.

Downtown and Railtown will become better connected to the waterfront through additional linkages that include potential at-grade or bridge crossings over the CP tracks and a trail system following Cottonwood Creek. These will provide enhanced access to recreation and the new activities and work opportunities foreseen to occur in the waterfront neighbourhoods for all Nelsonites.

The waterfront neighbourhoods – Waterfront West, Central, East and North – by their geographically compactness and broad mix of uses, will offer more opportunities for working, living and playing, thereby reducing the need to travel by car to other areas. In total, up to 800 new multi-family housing units and 200-400 new jobs are foreseen within the waterfront. Each neighbourhood will have its own individual character defined by a unique mix of uses, building types, streets types and park spaces.

In order to affect these changes this document sets forth a series of specific strategies, design guidelines and implementation mechanisms that will help to achieve this vision. These strategies, in turn, will inform amendments to the Official Community Plan (OCP) policies and Zoning Bylaws that will regulate development of the Downtown and Waterfront.

A community planning process was initiated some thirty five years ago with a Waterfront recreation master plan, and over the ensuing years other planning efforts and targeted improvements for the waterfront and downtown have occurred. As a result of these actions, Nelson has been able to shift its economy and cultural focus from an industrial base of forestry and railroad operations to local-businesses and tourism with a unique overlay of art, history and innovation.

This Master Plan builds upon these successes and incorporates new goals, many specific to the sustainable principles from the concurrent Path to 2040 Sustainability Strategy. These goals, as described in Section 2, include: better connections between downtown and the waterfront; neighbourhoods comprised of a rich mix of uses; connected street and trail systems; and, continuous waterfront open space and trail.

The Master Plan description in Section 3 sets forth a description of the characteristics that define each of the neighbourhoods, followed by an urban form strategy that serves as a framework for their physical structure, and concludes with the land uses, streets and open space networks that shape and connect them. The urban form strategy delineates the location of important focal points, gateways, primary neighbourhood streets and view sightlines. Within this structure, land uses are set forth, ensuring that each neighbourhood has a healthy mix of uses engendering vitality, walkability and sustainability. The urban form strategy also guides the location and configuration of the major infrastructure networks – the streets, trails, open space and utilities. These networks will create better connectivity in and between neighbourhoods and better access to open space.

Rendering showing potential new Downtown plaza on portion of Hall Street south of Baker Street

In Section 4 Design Guidelines for the public realm (streets and open space) and development parcels are provided to ensure the form of development is consistent with the community's vision. Strategies for these elements are intended to create a cohesive, engaging and attractive series of spaces for all to enjoy. The development parcel design guidelines are intended to ensure that the development parcels engage with the public realm and enhance the pedestrian experience. The general form and shape of buildings is regulated to ensure that they are appropriately scaled and proportioned according to their location. Many of the building details are also defined in order to refine building form and to enhance building character. Finally, the Design Guidelines provide direction for the design of new buildings where they are near to or adjacent heritage buildings in order to preserve established patterns that define the character of such important streets in the Downtown as Baker, Vernon, Victoria, Ward, and Hall among others.

In Section 5 a series of recommended implementation mechanisms are set forth that address policy changes and catalyst measures that can be utilized by the City in order to build the envisioned infrastructure and incent development by private interests.

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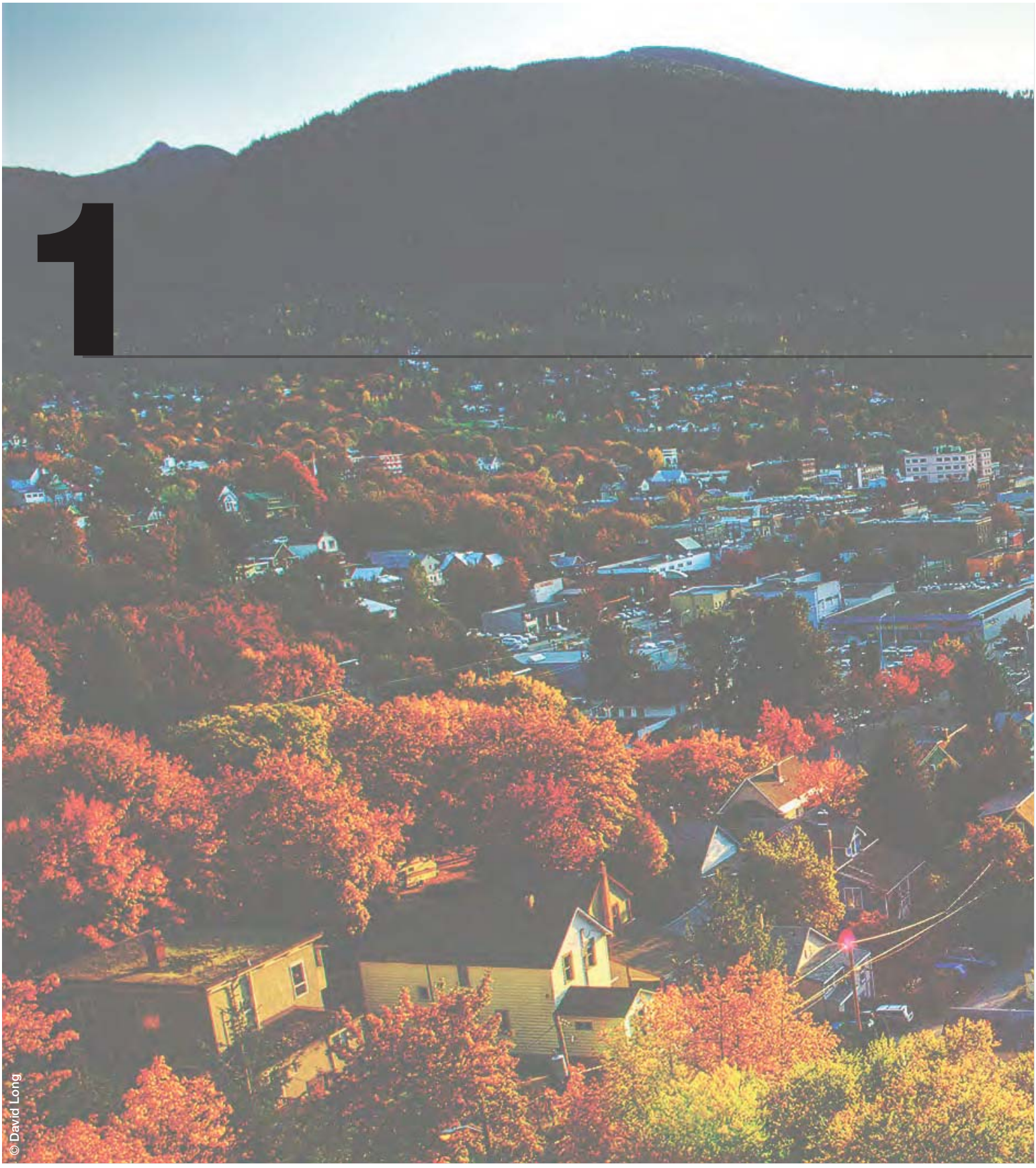
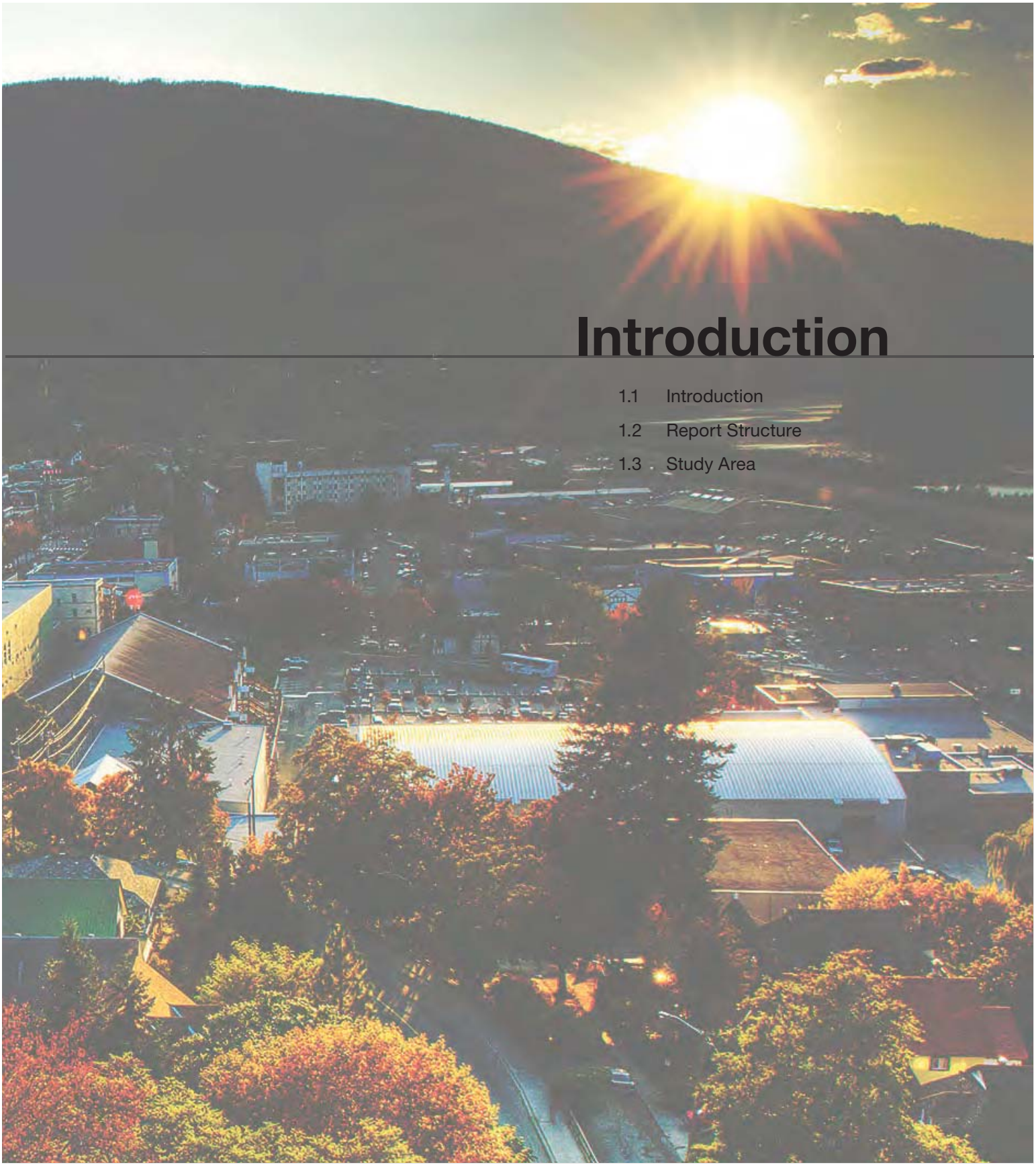




Introduction

1 Introduction

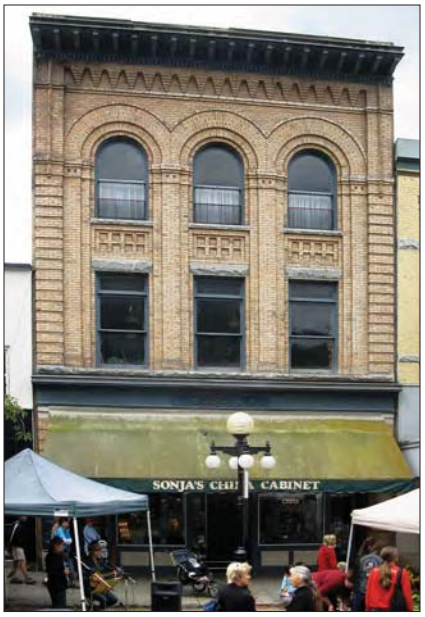
1.1 Introduction

The Sustainable Waterfront and Downtown Master Plan (Master Plan) proposes solutions to the challenge currently facing the City of planning for the future development of its waterfront lands while preserving and even enhancing its adjacent downtown. Additional challenges addressed in this Master Plan include renewing its aging infrastructure, adding affordable housing, preserving and restoring the natural environment, adapting to climate change and ensuring that the community can support its citizens economic well being.

The opportunity to address these challenges was first recognized 35 years ago in the midst of an economic crisis when the City embarked upon the first planning exercise for the Waterfront and Downtown and in 2001 when hundreds of citizens contributed additional details to the vision. Goals identified in that plan included preserving the waterfront as one of the community's most valuable assets, the dream of a continuous water front pathway, a new light industrial area, higher density developments, and maintaining the airport as a land bank. These efforts guided previous City councils in implementing policies and directions that led to the creation of waterfront parks and revitalizing Baker Street, transforming the City from a community primarily reliant on the forest and railroad industries to a broader economic base supported by tourism, small entrepreneurs, and other small and mid-size businesses. Nelson did not die as many predicted, rather it flourished.

Since that time, through the contributions of many volunteer organizations such as the Community Heritage Commission (CHC), Cultural Development Commission (CDC), Advisory Planning Commission (APC) and others, many important initiatives have added to the vitality of the community. These include the restoration of the Capitol Theatre; the development of the Lakeside Playing fields; the Prestige Hotel; the NDCC, Touchstones Museum and Revitalized Hume Hotel to name a few. Today, new developments are planned in the central and east waterfront that build upon this legacy of improvements.

This Master Plan identifies a vision that reflects past goals while incorporating the community's new ideas about mixed-use neighbourhoods, active transportation and sustainability. The vision reflects the values established by the community through the public consultation process embodied in this Plan and the Path to 2040 Sustainability Plan. It sees the City creating more sustainable neighbourhoods by reinforcing its downtown as the nucleus of the City with mixed use developments; creating new mixed-use neighbourhoods in the waterfront; and, creating new recreational opportunities at the waterfront. Additional connections are envisioned between the downtown and waterfront that will support better mobility of all types and stimulate activity in the waterfront.



The vision is articulated in this Master Plan in a series of specific, community-formulated goals, each addressing different physical elements. These recommendations include among others:

- Adding new at-grade or overhead crossings over the CPR tracks;
- Promoting new mixed-use neighbourhoods at the waterfront;
- Completing the waterfront trail system;
- Adding new parks to the waterfront;
- Protecting sensitive habitats; and,
- Building civic spaces that acts as neighbourhood focal points.

These goals, in turn, are realized in this Master Plan by providing strategies for the improvement of the mix of land use and public realm networks and providing design guidelines. The public realm networks include the streets, trails, open space and parks, and infrastructure. The design guidelines provide specific recommendations and controls for the design of streets, parks, open space, buildings, parking and landscaping.

These strategies, once implemented, will create sustainable, vibrant and connected neighbourhoods in the downtown and waterfront that reflect the values and dreams of the citizens of Nelson.

1.2 Report Structure

This Master Plan is organized in a way that leads from the context and vision for the downtown and waterfront lands to the master plan strategies that include land use, public realm networks and design guidelines. Finally, implementation mechanisms are set forth that can be used by the City to initiate many of the proposed strategies.

The Context and Vision section includes a discussion of the previous related planning exercises that have been conducted by the City going back to the early 1980's; the public consultation process used in the planning process for this Master Plan; the findings of a current market study describing the demand for various land uses; and, the vision and goals that resulted from the public consultation process and that form the basis for the strategies within this Master Plan.

The 'Master Plan' section sets forth recommendations for land use, infill and redevelopment sites, and the structural systems that form the public realm such as the mobility network, the parks and open space network and the infrastructure network.

The Design Guidelines section describes standards and guidelines that serve to define the desired characteristics of the public realm components – streets, trails, and parks and open space; and, the development blocks including the street interface, building form, building details, and use-specific guidelines.

The Implementation section describes the various mechanisms the City can use to effect changes to planning policy and to set in motion various catalyst projects that will stimulate the changes described in this master plan.

1.3 Study Area

The Master Plan study area encompasses 152 hectares of land in the City's downtown core and all waterfront areas on its south and north shores. The south western portion of the study area, comprised of the downtown and a portion of the waterfront, is a fairly large and contiguous parcel, whereas the eastern and northern portions are much narrower strips set tightly against the water's edge. Within the overall study area nine sub-areas – 'districts' – have been identified, some in downtown and others in the waterfront, each characterized by unique geographical or functional qualities.

Downtown

Nelson's downtown, set on a hillside overlooking Kootenay Lake, is comprised of a tight-knit grid of about twenty blocks containing a vibrant mix of shops, services and at the peripheral areas residential housing. Many late 1800 / early 1900 buildings set a historic tone reflective of the mining, forestry and administrative activities that were the basis for the City's foundation. The downtown sits above the waterfront lands, physically separated from the waterfront by a topographical drop and the CPR tracks and works yard. Overcoming this separation is a fundamental challenge in being able to develop robust neighbourhoods in the portions of waterfront adjacent downtown. It is also important in maintaining the vitality of the downtown, since with better linkages many synergistic relationships between the downtown and central waterfront can be created. Additional challenges to overcome include a low number of residential units that lead to a 'lights out' feeling in the evening, and gaps in the continuity of street fronting buildings, created by undeveloped or underdeveloped parcels.

Within the downtown five districts were identified as having unique characteristics and challenges warranting specific recommendations.

1. DOWNTOWN – BAKER STREET

Baker Street is Nelson's primary retail street – its 'Main Street'. It is comprised of eight blocks containing shops, services, hotels, and at its eastern end, one block of historical single family homes. Numerous historic buildings, many registered with the City's catalogue of protected buildings, create a character that has become a defining image for the City. While Baker Street could be considered one of the healthiest and most vibrant main streets in British Columbia, it must overcome challenges that are caused by several gaps in the continuity of its street fronting building edge. Laneways to the north and south of Baker Street function as service corridors for the loading functions of shops and restaurants. In some laneways locations, artful murals and small gathering spaces add a unique character overlay in the downtown core that should be encouraged in these locations.

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2. DOWNTOWN – VERNON STREET

Vernon Street runs parallel and one block to the north of Baker Street. Its western portion is a designated section of Highway 3A. Vernon is unique in the downtown core, since for much of its length it has a central median with mature street trees. It serves as the downtown's main arterial street and secondary commercial spine, with shops and services that include the post office, city hall, courthouse, several hotels, and a movie theatre. Vernon's eastern end, like Baker Street, has a block of historic single family homes. It is intersected at its mid-point by Ward Street, where the courthouse building and other prominent historic buildings are located, marking an important corner near the centre of town. Vernon Street faces a similar challenge to Baker Street where there are gaps in the street-fronting buildings or there are underutilized blocks that create discontinuity in the pedestrian experience.

3. DOWNTOWN – VICTORIA STREET

Victoria Street serves as a secondary retail and service street, containing in its central blocks shops, restaurants, inns and B&B's, and government services, and at its ends residential single family homes. Victoria Street faces modest challenges where some of its larger buildings contain non-active uses along the street; however, Victoria generally has a pleasant character consistent with its role as supporting service area for the downtown and transition area to residential neighbourhoods.

4. DOWNTOWN – FRONT / LAKE STREET

The Front / Lake District located north of Vernon Street and east of Ward Street is the most directly connected district to the waterfront by way of Hall Street. It contains a number of shops and services, the region's recreation centre, and single family homes at its eastern edge. Challenges include the significant grade drop, particularly along Hall Street, that visually separates the top and bottom of the district, the inwardly-oriented shops west of the Hall / Front intersection, and Front Street itself which has few safe and convenient places for pedestrians to cross from one side to the other.

5. DOWNTOWN – RAILTOWN

The Railtown District is also known as the Baker Street South District; however, Railtown is a name that more aptly describes the area, given the recent restoration of the prominent historic CPR station, which is currently being renovated as the new Chamber of Commerce building, and the nearby rail tracks and yard. The district contains the station, other historic buildings, the adjacent rail tracks, light industrial buildings, and Cottonwood Creek and Park. Challenges facing the district are a lack of diverse uses and its relative isolation caused in part by the grade drop from the downtown core and the Highway 3A traffic.

Study Area Districts


9
8
8
7
LEGEND
Waterfront
7 Waterfront Central District
8 Waterfront Lakeside & East District
9 Waterfront North Shore District

Waterfront

Nelson's waterfront area includes land on the south and north shores of Kootenay Lake. Land on the south shore is bordered by the CPR tracks and stretches almost five kilometres from the City's western to eastern boundary. The western and central portions of this area are generally flat and comprised of fill material and are much wider than eastern portions which lie in a narrow strip between the CPR tracks and the lake. On the north shore the waterfront area is much smaller, reflecting the pinched City boundaries.

Four districts in the waterfront were identified as having unique characteristics and challenges warranting specific recommendations as described below.

6. WATERFRONT – WEST

Waterfront West lies on the north side of the CPR tracks running from Hall Street to the western boundary of the City. The district contains CPR operations, a number of light industrial businesses, the airport, and waterfront parkland that is used for activities like walking on the waterfront trail and nature enjoyment. The primary challenge facing the district is its isolation due to the single access point of Lakeside Drive off Hall Street. While physically very close to downtown, there are no direct linkages with downtown, leaving it functionally remote. Other challenges to development include varying levels of soil contamination and the airport runway which creates a major physical barrier and a minor visual barrier to the water's edge.

7. WATERFRONT – CENTRAL

The Waterfront Central district is located on the north side of the CPR tracks between Hall Street and Poplar Street. Activities and uses include a hotel, regional shopping centre, works yard and waterfront parkland that includes a public pier and waterfront trail, and a private marina. Challenges facing the district include varying degrees of soil contamination, incompatible land uses, and the long-term uncertainty of public access, since the only east-west road, Lakeside Drive, runs over private property.

8. WATERFRONT – LAKESIDE PARK & EAST

The Waterfront Lakeside Park and East district is located on each side of the Nelson Bridge. On the west side of the bridge, Lakeside Park runs west to Poplar Street and accommodates a variety of active and passive recreation uses. The land on the east side of the bridge runs east to the City boundary and contains the RCMP offices, single family residences, a large undeveloped parcel and Red Sands Beach. Challenges facing this district include limited access, a discontinuous shoreline trail, and uncertainty about the future designation and function of Red Sands Beach.

9. WATERFRONT – NORTH SHORE

The Waterfront North Shore district is a small parcel at the northern end of Nelson Bridge comprised of single family homes, a manufactured home park and highway-oriented commercial establishments. Challenges include a lack of public access to the shoreline, and lack of a dedicated bicycle access on the bridge.


2

Context & Vision

2 Context & Vision

2.1 Introduction

The vision and goals for the Sustainable Downtown and Waterfront Master Plan evolved from an extensive public consultation process that included citizens at-large, stakeholder groups, a steering committee, and city council.

These groups worked from background information that included a summary of previous planning studies including Waterfront-specific studies; the Path to 2040 principles and goals; an analysis of the existing physical conditions; and, a market study evaluating demand for various types of development.

The background information, public consultation process and resulting vision and goals for the Master Plan are described below.

2.2 Planning Background

2.2.1 PREVIOUS PLANNING STUDIES

The City of Nelson has for a number of years been working towards the development of this Master Plan. As early as the 1980's, Nelson conceived a plan for the recreational elements of the waterfront, and many of these facilities are now constructed. In 2001, the City underwent a significant public consultation process for the Waterfront, many of whose goals have been built upon and incorporated into this Master Plan. Other documents that provide valuable background to this plan include studies on active transportation, the roadways, the airport, sustainability vision, current OCP and its guidelines and, very recently, the Path to 2040 principles and end-state goals, whose intent for a more sustainable City informs many of the strategies in this Master Plan. The reports reviewed were:

1. Waterfront Development Plan, 1984
2. Integrated Transportation Strategy, 1995
3. Waterfront Visioning Document, 2001
4. Nelson Airport Lands Review, 2006
5. Roadway Network Review – Technical Memo, 2007
6. Integrated Community Sustainability Planning (ICSP) – Community Assessment, 2008
7. OCP Design Guidelines (Schedule G), 2008
8. Official Community Plan, 2008
9. Active Transportation Plan, 2010
10. Path to 2040 – Sustainability Principles and End-State Goals, 2010
11. DRAFT – Conceptual Restoration Plan for Lower Cottonwood Creek, 2010
12. Nelson and Area Business Retention & Expansion, 2010

Summary of Goals of Previous Planning Studies

The most commonly cited goals from these planning studies have been summarized into the following areas: Land Use, Built Form, Vehicular Transportation, Pedestrian & Bicycle Transportation, Parks & Recreation, Environment, and Economic Development. These goals present a summary of the collective vision of the community for the Waterfront and Downtown and served as a starting point for the development of concepts.

Land Use

WATERFRONT

- Mixed use (light industrial, commercial, residential, institutional)
- Compact and complete (all land uses in close proximity)
- Highest residential densities within City; multi-family encouraged, single family discouraged
- Light industrial encouraged, but not on water's edge; heavy industrial discouraged
- Airport maintained and used as land bank
- Water's edge accessible to public

DOWNTOWN

- Maintain as commercial core of city
- Variety of residential housing types
- Office, government buildings

Built Form

WATERFRONT

- Character of buildings / landscape may be influenced by industrial and water vernacular
- Protect lake views from downtown
- Blocks should be pedestrian-scaled (not long)
- Buildings up to 16.75M (55 ft) height unless variance allowed for higher
- Unified streetscapes (setbacks, scale / proportion, texture, pattern)

DOWNTOWN

- Protect/respect historic buildings
- Unified streetscape scale

Vehicular Transportation

WATERFRONT

- Street connection desired from lower Baker Street to Lakeside (across CP tracks) into West Waterfront
- Street connections identified at Hall and Cedar into Central Waterfront
- Street connection desired in East Waterfront at Seventh Street

DOWNTOWN

- Vernon to be primary east-west collector
- Hall to be primary north-south collector
- Signalize Baker/Highway 3A; Highway 3A/Cedar
- Remove on-street parking at west end of Vernon for safety reasons
- Restrict left turns at Front/Lake intersection for safety reasons
- Consider an additional City parkade downtown
- Consider back-in angled parking downtown for safety

Pedestrian and Bicycle Transportation

WATERFRONT

- CP Rail crossings desired into Central and West Waterfront
- Poplar Street sidewalk desired
- Poplar to Hall Street path desired
- Continuous waterfront path desired connection needed near Nelson Bridge; extension needed at north end
- Bike lane desired on Nelson Bridge

DOWNTOWN

- Bicycle shared lanes (pavement markings/signage) on a variety of streets

Parks and Recreation

WATERFRONT

- Marinas / piers desired at water's edge
- Continuous open space to link areas of waterfront
- Sheltered activity nodes
- Trail along Lower Cottonwood Creek

DOWNTOWN

- Primary public realm is comprised of sidewalks and plazas which are encouraged to be engaging and plentiful

Environment

WATERFRONT

- Remediate contaminated land
- Restore riparian areas of creeks and shoreline
- New development strives to attain 'Path to 2040' goals for such areas as arts, energy, food, waste, etc.

Economic Development

DOWNTOWN / WATERFRONT

- Promote economic development efforts through business districts, with the goal to 'announce' to visitors that they are entering the Waterfront District, Historic Downtown, or Entertainment District using gateway signs. In practice, these need only be signage campaigns rather than actual administration or management differences.
- Create an improved wayfinding system to instruct visitors how to navigate between the districts.
- Create and maintain a commercial land inventory.
- Maintain and enhance the pedestrian shopping experience through an enhanced beautification effort, improved retail signage, and a merchant-driven enforcement program.
- Investigate potential of accessing Columbia Basin Trust funds for beautification initiatives.
- Try to get more continuity of signage and sidewalk presence for businesses.

2.2.2 PATH TO 2040 SUSTAINABILITY STRATEGY

The Path to 2040 process identifies key sustainability principles for the City as described below. These principles have strongly influenced the vision and goals of this Master Plan, in order that the Master Plan itself is a highly sustainable blueprint for the development of the Downtown and Waterfront. The extent to which the objectives have been incorporated into each of the Master Plan goals is noted further in this section.

PRINCIPLES

1. **Cultural Strength** – Cultural Strength is about celebrating and embracing our history and our diversity. It is about using our many arts, traditions, heritage and recreation assets to enrich the quality of life for all citizens.
2. **Healthy Neighbourhoods** – Healthy Neighbourhoods are safe, welcoming, connected places with meaningful opportunities to interact with neighbours of all ages and income levels.
3. **Robust Ecosystems** – Robust Ecosystems are about ensuring natural systems are flourishing in Nelson.
4. **Prosperity** – Prosperity is about fostering a diverse, value-added economy that provides meaningful employment opportunities and supports healthy and affordable lifestyles.
5. **Resiliency** – Resiliency is about maintaining and enhancing the economic, social, ecological, and cultural systems that strengthen our ability to withstand future challenges.

FOCUS AREAS & END-STATE GOALS

1. **Arts, Culture & Heritage** – Nelson is regarded as a vibrant arts, culture and heritage hub where locals and visitors are engaged in experiencing the authentic fabric of the city, the diverse nature of the community and the creative spirit of its people.
2. **Energy & Climate Change** – Nelson is an energy self-sufficient community where energy production is local, resilient, adaptive, carbon-neutral, and minimizes impacts on the ecosystem. Production meets or exceeds local consumption and energy is consumed responsibly and efficiently. Together, production and consumption creates a vibrant and resilient economy. A clear differentiation between our “energy wants” and our “energy needs” are central to our energy decisions regarding matters such as supply, type, and distribution.
3. **Food, Food Security & Agriculture** – All Nelsonites have access to affordable, nutritious food that is produced in a socially just and environmentally sustainable manner. The local food system is robust, resilient and integrated with other sustainable regional and global food systems.

4. **Healthy Living & Social Well-Being** – Nelson is a healthy, vital, safe, inclusive and affordable community where people are engaged, respectfully connecting with their families, other generations, their community, the economy, culture, the environment. Learning is embraced as a means to adapt positively to change.
5. **Land Use** – The City of Nelson manages the use of land and housing by enforcing responsible and sustainable policy which reflects the needs of an increasingly diverse population.
6. **Local Economy** – Nelson is a forward-thinking community that attracts investment and innovative business that values our Kootenay lifestyle.
7. **Natural Areas, Recreation & Leisure** – Nelson's natural areas are restored into functioning, accessible ecosystems. These ecosystems provide recreation, leisure, sustenance and transportation opportunities. Nelson meets the diverse recreational and leisure needs of its demographic within a carbon-neutral context.
8. **Solid Waste** – Nelson is a zero-waste community that avoids and reduces consumption first, then reuses, recycles, and recovers waste, and finally ensures responsible disposal of the small amount remaining.
9. **Transportation and Mobility** – The community of Nelson has access to various modes of transportation and mobility which blend public and private enterprise to ensure the energy-efficient movement of people and goods.
10. **Water, Waste Water, Stormwater** – Our mountain watersheds and water courses are protected from over consumption and provide a clean, safe, secure, and plentiful water supply for ourselves and future generations.

2.2.3 Existing Conditions Analysis

The existing conditions of various factors and systems of the study area were analyzed, including: land use (& zoning), built form, mobility, parks and open space, and infrastructure. Additional, more detailed, analyses are contained in the appendix.

LAND USE (& ZONING) ANALYSIS

Overall, the current land uses reflect a segregated pattern of development. With the exception of the downtown core, most areas have single-uses that are neither horizontally nor vertically mixed. In some cases, adjacent uses are incompatible, such as the adjacency of Waterfront Tourism and Industrial. An analysis of the land uses follows:

Downtown


Railtown


Waterfront West


Waterfront Central


Waterfront Lakeside

Downtown – Downtown Nelson is the historical and commercial core of the city. The core contains many historic buildings along Baker Street – the retail main street. There are several mixed-use buildings, as well as residential and hospitality uses. Building heights are generally 1-2 stories, with a few that are between 4–5 stories. Baker Street has a strong street wall comprised of shops, restaurants and services along almost its entire length. Downtown contains several important civic buildings, including City Hall, the courthouse, and the community complex.

Railtown – The Railtown district is located west of Downtown, across Highway 3A. It is primarily a light industrial district, with mostly one-story buildings serving a variety of commercial purposes. There are two main buildings of historical and cultural significance: the Coke and Gas Works building (currently occupied by the Nelson Brewery) and the historic CP Rail station, which is currently under renovation and will contain the new Chamber of Commerce and other services. There is also a small cluster of single family homes near the intersection of Railway and Government Streets. At the southern end lies Cottonwood Creek Park, with gardens and public market / fair facility. The park is bounded by a steep embankment leading up to Highway 3A and by Cottonwood Creek on its western side. The district is relatively isolated due to the steep topography to the south and west, the highway to the east, and the CP Rail yards to the north.

Waterfront West – Across the CPR tracks from Railtown lays the Waterfront West district, which is primarily composed of the CP rail yards, the city transfer station and other public buildings, the airport, and light industrial uses. There is a large grocery store and associated surface parking along Lakeside Drive, between McDonald Street and Hall Street. The waterfront is largely cut off from the district by the airport; the shoreline trail extends along the length of the water's edge. Cottonwood Creek runs through the district in a naturalized state on the northern half, and in a channelized state as it crosses the CP rail yards.

Waterfront Central – The Waterfront Central district is composed of two primary commercial uses: a waterfront hotel and the Chahko Mika Mall. The mall parking extends very close to the water's edge, leaving a narrow shoreline trail. Two other large parcels – the Kutenai Landing site and Yellowhead Road and Bridge yard – in the district's southwest portion are underutilized, leaving large gaps in the neighbourhood fabric. The streetcar route, which extends to the Nelson Bridge, crosses the entire district and terminates at Hall Street.

Waterfront Lakeside – The Lakeside District is primarily a park consisting of both passive and active recreation uses. The shoreline trail is well established, serving as a multi-use facility. A tot-lot and picnic facilities are included in the northeast corner, as well as several park associated buildings. There is a sandy beach and wharf / boat launch at the northern end of the district, adjacent to the Nelson Bridge; an outdoor exercise area is located to the south. The streetcar route runs fron Nelson Bridge, through the district next to the CP tracks, terminating in the Waterfront Central district.


Waterfront East


North Shore


Baker Street surface parking


Vacant lot along Baker Street

Development Site along Vernon Street

Waterfront East – separated from the Lakeside District by Nelson Bridge, the Waterfront East District is a relatively narrow band of land waterside of the CP tracks. The western portion is made up of several waterfront single family residential lots and police station. As a result, the shoreline trail does not extend along the water's edge. The trail resumes along the water at John's Walk, a single-family neighbourhood. East of John's Walk is the old Kootenay Forest Products parcel, currently vacant. At the eastern edge of this parcel lies Red Sands Beach, which lies in a more natural setting than the beach at Lakeside Park.

North Shore – On the north side of the Nelson Bridge, the North Shore District contains highway commercial adjacent to Highway 3A and single-family residential lots. There are no developed parks or open spaces within the district.

BUILT FORM ANALYSIS

In the downtown area the pattern of buildings is dense, especially along Baker Street; however, several key sites along Baker Street and throughout downtown are either vacant or underdeveloped, thus creating gaps in the fabric of the street wall and reducing street vitality. The main sites are described below:

BAKER STREET

- **Highway 3A - Falls** – The block suffers where surface parking has been permitted at the street edge on the south side.
- **Falls - Kootenay** – The block has a large street fronting surface parking lot and adjacent fenced off vacant lots that leave a significant gap in the street wall and leaves the western portion of Baker feeling disconnected from the eastern portion.
- **Hall - Hendryx** – The block between Hall and Hendryx has a surface parking lot on the north associated with a grocery store and a parking lot on the south side associated with a car dealership.

VERNON STREET

- **Stanley - Ward** – There is a large gap in the street fabric on the north. The ground level of the parcel is much lower than street level.
- **Ward - Josephine** – There is a gap in the street wall along the south side of Vernon Street, which would benefit from development.
- **Josephine - Hall** – The northern side of Vernon Street has one large and disruptive gap. The ground level of the parcel is much lower than street level.

WARD STREET

- **Vernon - Front** – The plaza in front of City Hall does not have the level of public activity warranted by the importance of the space.

Nelson City Hall and Plaza


Vacant lot at Hall St./Front St. intersection


Lack of sidewalk along Vernon Street


Lack of sidewalk along Poplar Street

HALL STREET

- **Vernon - Front** – Hall Street serves as a major connection between Downtown and the Waterfront; however, it has significant gaps in the street fabric due to both vacant and underutilized lands. Most significant are the lots along the east side of the street from the recreation centre to the intersection of Front Street.

MOBILITY ANALYSIS

The existing mobility network consists of streets, sidewalks, transit, rail, bicycle routes, and other trails, each described below.

Description of Street Network Hierarchy – There is an established street network hierarchy, which includes:

- **Arterials** – Highway 3A (Front Street) is the only identified arterial.
- **Collector Streets** – There are several collector streets:
  - Downtown: Vernon, Hall and the western portion of Baker
  - Railtown: Railway and Government
  - Waterfront: Lakeside and the portions Hall and Poplar north of Front Street.
- **Local Streets** – all other streets in the study area are identified as local serving streets.

Deficiencies in Street Network – There are several streets and intersections that are problematic:

- **Vernon Street** – There is no sidewalk on the northern side of Vernon Street between Ymir Road and Kootenay Street, creating an unsafe condition for pedestrians.
- **Lakeside/Hall Intersection** – The current priority of the Lakeside/Hall 3-way intersection is confusing, causing it to function at sub-optimal levels.
- **Poplar Street** – There is no sidewalk along Poplar Street as it extends to the water from Front Street, creating an unsafe condition for pedestrians.
- **Cedar /Front Intersection** – This intersection is not controlled, making it difficult for vehicles to make left turns from Cedar to Front, and difficult for pedestrians to cross Front.

Gaps in Street Network – There are several gaps in the street network that decrease overall mobility:

- **Waterfront West – Railtown** – No direct linkage exists between the two districts. This severely limits access to the Waterfront West district and creates a dead-end along Lakeside Drive.

Private road on Chahko Mika Mall Site with streetcar access

Shoreline Trail Bypass between Nelson Bridge and John's Walk

Lakeside Park active uses

Cottonwood Falls

- **Railtown** – The western terminus of Baker Street is a dead-end, as it does not extend to Government Road, limiting overall mobility within the Railtown district, particularly its western portions.
- **Waterfront Central** – There is no public road along the waterfront at the Chahko Mika Mall site. A private road exists between Lakeside Drive and Poplar Street; however, the City does not have control over the road.

Transit – Current transit service covers the majority of the Downtown, Waterfront Central and Northshore districts. Transit service is lacking in the Railtown, Waterfront West and Waterfront East districts. At the current intensity of land uses in these districts, viable transit service may not be supportable.

Rail – There are two types of rail tracks:

- **CP Rail** – The CP Rail tracks are located at the boundary between downtown and the waterfront. For much of this length there is a single track. Westward from approximately Ward the tracks split into two, then four.
- **Streetcar** – There is a streetcar track stretching from near the Prestige Hotel at Hall to the Nelson Bridge.

Bicycle Routes – In addition to the shoreline trail, there are several identified on-street bicycle routes; however, no on-street markings or signage identify the cycle lanes of these routes from vehicular lanes. Further analysis of the bicycle routes is contained in the 2010 *Active Transportation Plan* (ATP).

Trails – Existing off-street multi-use trails are located along the waterfront, serving both pedestrians and cyclists. There is a gap in the waterfront trail extending north from the Nelson Bridge to John's Walk. The shoreline trail terminates at John's Walk to the north, and the mouth of Cottonwood Creek to the south.

PARKS & OPEN SPACE ANALYSIS

There are three principle components to the existing parks and open space network:

- **Lakeside Park** – Extending from Poplar Street to the Nelson Bridge, the Lakeside Park contains a range of passive and active uses, including sports fields, a beach, playground, workout facilities, grassy areas, tennis courts, bocce ball courts and various buildings. In addition, the shoreline trail extends the length of the park as a multi-use trail which is primarily gravel based.
- **Cottonwood Falls Park** – Located below Highway 3A, Cottonwood Falls Park contains predominantly passive uses, with garden plots and a short trail system. There is a famer's market facility that is utilized during summer months. The falls and creek are a significant feature within the park.


Shoreline Trail

- **Shoreline Trail** – The shoreline trail is a significant component of the open space network, linking the mouth of Cottonwood Creek to the Waterfront East district. In Lakeside Park it is paved at the northern end; elsewhere it is mostly gravel surfaced.

ENVIRONMENTAL CONDITIONS ANALYSIS

There are several known environmental constraints for new development within the project area, see Appendix B for more information:

HYDROLOGY

The project area includes several creeks and an extensive shoreline of Kootenay Lake. Within the shoreline/creek edge – 15m setback zone from all watercourses there is a high level of environmental value, and this zone should be avoided completely. Any proposed development within this area will require approval from the City of Nelson and Fisheries and Oceans Canada, as well as potentially significant compensation.

Compensation requirements depend on site-specific impacts, requiring a “no net loss” strategy including a 1:1 minimum ratio for habitat lost vs. habitat gained. Long-term success monitoring programs (i.e. three to eight years) and financial securities (i.e. Letters of Credit) to ensure compensation commitments are both implemented and successful will also be required.

Within the 15-30m setback zone from all watercourses there is a low to moderate level of environmental value. There are no regulations restricting development within this zone. There are, however, significant opportunities for riparian habitat enhancement and compensation (i.e. increased setback widths where possible, ecosystem restoration, off-channel habitat construction, stormwater management features).

The ecology of Kootenay Lake is also known to support several species at risk, both within the aquatic and associated riparian environments. White Sturgeon, a federally protected and provincially Red-listed species, are known to occur in Kootenay Lake. Previous observations have also identified Nuttall’s Waterweed, a provincially Blue-listed species, along the lakeshore. Future detailed, site-specific investigations will be required to confirm the presence/absence of species at risk, assess potential impacts, and determine the need for mitigation and/or compensation.

UNGULATE WINTER RANGE

The Ungulate winter range extends into the southwest (Waterfront West and Railtown) and northeast (Northshore) corners of the project area. The southwest corner has low environmental value; impacts are possible but can be mitigated / compensated easily and should not limit development. The northeast corner has moderate to high environmental value; minor impacts are possible, but avoidance is recommended.

SPECIES AT RISK (STURGEON / NUTTALL'S WATERWEED)

White Sturgeon and Nuttall's Waterweed are located within Kootenay Lake. Sturgeon habitat covers the entirety of the Lake within the project area, while Nuttall's Waterweed is documented within a small zone. Proposed development may be possible; however, mitigation could prove difficult. Additional investigations and extraordinary compensation measures may also be required.

CONTAMINATION ANALYSIS

Within the project area, 20 sites on the waterfront and 4 sites downtown are identified in the Ministry of Environment's (MOE) registry as 'Schedule 2' sites (see Appendix C). These sites may follow MOE process or equivalent best practices for remediation and may require signoff for development to proceed. An additional 10 sites have previously been remediated and/or have achieved signoff.

The costs associated with MOE signoff, and remediation if required, can be considerable; however, commercial development (retail, office, light industrial) has less stringent standards than sites that include residential/park use at grade.

Remediation or mitigating strategies may include removal of soil, managing in place where safe, or new and emerging best practices. Strategies must be assessed on a site by site basis.

INFRASTRUCTURE ANALYSIS

The City's infrastructure is comprised of water, sanitary, storm water, and electricity networks as described below.

WATER

The existing water system consists of three reservoirs fed by primarily by Five Mile Creek in Upper Fairview. Minor supplemental supply comes from Anderson Creek and Selous Creek. The network has sufficient capacity to supply water for general use, but some areas of the city have occasionally insufficient supply for fire flows in summer months.

The existing water pipe network varies in age from 20 – 90 years, with some of these pipes nearing or at the end of their life, most notably the pipes along Baker Street and other locations within the Downtown area. At such time as replacement is necessary, construction should be phased and mitigation measures taken such as temporary foot bridges overtop excavation areas, in order to minimize disruption of access to the fronting businesses.

The 2007 *Water Master Plan* outlines key recommendations for achieving future water demands.

SANITARY

The city's sanitary system is comprised of the network of pipes within the City, and the Grohman Narrows sewage treatment plant. The sanitary pipes network flows from all parts of the city to the city main airport lift station located at the corner of Lakeshore Drive and Stanley Street. Natural topography of land helps the system to gravity flow towards the airport lift station. An assessment of the sanitary pipes network is currently being conducted as part of the detailed *Sewer Master Plan*, which should be complete in 2011.

The sanitary system is connected to the Grohman Narrows sewage treatment plant, which has a capacity of 2.7 million gallons per day for a population of 13,000 people; thus, the plant has capacity for an additional 3,600 person increase in population.

Some previous residential storm system (perimeter drains) are connected to sanitary sewer system, which reduces the capacity of the available network and the treatment plant. Residential storm systems are no longer allowed to connect to the sanitary system; the residences with storm connections to the sanitary network are systematically being disconnected and diverted back to the storm water system.

STORM WATER

The city storm water system is designed in such a way that it flows directly into either Kootenay Lake or Cottonwood Creek. Storm water travels from streets into catch basins, flows through the storm pipe system and exits at approximately 46 outfalls into Kootenay Lake or Cottonwood Creek. Minimal treatment is provided to storm water; the three largest outfalls into Cottonwood Creek filter sediment only.

ELECTRICITY

The power system is supplied in part by a City owned facility, Nelson Hydro, along the Kootenay River and through a purchasing agreement with FortisBC. There is sufficient supply of power for additional development.

The distribution system within the City is currently being upgraded from 4Kv to 25Kv. There is insufficient distribution infrastructure along most of the waterfront for new development; new cables will likely be required.

2.2.4 MARKET ANALYSIS

A market analysis for the project area was conducted in order to determine the projected demand for residential, commercial, office and light industrial uses. The market analysis is summarized below; see Appendix A for the complete analysis.

RESIDENTIAL

Over a 10-year period, the residential demand within the project area is expected to be 50 units/year, with the majority of units being apartments. Buyers into a residential project are typically local, with a smaller proportion of buyers coming from outside of the local area. Of the outside buyers, roughly half are from within BC; Albertans make up a significant secondary portion. Usually, local buyers are looking for a new place to live, whereas non-locals are at a higher likelihood of buying second homes as investments, recreational property, or units they plan to eventually retire to.

COMMERCIAL

Over a 10-year period, additional commercial demand within the Waterfront's West, Central and East districts is expected to be approximately 1,000m^2 to 2,000m^2 , comprised primarily of local service retail which should be targeted to the needs of nearby residents while not competing with downtown businesses. The Commercial should be distributed so that each of the districts is served by at least one establishment, thereby encouraging walking rather than driving for convenience items.

OFFICE

Within the waterfront lands there is little to no projected office demand; offices such as a dentist should occupy service retail spaces. No land should be allocated within the waterfront for office in order to create the incentive for any office demand to be located within the downtown.

LIGHT INDUSTRIAL

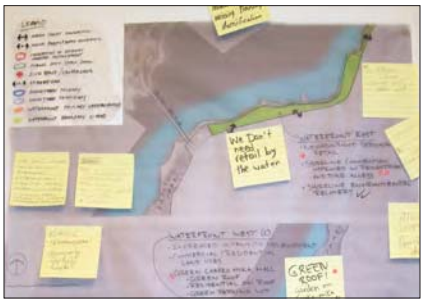
Over a 10-year period, based on the age profile of in-migrants and the percentage of goods-producing jobs, it is expected that 250 light industrial jobs will be produced. The land required will depend on the nature of the uses. At a density of 25 jobs per hectare for light industrial, it is recommended that 10 hectares of land would be required. Higher intensity light industrial uses, which include office and warehouse space, can be approximately 40 jobs per hectare; such uses would require slightly more than 6 hectares of land.

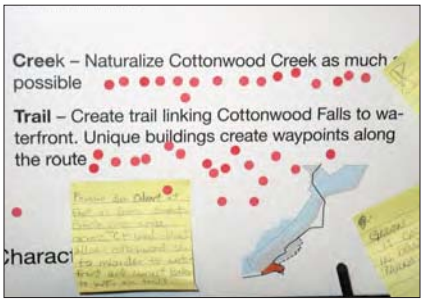
SUMMARY

The market analysis is summarized on the following page:

Market Analysis Summary

USE	FORECAST	REMARKS
Residential (multi-family)	**~50 units/year** - 70% apartment - 30% townhome	• Strong demand for townhome and low-rise apartment residential on the waterfront. • Demand for Live/work as a transitional use between rail/airport/light industrial and residential uses.
Commercial	**~1,000m² -2,000m²** (10 year buildout) - Primarily local service retail and potential for restaurant(s) - Should be distributed throughout Waterfront districts	• The land supply in Nelson is constrained by the river and mountains. Commercial development opportunities on new sites would likely see development interest. • Commercial developments on the waterfront should be limited so as not detract from the Downtown commercial on Baker Street. • Chako Mika Mall attracts spending from the City and beyond, and prevents some spending outflow to other regional centres as well as Spokane and Kelowna. • Commercial should be concentrated to promote browsing, pedestrian usage, and opportunities for increased time and spending by consumers. • Potential hotel/accommodation demand.
Office	Minimal (demand higher for live/work - see Residential)	• Office demand is largely met in the Downtown area
Light Industrial	**250 jobs** (10 year buildout)	• Warehouse type light industrial assumes 25 jobs/gross hectare • Light industrial with a higher percentage office component assumes 40 jobs/gross hectare





2.3 Public Consultation Process

A public consultation strategy was conducted in order to effectively communicate planning strategies to and solicit feedback from stakeholder groups, the public at large, and City staff and elected officials. The public consultation process consisted of:

Steering Committee

A steering committee was established to guide the Master Plan process. The steering committee consisted of three City Councillors, City planning staff, and the City Manager. The steering committee was consulted at key points throughout the planning process.

Public Workshops

Two public workshops were held, each consisting of a morning workshop with stakeholders, and an evening workshop with the public at large. The stakeholders represented a broad range of interests.

Feedback from the workshops was received in the way of design ideas (stakeholder workshop), and on posters presented to the public. The feedback informed the overall Master Plan goals (see Section 2.3).

Public Meeting

A public meeting was held to present the draft Master Plan and solicit additional feedback.

Internet Newsletters

Following each public workshop and meeting, the comments and ideas heard from the public were reiterated in the form of a newsletter that was published on the City website. The newsletters described the key ideas heard in the workshops and how they would inform future direction for the Master Plan process.

Council Meetings

A preliminary meeting with City Council was held to present the draft Master Plan and receive feedback. A second meeting was held to present the final Master Plan for approval and adoption.

Path to 2040 Focus Areas

1. **Arts, Culture & Heritage**
2. **Energy & Climate Change**
3. **Food, Food Security & Agriculture**
4. **Healthy Living & Social Well-Being**
5. **Land Use**
6. **Local Economy**
7. **Natural Areas, Recreation & Leisure**
8. **Solid Waste**
9. **Transportation and Mobility**
10. **Water, Waste Water, Stormwater**

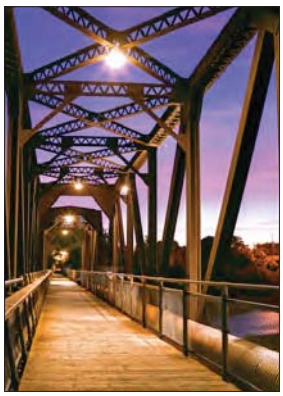
2.4 Master Plan Vision & Goals

Vision

The vision for this Master Plan, as formulated through the public consultation process, is to create two robust, vital and connected neighbourhoods; each defined by individual characteristics, yet more strongly linked together by better connections so that the energy of each contributes to the other. The Downtown will continue to function as the commercial core of the City. Additional development will emphasize mixed use projects that add residents to the area. The Waterfront will be a mixed use district with the most intensive forms of residential housing, commercial, light industrial, and water-oriented parks and activities.

Goals

In order to realize the vision, ten goals are set forth for the physical strategies within the Master Plan, each meeting various Path to 2040 focus areas and end-state goals.



1. Connections

Create additional vehicular and pedestrian connections between Downtown and the Waterfront.

PATH TO 2040 GOALS MET

5 9

2. Downtown Infill

Encourage development of vacant Downtown lands, especially along Baker Street. Infill projects should be mixed-use to create more multi-family residential dwellings in the Downtown.

PATH TO 2040 GOALS MET

1 2 4 5 6

3. Heritage/New Construction

Protect recognized and designated heritage buildings while allowing new construction to reflect current styles/practices.

PATH TO 2040 GOALS MET

1 5

4. Intensify Railtown and Waterfront districts, particularly West and Central

Intensify development with Railtown and on the Waterfront adjacent to Downtown with a mixture of residential, commercial and industrial

PATH TO 2040 GOALS MET

2 4 5 6 9

5. Public Waterfront

Ensure the water's edge remains public with a continuous shoreline trail that is accessible to all.

PATH TO 2040 GOALS MET

3 7 9

6. Sight Lines

Maintain sight lines from Downtown to the water. Sight line locations should inform the location of future streets in the Waterfront

PATH TO 2040 GOALS MET

5 7

7. Cottonwood Creek

Revitalize Cottonwood Creek, including a pedestrian/bike path and City park at the mouth.

PATH TO 2040 GOALS MET

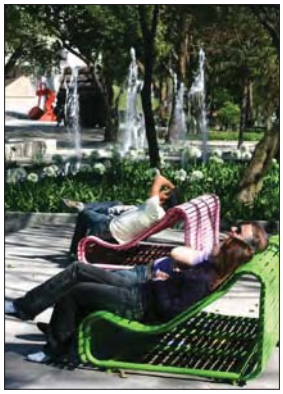
3 4 5 7 9 10

8. Red Sands

Create a new city park at Red Sands Beach and preserve the adjacent tree grove.

PATH TO 2040 GOALS MET

4 7 9

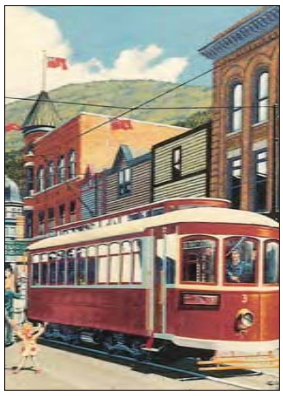


9. Civic Spaces

Create strong civic spaces that are focal points for neighbourhoods, including at the CP Station, City Hall, and key intersections Downtown.

PATH TO 2040 GOALS MET

1 4 5 7



10. Streetcar

Identify opportunities for extended streetcar service along the Waterfront and possibly Downtown.

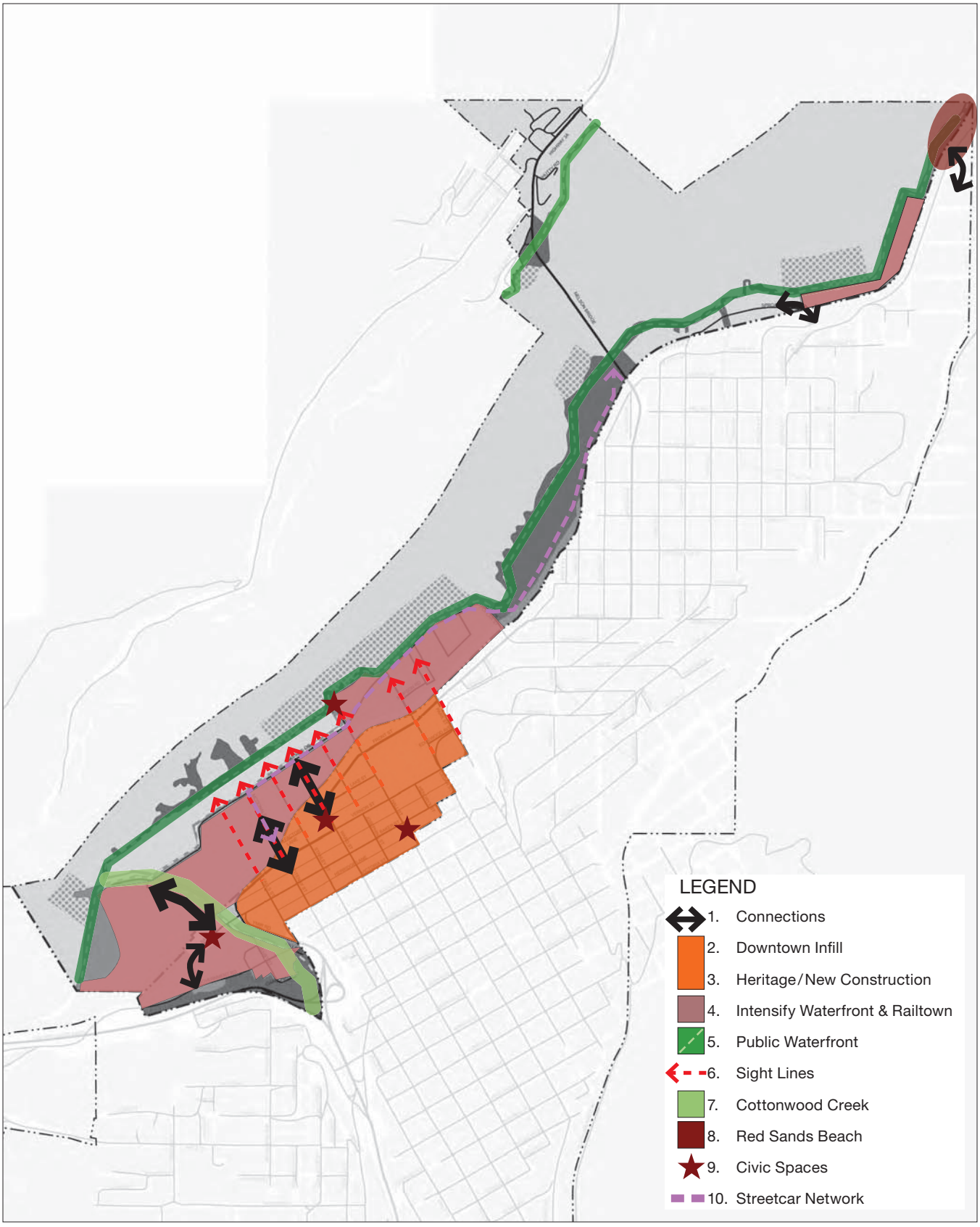
PATH TO 2040 GOALS MET

2 9

3

Master Plan

Figure 3.1 – Key Improvements



3.0 Master Plan

3.1 Description

3.1.1 GENERAL

The improvements proposed in this Master Plan range from large scale, such as infrastructure networks like streets and open space, to a finer scale, such as buildings or civic spaces. At the network scale, plans are set forth for the streets, parks and open space, sidewalks, trails, bicycle routes and utility infrastructure. At the finer scale, recommendations are made for infill and redevelopment sites in the Downtown, and civic spaces in the Downtown and Waterfront.

The plan envisions robust mixed use neighbourhoods near the City centre (Waterfront West, Waterfront Central, Railtown and Downtown), each distinct, yet because of proposed connections, tightly linked to form a nucleus of activity for the City. The outlying portions of the waterfront (Waterfront East and North) will be quieter, characterized by secondary neighbourhoods interwoven with parks and trails.

In total, up to approximately 1,000 to 1,200 new multi-family homes representing approximately 2,500 to 3,000 residents are envisioned to be added to the study area over time. Most would be located in Waterfront Central with smaller amounts in Waterfront East, Railtown and Downtown.

Additionally, up to approximately 10 hectares of light industrial activity is envisioned to be added over time for portions of Waterfront West (mostly on CP Rail land) and Railtown. Also envisioned for these and other parts of the waterfront are live / Work units, neighbourhood serving retail, various tourist uses and new parks, as described below and shown on Fig 3.2.

The most significant improvements are listed below followed by descriptions of the mobility and open space networks and the individual neighbourhoods.

1. **Create Connections Between Downtown and Waterfront**
   - Three new possible connections identified across CPR tracks – one at-grade and two longer term bridges – in order to strengthen the connection between the Downtown and Waterfront and vitalize the waterfront lands.
2. **Infill Downtown Parcels**
   - Key mixed-use infill and redevelopment sites identified within the Downtown that reinforce its position as the nucleus of the City.
3. **Heritage/New Construction**
   - New Design Guidelines created to provide direction for the ways new construction should relate to heritage buildings in order to encourage contemporary architecture to contribute positively to the existing streetscape.

4. **Intensify Waterfront and Railtown Districts**
   - New mixed-use precincts identified within the Railtown, Waterfront West and Waterfront Central districts to promote complete, walkable neighbourhoods.
   - New multi-family residential neighbourhood identified in the Waterfront Central district that brings more residents in close proximity to Downtown and the water's edge.
   - Height allowance increased for Light Industrial uses within Railtown district to encourage more intensive development that better utilizes the land base.
5. **Enhance Public Waterfront Opportunities**
   - Identified strategies for completing the existing shoreline trail on the South Shore, and a possible new trail on the North Shore; for both sides, encourage its continuation beyond city limits.
   - Identified additional opportunities for public and private water-based activities.
6. **Protect Sight Lines**
   - Designated sight lines protected from development in order to maintain views from Downtown to the water. The sightline corridors form the basis for new Waterfront street locations.
7. **Enhance Cottonwood Creek**
   - Designated the Cottonwood Creek corridor for rehabilitation plus a new multi-use trail linking Baker Street to the water.
8. **Protect Red Sands Beach**
   - Identified a new City Park at Red Sands Beach that will function as the eastern terminus of the shoreline trail.
9. **Create Civic Spaces**
   - Key civic spaces identified within the Downtown and Waterfront that serve as neighbourhood gathering spaces and promote art and culture.
10. **Enhance Streetcar Network**
    - Identified streetcar route expansion options within the Waterfront and Downtown that take advantage of this historic mode of sustainable transportation.

3.1.2 MOBILITY

A critical element in achieving the goals of the plan is to create additional linkages between the Downtown and the Waterfront in order to make the movement of people and vehicles more fluid between the two, encouraging additional cultural and business activity in both. Three possible new connections are proposed across the CPR tracks, requiring additional consultation with CPR in order to formalize their implementation. The most critical of these is the connection between Lakeside Drive and Baker Street's west end, in order to make Lakeside

Drive a looped system rather than a dead-end. Additional overhead crossings, either as supplements or alternates to the Baker Street crossing, are proposed at Kootenay and Ward Streets. Both of these crossings are centrally located so they would directly connect the most active portions of the Downtown with what is envisioned as some of the most active portions of the Waterfront. In Waterfront East a connection of Sproat to Seventh is proposed to make Sproat a loop road, thus enhancing mobility in this neighbourhood. Additionally, a connection to Red Sands Beach off Beatty Road is proposed.

3.1.3 PARKS AND OPEN SPACE

The parks and open space system, while already well developed, will be better linked, so that users can travel in an uninterrupted open space environment. Additional connections are proposed to link urban areas with parks spaces to make the system more accessible, specifically the Cottonwood Creek corridor and a new small park space connecting Hall Street to the waterfront trail. Opportunities have been identified for the completion of the waterfront trail on the South Shore so that it runs continuously, from the western City limits west of Cottonwood Creek to the eastern end of the City limits at Red Sands Beach. Additional parks are proposed west of Cottonwood Creek, in Waterfront Central, at Red Sands Beach and in Waterfront North. In the urbanized areas additional civic spaces, or ‘mini-parks’, are proposed for key focal points within all of the major neighbourhoods.

3.1.4 NEIGHBOURHOODS

The character of the neighbourhoods is proposed to be mixed-use, blending together residential, retail, light industrial, commercial and civic uses, sometimes within the block, sometimes within the building. By doing so, neighbourhoods will contain live, work and play elements, encouraging walking and biking as an alternative to driving.

The Downtown will continue to be the commercial and service centre for the City. Augmenting this activity, approximately 200 additional multi-family residential homes are proposed to be added over time, mostly on sites that are vacant or underutilized. This residential development will be able to utilize existing infrastructure and will put residents near the services they require for daily life, thus encouraging walking / bicycling rather than driving for daily needs. The residents in these new homes will also contribute to activity in the downtown for a longer portion of the day and evening.

The Waterfront’s West and Central district are proposed to be robust, mixed-use neighbourhoods that reinforce the energy of the Downtown, particularly once additional linkages between these neighbourhoods are realized. Residential in these neighbourhoods is envisioned to be multi-family in the form of multi-level apartments and condominiums, and ground-oriented attached homes (i.e. townhomes), fostering a more lively environment than found in the sparser patterns of single family housing in

Figure 3.2 – Master Plan (South)

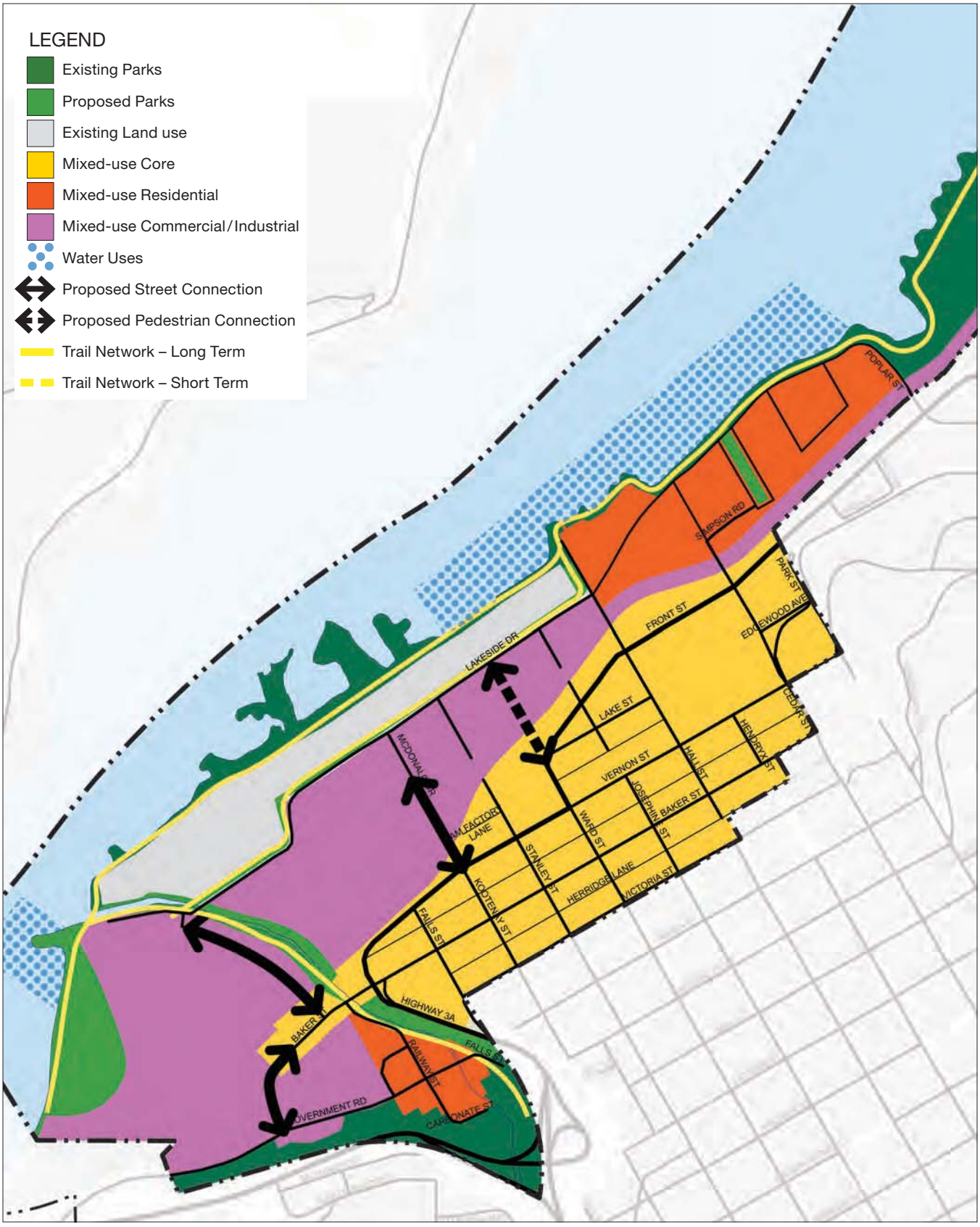
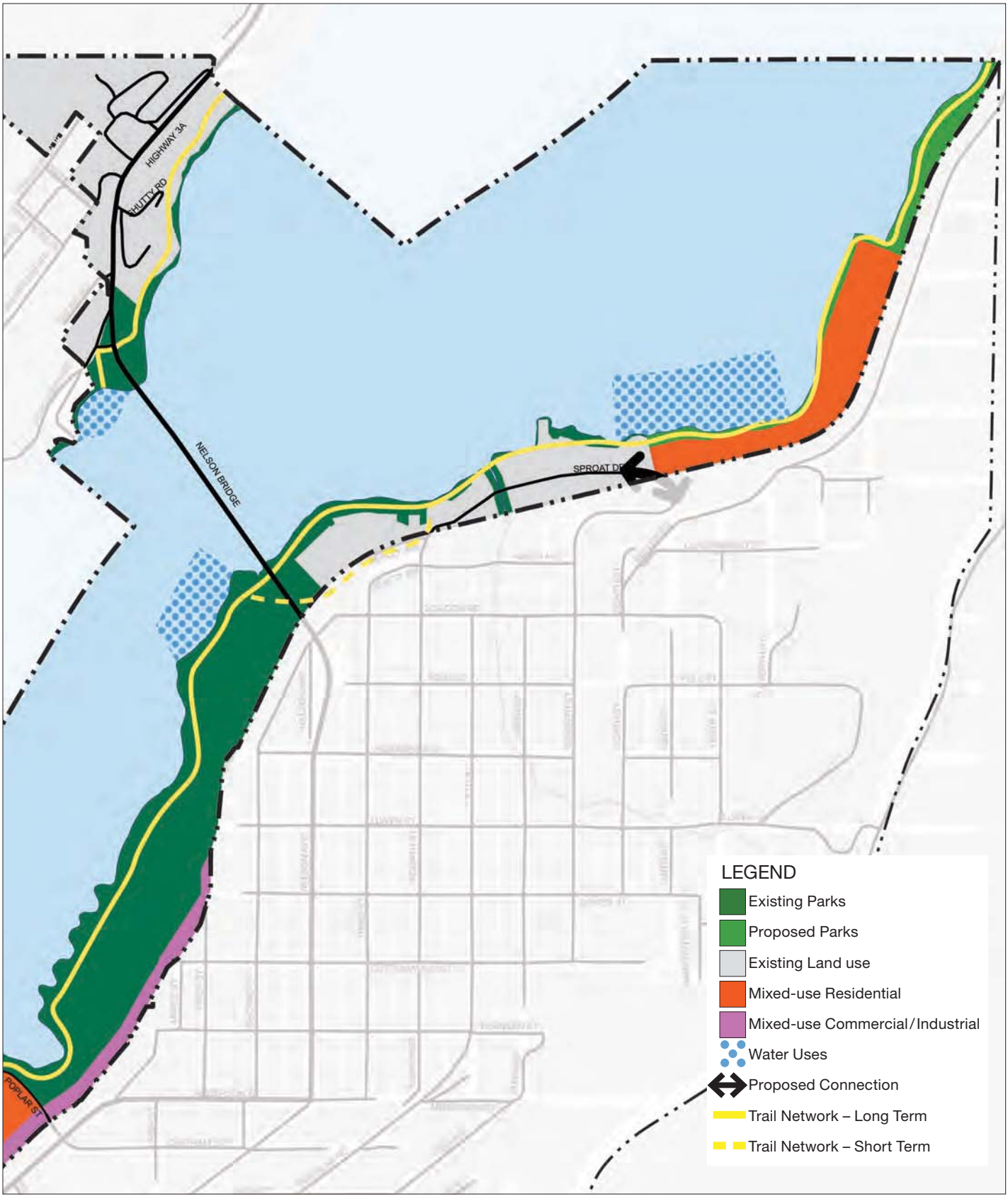


Figure 3.2 – Master Plan (North)



the outlying areas.

Waterfront West will continue to serve light industrial business. Over time, however, additional light industrial infill is encouraged, and additional land is encouraged to be added – specifically portions of CP Rail's land that are not utilized for rail operations. These changes could add approximately 8 hectares of new light industrial land capable of accommodating businesses employing some 200-400 people. Waterfront West is also proposed in the longer term to be a relocation site for the regional serving retail that is currently located along the water's edge in Waterfront Central.

The relocation of regional retail would allow the current site in Waterfront Central to be redeveloped more intensively into a mixed use residential neighbourhood, a more appropriate use for this prime lakefront location. Consistent with this strategy, Waterfront Central is envisioned as a primarily residential neighbourhood with additional local-serving retail, live / work units, and a neighbourhood park. In total, some 600 new multi-family homes are foreseen for the area including the current Kootenai Landing proposed project.

The Railtown district is proposed to continue to serve light industrial businesses. An additional 2 hectares or so can be accessed at the western edge by adding the proposed short connector street between Baker and Government. The Railtown district is also proposed to have modest additional infill multi-family residential of some 100 units, capitalizing on its proximity to Downtown, the Cottonwood Falls and waterfront park systems, and the adjacent opportunities for working. These residential uses should be located in the areas around Baker and Railway Streets in order to intensify and reinforce this zone as the core of the neighbourhood.

The Waterfront East district is proposed to have approximately 200 multi-family residential homes, generally at lower densities and heights than Waterfront Central, a possible hotel and a modest component of neighbourhood-serving retail, all served by additional waterfront trail access and a park at the eastern end.

The Waterfront Northshore district is envisioned to have a new shore side park south of the Nelson Bridge and over the long-term a shoreline trail running the length of the district. Minimal changes in building form are proposed. In the future the City may pursue expanding city limits beyond the current boundary.

Computer simulation of long-term build-out of Waterfront Central and West

Overview – Waterfront Central and West

Waterfront Central

Waterfront West

Gateway 1. Highway approaching Baker Street

Gateway 1. Baker Street approaching Highway 3A

Gateway 2. Hall Street/Front Street Intersection

Gateway 3. Poplar Street/Front Street intersection

3.2 Urban Framework

The urban framework provides the physical structure for the master plan by setting out the principles around which all development and infrastructure is organized. The primary elements contributing to the urban framework – gateways, focal points, primary neighbourhood streets, and sightlines – are described below and shown in Figure 3.3.

3.2.1 GATEWAYS

Gateways (entrances) to each of the Downtown and Waterfront neighbourhoods are proposed in order to define their entrance locations and set the tone of their character. They should be marked by significant architecture and public realm treatments to reinforce their importance. Recommendations for key gateway locations are:

1. **Highway 3A and Baker Street intersection** – Gateway to the City, Downtown and Railtown.
    - Improve signage to better enhance visibility at the intersection and to its approach from the south
    - Install public art
    - Install lighting and paving materials extending both directions along Baker Street to better link Downtown to Railtown
    - Add elements to the Cottonwood Creek crossing so that it looks more like a bridge in order to enhance the gateway experience between the Downtown and Railtown districts. Elements could include a decorative truss or similar structure that would emphasize the rail heritage.
2. **Hall Street and Front Street intersection** – Gateway to Downtown and Waterfront.
    - To strengthen the corner, consider removing the Hall Street right turn pocket to allow new development to be built closer to the northeast street corner.
    - On new development encourage architectural features that reinforce the corner such as active pedestrian oriented uses, taller volumes and distinctive materials.
    - Widen the sidewalks and add street trees on Hall.
3. **Poplar Street and Front Street intersection** – Gateway to the Waterfront and Lakeside Park.
    - Add signage or other visual cues such as banners along Highway 3A that introduce the waterfront and park entrance.
    - Add sidewalk to north side of Poplar Street to facilitate park access.

Gateway 5. Highway 3A at north end of Nelson Bridge


Focal Point 1. Hall Stree south of Baker Street


Focal Point 2. Ward Street


Focal Point 3. CP Rail Station on left, plaza in front


Focal Point 4. Hall Street northern terminus

4. **Seventh Street Northern Terminus** – Gateway to Waterfront East
    - Add signage along Seventh Street and unique landscape features at the entry to John's Walk and future KFP lands development across the CP tracks.
5. **Highway 3A at the north end of Nelson Bridge** – Gateway to the City.
    - Remove or thin trees that block the sight line from Highway 3A southbound to Downtown.
    - Improved signage announcing arrival to Nelson.

3.2.2 FOCAL POINTS

Focal points are considered the 'heart' of neighbourhoods, the places where people gather. They should be located at important crossroads of activity in areas that are unique to the neighbourhood such as at the junction of a major street and open space, in front of important buildings, or overlooking an important vista. At these locations the buildings should be of significant scale and stature, and civic spaces should be enhanced with public art and high quality landscaping. There are major and minor focal points are proposed. Recommended major focal points are described below:

1. **Baker Street and Hall Street** – create a new civic plaza in the half block of Hall on the south side of Baker Street (see Section 3.5 for more information).
2. **Ward Street** – the key intersections with Baker Street and Vernon Street should be reinforced with special paving and public art. The plaza in front of City Hall should be activated and enlivened by way of public art and the possible inclusion of commercial to activate the space (see Section 3.5 for more information).
3. **CP Rail Station (Chamber of Commerce building)** – create a plaza that reinforces the rail heritage of the building and the district. The CP Rail Station and proposed plaza will be a catalyst that activates the surrounding Railtown district, due in part to its strategic central location as a 'knuckle' between Downtown, the shore via a proposed trail along Cottonwood Creek, and the Cottonwood Creek Falls Park. (see Section 3.5 for more information).
4. **Hall Street northern terminus** – this important space should be re-configured in order to strengthen the connection to the water. Over time some of the existing parking and landscaping is recommended to be converted to open park space so that the lake and pier become the focus of activity and the view looking down Hall Street. Infill with commercial uses along the eastern edge of this location is encouraged in order to animate the space (see Section 3.5 for more information).

Figure 3.3 – Urban Framework (South)

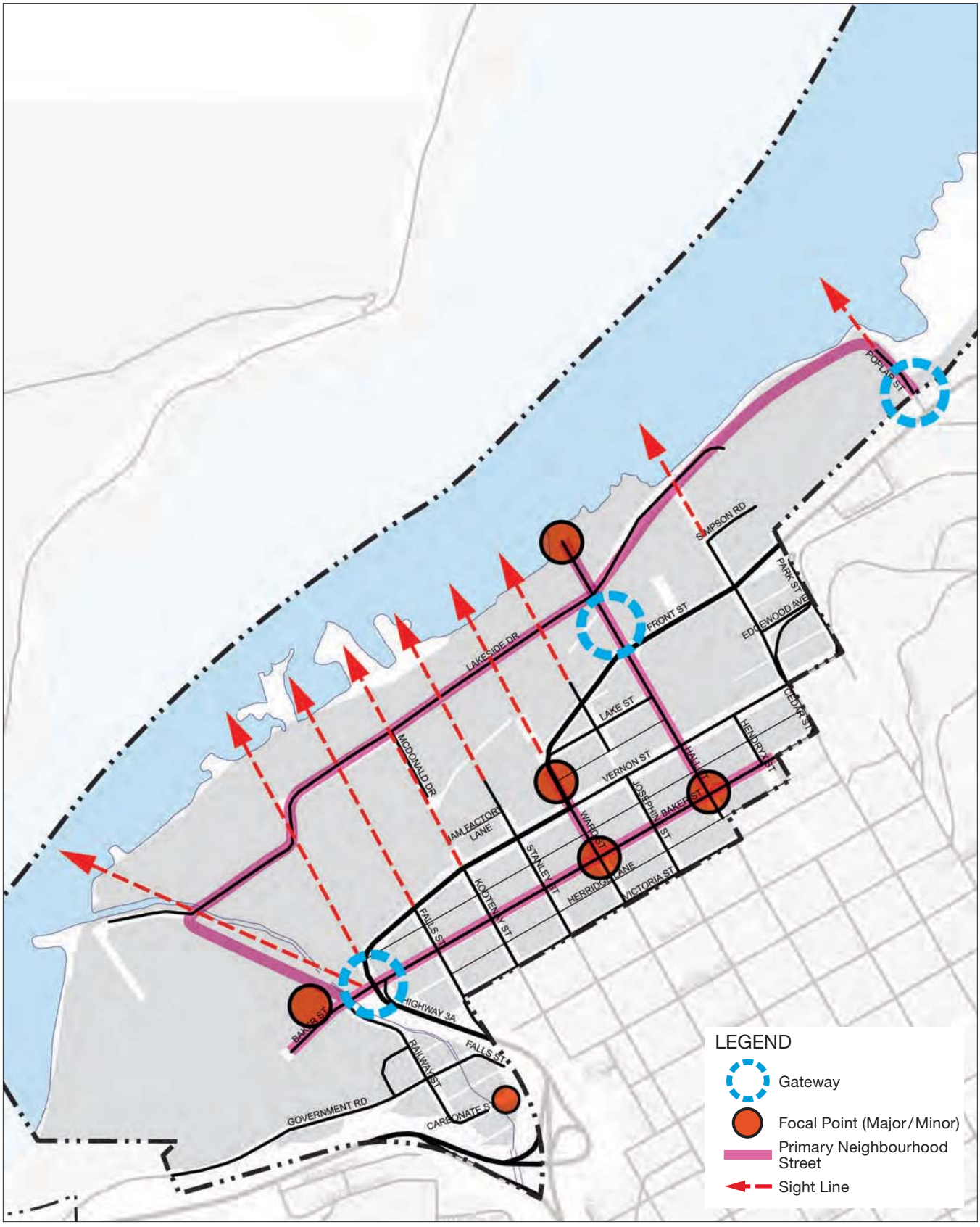
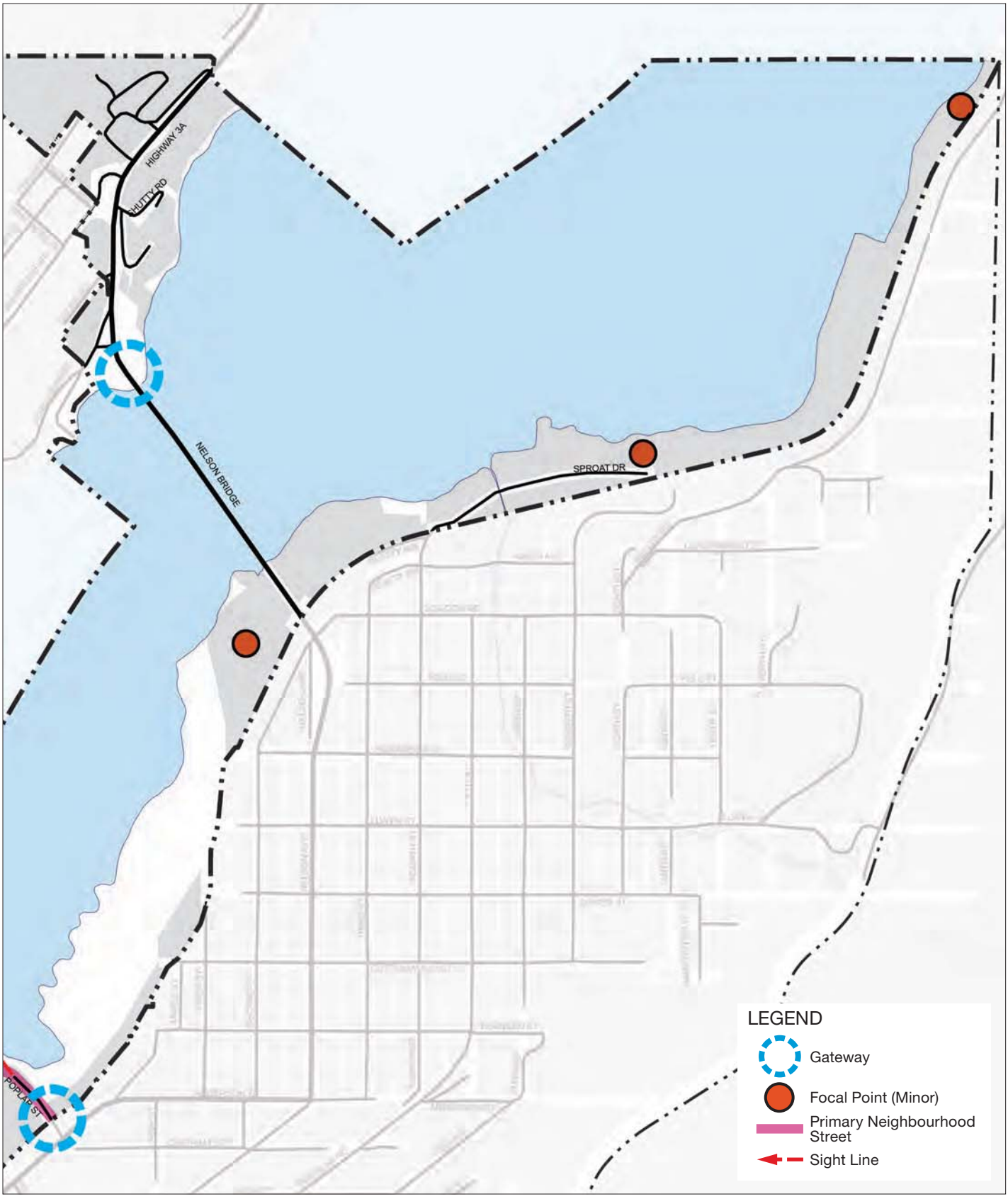


Figure 3.3 – Urban Framework (North)



Downtown Primary Street – Baker Street

Downtown Primary Street – Hall Street looking towards lake

Downtown Primary Street – Ward Street looking towards lake

3.2.3 PRIMARY NEIGHBOURHOOD STREETS

Primary neighbourhood streets serve as the spine of neighbourhoods or the key connectors between neighbourhoods, in both cases serving as the neighbourhood's 'living room'. They are characterized by having strong streetwalls (generally continuous buildings fronting the street with active uses at grade), and generous public realm elements (wide sidewalks for comfortable pedestrian movement, street trees, and other landscaping and decorative elements).

In some cases neighbourhoods already have a well defined primary street that may require only minor improvements, while in other cases primary streets do not exist and will need to be created when the neighbourhood is developed. Both are discussed below:

DOWNTOWN

1. **Baker Street** – Baker Street should continue to be the primary commercial street in the downtown and should be prioritized for infill and redevelopment in order to fill the gaps in the street wall, extending from Hendryx Street to Highway 3A. The public realm is currently well developed within the Downtown portion of Baker Street; the current treatment should be extended into the Railtown district (see below).
2. **Hall Street** – Hall Street currently offers the only direct physical linkage between Downtown and the Waterfront. Presently, Hall Street has several gaps in the street wall. An empty lot at the intersection with Front Street, poor connectivity for pedestrians, and few street trees all contribute to the erosion of this connection. In order to strengthen Hall's role as one of the key linkages between Downtown and the Waterfront it is proposed to create a gateway and two focal points along Hall Street (discussed under Focal Points), a strong streetwall, and accompanying sidewalk widening and street trees.
3. **Ward Street** – Little additional development is possible along Ward Street; however, its street wall should be strengthened north of Vernon Street, particularly along the east side between Vernon Street and Lake Street with additional mixed-use buildings. In addition, focusing activity in front of City Hall and a potential overhead CPR crossing at the foot of Ward would help strengthen this block's role as one of the most central in the City. Special landscape treatment such as widened sidewalks and street trees along the length of Ward is recommended to further reinforce its importance.

Railtown Primary Street – Baker Street within Railtown looking east

Waterfront Primary Street – Lakeside Drive looking east

Sight Lines – Water view blocked along existing Josephine sight line

RAILTOWN

The primary street for Railtown should be **Baker Street**, since it provides direct connection to the downtown core, potential to be connected to the Waterfront via a linkage through CPR lands, and is home to the historic landmark CPR Station. Street trees and sidewalks should be added to Baker Street and the bridge across Cottonwood Creek embellished (see Gateways). Additional street fronting buildings on both sides of the street to the west of the station are encouraged.

WATERFRONT

The waterfront's primary street should be **Lakeside Drive**, as it links Cottonwood Creek to Poplar Street. Lakeside should reinforce the water-focused character of the neighbourhood by having generous sidewalks that encourage recreational walking, street trees and limited building development in order to protect sight lines and views of the lake.

3.2.4 SIGHT LINES

The many north-south oriented Downtown streets create view corridors, or sight lines, to the water, creating a visual linkage between Downtown and the Waterfront. It is important that the corridors within which these sight lines run are protected. In the Waterfront blocks where existing development has intruded on view sight lines, future proposals must restrict development from these locations. Additionally, it is recommended that the view sight line from Ward Street to the Waterfront be strengthened by removing or topping the trees that currently block the view. Ward Street serves as the central north-south spine in the Downtown, and accordingly it is important that it have a visual linkage to the Waterfront.

The view corridors through which sight lines run are recommended to form the location for the north-south running streets within the Waterfront. In this way, views are ensured to be protected, and the pedestrian-friendly scale of block sizes in the Waterfront will be similar to those established downtown.

3.3 Land Use (& Zoning)

The existing Land Use and Zoning within the OCP and Zoning Bylaw (see Fig. 3.4 and Fig. 3.5) regulates the distribution of existing (land use) and permitted (zoning) uses within the project area. The current zoning in Downtown is consistent with the goals of the Master Plan, thus no changes are proposed (see Fig. 3.6). The current zoning for the Railtown, Waterfront West and Waterfront Central districts is comprised largely of light industrial and rail industrial, with small pockets of commercial (waterfront and core) and comprehensive development. Within the Waterfront East district, the current zoning is primarily comprehensive development and parks and open space. In these districts, in order to promote more mixed-use development and achieve the density and intensification desired within these districts, the Zoning ByLaw should be revised as proposed below.

3.3.1 PROPOSED LAND USE

1. CP Rail Station Precinct

2. Hall Street/Lakeside Drive Precinct

The land use plan (Figure 3.4) illustrates the general location and size of uses for the master plan, including mixed use, residential, commercial (retail), rail industrial, light industrial and open space. The size of the land uses relates to their projected market demand and to the community vision (see Section 2.1.D).

The Master Plan proposes the following changes to current land use:

MIXED-USE

Four new mixed-use precincts are proposed in order to blend residential uses with job-creating uses such as retail, office and compatible light industrial. These precincts are:

1. **CP Rail Station** – the area immediately adjacent to the renovated CP Rail Station and extending to Cottonwood Falls Park is proposed as mixed-use, bringing residential into the area in order to create additional activity. Residential live/work is also proposed as a means of providing space for local artists and small business entrepreneurs to afford workspaces and housing. Light industrial uses proposed should be compatible with residential.
2. **Hall Street & Lakeside Drive** – The area surrounding this intersection is the primary gateway to the Waterfront and should be reinforced accordingly. At-grade uses such as retail and restaurants are proposed in order to enliven the intersection. Office, commercial and residential uses should be located on upper floor levels in order to frame the intersection and strengthen its importance. If the streetcar service is extended west, the existing turnaround land should be used for a commercial or mixed-use building.

3. Central Waterfront (north) Precinct

4. Waterfront East Precinct

3. **Waterfront Central (east portion)** – The eastern portion of the Central Waterfront (current site of the Chahko Mika Mall) is proposed in the long-term as a mixed-use site comprised of residential and regional commercial uses. The intent is to allow for the redevelopment of the current mall into a mixed-use precinct, with retail uses at-grade and residential above. Commercial uses should be primarily regional serving, as is currently the case, in order to differentiate from the Downtown commercial; small amounts of neighbourhood serving retail may also be developed. The site may also be developed as primarily residential if the current regional serving commercial uses are relocated to an alternate site west of Hall Street within Waterfront West.
4. **Waterfront East** – The waterfront lands northeast of the Nelson Bridge should be mixed use in a combination of residential and neighbourhood-serving retail.
5. **Downtown** – Redevelopment of underutilized sites and infill development of vacant sites within the existing Downtown core is encouraged to be mixed-use, with retail at grade and office or residential uses above. These sites are ideal for new seniors housing and other assisted living housing due to the close proximity of existing shops and services.

Precedent for residential development along waterfront

RESIDENTIAL

The Waterfront lands between Hall Street and Poplar Street (Waterfront Central) are proposed to form a new residential neighbourhood along the Waterfront. Due to the close proximity to Downtown, residential uses should be multi-family, in a mixture of ground-oriented units (ie. townhomes) and stacked units (ie. apartments). Live/work units are encouraged close to Hall Street. The currently approved Kutenai Landing development will form a central component to the neighbourhood, and includes five-story apartment buildings and a possible marina. Within this neighbourhood a centrally located community park should be developed. It should be a minimum size of 0.2 hectares and have direct access to the waterfront trail system (see Section 3.4 for additional detail).

Precedent for vertically developed light industrial/office

LIGHT INDUSTRIAL / REGIONAL COMMERCIAL

Most of the remainder of the Waterfront (Waterfront West, west of McDonald Drive) is identified as Light Industrial / Regional Commercial, allowing for light industrial, regional commercial retail and possible office uses. Current one-storey buildings fail to capitalize on the maximum allowable development intensity and job creating opportunities of these lands. Thus, light industrial lands, whether on currently developed or undeveloped sites, are encouraged over time to develop vertically to maximum allowable height (see Section 4.2.2) in order to increase the intensity of development. Opportunities should be explored for the development of high tech and research and development jobs in these areas, especially in the Railtown district.

The lands allow for regional serving commercial uses in case the current Chahko Mika Mall site is redeveloped as residential, leaving room for the relocation of such uses within Nelson (see Figure 3.6). Any development is encouraged to include office uses on upper floors.

CP Rail land: Current lands are largely vacant/underutilized

CPR LANDS – RAIL INDUSTRIAL / LIGHT INDUSTRIAL / REGIONAL COMMERCIAL

Currently, the lands owned by CP Rail are zoned as Rail Industrial, limiting uses to those directly associated with railway operations. With the exception of the land used by the active tracks, these lands are underutilized. They offer the potential to increase the light industrial and regional commercial land base within the City. In addition, portions are proposed as parks and public use, specifically the transfer station site and the riparian areas of Cottonwood Creek. In order to expand the possible uses on the non-track area of CPR lands, the Zoning Bylaw should be revised to allow for light industrial, commercial use, and parks and open space in addition to railway uses.

Figure 3.4 – Current Zoning (South)

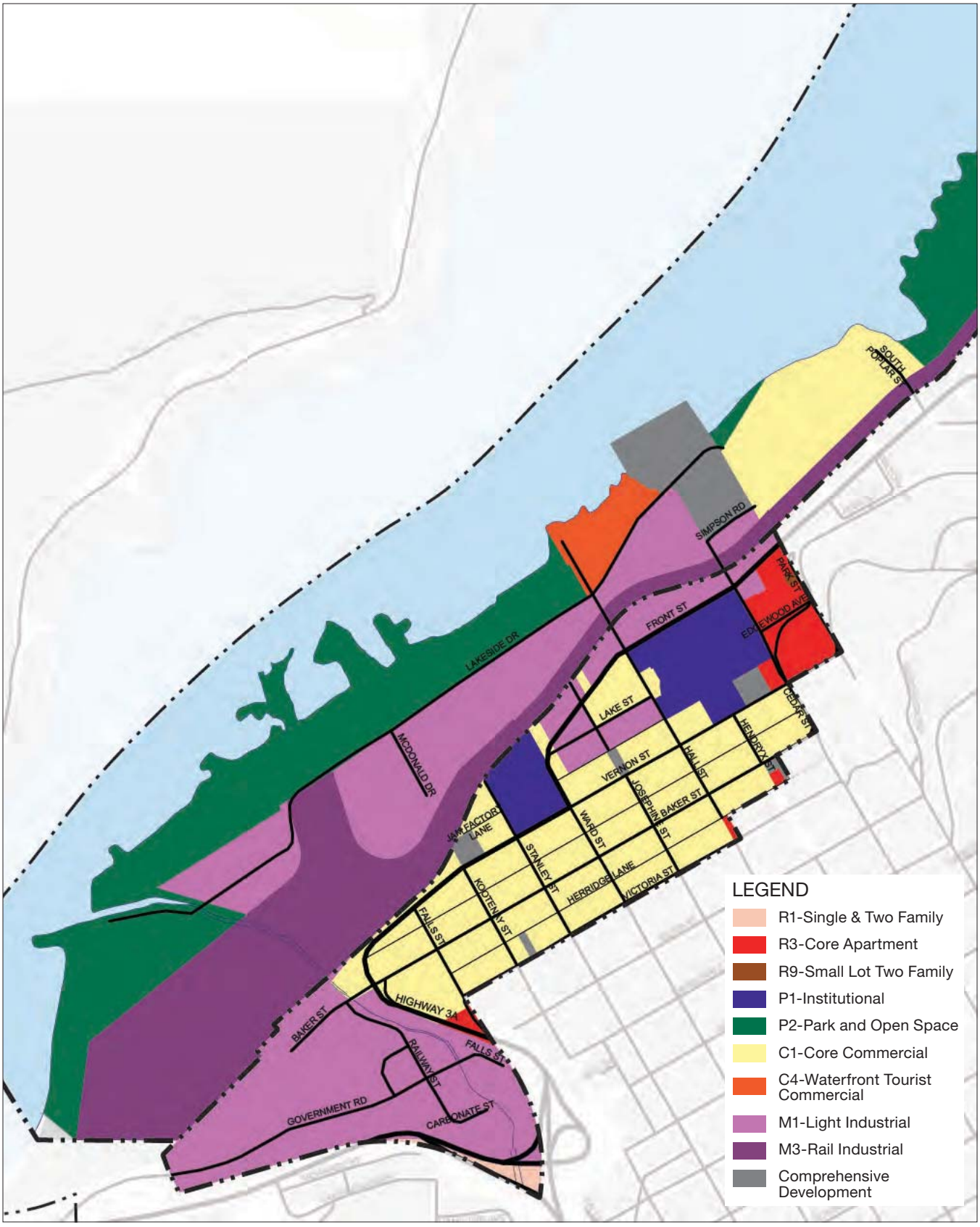


Figure 3.4 – Current Zoning (North)

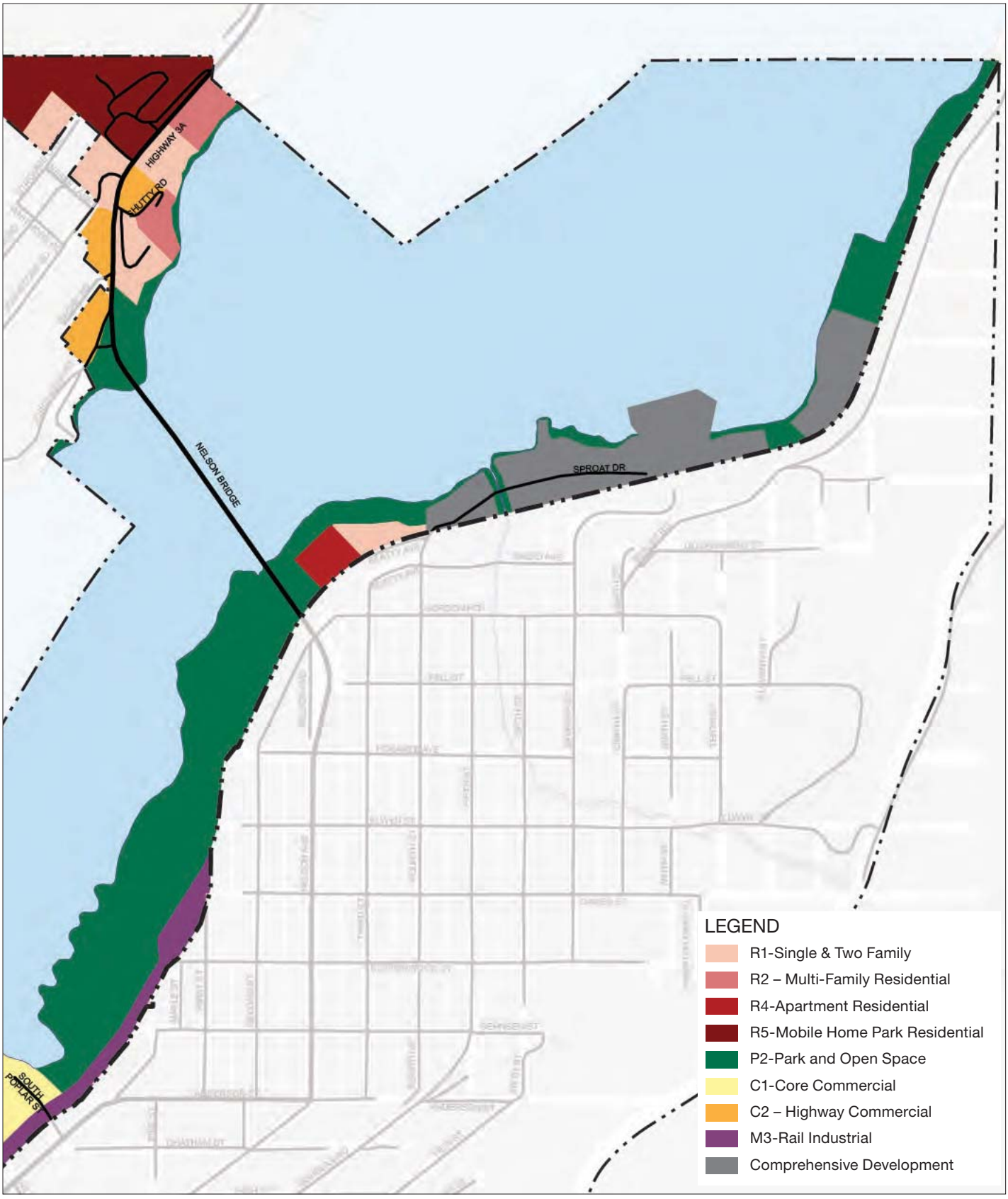


Figure 3.5 – Current Land Use (South)

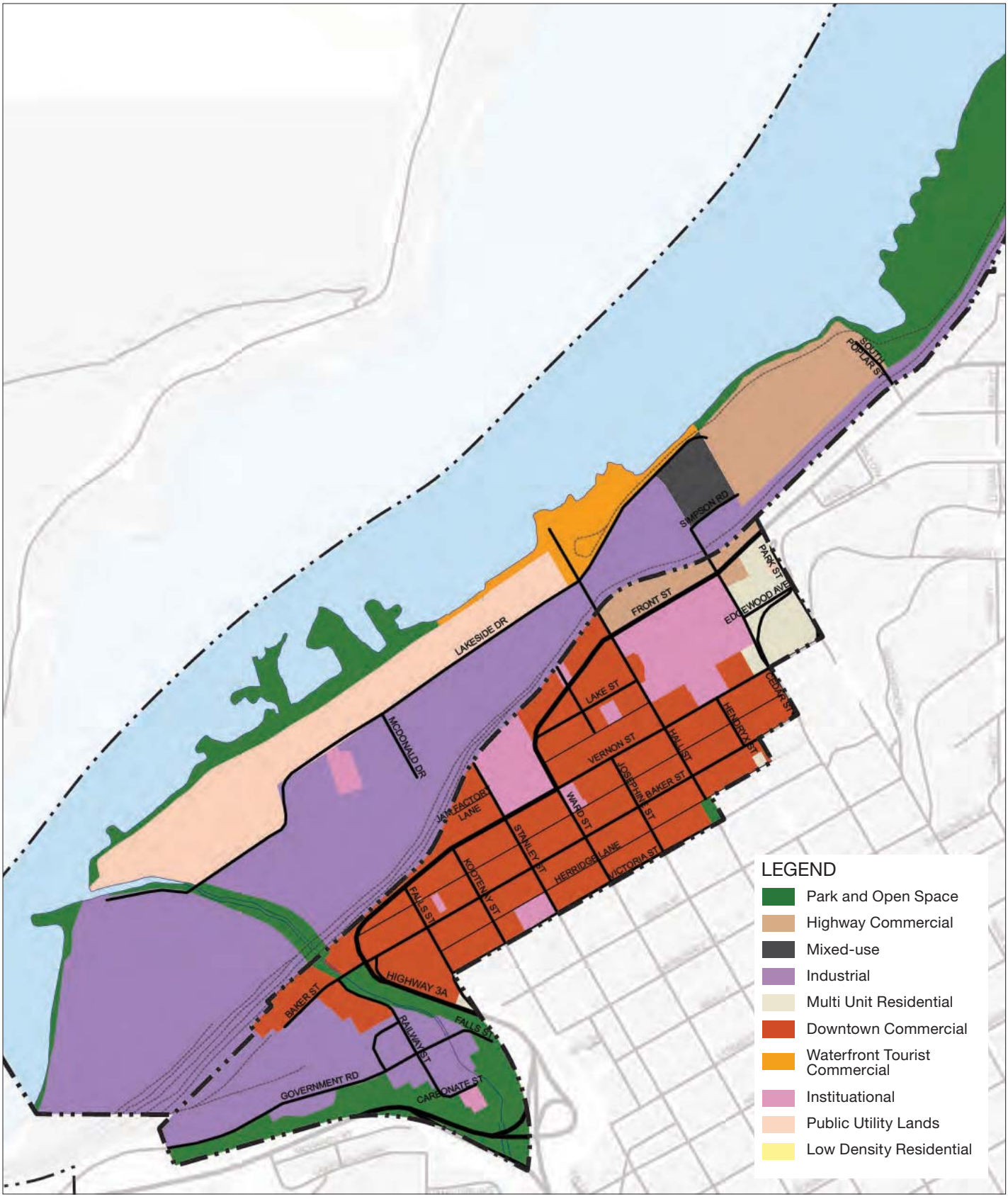


Figure 3.5 – Current Land Use (North)

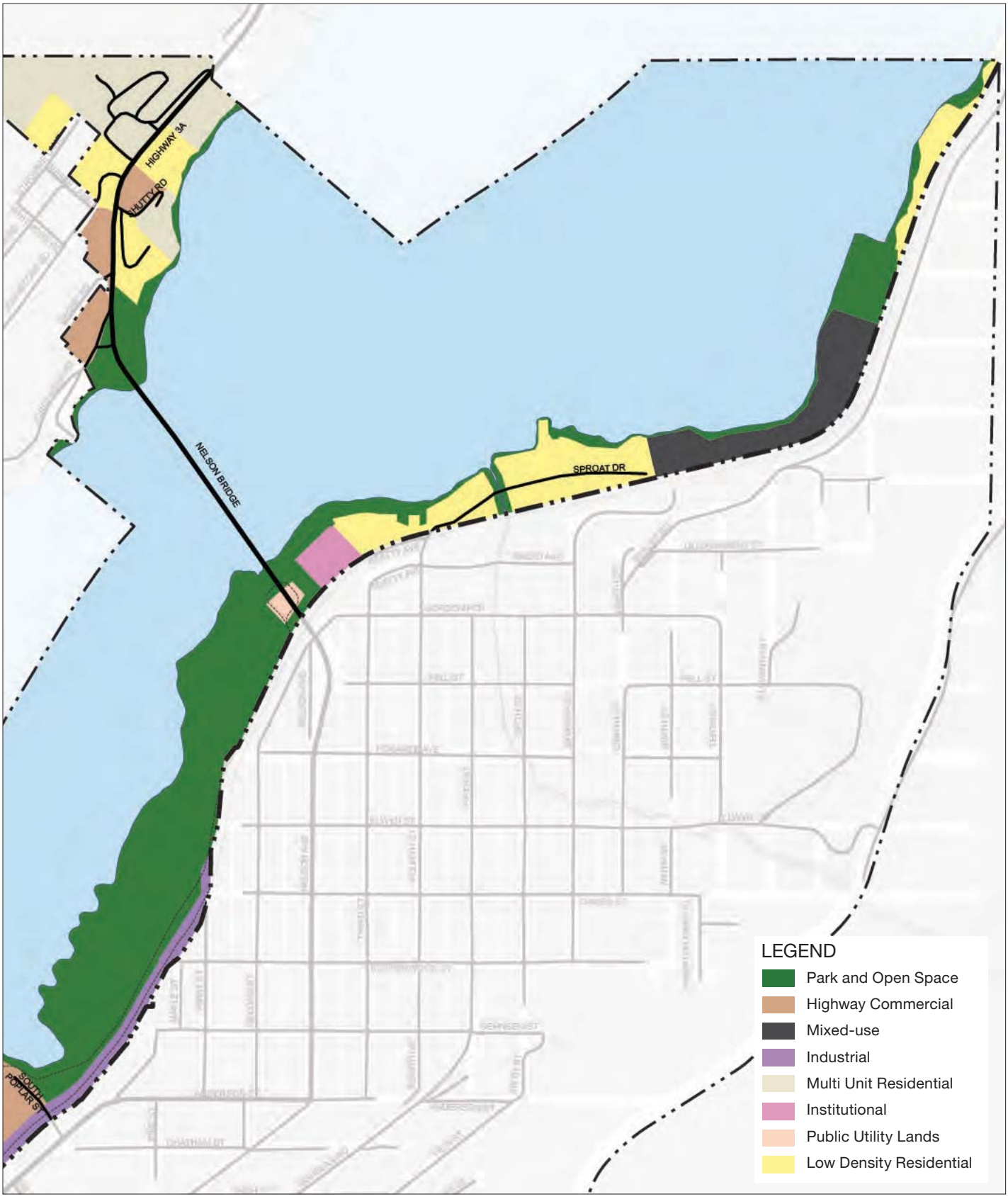


Figure 3.6 – Proposed Land Use (South)

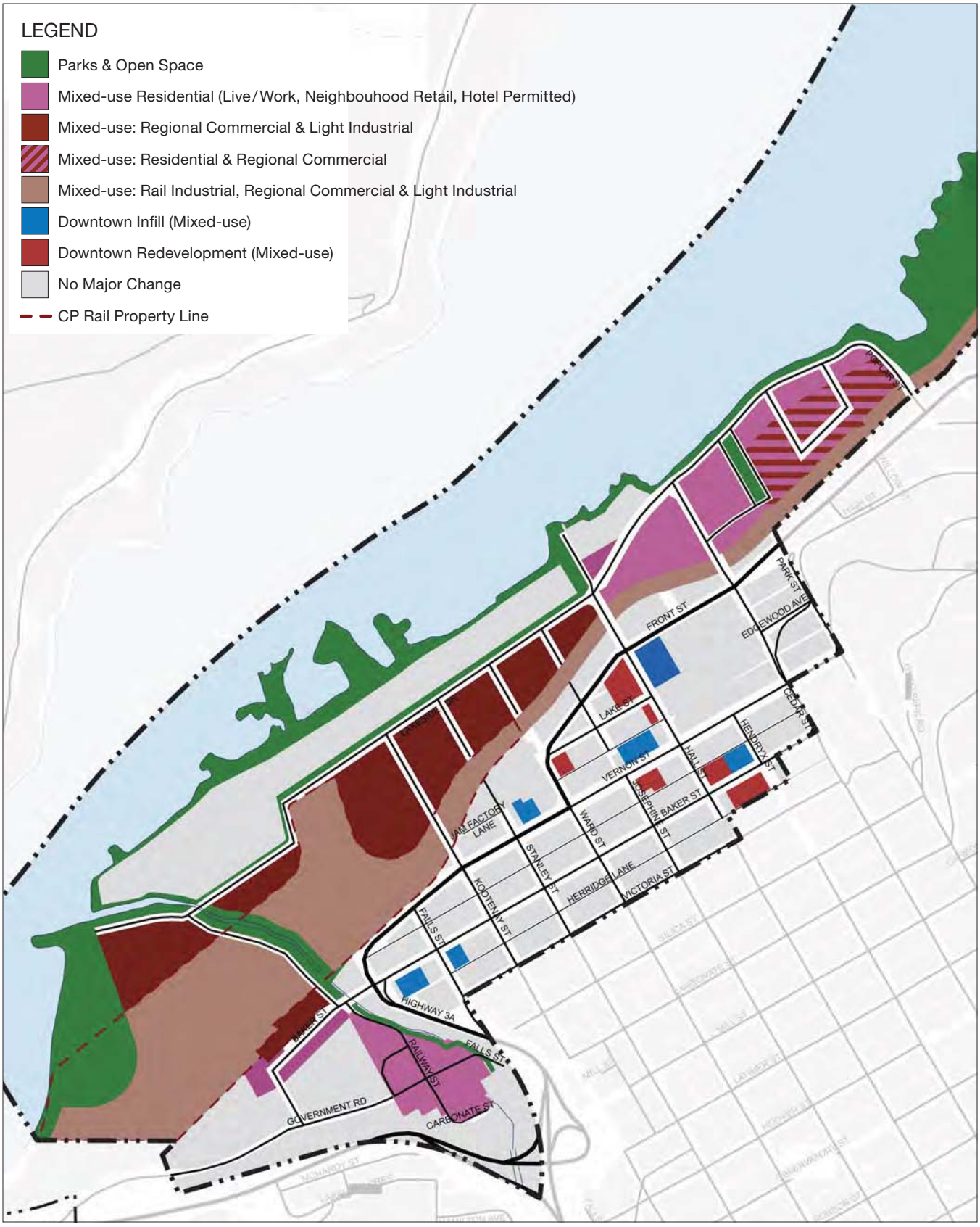
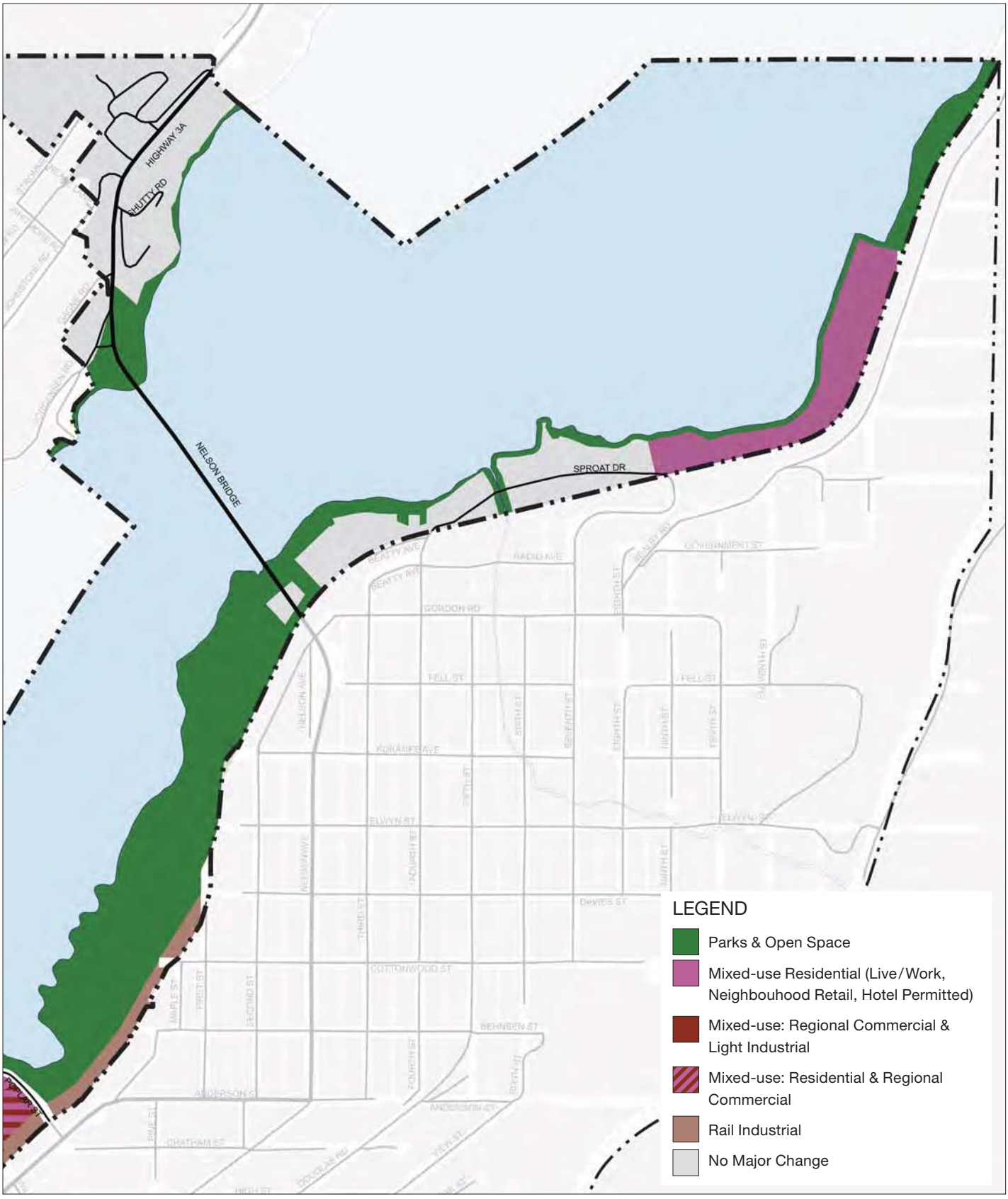


Figure 3.6 – Proposed Land Use (North)



3.4 Downtown Infill and Redevelopment

Nelson has one of the most historically significant and active downtown areas in the province. Baker Street defines the Downtown district, with continuous retail frontage, generous sidewalks and regular car-free events throughout the summer, creating an animated, pedestrian oriented zone. The most active portion of Baker Street is from Falls Street to Hall Street, where there is a concentration of eclectic street level retail shops and restaurants, sometimes punctuated by second storey office and residential space, and landmark historic buildings like the Nelson Daily News, the Mara-Barnard Block, and the Bank of Montreal.

Despite these successes, there are vacant or underutilized sites along Baker Street and throughout downtown that do not capture the same level of interest and activity. These sites are encouraged to be developed as [infill] mixed use, as described below.

Baker – Surface parking near Highway 3A

Baker – Vacant lot at Fall intersection

Baker – Parking lot at Hendryx Street

3.4.1 INFILL OPPORTUNITIES

Several sites in the Downtown are either vacant or underdeveloped as surface parking lots. In some cases, particularly on Baker Street, these sites leave major holes in the fabric of the street wall which are detrimental to street vitality. Infill sites in downtown should be a mixed-use style of development, with commercial space on the ground floor and additional commercial space, residential or office uses above. Proposed infill sites are shown on Figure 3.6 and described below:

BAKER STREET

- **Highway 3A to Falls** – This south side Baker Street block, currently surface parking, should have mixed use development in future.
- **Falls to Kootenay** – The southeast corner of Baker Street and Falls Street has a large contaminated fenced-off lot with adjacent surface parking to the east. The block should be developed as mixed use in the future in order to help link the downtown core and Railtown.
- **Hall to Hendryx** – The north side of this Baker Street block between Hall and Hendryx currently has a large surface parking lot associated with a grocery store to the north; the south side has a large parking lot associated with a car dealership. Future development on these lots should have mixed use development that is carefully designed to provide a transition from the commercial uses to the west of Hendryx and the residential uses to the east.

Vernon – Vacant lot between Stanley and Ward

Ward – Plaza in front of City Hall

Hall – Large vacant site at Front intersection

VERNON STREET

- **Stanley to Ward** – The north side of this Vernon Street block has a large gap in the street fabric that offers an excellent opportunity for an in-fill project that could have parking at the levels below the street served from Stanley Street with commercial at the Vernon street level and additional floors of commercial, residential or office above.
- **Ward to Josephine** – This south side of Vernon Street block has a gap in the street wall that should have mixed use development.
- **Josephine to Hall** – The northern side of this Vernon Street on this block has one large and disruptive gap that offers a good opportunity for an infill project that could have parking at the levels below the street that would be served from the laneway below and have commercial at the Vernon Street level and additional floors of commercial or residential above.

WARD STREET

- **Vernon to Front** – The plaza in front of City Hall does not generate significant level of public activity that are warranted by the importance of the space. Potential infill at the edges of this space, such as a café, would help frame and activate the plaza and enhance the significance of Ward Street.

HALL STREET

- **Vernon to Front** – Hall Street serves as a major connection between Downtown and the Waterfront; however, it has significant gaps in the street fabric due to both vacant and underutilized lands. Most concerning are the lots along the east side of the street, from the recreation centre to the intersection of Front Street. Mixed-use affordable housing should be considered for these sites.

3.4.2 REDEVELOPMENT OPPORTUNITIES

Several key locations have uses that are either not compatible with the overall character of downtown or are underutilized given their important location within the downtown core (see Figure 3.6). Redevelopment into more vertically intensive mixed-use building forms is proposed over time at the following sites:

Baker – Surface parking on south side between Hall and Hendryx

BAKER STREET

- **Hall to Hendryx** – The north and south sides of this block have inactive edges caused by the parking lots of the businesses. Mixed use development is encouraged on this block, mindful that it needs to provide a transition from the commercial uses to the west and the residential uses to the east.

Vernon – Parking structure between Stanley and Ward

Vernon – Large inactive wall between Hall and Hendryx

Hall – Long inactive (blank) wall between Lake and Front

Herridge Lane – Alleyway restaurant

VERNON STREET

- **Stanley to Ward** – The character of the southern side of the block is compromised by a large parking structure that has no active street edges. Redevelopment of this site is encouraged over time to be mixed-use with an active street frontage.
- **Hall to Hendryx** – On the southern side of this block there is a long inactive (blank) wall caused by the rear of the grocery store. Over time active uses are encouraged along this edge.

HALL STREET

- **Vernon to Front** – Hall Street serves as a major connection between Downtown and the Waterfront; however, it has significant gaps in the street fabric due to both vacant and underutilized lands. Low buildings lacking active uses on the sidewalk dominate the character of the west side of the street. The homes on the west side of Hall are encouraged to be redeveloped over time as mixed use. The block between Lake and Front that contains a shopping mall with blank walls facing the street edge is also encouraged to be redeveloped with mixed-use buildings comprised of street-facing retail with residential or office uses on upper floors.

3.4.3 ALLEYWAY COMMERCIAL INTENSIFICATION

Within the downtown, restaurants and other commercial uses front the alleys in various locations. These commercial uses function well; however, further intensification is not recommended until the primary commercial streets – Baker, Vernon and Victoria – are more fully occupied with commercial and other active uses. Should alleyway commercial intensification be pursued in the future, it should be targeted to the blocks between Ward and Hall in order to create a critical mass, such as a restaurant alley. Alleyway intensification can also provide affordable commercial space for business that could not otherwise afford space on the primary streets.

3.5 Mobility Network

The mobility network includes the streets, transit routes, bicycle and pedestrian system. Streets are a central element in connecting and creating safe and enjoyable neighbourhoods. Streets should prioritize walking, bicycling, and transit use; serve as public spaces for social interaction and community life; and be green spaces that enhance the City's ecological function. Transit routes provide connections between central parts of neighbourhoods. The pedestrian and bicycle networks enhance connectivity while increasing opportunities for leisure, recreation, and socializing.

In order to enhance the street system and overall mobility, improvements to existing streets and several new streets are proposed below.

3.5.1 STREET AND BLOCK PATTERN

The street and block pattern forms the structural framework to which all development relates. Nelson is unique for its relatively small block size (approximately 90 m x 90 m), which enhances mobility and connectivity, and creates a human scale pattern of building development. The corresponding street pattern is connected, which allows for the fluid movement of pedestrian and vehicular traffic. The creation of new streets within the Waterfront should conform where possible to the scale and orientation of existing streets downtown, building on the established pattern throughout the City, and preserving or improving sight lines by extending them from downtown through to the waterfront. New streets should be configured to enhance the pedestrian and bicycle systems (see Section 4.1).

3.5.2 VEHICULAR NETWORK

Improvements to Existing Streets

Improvements to existing streets are recommended in order to achieve a variety of results, as described below and shown in Figure 3.7.

HIGHWAY 3A:

- **Signals** – Two new signals are proposed at the intersections with Baker Street and Cedar Street in order to effectively manage anticipated traffic volumes and to provide safer pedestrian crossings of Highway 3A.
- **Limited Turn Movements** – For safety reasons, limited turn movements or lane closures are proposed at the curve in Highway 3A where it changes name from Front Street to Ward Street.
- **Parallel parking** – For safety reasons, existing parking should either be eliminated or a sidewalk added on the north side of the block between Highway 3A and Kootenay St.

Hwy 3A – Current 4-way stop at Baker

Hwy 3A – Lack of signal at Cedar

Hall Street current one-way configuration

HALL STREET

The block of Hall Street between Vernon and Baker should be reconfigured for two-way travel in order to make Hall a more functional primary connector between downtown and the waterfront and to activate the eastern portion of Baker. Existing diagonal parking on this block should be changed to parallel parking in order to accommodate the extra travel lane. To the north of Vernon Street, Hall Street should be reconfigured with an expanded pedestrian realm, reducing the scale of the drive aisles, and thereby enhancing the overall importance of the street as a main pedestrian connection to the waterfront. Figure 3.8 provides a recommended street cross section.

LAKESIDE DRIVE

Lakeside Drive should be reconfigured where it runs adjacent the airport. Narrowing the vehicular lanes and utilizing the portion of the airport lands up to the fence will allow for the addition of a multi-use trail, sidewalk, and additional parallel parking on both sides of the street. Figure 3.9 provides a recommended street cross section.

Lakeside/Hall intersection

LAKESIDE DRIVE / HALL STREET INTERSECTION

This intersection functions poorly due to the confusion caused by the stop signs and traffic priority. A traffic signal is proposed for this intersection, which will effectively deal with the anticipated additional volumes brought about by waterfront development. The signal sequencing can be timed to mitigate the potential for vehicle stacking at the CPR tracks. A round about is not considered, as its large footprint would push buildings far away from the intersection and require the acquisition of land. This in turn would detract from the importance of the intersection as an activity node.

New Streets

Five new streets are proposed to better connect downtown and the waterfront as described below and shown in Figure 3.7:

- **CPR Street** – Should a crossing of the CPR tracks in Railtown be secured, a street is proposed in order to create a loop street network along the western waterfront, which will greatly increase access to the westernmost waterfront lands. This street should be located adjacent and parallel to Cottonwood Creek (outside riparian protection zone) to enhance public access to this important open space corridor. If an at-grade crossing is not achievable due to the nature of rail operations, a bridge crossing should be considered. These strategies will require consultation with and approval from CPR.

- **Baker Street to Government Road** – a new public street connecting Baker Street with Government Road should be added in order to provide better north-south connectivity within Railtown district and provide access to the western portion of the district. The street cross section should be consistent of that currently along Baker Street within the Downtown core at least as far as the western end of the renovated CP Station.
- **Lakeside Drive to Poplar Street** – a shore side extension of Lakeside Drive to connect to Poplar Street should be added at such time as the mall site is redeveloped in order to create a public vehicular connection between the Waterfront Central district and Lakeside Park. Figure 3.10 provides a recommended street cross section based on the existing right of way in front of the proposed Kutenai Landing project.
- **Cedar** – Cedar should be extended to connect to Lakeside Drive to strengthen connectivity in Waterfront Central.
- **Sproat Drive** – Seventh Street – a connection should be provided across the CP tracks connecting Sproat Drive in the John's Walk development to Seventh Street in Fairview.
- **Red Sands Beach** – a short connection should be provided between Beatty Street and Red Sands Beach.
- **Local Street(s)** – possible new streets may be developed within the waterfront lands in order to create new development blocks. Such streets are recommended to be narrow, with ample sidewalks and plantings to promote traffic calming and safety. Figure 3.11 provides a recommended street cross section.

Figure 3.7 – Streets Improvements (South)

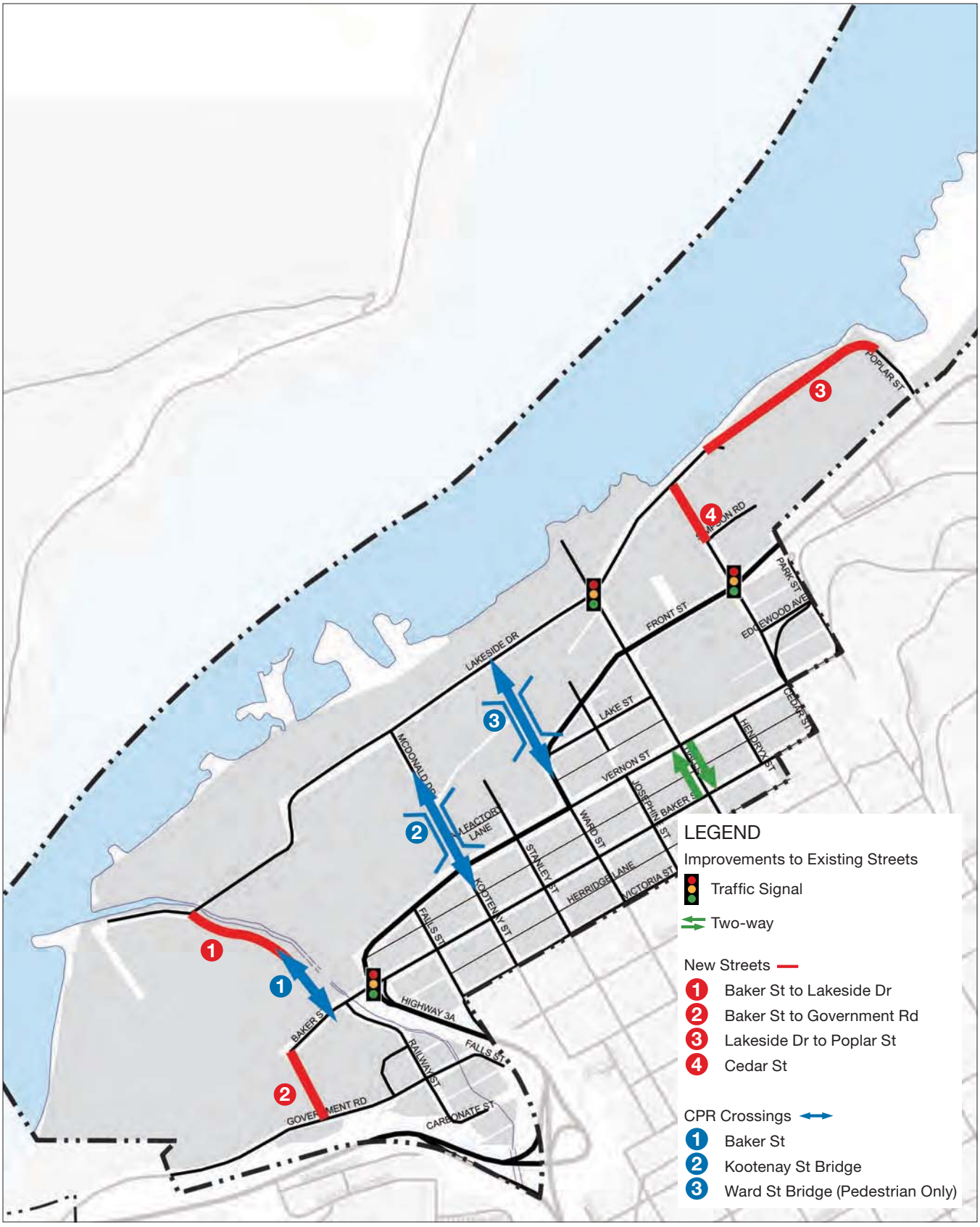


Figure 3.7 – Streets Improvements (North)

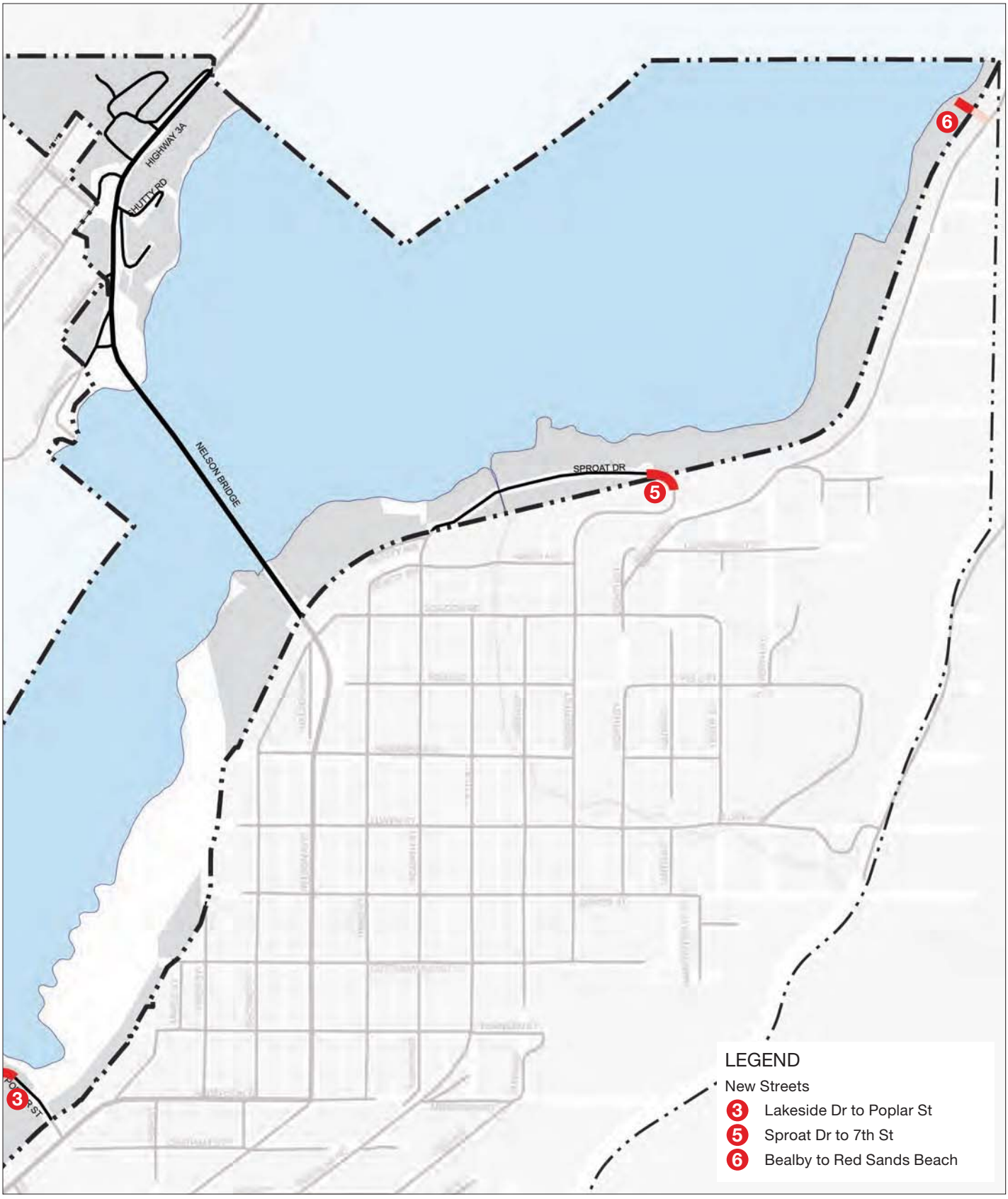


Figure 3.8 – Hall Street, Proposed Cross Section (see Section 4.1 for recommended dimensions)

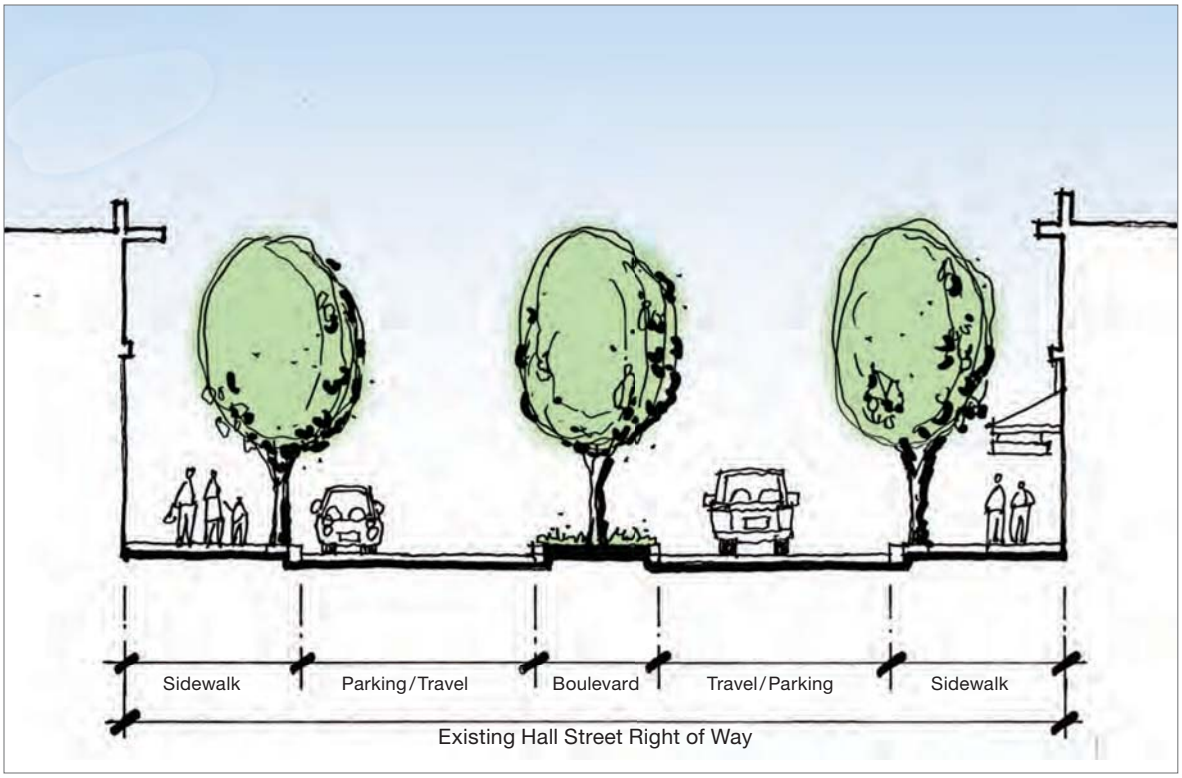


Figure 3.9 – Lakeside Drive at the Airport, Proposed Cross Section (see Section 4.1 for recommended dimensions)

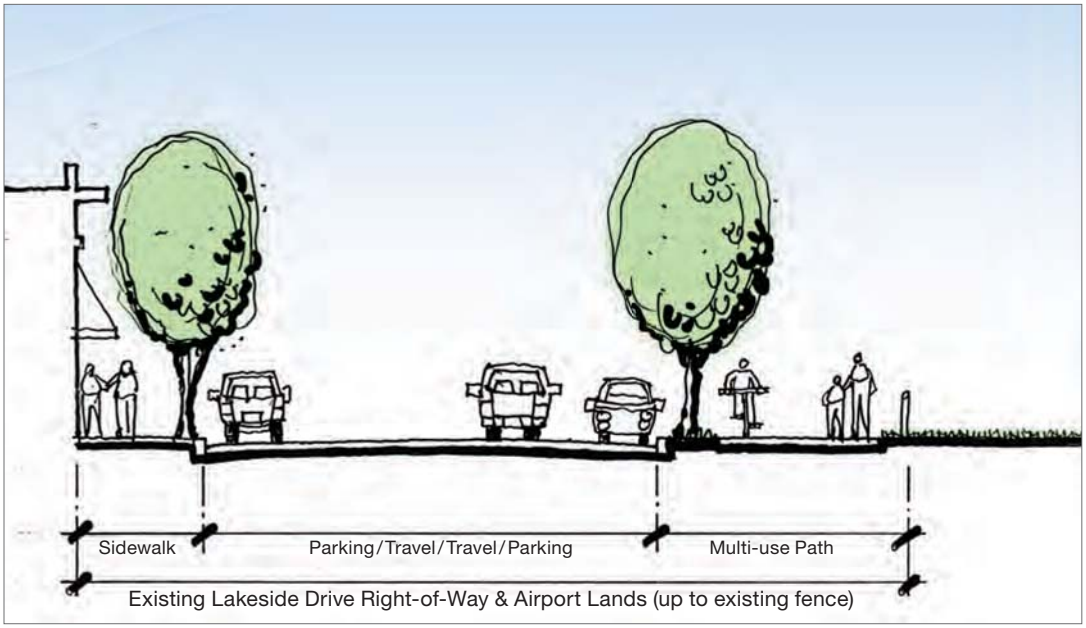


Figure 3.10 – Lakeside Drive at Chahko Mika Mall, Proposed Cross Section (see Section 4.1 for recommended dimensions)

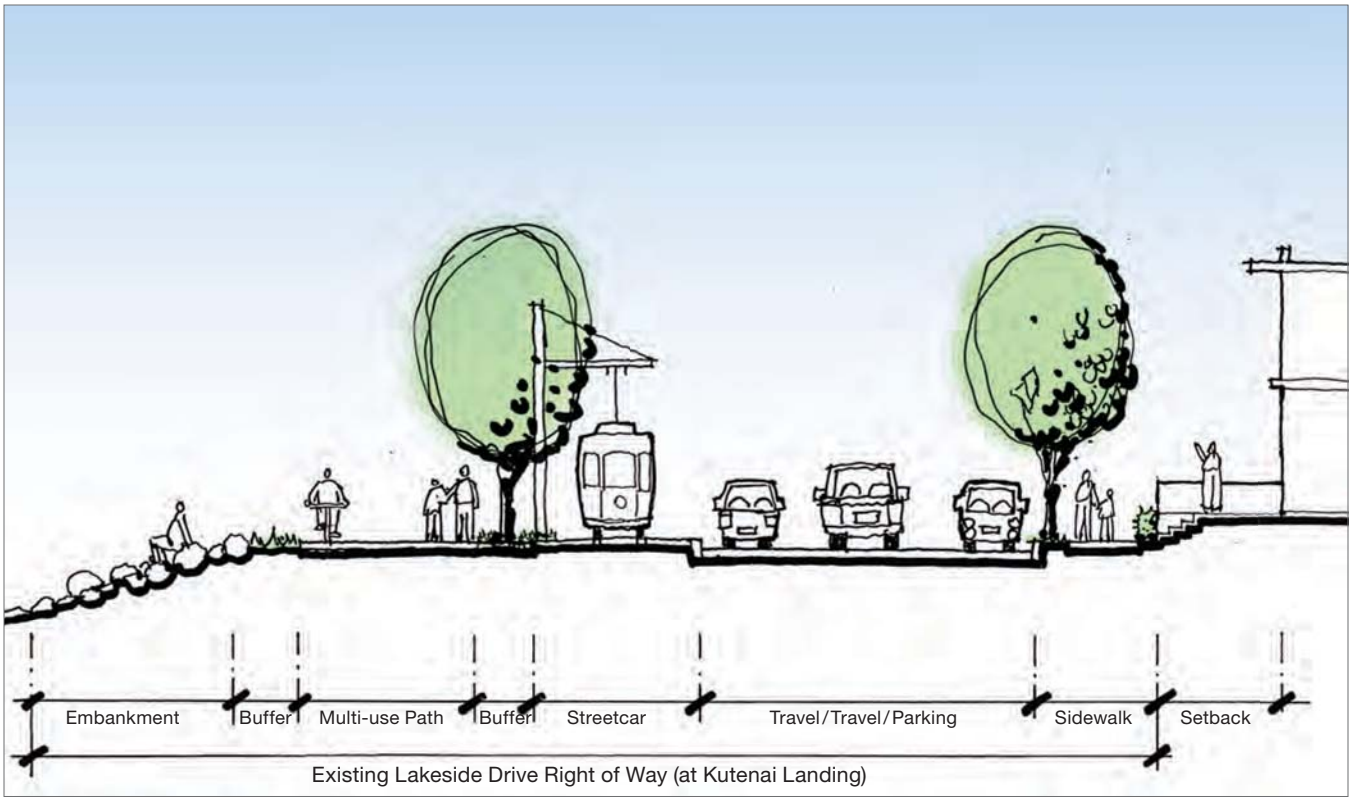
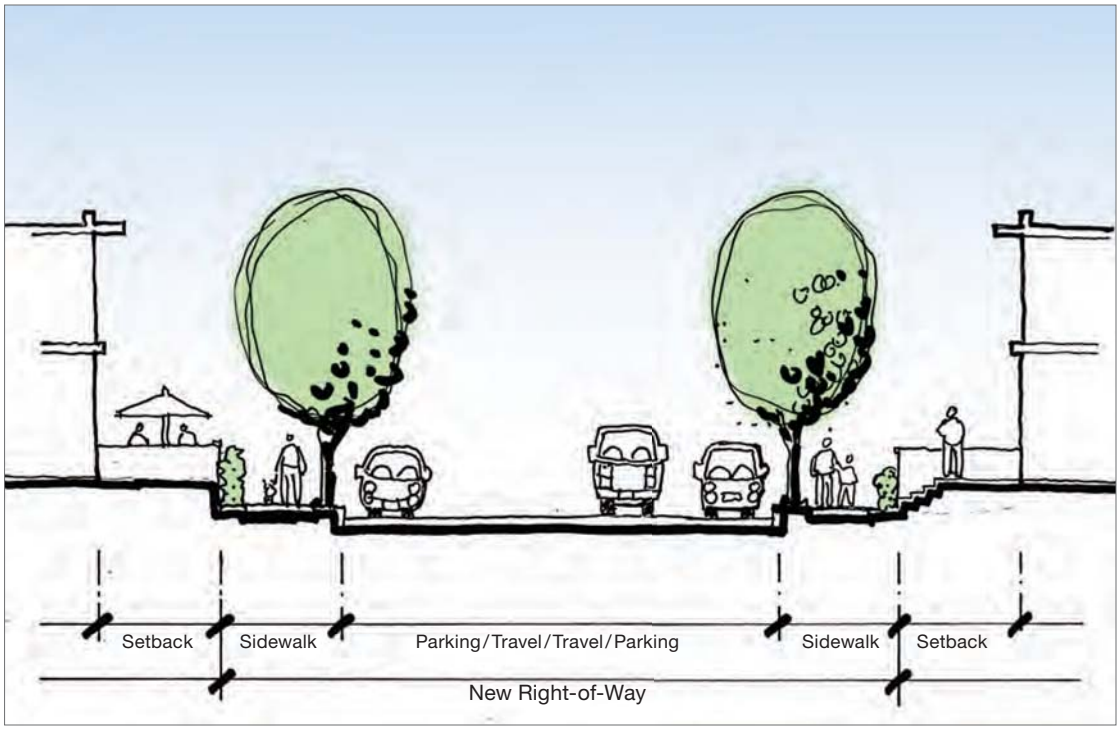


Figure 3.11 – New Local Street, Proposed Cross Section (see Section 4.1 for recommended dimensions)



CPR Crossings

In order to augment the existing linkages between the Downtown and Waterfront lands, additional crossing(s) over the CPR tracks should be pursued. Several new crossings, either at-grade or by bridge, are proposed; all will require CP Rail approval. The crossings are prioritized in importance as follows:

1. **Baker Street** – An at-grade CPR crossing is proposed near the western end of Baker Street in order to provide a critical linkage between the western end of Lakeside Drive and Railtown District, thus providing a looped street network in the Waterfront and enhancing access for emergency vehicles, commercial vehicles and others. This street should be located adjacent and parallel to Cottonwood Creek to enhance public access to this open space corridor. If an at-grade crossing is not achievable due to the nature of rail operations, a bridge crossing should be considered.
2. **Kootenay Street Bridge** – an extension of Kootenay Street, across the CPR tracks to the waterfront, is the preferred bridge option due to the central location along the waterfront lands, favourable grades for clearance, and relatively narrow distance required to cross CPR property. The Kootenay Street intersection at Vernon offers adequate stacking and sight distances, and would function efficiently as a signalized stop.
3. **Ward Street Bridge** – a second central waterfront bridge connection should be considered at Ward Street; however, it is less favourable to a Kootenay Street crossing because of its proximity to the existing Hall Street crossing. This central location would be ideal for a pedestrian bridge since it would link the heart of downtown with the heart of the Waterfront. Should it be designed for vehicular movement, the Ward/Front intersection should be configured as right-in/right-out plus a possible left turn pocket on Ward Street northbound.

Parking

It is recommended that the city implement the recommendations from the 1995 *Integrated Transportation Strategy* to address parking issues within the downtown.

In addition, the strategies set forth in this Master Plan – providing mixed-use developments in proximity to downtown in conjunction with better linkages – should result in reduced vehicular trips and parking demand. As such, the City should review parking requirements for multi-family development within the Waterfront. Any new developments must provide sufficient parking per City requirements so that they will not burden existing parking supplies. Notwithstanding these improvements,

additional parking may be required. If required, the following strategies are recommended:

DOWNTOWN

- Several streets currently have very wide travel lanes that could be reconfigured by using the extra width to convert parallel parking to angled parking (see Section 4.1).
- Explore a Public-Private partnership as a means of developing a new parking structure.

WATERFRONT

- All new streets should provide parallel parking to ensure overflow demand can be met.
- Consider adopting maximum parking requirements as opposed to minimums, especially within Waterfront Central where alternative modes of transportation and access to services and shops are readily accessible.

3.5.3 TRANSIT NETWORK

The transit system, including bus and streetcar, should be coordinated and expanded to provide service to the Waterfront West and Railtown districts (see Figure 3.12). Expanded bus service into Railtown at the CP Station building is most appropriate in the short-term; however, should a new crossing be secured across the rail tracks (at-grade or bridge), a transit loop from the station through to the waterfront should be created. Stops should be located at key intersections, spaced at an average of 300 metres.

Streetcar service, subject to a cost analysis, could offer a viable long-term alternative to bus service, especially if an alignment can be secured that connects downtown and the waterfront. An extension of the existing streetcar alignment further west along the Waterfront should be considered. Should the Kootenay Street Bridge be developed, the streetcar service could utilize the bridge to continue into downtown, turning east on Vernon Street and running in the centre boulevard. Extensions to the existing service would precipitate moving the current turnaround in front of the Prestige Hotel which would benefit the Hall / Lakeside intersection as the vacated turnaround space could be utilized for commercial space in conjunction with a streetcar stop, thus activating this important gateway intersection (see Section 3.2).

Figure 3.12 – Transit Improvements (South)

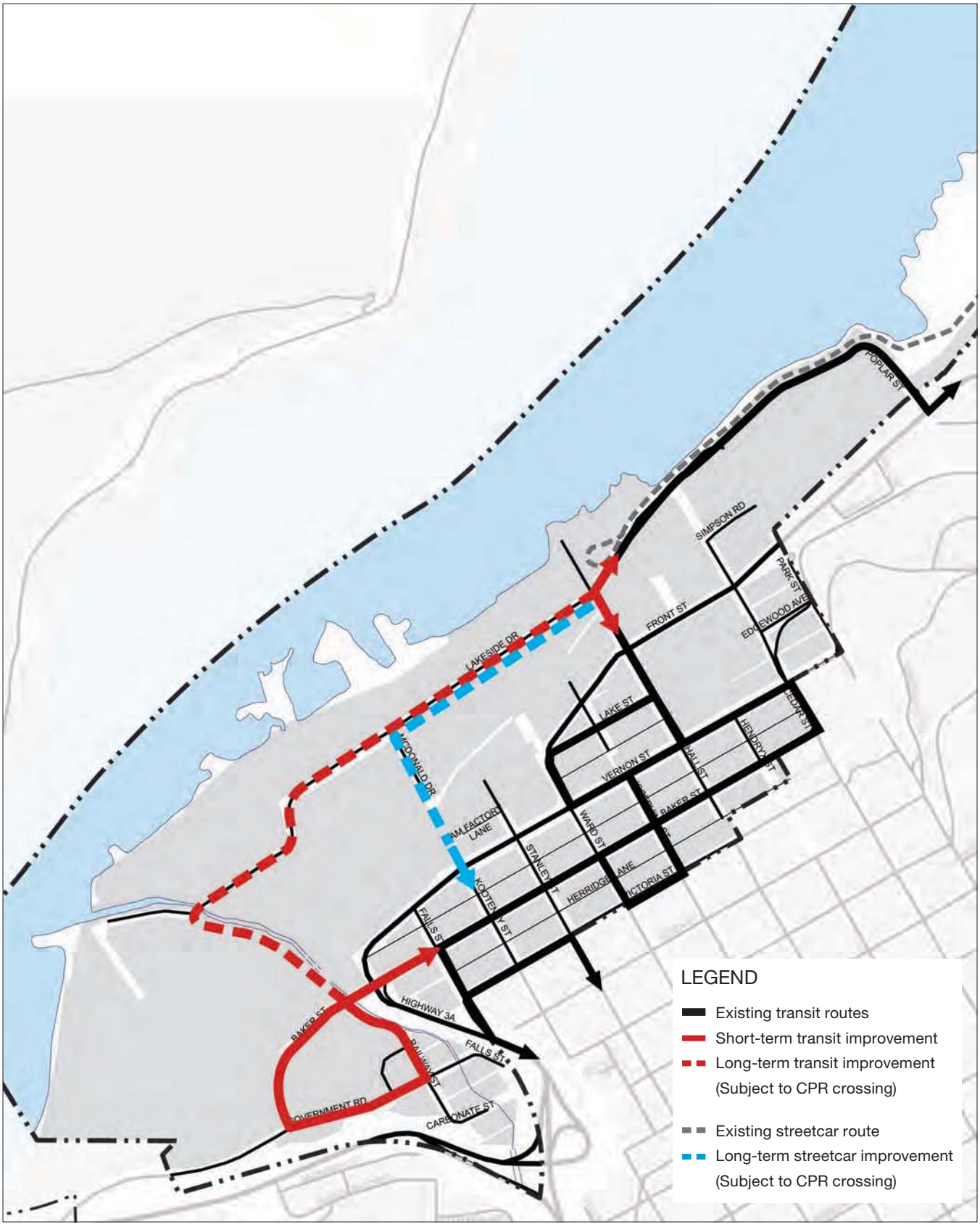


Figure 3.12 – Transit Improvements (North)

Precedent for multi-use path along Lakeside Drive

Precedent for on-street marking along cycle route

3.5.4 BICYCLE/PEDESTRIAN NETWORK

The bicycle and pedestrian network is made up of multi-use trails/paths that serve both bikes and pedestrians, as well as single-use paths. Figure 3.13 shows the proposed bicycle improvements; Figure 3.14 shows the proposed pedestrian improvements.

Multi-Use

Several multi-use trails are proposed to better complete the existing trail system and expand on the bicycle and pedestrian networks. They include:

SHORELINE TRAIL (SOUTH SIDE KOOTENAY LAKE)

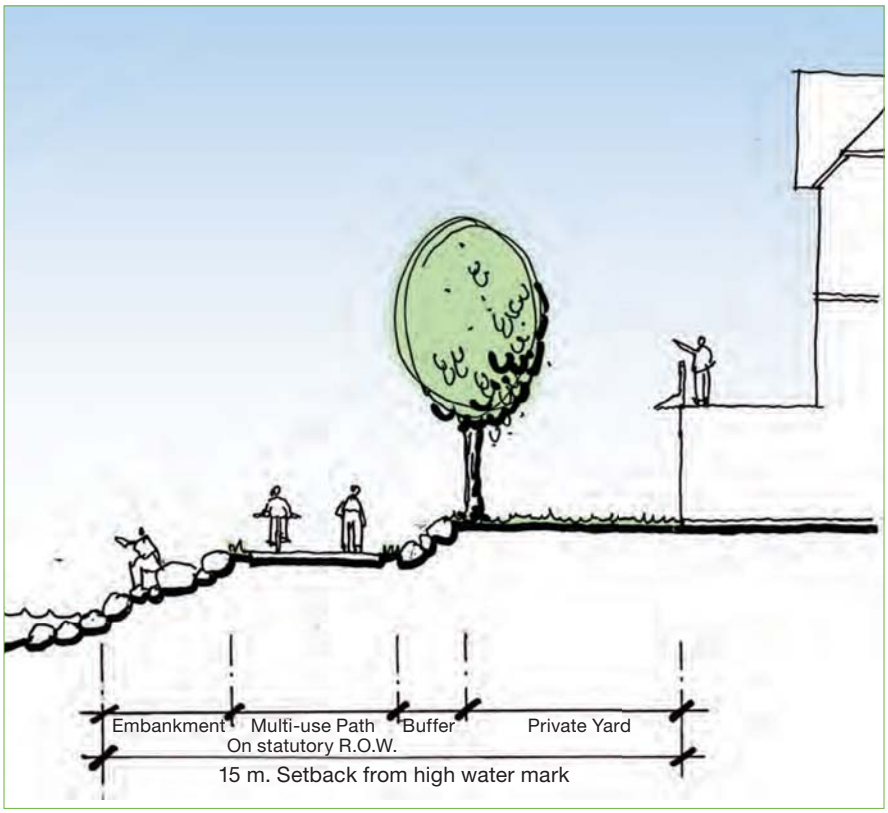
The ultimate goal is to have a wide and accessible trail at the shoreline from Red Sands Beach to the western City boundary beyond the mouth of Cottonwood Creek. Currently there are several gaps in the shoreline trail, as well as a zone that requires improvement. To address these deficiencies several shoreline trail improvements are proposed:

- **Nelson Bridge to John's Walk** – Along the shoreline path, the existing gap in the trail between the Nelson Bridge and John's Walk should be connected. Three options to create this linkage, two short term and one long term, are described and shown below.
    1. **CP Tracks** – In the short term create a trail easement within the CPR right of way. Signage and stronger visual cues are required to enhance wayfinding between the existing trail ends.
    2. **Gordon/Beatty ROW** – In the short term create a trail extension along Gordon Road and Beatty Avenue in the form of a multi-use trail for bikes and pedestrians. This would entail widening the sidewalk on Gordon and creating a formal trail along Beatty. Signage and visual cues would be required to guide users to the trail.
    3. **Shoreline Trail** – In the long-term, create a shoreline trail; the City would need to acquire an easement right-of-way. This would be considered at such time as, and only if, owners applied for rezoning whereby the easement right-of-way would be a City condition of the rezoning.

Three trail connection options from Nelson Bridge to John's Walk

Current shoreline trail at Chahko Mika Mall

- **Old KFP Lands (proposed location for Nelson Landing)** – located at the eastern most end of Nelson's south shore, any proposed development should include a publically accessible trail along the entirety of the development. The trail should adhere to the design guidelines as set out in Section 4.1.2. The cross section below shows the recommended configuration of the statutory R.O.W. across private lands.



Shoreline Trail at Former KFP Site Proposed Cross Section

- **Chahko Mika Mall** – should the current Chahko Mika Mall site be redeveloped, an expanded shoreline trail is proposed as a hard surface extension of the trail through Lakeside Park. This expanded trail should contain adequate landscaping to provide a buffer from vehicular traffic (see Section 4.1.2).

SHORELINE TRAIL (NORTHSHORE)

A new trail is proposed to extend along the entirety of the north side of Kootenay Lake, linked with the proposed Northshore Park (see Section 3.5).

LAKESIDE DRIVE

A multi use path is proposed along the north side of the Lakeside Drive right-of-way serving as a primary east-west bicycle and pedestrian route in the Waterfront lands. This trail would require the reconfiguration of the existing right-of-way, including the gravel parking south of the airport, and would provide a hard surface alternative to the shoreline trail.

COTTONWOOD CREEK

With the rehabilitation of Cottonwood Creek, a multi-use trail parallel to the creek bank is proposed to serve as a primary path between Downtown and the western waterfront.

Single-Use – Bicycle

A well designed bicycle network offers one of the best means of enhancing Downtown and Waterfront mobility, increasing health and reducing green house gas emissions. In-street bicycle improvements should be a priority in the design of new streets within the waterfront. Bicycle network improvements should follow the recommendations of the 2010 City of Nelson Active Transportation Plan (ATP). Additional recommended routes not discussed in the ATP include:

- **Baker Street** – signage and shared route painting should extend the length of Baker Street in order to provide a continuous bike route on the Cycle Circle Tour.
- **Nelson Bridge** – Study the feasibility of adding bike lanes to the bridge. Options include: one of the two sidewalks on Nelson Bridge converted to a bike-only lane with associated crosswalks; or, adding a sidewalk on the outside of the bridge structure in order to allow one or both of the existing sidewalks to be used for bike travel.

Ward – Sidewalk on Nelson Bridge

Ward – Narrow sidewalk condition

Hall Street sidewalk to be improved

Single-Use – Pedestrian

A well designed, interconnected pedestrian network comprised of street-oriented sidewalks and stand-alone trails serves to increase walking trips within the Downtown and Waterfront, thereby decreasing auto trips and resultant pollution. Sidewalks and trails also offer a public space for informal social interaction, helping build social capital. Several improvements are recommended to the existing pedestrian system (for a description of recommended trail design, see Section 4.1.2). Figure 3.14 illustrates the proposed pedestrian improvements.

SIDEWALK

Primary neighbourhood streets, as identified in Section 3.1, should have ample sidewalks and landscaping in order to reinforce their importance within the pedestrian network.

- **Hall, Front & Ward** – Hall Street, Ward Street and the north sidewalk on Front Street between Lake and Hall currently have relatively narrow sidewalks and lack a landscape buffer from vehicles. Sidewalk widening, including a landscaping strip for street trees, is proposed to improve the pedestrian environment and enhance their character. Additionally, it is proposed to cover the steps along Hall

Lack of sidewalk along Poplar Street

Lack of safe crossings along Front Street

Street to increase their usability and safety during winter months and decrease long-term snow clearing costs.

- **Poplar Street** – As noted in the 2010 *Active Transportation Plan*, sidewalks should be added to Poplar Street from Front Street to the waterfront trail.
- **Front Street Crosswalk** – There is a lack of safe and accessible crossings along Front Street, which inhibits mobility between the north and south sides. An additional crossing is proposed at the intersection with Cedar Street.

TRAILS

One additional single-use trail is proposed within the project area:

- **Nelson Bridge** – create a trail connection from the north end of the Nelson Bridge to the Northshore waterfront, linking the Northshore open space network to Lakeside Park. Steep grades may render this trail as pedestrian only single-use.

Figure 3.13 – Bicycle Network (South)

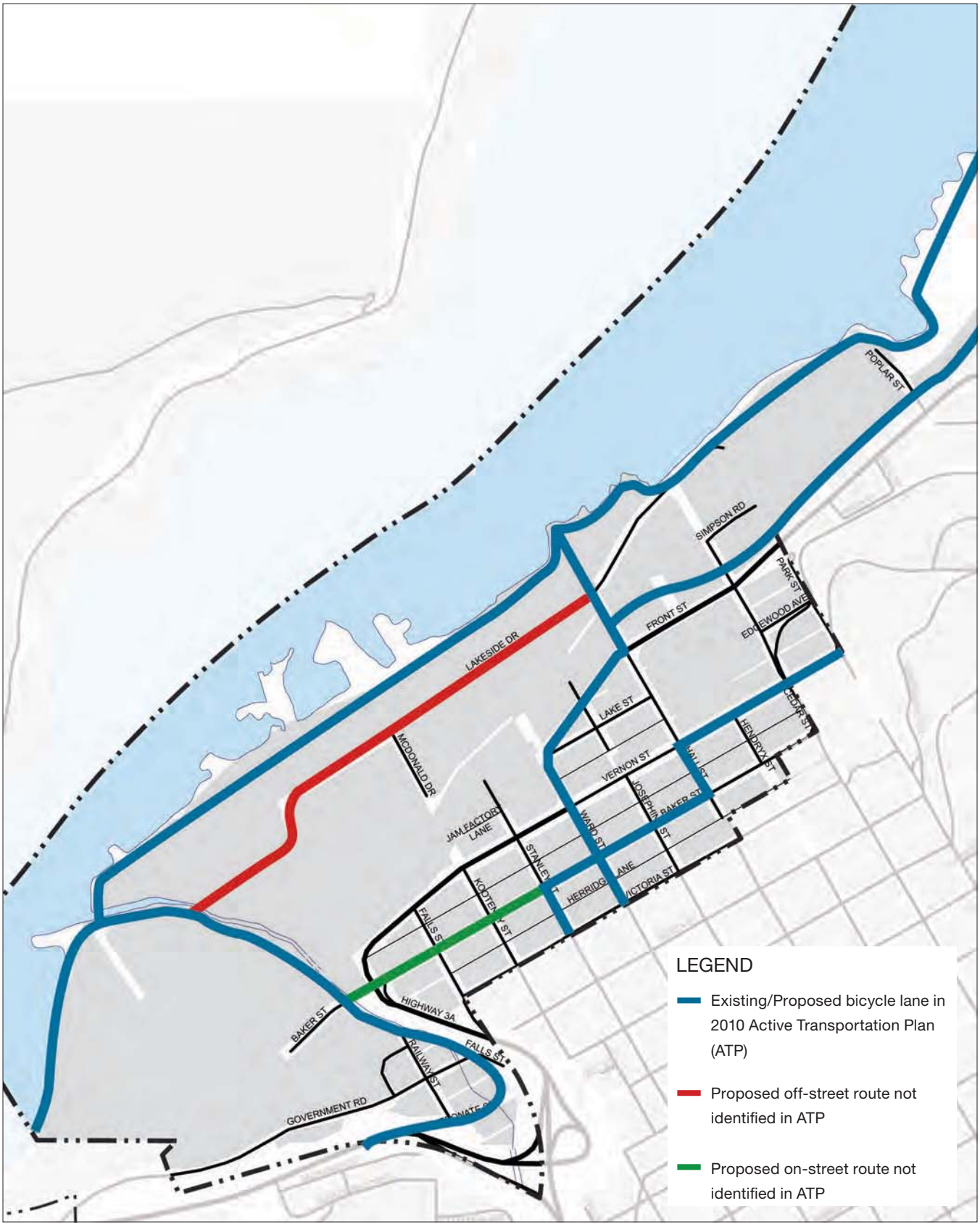


Figure 3.13 – Bicycle Network (North)

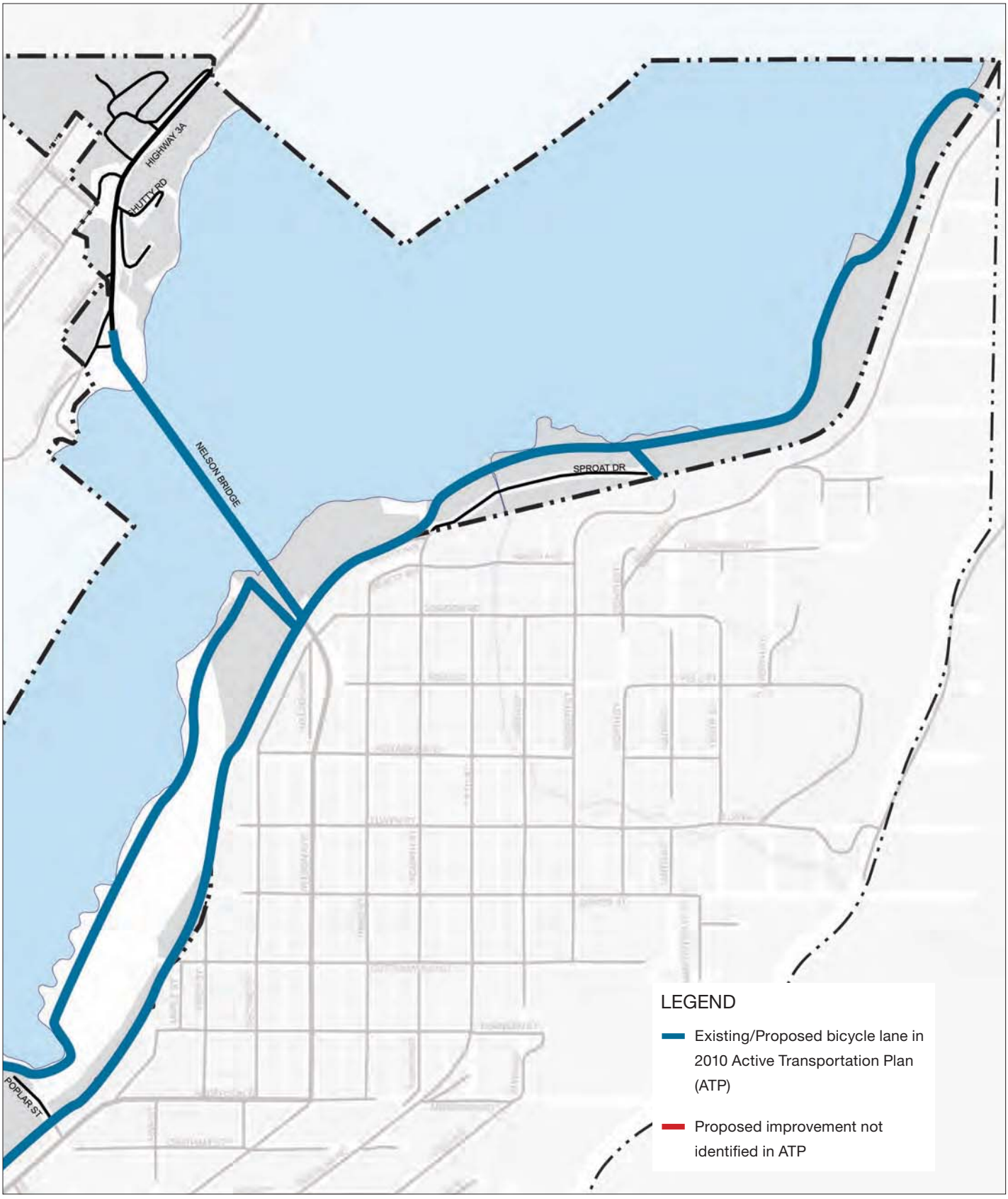


Figure 3.14 – Pedestrian Mobility (South)

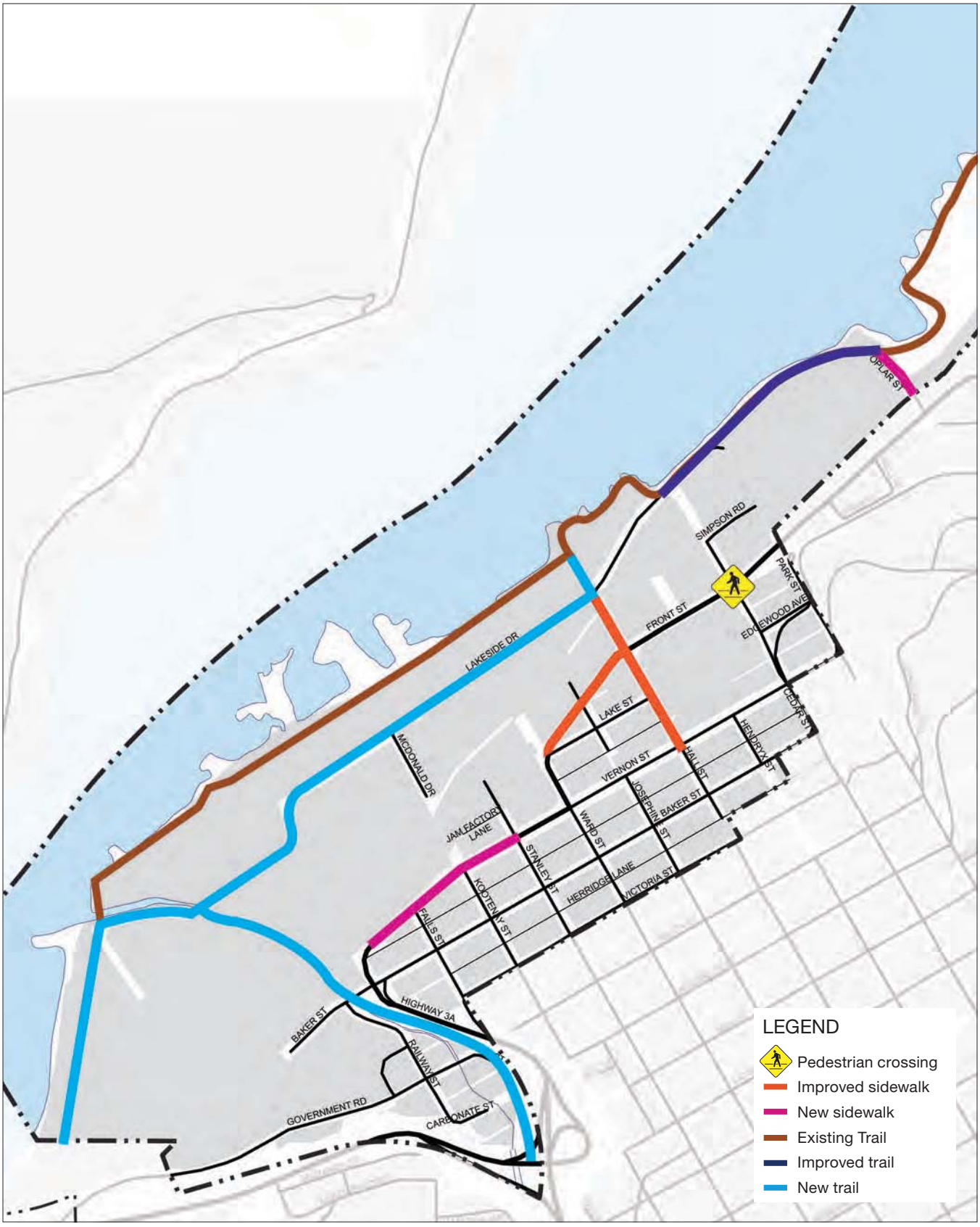
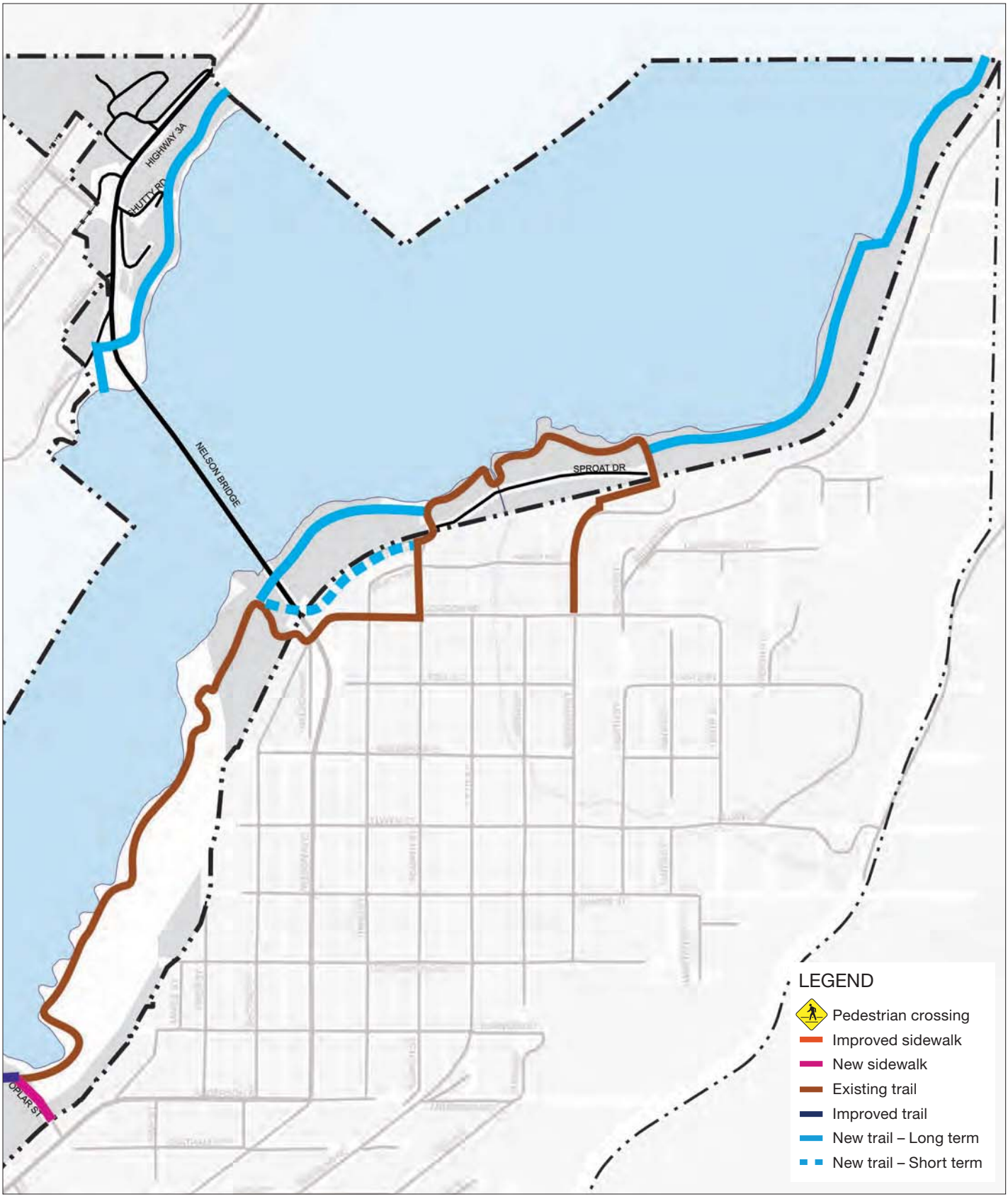


Figure 3.14 – Pedestrian Mobility (North)



Cottonwood Creek mouth: proposed location for City park

Precedent for community park

3.6 Parks & Open Space Network

The parks and open space consists of the active and passive recreation park system, as well as the urban plazas and other civic spaces within the Downtown and Waterfront. The proposed parks and open space program expands on the current system, expressing the desires of current residents, the needs of future residents and building upon the unique opportunities presented by such diverse characteristics as the water's edge and the Downtown street corners. Five new parks are proposed, each with distinct program elements and purposes. Additionally, four plazas are proposed in urbanized areas in order to create strong and meaningful civic spaces at strategic locations.

3.6.1 PROPOSED PARKS

RED SANDS BEACH

Located at the eastern most point of Nelson's south shore, Red Sands Beach is surrounded by mature tree groves, creating a park experience that would be unique in Nelson's park network due to its naturalistic character. Currently private land, any proposed development of the former KFP mill site should include the conversion of the beach and tree grove to a public park in order to serve the region as well as the new residents of the KPF mill site. In order to preserve its natural character this park should have minimal development, restricted to restrooms, a small picnic area, and a small amount of parking.

COTTONWOOD CREEK MOUTH

The mouth of Cottonwood Creek where the shoreline trail and proposed Cottonwood Creek trail converge is a strategic location that is proposed to become a passive park space. Potential program elements include seating, picnic areas, community gardens, playground and possibly a general purpose pier with public dock.

CENTRAL WATERFRONT RESIDENTIAL COMMUNITY PARK

The proposed central waterfront development should include a small centrally located park that is directly connected to the waterfront trail system. The park should have amenities such as a playground, seating and community gardens.

NORTHSHORE

The small portion of the waterfront located adjacent to the former ferry dock is proposed as a new park that will be a gathering space for Northshore residents. The park's modest size and waterfront location make it most suitable as a picnicking area and boat launch. Additional program elements may include a playground and pier.

Possible program element – lakeside playground

Possible program element – community gardens

Possible program element – dog run

FOOT OF HALL STREET

Portions of the northmost Hall Street right-of-way should be converted from parking areas to park in order to provide a gateway park to the waterfront and a more visible, welcoming connection to the waterfront trail system. A conceptual site plan is shown below indicating a general approach.

Precedent for pier and small boat launch to activate water's edge

WATER USES

The shoreline is one of Nelson's most valuable assets for both human activity and natural ecosystems. Between Cottonwood Creek and Lakeside Park additional active water uses are encouraged. Built structures, such as marinas, boathouse communities, and piers are encouraged, provided they conform to environmental regulations.

3.6.2 PROPOSED PLAZAS

Urban plazas serve as important gathering spaces and activity nodes within the overall city fabric. In the Downtown, four public plazas are proposed to be enhanced or constructed at the following locations:

CITY HALL PLAZA

The plaza in front of City Hall is an ideal location and size to become the City's primary 'outdoor living room'. In order to make the space more active and interesting, additional activities should be incorporated in combination with associated seating areas. Activities could include a large, continuous area for several hundred people to gather for civic celebrations, one or several small retail or food businesses at its northern edge, interactive public art, interactive fountains, gardens, playground, bocce ball or small stage area. The rendering below shows one concept for what this might look like.

Rendering of proposed plaza in front of City Hall

Baker Street Seating Alcoves

BAKER STREET SEATING ALCOVES

It is recommended that the sidewalk side of the stone walls of the Baker Street seating areas be removed in order to create a more visible and inviting space from the sidewalk. This strategy will better integrate the seating area with the sidewalk.

HALL AT BAKER

A new civic plaza is proposed at the southern terminus of Hall Street, just south of Baker Street, in order to create a gathering place in the eastern portion of Baker and provide a visual termination of the view from the Waterfront to the Downtown. Since this section of Hall Street has minimal traffic it is an ideal location to add an urban plaza. The plaza can stretch across the full street right of way provided two way access connecting Baker to the lane is incorporated. Buildings facing the plaza, particularly on the south-facing side, are encouraged to add uses that animate the plaza, such as food and beverage services. The computer representation below shows what the plaza could look like. In it there is a large plaza on the north side, with seating, shade trees and outdoor patio room; two-way travel and a parking lane in a narrowed roadway separated by a roll curb is provided on the south side of the right of way. This location is also suited to having public restrooms, since none currently exist in this part of the downtown.

Rendering of proposed plaza on Hall Street at Baker

CPR STATION (CHAMBER OF COMMERCE BUILDING)

The renovation of the historic CP Rail Station serves as a neighbourhood activity node for Railtown and it is a strong visual focus looking westward down Baker Street. As such, the prominent area in front of the station should serve as a public gathering space. A focus of the plaza should be a monument and/or public art located on the Baker Street sightline, which commemorates the rail heritage of the site. Additional commercial uses along the north side of the plaza are encouraged in order to animate the space.

Mural along Herridge Lane

Precedent – Artful manhole cover.

3.6.3 PUBLIC ART

Public art is a vital cultural resource within the City and is encouraged to be expanded where possible. It is an important component for enhancing the public realm of parks, open spaces and streets. The Art in Public Places policy, administered by the Cultural Development Commission (CDC), has been established to promote public art within the City of Nelson. It defines the types and associated goals of public art. The CDC should continue to advise on the development and installation of public art, seeking joint approval from the Community Heritage Commission when public art is proposed on a registered or designated heritage building. Key locations where public art is encouraged include:

- **Alleyways** – art corridors should be developed along the downtown alleyways in order to showcase public art, especially murals and paintings.
- **Blank Walls** – several buildings within the downtown and waterfront have large blank walls – walls without activating features such as windows or doors – that could be rendered more interesting with public art installations.
- **Public Plazas** – as key focal gathering points throughout the city, public plazas should showcase local artists, expressing Nelson's historic and current culture.
- **Open Spaces** – lookouts and other important spaces within the parks and open space network should be reinforced with public art installations.
- **Civic Buildings** – public art should be showcased within and outside of City and District buildings.
- **Infrastructure** – bridges, manhole covers, tree grates, furnishings, and other City infrastructure elements are encouraged to be customized with artful elements.

3.7 Infrastructure Network

The City's infrastructure, comprised of water, sewer, storm water, and electricity networks, will be impacted by intensified development of the Downtown and Waterfront lands. Required upgrades to these systems are described below.

3.7.1 WATER SYSTEM

As noted in Section 2.2.3, the water system has sufficient capacity. The 2007 *Master Water Plan* by Urban Systems provides detailed recommendations and required upgrades. Over time, additional development within the project area may require an upgrade of the supply line, existing pipes network, or development of new water sources (Kootenay Lake is recommended).

The design guidelines provide recommendations for climate appropriate landscaping and other features with the goal of reducing overall per capita water demand.

3.7.2 SANITARY SYSTEM

As noted in Section 2.2.3, the City is currently undertaking a Sewer Master Plan, which is detailing the current capacity and possible shortcomings of the sanitary pipes network with additional population growth. Until the Sewer Master Plan is complete, it is premature to determine the impact of new development within the Downtown and Waterfront lands.

The overflow from the airport lift station, which is directed to Cottonwood Creek, is an environmental and safety issue. Treatment of these overflow volumes should be considered, especially if Kootenay Lake is developed as a potable water source.

3.7.3 STORM WATER SYSTEM

The existing system should have sufficient capacity to accommodate additional development within the Downtown and Waterfront lands. For waterfront developments that front Kootenay Lake, new development may be required to create additional outflows into Kootenay Lake, separate from the existing network. In addition, new developments will be required to control on-site storm water flows.

As noted in Section 2.2.3, some past residential developments tied their perimeter storm drains into the sanitary system; this practice is no longer permitted.

Finally, should the City elect to utilize Kootenay Lake for its future potable water supply, intake sources should be upstream of any possible contaminant sources. If storm water outfalls are found to be contaminating a water source, storm water should be treated prior to being released into the lake. The only storm flows that are currently treated are the three largest outfalls into Cottonwood Creek; however, only sand and gravel are filtered.

3.7.4 ELECTRICAL SYSTEM

The City is in the process of upgrading the entire power system from 4Kv to 25Kv; however, within the waterfront, there is limited infrastructure. Any new development will likely require new infrastructure to link into the existing system.

There is no shortage of electrical supply, as the agreement with FortisBC will cover any increased demand from additional uses within the project area.

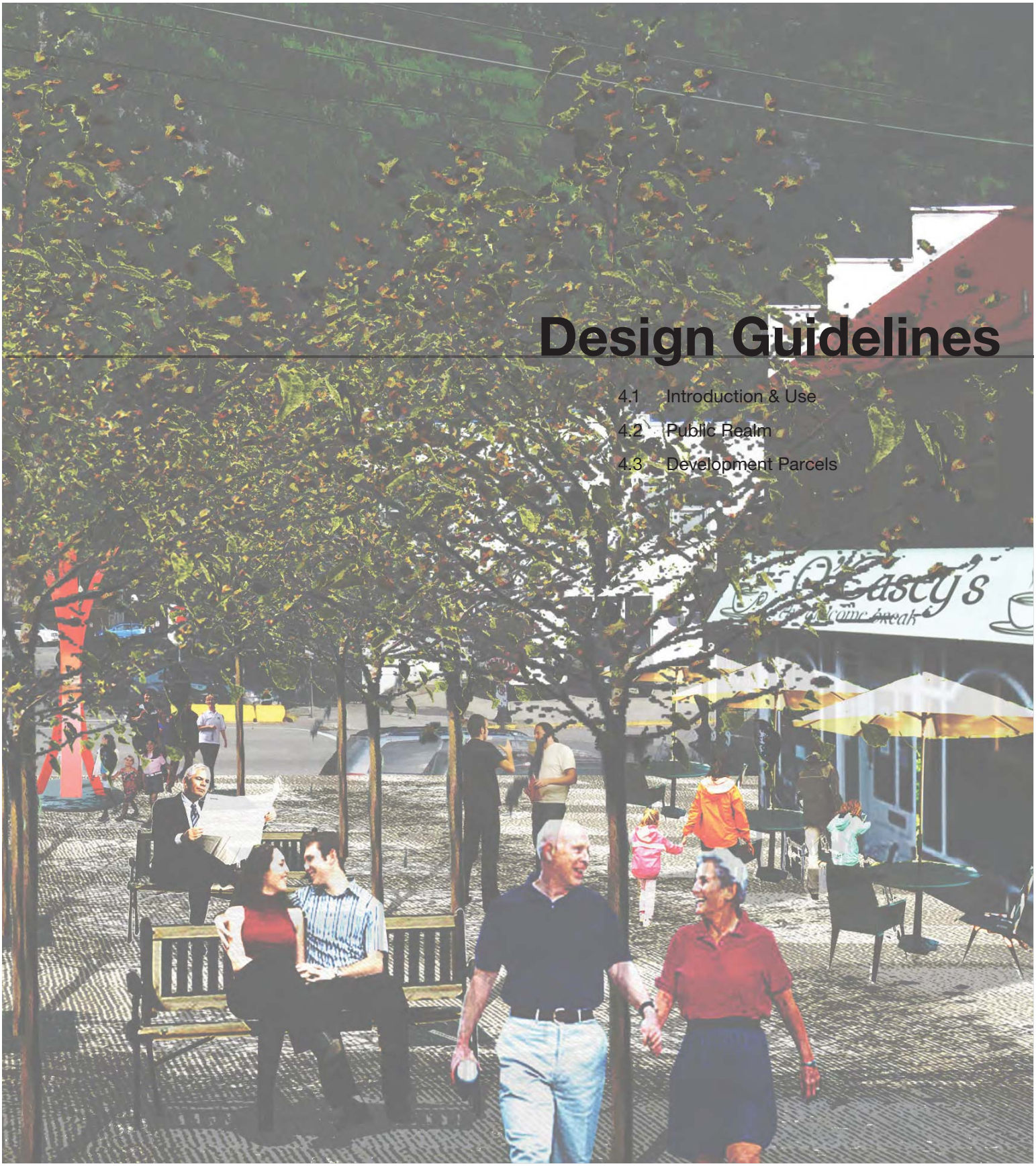
Opportunities for micro-hydro generation are encouraged to be explored at Cottonwood Falls consistent with Path to 2040 sustainability principles.

3.7.5 DISTRICT SYSTEMS

Within the waterfront lands, there is a relative lack of existing infrastructure and a considerable amount of proposed development that, taken together, creates the opportunity to implement district wide systems and share resources such as district heating / cooling; district waste management; district storm water treatment; and, district composting. New significant developments are strongly encouraged to be connected to these systems if available.

4

Design Guidelines



4.0 Design Guidelines

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4.1 Introduction & Use

These design guidelines are intended as an implementation mechanism of the goals and objectives of the master plan as described in Chapter 3 of this report. By following these guidelines, new infrastructure and developments will support the sustainability objectives set forth in the Path to 2040 strategy.

The section is composed of standards and guidelines. Standards are required actions, prefaced by the term 'shall'. Guidelines are recommended actions, prefaced by the term 'should'. A combination of words, diagrams and precedent photos are used to articulate each of the guidelines. Photos are intended to illustrate general principles rather than specific applications.

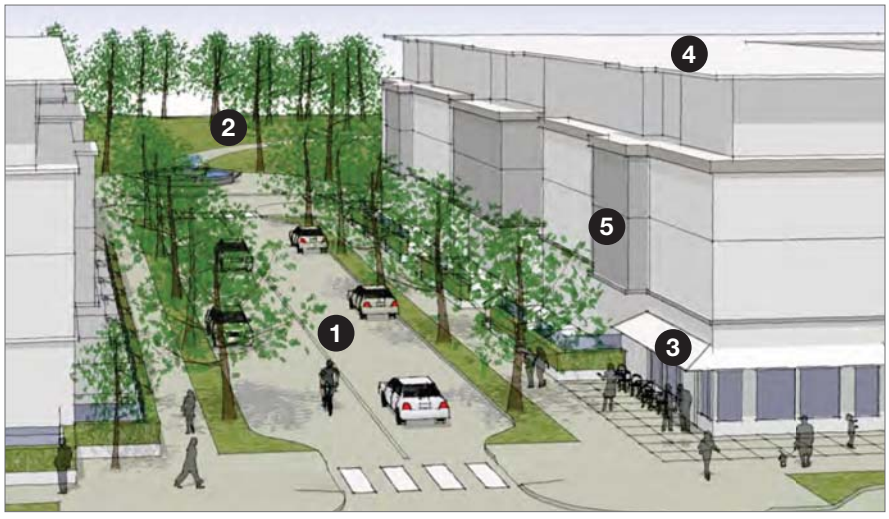
The guidelines cover the **public realm** and **development parcels**, organized as follows:

The public realm is comprised of the streets, sidewalks, trails and open spaces. From a functional point of view these are the armature of the city and the framework to which development parcels relate. However, the public realm should also be considered as the outdoor 'rooms' of the city, the proper design of which is important in engaging civic function and participation.

The development parcels comprise all land outside of the public realm. With them the street interface is the zone at-grade where the buildings relate with the public realm. It must be well designed so that it contributes positively to the public realm.

The sculpting of building form is controlled by guidelines for its mass, height and façade in order to ensure that the 'outdoor rooms' are appropriately framed and the building scale and proportion is in context with surrounding buildings and the neighbourhood.

1. Streets and Sidewalks
2. Open Space
3. Street Interface
4. Building Form
5. Building Details



Key Elements of the Design Guidelines

Precedent – Narrow neighborhood street.

Precedent – Sidewalk with unobstructed path of travel.

Building details are the elements that create distinctions between buildings so that there is a diversity of building styles and features, that contribute to unique and expressive neighbourhoods.

Finally, use-specific guidelines are set forth that regulate each of the types of buildings envisioned, including heritage buildings, multi-family residential, commercial (retail), live/work, light industrial/office, and parking.

4.2 Public Realm

The public realm is comprised of the public streets and sidewalks, trails, parks and open spaces. A high quality public realm is of great value for residents and visitors of Nelson alike, as it is the shared public expression of the built environment.

4.2.1 STREETS

Streets are the conduit for vehicular and pedestrian mobility, the armature for building and development parcels, and a primary place where citizens and visitors engage in shared civic life. As such, streets should be designed to be visually appealing and exciting spaces, while ensuring safe and functional traffic movement.

STREET PATTERN

The street pattern refers to the location and relationship of streets in forming a network that encourages fluid and connected movement of vehicles, bicycles and pedestrians.

Hierarchy – Streets should be organized in a hierarchical network. Given Nelson's modest traffic volumes, most streets should be local; few collectors or arterials should be required.

Spacing – Streets should provide continuous through movements by being connected to one another at a spacing similar to the existing downtown grid of 90m by 90m. Areas at the periphery of the waterfront where larger parcels are required may have wider spacing but should not exceed 200m.

Cul-de-sacs – Cul-de-sacs are discouraged, as they disrupt connectivity. In isolated instances they may be required on the waterfront lands where the CPR tracks block through access to Front Street.

STREET DIMENSIONS & GEOMETRY

Streets are made up of multiple components, each of which has an optimal dimension in order to ensure functionality and safety as described below. Additional street standards should be consulted in the Draft Subdivision Bylaw.

Precedent – Shared bike/vehicle lane.

Precedent – Dedicated bicycle lane.

Precedent – Sidewalk furnishing zone.

Precedent – Plaza bench.

Vehicular Travel Lanes – Travel lane width depends on the street type and vehicle type using the street:

- Neighbourhood Streets – Dedicated travel lanes on neighbourhood streets serving primarily personal cars and trucks should be in the range of 3.0m, to a 3.7m maximum. In low-traffic neighbourhood conditions where traffic calming is a priority the development of a single travel lane two-way street where traffic must pull off to allow for the passage of oncoming cars may be utilized; the travel lane is recommended to be 4.3m.
- Truck Routes – Travel lanes along streets that accommodate truck and bus traffic should be in the range of 3.4m to a 4.0m maximum.

On-street Parallel Parking – Curb-side parallel parking should be in the range of 2.2m with a 2.7m maximum.

On-street Bicycle Lanes – There are two types of bicycle lanes:

- Shared Bike/Vehicle Lane – On streets where bicycle traffic is intended to share the roadway with automobiles, the vehicular travel lane should be narrowly dimensioned in order to discourage automobiles from passing bicycles, since passing tends to push cyclists towards parked cars where there is a greater chance of being struck by an opening car door.
- On-street Dedicated Bicycle Lane – Not all existing streets are wide enough to accommodate dedicated bike lanes; however, should a dedicated bike lane next to a curb be planned on a new or existing street it should be a minimum of 1.2m; 1.7m is preferred. A dedicated bicycle lane next to parallel parking should be a minimum of 1.6m; 1.9m is preferred.

Sidewalks – Sidewalks serve a variety of functions depending on the street type. They should be located on at least one side of quiet local streets and two sides of collectors and arterials. Sidewalks should allow for a minimum of 1.5m unobstructed path of travel for pedestrians. On busy retail streets, sidewalks may be as wide as 4.6m to allow for restaurant patios and other retail displays provided there is a minimum unobstructed path of travel of 2.0m. Permanent patios within the public realm along Baker Street are prohibited. Seasonal patios within the Baker Streets alcoves (see Section 3.6.2) are encouraged, but should not occupy more than 50% of the alcove area.

Sidewalk Landscape / Furnishing Zone – Street trees, landscape elements and furnishings should be grouped in a dedicated corridor between the sidewalk and street in order to retain maximum clearance on the sidewalk and create a buffer between cars and pedestrians. The size of the zone will vary to accommodate the desired elements.

LANDSCAPE / FURNISHING ZONE ELEMENTS

The following guidelines are for streetscape furnishings and plantings within the landscape zone. They provide direction for the creation of

Precedent – Artful bike rack.

Precedent – Special crosswalk treatment.

Precedent – Tree grate.

streets that provide trees and planting for visual interest and shading, stormwater management, seating and other furnishings.

Sustainable Landscaping – Street landscaping should emphasize street trees and consist of native and regionally appropriate planting. In retail areas trees with high crowns are preferred so the view of storefronts is not blocked from the street. Street landscaping should be strategically planted to help regulate climate, control stormwater, cleanse air and water, and provide habitat.

Benches and Seating – Should be provided on retail and significant streets and in bulb-out areas. Benches and seating should be oriented to create social spaces. Additionally, seating should be located along steep streets and paths to provide a place to rest.

Waste / Recycling / Other Receptacles – Shall be provided on retail streets, at bus stops, near seating or on bulb-outs near the street corner.

- **Bicycle racks** – On public streets, provide bicycle racks on streets fronted by retail, commercial, multi-unit housing, and public service buildings. Additionally, provide bicycle racks adjacent to transit stops, and park entrances. Locate bicycle racks in the furnishing zone, bulb-outs or curb extensions to ensure clear pedestrian travel.
- **Newspaper racks** – Install newspaper racks in retail zones and near transit stops. Locate newspaper racks in the furnishings zone or on bulb-outs.
- **Tree grates** – Use tree grates rather than a landscape strip where pedestrian traffic is high and where sidewalk space is limited.
- **Utility vaults** – Locate utility vaults in the furnishings zone where possible. Group and arrange vault covers in an orderly fashion.

STREET LIGHTING

- Extend the lighting style along Baker Street into the Railtown district.
- Locate street lighting in the furnishing/landscape zone.
- Lamps should use high-efficiency technology, such as LED, to minimize energy consumption.
- Design lighting to maximize public safety while minimizing light pollution.

Permeable Parking Lanes – Permeable parking lanes are encouraged to mitigate stormwater runoff. They may be porous asphalt, porous concrete, permeable pavers, or concrete-grass-block grid.

Special Crosswalks – Special crosswalks should be utilized at important intersections and high traffic intersections to raise awareness of pedestrians. Colour, imprinted asphalt, concrete with integral colour and special texture, or unit pavers can be used to do this. Raised crosswalks are encouraged where they will not impede transit or truck routes, especially within residential areas. Intersections that should utilize special crosswalks include at a minimum:

- Highway 3A / Baker Street
- Vernon Street / Ward Street
- Front Street / Hall Street
- Baker Street / Ward Street
- Baker Street / Hall Street
- Hall Street / Lakeside Drive

Precedent – Interpretive trail.

Precedent – Multi-use path.

Precedent – Playground.

Precedent – Community Garden.

4.2.2 TRAILS

Trails offer the means of non-motorized movement throughout the open space network, and should be designed to allow for safe passage at various speeds. Multi-use trails are designed to accommodate speeds and uses ranging from meandering pedestrians to cyclists.

TRAIL DESIGN

Depending on the desired use (single-use / multi-use) and location of a trail, the following minimum dimensions and other considerations are provided.

Pedestrian Travel Zone – A pedestrian only path or pedestrian portion of a multi-use path should be a minimum width of 1.8m to allow for pedestrians to walk side-by-side while still allowing space for others to pass; 2.5m is preferred.

Two-way Bicycle Travel – A trail that accommodates two-way bicycle travel should be a minimum of 2.5m; 3.0m is preferred.

Multi-use Trail – a trail that accommodates pedestrian and bicycle travel should be a minimum of 4.0m; 5.5m is preferred (see the Active Transportation Plan).

Trail Buffer – Trails next to a public street or private parcel shall contain a buffer for landscaping. When next to a street, the buffer shall be a minimum of 1.5m; when next to a private parcel it shall be a minimum of 3.0m. The landscaping buffer may contain ground covers, trees, hedges and other appropriate treatments.

Public Art – The trail system should contain public art at key locations to spotlight local culture and enhance the overall open space network.

Interpretive Trails – Where appropriate, trail signs should be utilized to increase awareness about Nelson's history and natural environment.

4.2.3 PARKS & OPEN SPACE

Parks and open space build upon and complement the pedestrian network within the streets system, and they serve as a place for recreation and social engagement.

PARKS

Several parks are proposed throughout the planning area (see Section 3.5) and should contain a variety of active and passive spaces. Final park design will be informed through a consultative process; however, the following considerations should be made in park design:

Passive Activities – In naturalistic environments, create areas that support passive activities, such as reading, conversation, solitude and bird watching.

Playgrounds – Ensure playground have activities that encourage active play for children of all ages and accessibility levels. Playgrounds should be suitable for supervised children.

Precedent – Plaza with ample seating and trees for shade.

Precedent – Public art within a plaza.

Precedent – Picnic Area.

Precedent – Pier.

Open Lawn – Large lawn areas that encourage unstructured play for people of all ages are encouraged.

Picnic Areas – Picnic areas should be designed to accommodate large and small groups while respecting privacy considerations between users.

Over-water Structures – Consider structured elements in key locations that take advantage of water views, such as piers, docks and small boat launches.

Food Production – Community gardens and their associated functional amenities (storage) should be considered throughout the parks system, including Lakeside Park.

Weather Protection – Provide outdoor areas that are protected from inclement weather.

Parking – Where necessary, provide parking that includes landscaping features and stormwater management measures.

PLAZAS

Plazas and important street corners offer opportunities for social interaction, and should be located at important crossroads of activity. In denser urban areas, plazas should be considered as a direct extension of the parks system, with high usage throughout the year. They should be welcoming, comfortable, and be framed and animated by adjacent buildings and street activity (see Section 3.5 for proposed plaza locations).

Location – Plazas should be located at centres of activity, such as transit exchanges, intersections of important streets and retail streets, thus providing a focal point for these areas.

Edges – Plazas should be framed by buildings on at least two sides to create well defined edges. The buildings should have active uses facing the plaza such as shop entrances, food/beverage, or recreation/ community.

Climate – Plazas should be located to maximize sunshine. Deciduous trees should be used to mitigate excessive sunshine during summer months, while permitting light penetration in winter.

Programming – Plazas should serve a range of activities from seating to interactive and playful sculpture or fountains, depending on the desired role of the plaza.

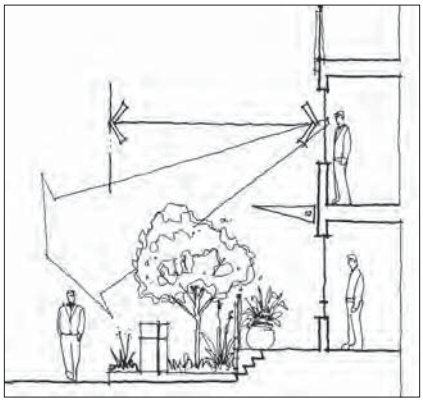
Public Art – Opportunities for the inclusion of public art should be explored in all plazas.

Furnishings – Plazas should have comfortable and functional furnishings such as lighting, seating, trash receptacles and restrooms in high-traffic locations.

Natural Open Space – Natural open space should serve to protect sensitive ecosystems, link park areas and create edges to neighbourhoods.

Precedent – Clearly defined entrance.

Precedent – Artful elements incorporated into façade.



Eyes-on-the street design principles encourages safety.

4.3 Development Parcels

The buildings and open space of development parcels have a strong influence on the public realm and overall cityscape. Accordingly, design guidelines are set forth starting with factors that have the greatest impact – the street interface edge, then elements of the building's form – height, bulk and massing, followed by the more detailed elements of buildings.

4.3.1 STREET INTERFACE

The base of buildings should animate the street by containing active uses reinforced by generous windows, entrances and active outdoor spaces. Active uses include street-level residential units with street-facing entrances, retail and restaurants that meet and engage the sidewalk with ample windows and doors, live/work units that front the street, displays and inviting entrances, entertainment, offices and lobbies.

At-grade Activation – In order to activate the ground plane along public streets, uses at-grade shall be active. These include residential, retail and office uses, lobbies and corridors (see Section 4.2.4 for Use Specific details).

Front Setback – The front setback is the required minimum distance between a building or use and the front yard lot line (see the Zoning Bylaw for side- and rear-yard setback standards). Along streets where an existing street wall is established, this becomes the 'established setback'. New construction should conform to within 10% of the established setback subject to minimum setback dimensions set forth in the following pages. On streets without an established setback, the first projects will define the established setback, again subject to minimum setback dimensions.

Main Building Entrance – The main building entrance shall be prominent and expressed by such elements as taller volumes, recessed doorways, canopies, lighting, public art, water features, special materials or colour and paving. Entrances shall be easily identifiable and well lit for convenience, visual interest and safety.

Artful buildings – Buildings themselves are encouraged to incorporate art into the design. This may include dynamic building elements or public art that is incorporated into building façades or entrances and lobbies.

Safety – Buildings and public space should be made safe by ensuring natural surveillance and clear legible boundaries and pathways. 'Eyes on the street' principles should be employed by locating doors, windows, and active open spaces to face public streets and parks.

4.3.2 BUILDING FORM

Height

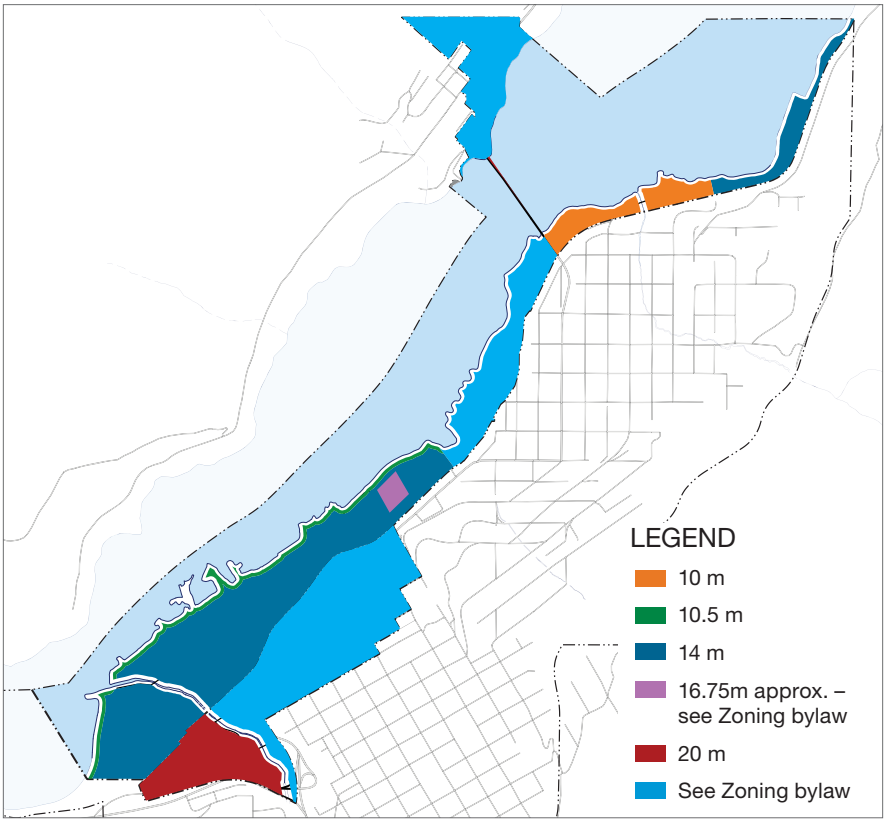
Building heights define the walls of the public realm, and should be in scale with the surrounding heights in the neighbourhood. In addition, building heights affect views and key sight lines. Thus, heights are regulated herein to ensure an appropriate scale along the waterfront lands and protect key views from Downtown. Maximum building heights may be relaxed at Council's discretion if a project is deemed to satisfy public needs such as provisions for affordable housing, public art, and/or enhanced public open spaces, or if a project utilizes cutting edge sustainable practices. Those districts in which revisions to the Zoning Bylaw are recommended are discussed below.

Height Measurement – See the Zoning Bylaw

Maximum Building Heights – Maximum building heights are depicted in Figure 4.1.

- Waterfront West/Waterfront Central – In order to protect views from Downtown, building heights in the Waterfront Central and Waterfront West districts shall be 14m with the exception of one parcel at 16.75 m as shown. Furthermore, any building within 30m of the shoreline shall have a maximum height of 10.5m to protect views and create an appropriate scale along the waterfront.

Figure 4.1 – Maximum Building Heights



- Railtown – Building heights can be up to 20m to encourage the intensification of the district.
- All other districts – see the Zoning Bylaw

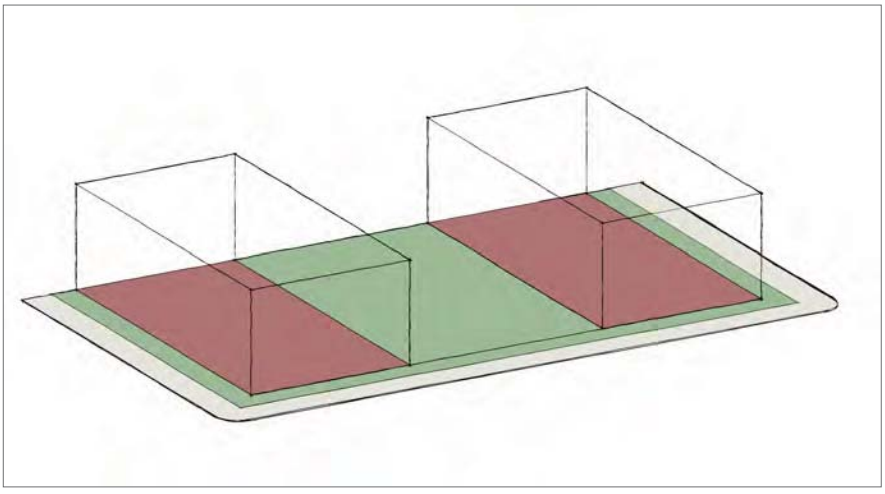
Massing

Building massing is controlled in order to limit the impact of its overall appearance and achieve a scale appropriate to the use and district. Building massing is controlled in three ways: lot coverage, length and floor plate size. These controls affect the Waterfront West, Waterfront Central and Railtown districts. For all other districts, refer to the Zoning Bylaw.

Development Lot Coverage – Development lot coverage is limited as indicated in Table 4.1. Coverage includes all habitable and non-habitable buildings including projections and structured parking. A development lot is defined as all land within the legal property line. The allowable lot coverage is based on the primary use at-grade.

TABLE 4.1 – DEVELOPMENT LOT COVERAGE

AT-GRADE USE	COVERAGE
Multi-family Residential	50%
Commercial	80%
Light Industrial	80%

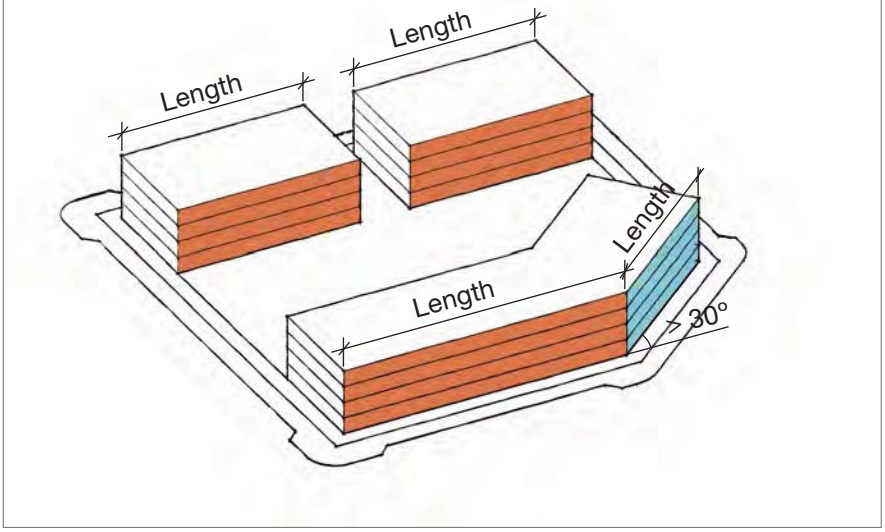


Coverage – Red: Lot covered; Green: uncovered

Building Length – The maximum length of any building face fronting a public right of way or park/open space is limited in order to create a pedestrian scale and sufficient active or view corridors. Building faces that turn greater than 30° are considered a different face. Plan length varies by building type as shown in table 4.2.

TABLE 4.2 – MAXIMUM BUILDING LENGTH

AT-GRADE USE	LENGTH
Multi-family Residential	75 m
Commercial	180 m
Light Industrial	180 m

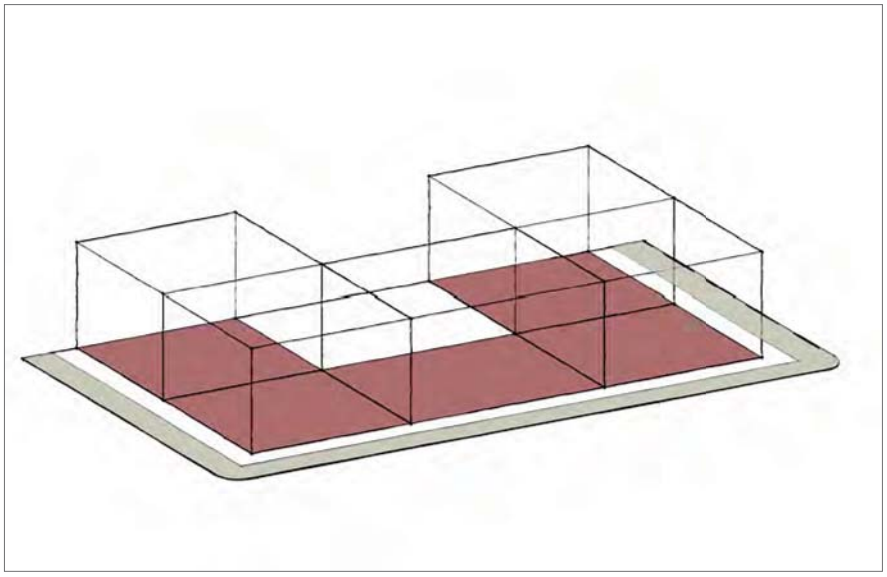


Building Length

Building Floor Plate – The building floor plate size in combination with the maximum building length limits the overall mass in order to restrict overly massive buildings while allowing for functionality. The floor plate of a building is defined as the area around the perimeter of all exterior walls. For buildings that share exterior walls (party walls), the floor plate is defined as the area around the perimeter of the outermost walls. Maximum floor plate sizes are defined by the primary at-grade use, as indicated in Table 4.3. Commercial and light industrial buildings that have large floor plates should mitigate the visual effects of blank walls and loading areas through landscaping or other appropriate means. Vertically mixed-use buildings shall be governed by the regulations affecting its at-grade use. Any building with a mix of uses at-grade shall be governed by the regulations affecting its primary at-grade use.

TABLE 4.3 – MAXIMUM BUILDING FLOOR PLATE

AT-GRADE USE	FLOOR PLATE SIZE
Multi-family Residential	1,850 m^2
Commercial – Neighbourhood	7,500 m^2
Commercial – Regional	18,500 m^2
Light or Rail Industrial	18,500 m^2



Building Floor Plate

Façade Modulation

The building façade should be modulated in order to moderate its apparent mass and define key elements. In addition, there are instances when the façade of a new building should respond to patterns established by adjacent historic buildings in order to maintain the overall patterns along the street. Modulation techniques and the context within Nelson for which they apply are described below.

Façade modulation – Techniques

There are a variety of techniques for modulating a building façade to improve legibility, break down the apparent massing, establish a human scale and create visual interest. At a larger scale, this can be done through vertical and horizontal modulation. At a finer scale, modulation is achieved with stepbacks, projections, recesses, and material and colour changes. All are described below.

Vertical Modulation – Multi-level buildings should have a defined base, middle and top.

- Base – the base may be the first storey (eg. buildings with retail grade) or the first two storeys (eg. Live/work, lofts, or ground oriented townhomes on residential buildings).
- Middle – the middle portion should define the principle building façade.
- Top – building tops should have a defined roofline and/or top floor.

Vertical Modulation – Distinct base, middle and top

Horizontal Modulation – Buildings should have a horizontal rhythm of modules that relate to the function of the interior spaces. The rhythmic modules for residential, retail and mixed-use buildings should not exceed 15m in length. The rhythm of the base and upper floors may vary.

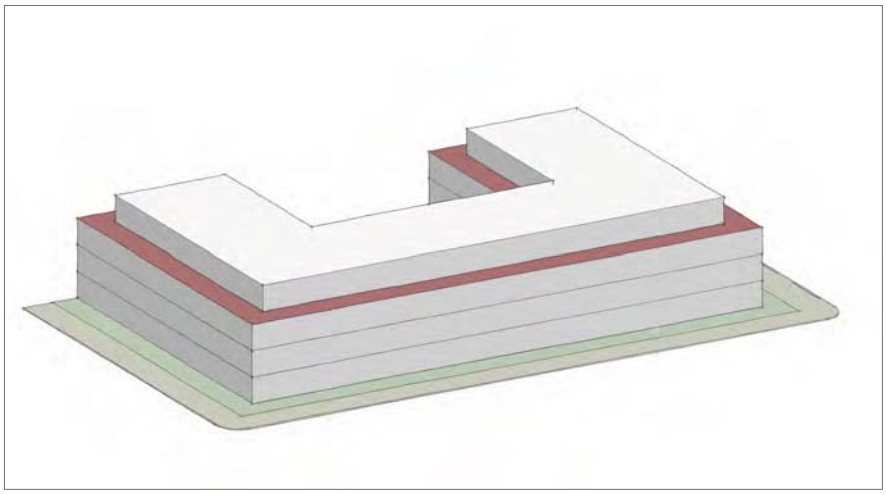
Horizontal Modulation – rhythm of modules

STEPBACK

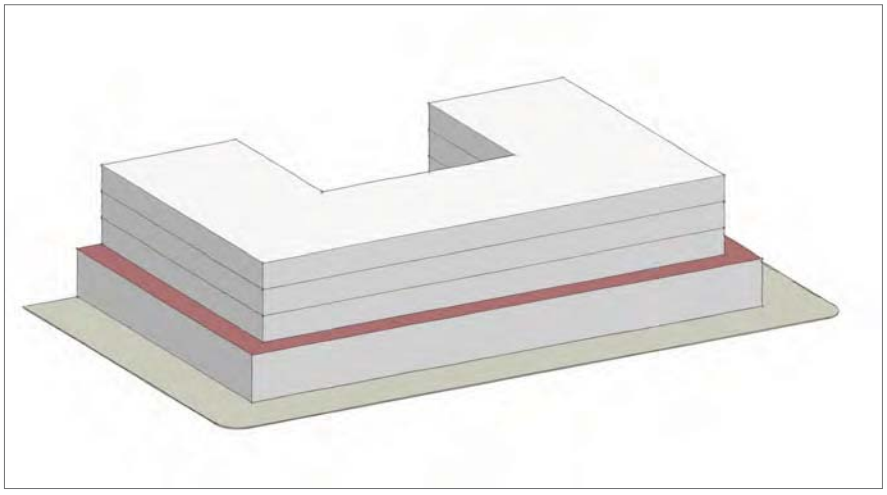
Upper floors of a building may be stepped back from the predominant building face in order to reduce their apparent mass from the street articulate different uses (retail at base, residential above), or distinguish the 'top' of the building.

Downtown – New construction within downtown, especially along Baker Street, should avoid stepbacks, in keeping with the established patterns of the historic architecture.

All other districts – Stepbacks for new construction are not required; however, if used, residential buildings shall only step the top floor back, while mixed-use buildings may step back all floors above ground level. Multiple stepbacks are discouraged unless a building is stepping in response to steep topography.



Stepback – Residential



Stepback – Mixed-use

PROJECTION

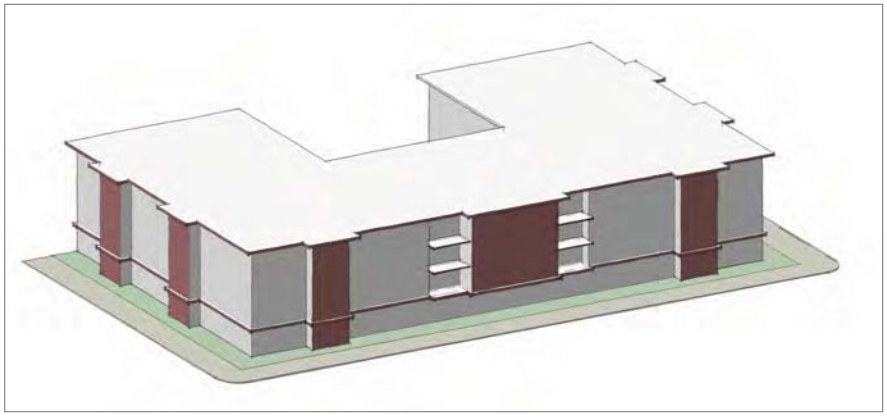
Projections help to define a modular rhythm and emphasize the horizontal planes of a building. Projecting elements can be habitable (eg. bay windows), non-habitable (eg. balcony), or decorative (eg. trims, mouldings and columns). Projections are encouraged in all districts except areas of the downtown core where they are not a significant component of the established pattern. All projections into the public realm are considered encroachments and are subject to encroachment agreements with the City.

Habitable projection – Habitable space within a projection means a portion of the building enclosed by walls and a roof. Typically this will be a bay window, corner element, or regularly occurring bay that extends through some or all floors of a building. Habitable projections beyond the main building face up to 1.0m into the setback zone or public realm are allowed on residential and mixed-use buildings. Habitable projections into the public realm shall allow for a minimum of 3.0m vertical clearance from sidewalk level to ensure safe passage.

Non-habitable projection – Non-habitable projections are spaces above ground level utilized by residents that are not enclosed by walls and a roof, such as balconies or awnings and canopies. Non-habitable projections beyond the main building face may extend up to 1.5m into the setback zone or 1.0m into the public realm. Non-habitable projections into the public realm shall allow for a minimum of 3.0m vertical clearance from sidewalk level to ensure safe passage.

Decorative projection – Decorative projections are elements of a building that define building rhythm or horizontal planes, such as floor levels or a roofline. Decorative projections include mouldings and belt courses, cornices, sills, eaves, columns and trim. They may extend beyond the main building face up to up to 50cm into a setback zone and 20cm into the public realm. Decorative projections may extend down to grade.

Sustainability projection – Features related to sustainable design, such as solar shading, are allowed. These may extend up to 1.5m into the setback zone or 1.0m into the public realm, and shall allow for a minimum of 3.0m clearance from sidewalk level to ensure safe passage.



Projections – Habitable, non-habitable, decorative and sustainable

RECESS

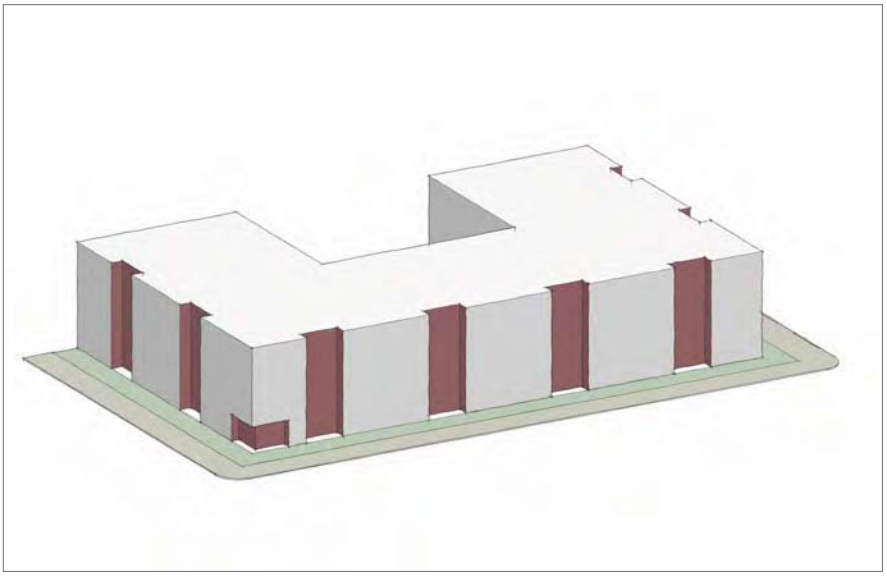
A recess is a notch into the main building face, which is used to articulate building rhythm and provide a sheltered space for building entrances and balconies.

Vertical building face recesses – Recesses that extend multiple storeys or the full height of a building shall not exceed a depth from the main building face of 2.0m.

Building entrances – In order to prevent dark and indefensible entrances, primary building entrance shall not be deeper than 2.0m; secondary entrances shall not be deeper than 1.0m.

Punched windows – Recessing windows from the primary building face creates attractive shadow lines and is encouraged. Windows should not be recessed greater than 30cm.

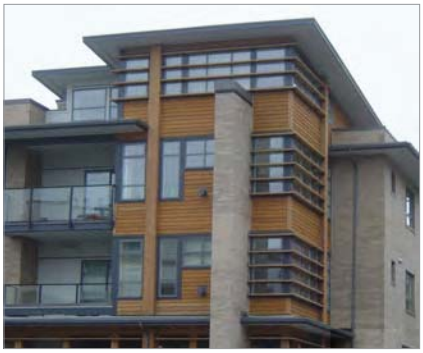
Decorative recess – Decorative recesses up to 20cm depth are encouraged as a means of adding a finer grain of articulation.



Recess – Bays, entrances, windows, decorative elements

Precedent – Colour changes distinguish floor levels.

Precedent – Brickwork pattern changes emphasize windows.



Precedent – Material changes emphasize the building corner.

MATERIAL, COLOUR & PATTERN CHANGES

A material and/or colour change can emphasize particular elements of a building's façade and help to establish vertical rhythm or differentiate horizontal planes. In addition, changing the pattern of a particular material, such as switching from long end brick exposure to short end, can highlight more detailed elements like doors and windows.

Material and Colour Changes (see Section 4.2.3 for permitted materials and colours) – Material and colour changes should not be excessive; greater than three material and/or colour changes on a façade, exclusive of windows, is discouraged.

Pattern Changes – Material pattern changes are common on historical buildings and, to a lesser degree, in contemporary architectural forms. Pattern changes, if utilized, should be similar to those seen within the historical precedents in Nelson on which the pattern of brickwork commonly changes to emphasize windows, corners, trim or a cornice feature.

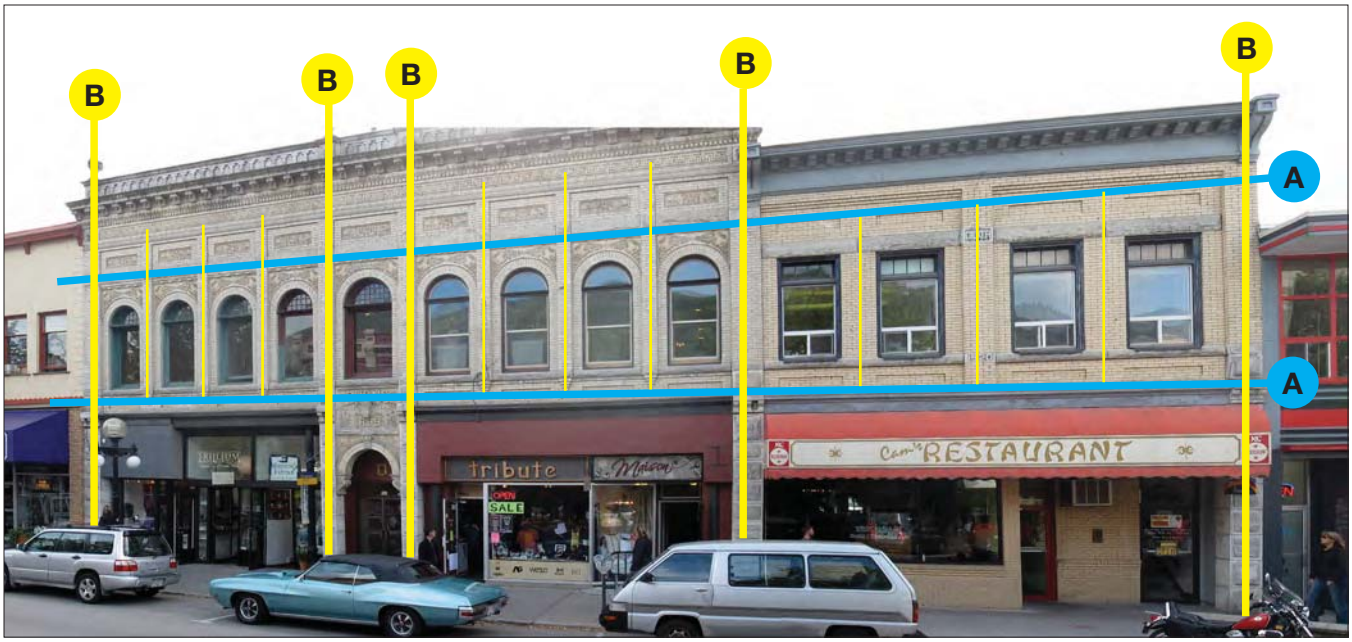
Façade modulation – Contextual Application

DOWNTOWN

Where there is an established building pattern, as is the case in the Downtown core, particularly on historically significant Baker Street and Vernon Street, it is important that the pattern of new buildings relates to the established pattern. The techniques for modulating a building's façade discussed above can be highly effective at achieving this by creating a common language between existing and new buildings. This may be achieved with either historical or contemporary methods and expressions.

The historic building patterns in downtown Nelson, particularly their scale and proportion, are illustrated in Figure 4.1 and described on the following pages in order to point out how the design of new buildings should respond to these patterns. The façades of new buildings should be modulated in such a manner that the base, middle and top, as well as the horizontal rhythm, are consistent with the patterns established by the historic building.

Figure 4.1 – Nelson Historic Building Patterns



A. Vertical Articulation

- Base to Middle – distinguished by the transom / awning and the use of a decorative projection at the top of the transom / awning line.
- Middle to Top – distinguished by a material change (stone from brick) on the building on the left; a pattern change on the building on the left

B. Horizontal Articulation

- Modular rhythm less than 15m
- Defined by decorative columnar projections.

Stepback – none

Projections

- Decorative projection defines the roofline
- Decorative projections further refine the modular rhythm of the upper level window bays

Recess

- Building entrances are recessed for both ground floor uses (retail) and upper level access
- Punched windows add emphasis to the window form
- Decorative recesses utilized to add visual interest

Material, Colour & Pattern Changes

- Base columns distinguished from above
- Windows defined by sills, lintel
- Roofline defined by cornice and parapet

The methods by which patterns established by historic buildings can be reflected in the façade of a new building, thus contributing to a generally unified yet individually expressed streetscape, are shown in the photo and described in the table below:

New building reflecting established (historic) patterns

PATTERN	HISTORIC BUILDING	NEW BUILDING
Vertical Articulation	**Base – Middle** • Glass transom **Upper Levels** • Horizontal trim • Window sizing/brick between windows **Roofline** • Cornice detail	**Base – Middle** • Metal feature **Upper Levels** • Spandrel glass maintains horizontal emphasis and preserves vertical distance between windows **Roofline** • Window recess emphasizes roofline
Horizontal Articulation (rhythm)	• Recessed windows • Mass between windows	• Recessed windows emphasizes vertical columns that run to the roofline
Other common elements	• Building height • Lack of stepback • Depth of recesses • Recessed entrance • Windows height at grade	

Methods for new buildings to express historic patterns

These pattern elements create a unified streetscape with compatible design between buildings from different eras. The contemporary building maintains the vertical and horizontal patterns established by the historic building, yet this is achieved with modern materials, emphasizing windows and metal.

DISTRICTS OUTSIDE DOWNTOWN

Buildings outside of the downtown are not subject to the same pre-established contextual patterns and rhythms of historic buildings, and therefore have more flexibility in their form and expression. The design techniques discussed in Section 4.2.2 should be used to articulate a building's façade, creating strong vertical and horizontal patterns that are attractive, and enhance the public realm.

Precedent – Green roof.

Precedent – Mechanical equipment screen.

Precedent – Rooftop terrace.

Roofs

Building roofs will be visible in many cases from a surrounding building or group of buildings. Accordingly, roofs should be an integral aspect of the building and an expressive opportunity that should be attractive and, if flat, usable for outdoor use, energy production and/or stormwater storage.

Fifth Façade – In most areas, roofs will be viewed from above and should be considered as a 'fifth façade'. Roof design should provide an attractive view from above.

Form – The roof form should reinforce its role as the top of the building and should form an integral part of the overall building composition. Expressive and sculptural roof forms that will be seen from a distance are encouraged.

Mechanical Equipment – Rooftop mechanical equipment including elevator / stair cores more than 2.0m above the roofline shall be screened from view of neighbouring units. The mechanical screens shall form part of the building top composition and consist of materials consistent with the overall building colour and material palette. The maximum permitted coverage by mechanical equipment is 30% of the roof top area for all buildings. Wherever possible, roof mechanical exhaust vent and equipment projections should be clustered and set back from the edge of buildings that are visible from the street or points above.

Usable Roof Terraces – Usable terraces on building roofs and podiums are encouraged where possible. Trellises and open structures should be designed as part of the overall roof composition.

Sustainable Design – The following guidelines should be considered when designing a building's roof:

- Use durable, thermally efficient roofs that reduce heating and cooling and enhance thermal comfort.
- The use of high albedo, non-reflective and landscaped roof is encouraged to prevent heat island effect.
- Green roofs are encouraged and should be insulated to minimize heat and noise transfer and use regionally appropriate plant species to minimize water consumption requirements. Temporary drip or bubbler irrigation systems to establish green roof plants are permitted, but once the planting has been established these systems should be disconnected and rendered unusable.
- Roofs should be designed to accommodate and mitigate stormwater runoff effects through the use of landscaping, diverting runoff to collection tanks or other appropriate means.

Precedent – Expressive, durable materials.

Sustainable wood products.

4.3.3 BUILDING DETAILS

Permitted Materials & Colours

Building materials and colours should be carefully selected to express the uniqueness of individual buildings, be visually pleasing and add to the overall composition of the street. Materials should be high quality, durable and should suit the local environment.

Walls – Permitted materials include: high quality finish cast in place or precast concrete, unitized ceramic panels, high quality metal panels, brick, stone, wood, stucco, cement fibre lap, curtain wall windows systems and photovoltaics forming a wall system.

Glass Types – All glass inclusive of the windows system shall perform to the minimum or better of the Province's Energy Efficiency Standards. Innovation related to sustainability is encouraged in the choice of glass and windows products. Low emissivity windows are encouraged. Not permitted: reflective glass; greater than 10% tinted glass.

Durable Materials – Materials shall be durable and of high quality and respond to the site's climate by utilizing appropriate envelope systems.

Local and Sustainable Materials – To the extent possible, locally sourced materials should be used to reduce transportation impacts and reflect the local climate, light, history, and culture. Additionally, the following materials are encouraged:

- Recycled materials or materials with a high-recycled content.
- Concrete with at least 25% fly ash or slag.
- Wood products certified CSA Sustainable Forest Management Standard or equivalent.
- Interior finishes and installation methods with low toxic emissions.

Colours – A variety of colour schemes is encouraged, yet overly bright or displeasing colours is discouraged. Generally, colours should be based on hues found within the natural environment, and be augmented with white and/or black to mute their tone.

Precedent – Lighting and building style integrated.

Precedent – Entry stairway lighting.

Lighting

Building lighting should be integrated with the building style and be used to creatively illuminate pedestrian areas and highlight building elements.

Fixtures – Full cutoff or fully shielded fixtures shall be used in order to avoid light being directed upwards. Zero candela intensity shall occur at an angle of 90° or greater above nadir. Additionally, no more than 10% candela intensity shall occur at an angle greater than 80° above nadir.

Pedestrian Areas – Pedestrian areas should have adequate illumination for safety.

Retail – Lighting should integrate with retail signage, storefront windows and other building elements.

Residential – Lighting should be sensitive to nearby development by:

- Limiting glare.
- Minimizing spill light beyond the property boundary.
- Within a development, common outdoor lighting should be designed to mitigate light trespass into adjacent units.

Energy Consumption – Sensor or timer-based shut off controls should be used for residential, pedestrian and parking areas.

Signage

Within the downtown core, signage shall adhere to the most recent City of Nelson Sign Bylaw. Outside of the downtown core, all neighbourhood-serving retail and live/work signage shall conform to Zone A requirements of the Bylaw; all other uses shall conform to Zone B requirements.

Precedent –Retractable 3-part awning.

Awnings & Canopies

Awnings and canopies contribute to store identity, provide outdoor shelter, and in some cases provide the structure for storefront signage. Awnings should add to the overall appearance of a building, yet not be a dominant feature of the façade.

Location – Awnings and canopies are encouraged on all buildings with street oriented retail at grade to form a continuous sheltered environment for pedestrians. Other commercial, light industrial and multi-family apartment residential uses shall have awnings overtop of main entrances.

Types permitted – 3-point, 4-point, quarter barrel and dome awnings and canopies are permitted; awnings may be retractable or fixed.

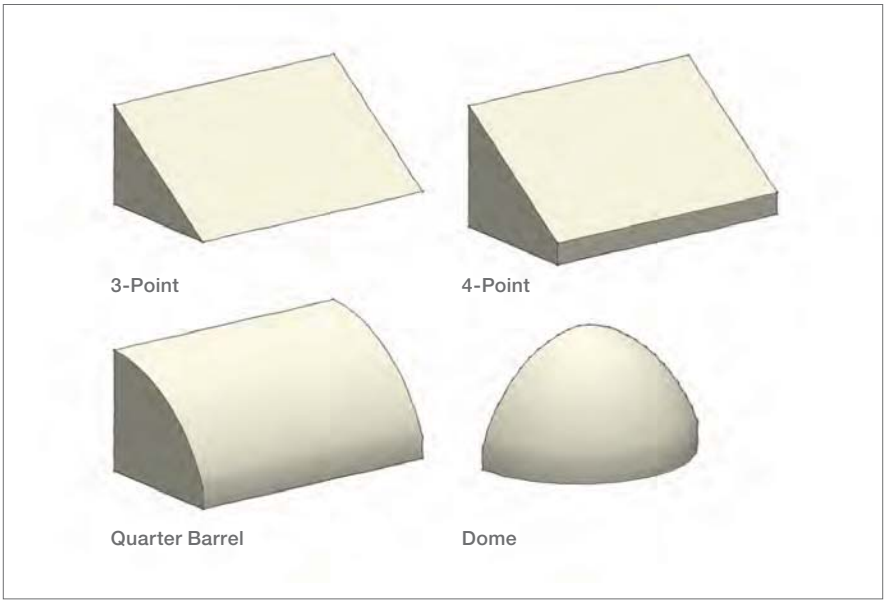
Top surface angle – The top surface shall maintain a minimum angle of 30º from horizontal in order to facilitate snow removal; 35º – 60º is preferred.

Clearance – A minimum vertical clearance of 2.5m from sidewalk height shall be provided.

Projection – Awnings and canopies shall project a minimum of 1.25m from the primary building façade, yet not project more than 75% of the width of a public sidewalk.

Materials & colour – Materials should be of high quality and durable. Bright and/or translucent vinyl is not permitted. The colour scheme should complement the building façade.

Awning signs – Typeface on awnings or canopies should have a maximum height of 30cm.



Precedent –Landscaping for stormwater management & minimizing heat island effort.

Precedent – Rainwater catchment barrels.

Sustainable Design

Sustainable development practices are highly encouraged as a means to implement the Path to 2040 sustainability principles. Buildings and their associated landscapes should utilize industry-leading sustainability features. Innovative sustainable approaches at all levels are strongly encouraged. A variety of standards and guidelines are described below to ensure that baseline practices are followed. For additional information refer to the Community Clmate Action and Energy Plan.

Stormwater Treatment – Water quality storm runoff from development parcels shall be treated before draining to the stormwater system utilizing low impact development treatment measures. For volume based treatment methods, the LEED sustainable sites Credit 6.2 shall be followed.

Climate Appropriate Vegetation – All landscaping for common open spaces, rooftop gardens and green walls shall use climate appropriate vegetation that does not require permanent irrigation.

Landfill Diversion – Construction of new buildings and demolition of existing buildings shall require that at least 60% of generated debris and waste be diverted from landfill, with a goal of 75%.

Recycling – Dedicated recycling facilities are required for all buildings or multi-unit developments.

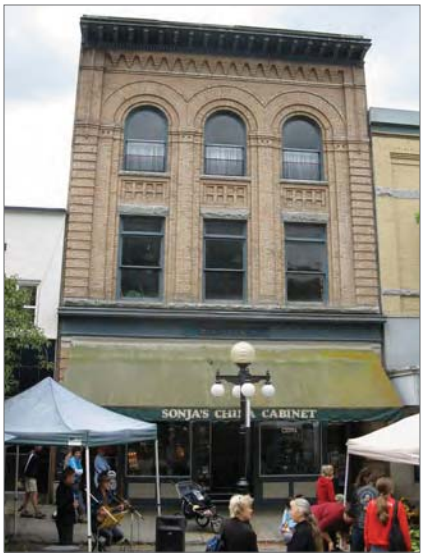
Site Design – Building form, orientation and thermal mass should optimize solar radiation, natural ventilation and day lighting.

Heat Islands – Reduce heat-islands by providing rooftop landscaping and light coloured / high albedo materials.

Water Efficiency – The following is encouraged to increase water efficiency:

- Use landscaping that does not require permanent irrigation or application of synthetic chemicals.
- Rainwater is encouraged to be harvested for on-site uses such as irrigation.
- Use water efficient supply and waste fixtures.

Energy Efficiency – Refer to the Community Climate Action and Energy Plan



Historic building on Baker Street.


Precedent – Residential setback zone.

4.3.4 USE SPECIFIC GUIDELINES

A variety of uses serving a range of functions are proposed within the planning area. In addition to the guidelines in Section 4.2.1 for the street interface zone, other guidelines apply for the following building uses:

Registered or Designated Heritage Building

Residential

Commercial (retail)

Live/work

Light Industrial / Office

Parking

Registered or Designated Heritage Buildings

All *registered* or *designated heritage buildings* within the Downtown and Waterfront as well as all existing buildings along Baker Street shall be subject to the design guidelines established for the Downtown: Schedule G of the Official Community Plan. For a list of registered and designated heritage buildings, contact the City of Nelson Department of Development Services and Sustainability.

The Community Heritage Commission (CHC) will continue to advise City staff and council on proposed modifications to registered and designated heritage buildings. However, as the heritage registry is incomplete, many heritage buildings are not currently listed on an official registry. Therefore, owners proposing modifications are required to consult City staff and the CHC to determine if a building is to be treated as heritage, despite lacking official designation/registration at the time of the application.

The Advisory Design Review Panel should be responsible for design review of new construction requiring contextual treatment in response to adjacent historic buildings (see Section 4.2.2.C).

Residential

Residential buildings include at-grade multi-family homes, such as triplexes, rowhomes and townhomes, and stacked units such as apartments and condominiums.

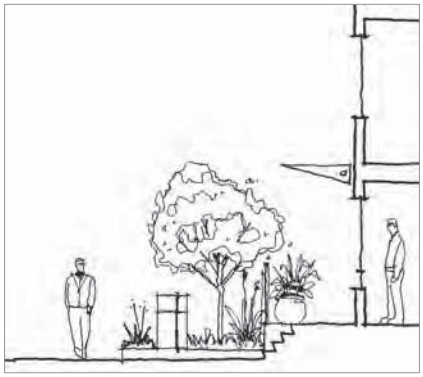
STREET INTERFACE

The following guidelines address the activation of residential uses at street level. Buildings with residential uses at-grade are intended to engage the street by having activated ground floor uses and ample landscaping in setbacks.

Setback Dimension – Multi-family residential buildings with residential uses at-grade shall have a minimum setback of 3.0m to allow for the provision of private landscaping and street facing patios and stoops. The setback shall be no greater than 6.0m so that units engage with the street. The setback of any one development shall be within 10% of other residential developments along a street in order create a consistent streetwall.

Setback Elements – The setback zone of all street-facing units shall be used to create high quality, usable open space, serving as a transition

Precedent – Ground floor unit entrance.



Precedent – Grade separated ground floor unit.

zone between private-use and the public realm. Permitted elements within the setback zone include street-facing stairs, stoops, porches, patios and landscaping. The setback zone shall be landscaped with high quality materials from the building edge to the property line.

Garages – Street fronting garages are strongly discouraged along public streets. Alleyways or a secondary vehicular circulation system internal to a development is encouraged as the appropriate location for garages.

Blank Wall – A blank wall is defined as having no active uses including no windows or doorways, excluding parking garage entrances. Residential buildings facing a street or open space shall have no single blank wall more than 5.0m in length.

Ground Floor Unit Entrances – Ground floor units fronting public streets and parks shall have an access point along the fronting building face. For units within an apartment building, the unit specific access is in addition to the main access from interior corridor, lobby, or parking structure. Entrances shall occur at intervals no greater than 12.0m, and may be ganged together. For entrances that are not recessed, awnings should be provided above the doorway to provide a sheltered space outside the unit. Such awnings should be integrated with the overall building façade.

Defensible Design – The setback zone should be designed to clearly define it as belonging to the residents of the unit, while also being usable for residents and encouraging neighbourly interactions. The following means may be utilized:

- Grade Separation – As one of the most effective means of ensuring privacy and creating 'defensible space', ground floor units should be elevated between 0.5 – 1.25m above the street. If the ground floor is not elevated, other means of defining the opens space should be utilized (see 'Private Open Space' below).
- Landscape Treatments – gates, railings, walls and landscaping can provide a buffer from the street and create a clear distinction between public and private realm. Landscape elements should be 0.9m – 1.3m tall.

Defensible design elements

Precedent – Private patio at grade.

Precedent – Private balcony.

Precedent – Balcony with good solar access.

Precedent – Common outdoor space with variety of program elements.

RESIDENTIAL OPEN SPACE

Each residential development will include both private and/or common open spaces.

Private open spaces include at-grade stoops and patios, balconies and private rooftop terraces for the owners/tenants use.

Common open spaces are intended for the common use by all owners/ tenants within a development, exclusive of common entrances, hallways, lobbies, and parking garages.

Total Open Space Area – Every building or building cluster shall have a minimum net usable open space equivalent to 10 m^2 per unit. The combination of Private Open Space and Common Open Space may be counted towards the total.

Plant Palette – Native and climate appropriate plants are encouraged.

PRIVATE OPEN SPACE

Private open spaces are intended for the occupants of a dwelling and their guests. At-grade stoops and patios should be designed to promote territoriality and safety, yet creating a space for friendly neighbourly encounters.

Minimum Size – Individual private open spaces that are less than 3.5 m^2, that have less than 3.0m clearance, or have a dimension of less than 1.8 lineal metres in any direction shall not be counted towards the total.

Orientation – Orientation of all open spaces should maximize solar access and views. Balconies are encouraged to be located away from building corners that face the prevailing wind direction.

COMMON OPEN SPACE

Common open spaces are intended for the use of all residents within a building or building cluster, and include rooftop spaces and internal courtyards.

Minimum Size – Common open spaces that are less than 10 m^2 that have less than 3.0m clearance, or have a dimension of less than 3 lineal metres in any direction shall not be counted towards the total.

Safety – Common spaces should be safe. They should be located in areas with high visibility from residential units.

Orientation – Open spaces should maximize solar access and views.

Rooftop / Courtyard Design – Rooftop courtyards should provide visual interest from surrounding overview homes. Street level residential courtyards that may be accessed or at least viewed from public streets and easements are encouraged.

Programming – A variety of programming uses should be provided to appeal to various constituents. This may include planters, paved areas, gardens, pools and play areas.

Precedent – high materials at retail base.

Precedent – Storefront awning.

Precedent – Integrated canopy and distinct bays.

Precedent – Retail entrances should be clearly distinguishable from residential entrances.

Commercial (Retail)

Note: See residential guidelines for residential levels above retail in a mixed-use building.

Street oriented retail stores should engage and enliven the pedestrian realm by way of distinguished displays materials, signage and lighting. Regional serving retail should minimize the visual impacts of parking and loading from within the public realm, while providing an interesting pedestrian shopping experience.

Street Oriented Retail

Street oriented retail is defined as being located at the edge of a public street, with primary access from the street side. The majority of existing and proposed retail within the project area is street oriented.

STREET INTERFACE

The following guidelines address the activation of street oriented retail uses. Special attention should be paid to the design of storefronts in order to enliven the overall pedestrian experience.

Setback Dimension – Street oriented retail buildings shall be oriented towards, and shall meet the sidewalk at grade, and are encouraged to be built to the property line. The maximum setback allowed shall be 1.0m unless to allow for an active outdoor use such as a patio.

Storefront Design – Storefront design shall promote pedestrian interest at the ground level and provide visual connection to the store interior with:

- Retail bays shall be no wider than 15m in order to create a fine-grained pattern of shops. A larger retailer may combine bays internally; however, the external bay articulation shall be maintained.
- At least 60% windows; windows shall be transparent.
- No more than 70% of store windows shall be obstructed with displays and signage, ensuring visual permeability into the store interior.
- Outdoor displays and patios are encouraged, but shall maintain a minimum 2.0m wide clear pedestrian zone within the public sidewalk. Permanent patios along Baker Street are prohibited.

Store Entrances – Retail entrances should be easily identifiable and distinguishable from residential entrances. They should be reinforced with such elements as recesses, awnings, special lighting, windows, colour and materials, and special paving. Multiple entrances to larger stores are encouraged.

Blank Walls – A blank wall is defined as having no active uses, such as windows or doorways, excluding parking garage entrances. Blanks walls shall be no greater than 20% of the storefront along the primary store façade; secondary façades shall be no greater than 50% blank.

Precedent – Regional shopping centre.

Precedent – Shopping centre pedestrian amenities.

ADDITIONAL GUIDELINES

Store Height and Depth – All retail spaces shall be a minimum of 4.0m height and average at least 10m in depth exclusive of service corridors.

Materials – Façades should be designed with high-quality materials that create visual interest to the pedestrian (such as stone, tile masonry, brick or terra-cotta).

Canopies / Awnings – Awnings or canopies are encouraged on storefronts, the length of the store. They should hold a common scale across a block, or where a prevailing style has been established (see Section 4.2.3)

Regional Serving Retail

Large format, regional serving retail should maintain a sense of pedestrian friendliness and visual interest that contributes to the overall city fabric and vitality.

Pedestrian Experience – Inviting pedestrian spaces should be a prime focus. Generously sized and furnished sidewalks with street trees should be located in front of entrances and connecting entrances to parking.

Storefront Design – Storefront design should promote pedestrian interest at the ground level and provide visual connection to the store interior through providing at least 40% windows along the store frontage. The windows shall be transparent.

Façade Articulation – The mass of large retail stores and/or their associated parking garages should be mitigated by:

- 'Wrapping' exterior façades with smaller retail stores, thereby breaking up the façade and reducing large blank walls.
- Creating a modular rhythm through material changes, recesses, and/or projections (see Section 4.2.2C).

Blank Walls – Areas without entries or windows greater than 15m are discouraged along the front façade. The impact of blank walls along side walls should be mitigated with the use of colour and materials, landscaping, and other appropriate means.

Canopies / Awnings – Canopies or awnings should be utilized overtop of store entrances (see Section 4.2.3)

Precedent – Live/work.

Live/work

Live/work units contain a street-oriented workspace that is for use by the resident within the dwelling unit. Live/work units serve as quasi retail space, offering an affordable alternative for artists and local entrepreneurs who would otherwise require a separate commercial space in addition to their primary dwelling unit.

Street Interface – In mixed-use locations, live/work units may serve as gallery or retail space for residents. In such instances, the "work" portion of the unit should be located at street level and designed according to the guidelines for street oriented retail listed above.

Flexible Space – Live/work units should have a minimum floor to floor height at-grade of 4.0m in order to provide workspaces that offer flexibility for such diverse uses as retail operations, graphic and visual artists, small-scale manufacturers, inventors and engineers.

Ventilation – Live/work units shall have adequate ventilation through the top of the building to vent noxious or objectionable fumes.

Precedent – Landscaped setback zone.

Precedent – Clearly defined entrance.

Precedent – Loading located at back of building.

Light Industrial / Office

Light industrial and office uses should contribute to an attractive streetscape.

STREET INTERFACE

The following guidelines address the activation of the at-grade portions of light industrial and office uses. Light industrial uses should maintain an active relationship with the public realm.

Setback Dimension – Buildings shall be setback between 0 – 3m along primary streets in order to create a strong streetwall and animate the street. Along secondary streets, the setback shall be between 3 – 6m. Within the above parameters, the setback of a particular development shall be within 10% of other residential developments along a street in order create a consistent streetwall.

Setback Design – The setback zone should consist of landscaping, seating and attractive features to create visual interest from the street.

Main Building Façade – The main building face should front a primary street and should be reinforced with distinguishing architectural treatments such as projections, special materials and colour.

Main Pedestrian Entrance – Main pedestrian building entrances should be located on a public street and clearly articulated.

ADDITIONAL GUIDELINES

Service and Loading – Service and loading should be avoided on a building face that fronts a primary public street, park or open space.

Common Outdoor Space – Common outdoor space should be incorporated within a development to provide inviting and comfortable space for eating lunch or other leisure activities. Design and placement should maximize solar gain, while providing appropriate landscaping including shaded or covered seating areas.

At-grade Mechanical Equipment and Material Storage – At-grade mechanical equipment / material storage should be screened from view of public streets.

Fume-hood Venting – Exhaust vents, if required, should be carefully designed and situated in order to minimize possible air contamination to open spaces and nearby buildings. Prevailing wind direction shall be a principal factor in identifying an optimal location.

Precedent – Screened structure with photovoltaics on the roof-deck.

Precedent – Sidewalks within surface parking lot.

Precedent – Shops built above surface parking.

Parking

Surface parking and parking structures should be designed to minimize the visual impacts of parking uses, ensuring safety of use and promoting sustainable design.

Parking location – Underground is the most preferred means of providing parking. If underground parking is not feasible, parking should be located internal to a development or block, in order to minimize the visual impact from the public realm. Any parking that must front a public street should be located along the least important street surrounding a development block, at the discretion of City staff.

STREET INTERFACE

The following guidelines apply to portions of a development where the at-grade use consists of either structured or surface parking. Parking structures and surface parking should be designed to contribute as much as possible to the street character. This can be achieved by providing active uses at-grade along parking structures or through the use of landscaping and screening of surface parking.

Structured Parking Garage Setback – Structured parking garages shall be set back the same distance as adjacent buildings to ensure a consistent streetwall.

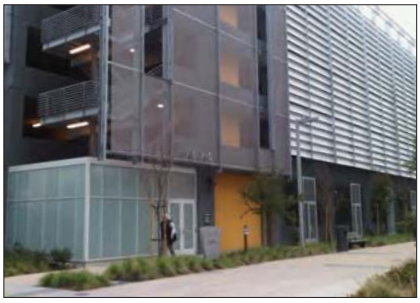
Structured Parking Screening – Multi-use developments with structured parking and single use parking garages shall screen the parking by the following means:

- Multi-use Developments – Active uses shall wrap the street frontage so that parking is concealed internally or is provided underground.
- Single-use Structures – The street level building face of all single-use parking structures should have active uses or be visually screened with landscaping or artful elements. Screening should utilize a rhythm of entrances and bays in a scale compatible with the surrounding buildings.

Surface Parking Setback – Surface parking shall be setback a minimum of 3.0m to provide adequate space for landscape and other screening treatments.

Surface Parking Screening – The setback zone surrounding a surface parking lot shall be a minimum depth of 3.0m and be designed as a visual buffer with landscaping treatments, including trees, in order to mitigate the effects of the surface lot from the public realm.

Precedent – Townhome garage off private alleyway.



Precedent – Parking structure screening where active uses not feasible.

Precedent – Screening with graphic panels.

Precedent – Buffer between the public realm and parking lot.

Structured Parking Entrance – Parking entrances should be situated away from direct sightlines and in areas that are away from high pedestrian or vehicular traffic, and concealed by the use of canopies, landscaping and setbacks. For structured parking garages, including off-street loading, the combined parking ingress and egress shall be a maximum 7.5m width. Separate parking ingress / egress shall be a maximum 3.75m width and be spaced a minimum of 18m apart to re-establish the building façade. The sharing of parking entrances and loading is encouraged. Shared parking entrances shall be a minimum of 12m from block corners and 6m from building entrances.

Townhome Garages – Garages are encouraged to be located on laneways or private drives rather than being accessed from the public street. The maximum number of garage doors per unit is one with a maximum width of 2.5m; side-by-side garages are prohibited.

UNDERGROUND PARKING / PARKING STRUCTURE

Landscaping – Underground parking structures that extend beyond the building face shall provide a minimum 0.9m soil depth above where landscaping is provided.

Visual screen – The face of a parking structure where there is not an active use shall have a minimum 'living' landscape wall, screening or baffles. Screening shall utilize a rhythm of entrances and bays in a scale compatible with the surrounding buildings.

Roof Deck – Parking roof decks should be 50% shaded through the use of landscaping, photovoltaic trellises or any other appropriate high albedo shading techniques.

SURFACE PARKING

Pedestrian Mobility – Provide sidewalks or pedestrian paths for the safe movement of pedestrians from shops to and within the parking areas.

Landscaping Treatment – Providing adequate landscaping within a parking lot, including trees at the ends of parking bays and along sidewalks and paths.

Stormwater Management – Bioswales or other sustainability features that will alleviate the impacts of storm events should be utilized throughout surface parking lots.

Apparent Size – Reduce the apparent scale and size of surface lots by creating several smaller parking lots separated by landscaped areas rather than one large lot.

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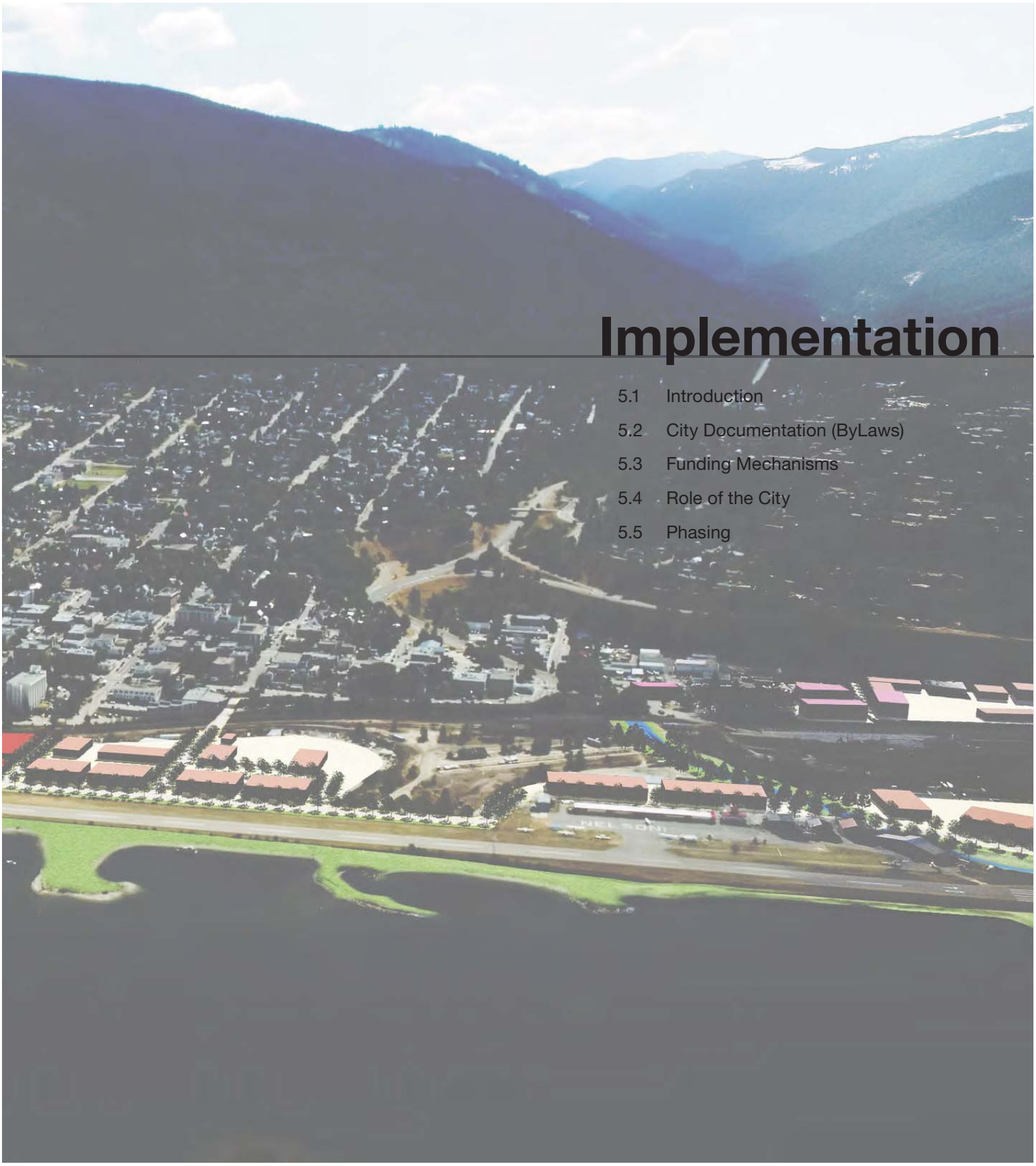

Implementation

5 Implementation

5.1 Introduction

This Master Plan provides numerous recommendations for future development within the Downtown and the Waterfront. In order for the recommendations to be realized, amendments to the City's Official Community Plan and Zoning Bylaw are required. In addition, several funding mechanisms and other considerations are recommended as tools to help raise funds for provision of infrastructure or to stimulate development. Finally, the role of the City should take relative to important committees as described, and a strategy for phasing the key goals is set forth.

5.2 City Documentation (Bylaws)

5.2.1 OFFICIAL COMMUNITY PLAN (BYLAW NO. 3114, 2008)

The City of Nelson Official Community Plan (OCP) is a visionary document, guiding future development within the City. It offers a range of objectives and policies in order to direct development to meet the community's vision and goals.

The OCP will require amendments in order to incorporate many of the recommendations regarding the public realm and land use within this Master Plan. As many of the Master Plan recommendations are in the form of goals, in order for them to be realized, they will need to be formulated into OCP objectives and policies. There are two recommended options for amending the OCP:

1. The City may choose to incorporate into the OCP prioritized goals from Section 3 of the Master Plan pertaining to land use, Downtown infill and redevelopment, transportation, and parks and open space. The highest priority goals should be the first to be incorporated into the OCP. As these goals are actualized or revised, additional Master Plan goals could be incorporated.
2. The Master Plan may be incorporated into the OCP as an additional Schedule (Schedule H). All Downtown and Waterfront discussion within the OCP would in turn refer to this Schedule. The Master Plan is part of a larger Sustainability Initiative, which includes multiple other documents that will require incorporation into the OCP. At the time that all current planning processes are complete, the OCP could be comprehensively amended, based on the recommendations from all documents.

The OCP schedules that will also require amendment, include:

- Schedule B: Land Use – Figure 3.3.C Proposed Land Use will serve as the base for amending Schedule B.
- Schedule C: Transportation – Figure 3.4 Street Improvements will serve as the base for amending the proposed links shown on Schedule C. As additional roads are built within the waterfront, the local roads on the schedule should be updated.
- Schedule D: Development Permit Area #4 – No change required.
- Schedule E: Development Permit Areas – Consider combining Area 2 and Area 3, as the existing design guidelines for Downtown (Schedule G) are recommended to apply to all heritage buildings across the downtown and waterfront, while the Design Guidelines within the Master Plan (Section 4) are proposed to apply to all new construction within both the downtown and waterfront.
- Schedule G: Development Permit Area Design Guidelines – as stated above, it is recommended that the design guidelines herein (Section 4) should be incorporated as a supplement to the existing guidelines within the OCP (Schedule G). The existing guidelines for Development Permit Area #2 are recommended to be retained, but only be applicable to registered and designated historic buildings within the entire project area, as well as all existing buildings along Baker Street. Reference to new construction should be removed from the existing guidelines. All new construction should be required to adhere to the design guidelines included herein, regardless of location within the study area.

5.2.2 ZONING BYLAW (BYLAW NO. 2243, 1987)

The City of Nelson Zoning Bylaw is a regulatory document that directs the form and character of development within the City. This Master Plan includes a recommended land use pattern to achieve its goals; thus, the zoning map within the Zoning Bylaw should be revised to reflect the desired land uses.

Several zoning designations require revision in order to allow for desired uses not currently permitted, including revising the Rail Industrial designation to expand on the allowable uses on CPR lands, including light industrial and regional serving commercial. Furthermore, specific zoning designations will require revision in order to integrate the heights and setback requirements within the design guidelines.

5.3 Funding Mechanisms

5.3.1 DEVELOPMENT COST CHARGES

Development Cost Charges (DCC's) – The City may choose to implement DCC's for future multi-family developments. A DCC is a way of attaching a fee on new developments to help pay for their share of the costs of major new infrastructure that is needed to support new development. The DCC should be charged at building permit stage, and likely only on projects of 4 or more townhouses or apartments. The rate should be determined by calculating expected unit growth potential, and determining each unit's share of the road, utilities, and parks costs that will be needed to support that growth. DCC's need to be considered carefully and charged judiciously so that they do not make new multifamily residential product less competitive compared to single family and existing multifamily stock.

5.3.2 MUNICIPAL DEVELOPMENT COMPANY (MDC)

To encourage private sector investment in revitalizing downtown and the waterfront, the City may form a municipal development company (MDC). The MDC would be established with a board of directors, including members of council as well as business professionals, and a mandate to develop and implement projects within the downtown and waterfront. The City, as the sole shareholder, may transfer lands to the MDC; in turn, the MDC would sell, rezone and sell, or develop the lands as the Board sees fit. Any profits could be channeled back into capital projects within the downtown or waterfront, or returned to general revenue.

In the near term, the MDC could purchase privately held lands in the project area for specific projects; in the long-term, should the waterfront airstrip be slated for re-development, the MDC could acquire the necessary approvals and/or develop the lands.

The City has a key role to play in the formation and financial feasibility of the MDC's project(s) and in turn the success of the entire revitalization effort. By selling lands to the MDC for a nominal amount, the city would agree to receive its returns in the long-term (i.e. in a later time frame), after those investors with shorter investment time horizons have received their capital and return. The city, in lieu of subsidies to the developer, would assume the role of partner in the venture; it could invest in the form of:

- Land purchase and assembly
- Parking structure
- Infrastructure
- Tax incentives
- Zoning and development approvals

5.3.3 ESTABLISH BUSINESS IMPROVEMENT AREA(S)

A Business Improvement Area (BIA) is essentially a quasi-governmental body that provides services the city government cannot deliver. They can be very effective economic development agents by acting as a single voice for the business community to engage with government, or launch programs such as beautification, parking or security initiatives. BIA's are funded by property owners who voluntarily increase their property taxes to pay for BIA functions. The tax is collected through normal city channels, and the funds are controlled by the BIA's board of directors. The BIA manages and implements the desired strategy.

A BIA's success is aided if their participation rate and volunteer commitment is strong; the mandate is clearly defined, if there is a unified membership, and if their budget (i.e. business levy yields) is high enough to fund programs. The City of Langley BIA is effective for these reasons. A BIA that covers a wide geographic area, or which has a diverse mix of priority issues could have more difficulty reaching consensus on initiatives.

Some possible roles for a BIA in Nelson include:

- Marketing an area to new developers
- Increasing safety with safety ambassadors
- Increasing public realm cleanliness
- Creating festivals and events

5.3.4 CLOSING REMARKS

Nelson has the potential to take advantage of one or more of these funding mechanisms. The tax tools are relatively easy to implement, but still generally rely on outside initiative and private interests assuming the risk (albeit reduced risk).

It is important for the City to identify what their end goal is in order to determine the best mechanism to use. For example, if a revenue-neutral approach is preferred, then a land subsidy or tax abatement approach could be used. If a small up-front investment is possible, then public-realm improvements such as parks and trails could be considered.

Larger public investments, such as infrastructure improvements or creating a MDC could yield more significant or faster private sector response, but the initial cost to the City is higher.

Section 5.4 – Role of the City

This Master Plan sets forth new design guidelines that affect how heritage buildings throughout the City and new buildings in the Downtown should be regulated. As such, it is suggested that the current relationship between the City and Community Heritage Committee (CHC) be revised. Currently, the CHC is responsible for reviewing all development applications within Development Permit Area #2, regardless of heritage designation, including new construction. It is recommended within the Master Plan that the CHC only review development applications for registered and designated heritage buildings, as well as all existing buildings along Baker Street. In addition, as the heritage registry is currently incomplete, the CHC should be consulted to determine if a building should be considered as heritage despite lacking official designation, thereby treated as heritage. All other non-heritage registered, designated or equivalent buildings, as well as new construction will be reviewed by City staff and possibly council. As noted in Section 4.2.4, the Advisory Design Review Panel should review any new construction that requires contextual treatments in order to relate to heritage buildings.

No change is suggested for the roll of the Cultural Development Commission. It should continue to advise City staff and council on applications for public art, and seek input from the CHC if the art is proposed for a registered or designated heritage building, or located along Baker Street.

PUBLIC REALM DESIGN & IMPLEMENTATION - COMMUNITY BUILDING

There are opportunities for community involvement in the design and/or construction of public spaces identified within the plan, including public plazas, planted areas, and other open spaces. For plazas, the City should consider soliciting the assistance of the Cultural Development Commission to oversee the development of any of the proposed plazas within the plan. Construction should be planned as a volunteer community event, giving local residents and visitors a chance to build community through the creation of meaningful civic spaces. Other public realm improvements should solicit feedback from the community at the design stage and may also be appropriate for community involvement in their implementation.

Section 5.5 – Phasing

The many goals set forth within this Master Plan should be phased in order to maximize the likelihood for successful implementation. The phasing strategy should be assessed on an ongoing basis. The following phasing strategy reflects the current conditions within the City of Nelson, and addresses only the highest order strategies and goals. The phases represent *priority* of actions and are not associated with a specific time frame.

PHASE I

- Downtown infill and intensification, especially mixed-use projects that provide housing;
- Downtown plaza development, especially at Hall Street;
- Hall Street improvements and Cottonwood Creek revitilization, establishing two connections between the downtown and Kootenay Lake;
- Waterfront Central residential development, especially on the Kutenai Landing site and Yellowhead Road and Bridge yard sites;
- Intensification adjacent to the CP Station building in Railtown, prioritizing mixed-use development;
- Intensification of light industrial uses within Railtown; and
- Intensification of the Waterfront East district, including the associated watefront trail and park at Red Sands Beach.

PHASE II

- Creation of an additional physical connection between downtown and the Waterfront West district, ideally the at-grade crossing near the western end of Baker Street;
- Redevelopment of the Chahko Mika Mall site and relocation of the regional retail uses to Waterfront West;
- Intensification of residential and mixed uses within Railtown towards Cottonwood Creek Falls Park; and
- Intensification of light industrial uses within the Waterfront West district.

PHASE III

- Intensification of the CP Rail yards with light industrial and/or commercial uses; and
- Creation of a new waterfront trail and Park on the North Shore.

Appendix A

Market Analysis

Downtown Waterfront, Nelson BC Commercial and Light Industrial Market Opportunities

Prepared For: The City of Nelson

October 28, 2010

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Notice

The information contained in this document has been obtained from sources deemed reliable. While every effort has been made to ensure its accuracy, Colliers International cannot guarantee it. Colliers International assumes no responsibility for any inaccuracies in this information.

This document is only intended for the use of the City of Nelson and agents working on its behalf.

Residential

Opportunities & Constraints

The Waterfront planning area has both challenges and opportunities as a residential development site. The challenges come in the form of adjacent land uses that could negatively affect the marketability of residential units. The railway and airport create noise which could turn away some potential buyers who have a vision of Baker Street and an outdoor lifestyle as their reasons for buying in Nelson. On the other hand, the waterfront will be a major draw for many residential purchasers. The potential for a master-planned development is appealing to people looking for a neighbourhood that is comprehensively planned rather than an infill project. Finally, the scarcity of land developable for higher density residential uses makes the Waterfront area appealing.

The current employment uses on the Waterfront lands provide a compelling opportunity, as some employment opportunity is maintained on these lands by designating areas for live-work residential.

Current Buyer Profile

Buyers into a residential project are typically local, with a smaller proportion of buyers coming from outside of the local area. Usually, local buyers are looking for a new place to live, whereas non-locals are at a higher likelihood of buying second homes as investments, recreational property, or units they plan to eventually retire to.

In Nelson and the Kootenays in general, the last decade has seen a major influx of Albertan purchasers, as that province has experienced a prolonged period of strong economic growth, rising incomes, rising property values, and a growing population, all propelled by the booming energy sector. When determining the market potential for residential product, however, the main source of potential buyers should always be from the local region or even within the municipality. Data from a recent survey of Nelson in-migrants shows that the largest group of new residents by province of origin, representing roughly half of those surveyed, were from within BC. While the growth rate of the Alberta economy has slowed in recent years, the general consensus among economists is that the price of oil will continue to rise. The cities of Edmonton and Calgary will likely continue to be a source of amenity driven migrants to the Kootenays. As has been the recent trend, the predominant demographic characteristic of these migrants is that they are Baby Boomers, empty nesters, and have active lifestyles.

Demand Forecast

Projecting the demand for dwelling units going forward, based on an average annual population addition of 450 individuals, the Nelson area could expect demand for the following dwelling unit split: 100 single-detached homes, 48 apartments, and 33 multi-family ground-oriented homes. This unit split is calculated using the age profile of new residents and the profile of Nelson's households by age of the household head and by dwelling type.

						10-year build-out		30-acre build-out		
	Annual Demand Nelson	Waterfront Share	Annual Demand - Waterfront	Gross Density (upa)	Annual Land Demand (acres)	Land	Units	land	Units	Years
Single-detached house	100	0%								
Apartment	48	70%	34	35	0.96	9.6	350	15	525	15.7
Ground Oriented Multi	33	50%	17	15	1.10	11.0	150	15	225	13.6
	181	***1***	***50***			***21***	***500***	***30***	***750***	

If the waterfront lands were targeted for a 10-year build-out, we estimate that, using the market capture rates as shown, there would be demand for 350 apartments and 150 ground oriented multi-family units. These units would cover 21 acres at typical gross densities.

If instead of planning for a 10-year build-out, the residential component of the waterfront plan was allocated 30 acres, the resulting buildout time frame using the same market capture rates would be approximately 16 years for the apartment product and 14 years for the other ground oriented multi-family product. In this scenario there would be 15 acres each of apartment and ground oriented multifamily, which would accommodate 525 apartment units and 225 other multifamily.

Retail

Retail Trends

There is a common phrase in retail market research that is “retail follows rooftops”. In general, this is a true statement which means that retail activity is resident-driven. The waterfront in Nelson, we believe, should be planned as an area in which the retail and service businesses are primarily intended to serve the convenience needs of the local residents. The principle behind the demand calculations should be that any new business supply added in the waterfront lands should be less than what the residents can support. In that way, some of the business generated by new residents in the waterfront area will flow to existing commercial areas in Nelson such as Downtown, the shopping mall, and elsewhere.

Retail Demand Origins

Retail uses on the waterfront would rely on a combination of resident and inflow trade in order to be successful. With an estimated 2010 average daytime population of over 15,500 people, the estimated expenditures total $261 million, including shelter. Based on this estimate, and using sample retail categories as test cases, it would appear that the City of Nelson’s retail and service commercial industries are highly dependent on retaining as much local spending as possible (limiting spending outflow), and also attracting inflow spending from tourists and other visitors.

In a situation such as Nelson in which the local businesses appear to rely heavily on inflow trade, there is the potential to upset the balance by adding unsupportable additional business supply. The result could be increased vacancy and business failures on Baker Street.

So as not to impact Baker Street commercial, and if anything to provide additional business support, our recommendation for retail and service commercial on the waterfront lands is to provide enough land/floor area to achieve a critical mass and to serve the basic convenience needs and limited discretionary spending opportunities for the residents and workers in the immediate area. A small amount of commercial can also increase the pace of absorption of residential units by creating a local neighbourhood feel that appeals to buyers. However, we will recommend that the majority of spending generated by any residents of the Waterfront lands, and especially spending on general merchandise items and most discretionary products, be encouraged to flow to other established business areas in Nelson rather than being provided for on the waterfront lands. In this way, the development of the waterfront areas will actually generate additional business

volume for other businesses in Nelson rather than hurting them by cannibalizing sales from existing businesses.

Demand Forecast

Based on a build-out residential unit count of 500 units, there would be over $21 million in annual retail spending generated by residents. In order to account for the significant inflow potential as well as the retail spending potential that does not appear in any formal or government estimates, 25% additional spending was included. We expect this to be conservative.

Using capture rates for the convenience and food categories which allow for the majority of spending to continue to flow to existing Nelson businesses, the result is a forecast demand for only 5,000 square feet of retail and service commercial uses. Contemplating two additional full-service restaurants of over 2,000 square feet each would suggest that the waterfront area be planned to include up to 10,000 square feet of retail and service commercial floor area. Additional commercial support would accrue from the employment uses on the waterfront lands. For the most part, that would be for food services (Quick Service Restaurants – QSR, and full-service restaurants), which are already accounted for in the 10,000 square feet.

If residential uses were allocated 30 acres in the land use plan, we would expect a 15-year build-out. The population in that scenario would support 8,000 square feet of net commercial floor area, plus two waterfront restaurants. In a mixed-use neighbourhood, the commercial can likely all be incorporated into residential buildings at-grade. In single-use scenarios, the commercial component would require between 0.5 and 1 acre. If the commercial is planned as streetfront CRU's, 5000 square feet should be double-loaded in a courtyard or small plaza. The road fronting the commercial should be a single travelling lane plus a parking lane in each direction. 8,000 square feet would require approximately 75 feet of double-loaded roadway (based on approximately 50-foot commercial depths).

Office

Office Trends

The markets for business space on the waterfront lands will largely depend on the market influences in other parts of the City and region. Office-based businesses which serve an individual end consumer, such as financial advisors, notaries public, lawyers and the medical office professions usually find value in locating their businesses near their markets. Technical and professional services such as corporate accountants, engineers, and government services which cater to other businesses or that simply do not need customer access often, tend to locate in areas where office space is more affordable, or close to other participants in their industry.

Demand Forecast

On the waterfront lands there will be the potential to include businesses that serve the needs of the resident population. Further, there could be demand from businesses that currently have office space within the waterfront planning area in locations that are targeted for redevelopment. Finally, there may be businesses in offices located elsewhere in Nelson who may want to relocate to the waterfront area when the redevelopment process gets underway. In any event, the sum total of resident-serving and nonresident-serving offices on the waterfront lands is expected to be minimal. Nelson, located between two other regional service centres, Castlegar and Cranbrook, does not generate a significant amount of office space demand. The growth in demand would be very minimal if the Waterfront residential population was driving new demand (assuming that office demand is currently being satisfied and that office users would not relocate to new waterfront developments simply as a result of new space being built).

Other than office-type uses such as dentists and financial advisors, who occasionally choose to locate in retail commercial environments, we would recommend not including land specific for office employment uses in the waterfront plan area. Office uses should be encouraged to populate other parts of the downtown, which could make redevelopment of a number of prime sites more economically viable. Office uses in the waterfront lands would detract from the downtown by creating demand for food services establishments away from Baker Street, and could attract businesses out of parts of Nelson that should maintain employment uses.

Light Industrial

Industrial Trends

We would expect that within the mix of additional uses that have market potential on the Nelson Waterfront, light industrial could be a viable land uses. As in any urban context, the market viability of all land uses will in some part depend on the context of other land uses neighbouring each property. The land use plan for the waterfront area can use ***live-work*** as a transitional use between the commercial plaza, the linkages from the waterfront area to the historic Downtown, and the more industrial parts of the plan area such as the airport, railway, and light industrial uses.

Demand Forecast

Over the next decade, there could be as many as 4500 more people in the Nelson region than there are today. Based on the age profile of in-migrants, approximately 61% of those peopled will be in the working age groups. However, according to the Economic Overview from Selkirk College, the goods-producing sector will only generate 18% of jobs over the 2008 to 2013 period. Looking forward for the next decade on the waterfront, there could be demand for land for up to 250 light-industrial jobs. At a density of 10 jobs per acre for light industrial, we would recommend that 25 acres of land be reserved for light industrial activity to give the opportunity to any new industries looking to move to Nelson.

Light Industrial -- 10-year Demand Forecast	
Population growth @ 450/yr	4500
Proportion of population in working age-groups	*61%*
10-year growth in working age population	2745
Labour Force Participation Rate	*50%*
10-year growth in Labour Force	1373
Proportion of Labour force in goods-production sectors	*18%*
10-year growth in Goods Production Labour Force	247
Employment density in Light Industrial (jobs/acre)	*10*
Potential 10-year Light Industrial land demand (acres)	**24.7**

Opportunities and Challenges

Favourable Conditions

- Nelson's Downtown – and particularly Baker Street businesses – has a regional draw and is considered one of the primary attractions for tourists.
- Nelson's downtown commercial area has heritage buildings and a character that attracts visitors.
- The demographics of BC and Alberta, where most in-migrants to the Nelson area are originating, are characterized by significant Baby Boom generations who are increasingly seeking opportunities for amenity migration.
- The land supply in Nelson is constrained by the river and mountains. Commercial development opportunities on new sites would likely see development interest.
- Nelson's tourism and in-migration markets have strong links to Alberta, which is expected to regain its strong, energy-based economic growth.
- Chako Mika Mall attracts spending from the City and beyond, and prevents some spending outflow to other regional centres as well as Spokane and Kelowna.

Commercial Development Considerations

- Commercial should be concentrated. Concentrated commercial areas promote browsing, pedestrian usage, and opportunities for increased time and spending by consumers. Commercial concentrations can be oriented linearly, but should have minimal or no non-commercial space between them.
- Commercial should have contextually relevant scale and design.
- Commercial uses should generally strike a balance whereby they under-serve their intended markets, yet also achieve a critical mass.
- Commercial developments on the waterfront should not detract from the Downtown commercial on Baker Street.

Potential Waterfront Development Opportunities

- Limited waterfront commercial (cafes and restaurants).
- Potential hotel/accommodation demand
- Low-rise apartment residential

Some of the challenges for development on the waterfront lands will be:

- Dealing with the linear nature of the site, and finding areas with adequate room for commercial development.
- Integrating waterfront commercial with the existing downtown commercial
- Site on the opposite side of the river will likely not see spin-off or complementary commercial activity from Downtown due to its physical and psychological separation from Downtown.
- Need to mitigate negative perceptions arising from proximity to rail line and airport runway and associated noise and visual externalities

Summary of General Conditions

The City of Nelson has a relatively strong commercial core in the Downtown, and has a good tourist-based economy. The built form is effective for pedestrians and the heritage buildings are attractive for residents and visitors to the area. Further, the Mall may prevent spending outflow from the community, but its anchor effect for the Downtown is not conclusive at this point.

Waterfront commercial activity will need to be carefully planned as a unique and integrated area in order to complement, rather than compete with the popular and successful Downtown area. The competitive effects can be mitigated by accommodating a different mix of businesses than are in the Downtown, by targeting a different consumer market, or by closely integrating the two areas in such a way that each benefits from cross-over trade.

Stimulating Community Investment

This section of the report is a description of the mechanisms by which public agencies have sought to encourage private sector stimulus such as property development, increased employment, and community enhancement.

Perhaps the key question to pose is not how to attract private sector investment. Rather, it seems that planners must first ask what type of private investments they wish to attract, and for what purpose – heritage rehabilitation, streetscape improvement, land conservation, population growth, land value increases, etc. – and act accordingly.

Examples and options are discussed throughout the report, and quantitative figures on real revenue implications are provided where available. Anecdotal evidence from informed sources, grounded in extensive observation and experience, is also relied upon to analyze the case for creating a high quality public realm.

The Role of the Public and Private Sectors

[1]When it comes to inducing public realm investment, cities must keep in mind that their needs are often at odds with those of investors and developers. If a city wishes to create a liveable built environment that is vibrant, pedestrian-oriented, safe, sustainable, mixed use and progressive – indeed this type of development has gained significant market, environmental and public policy support in recent years, and has become the core mandate of many cities – a city must consider three inherent realities, and make public investment (or inducements) decisions accordingly:

1. There is no financial evaluation methodology to measure mid-long-term cash flows; real estate is a long-term asset, yet it is financed using a short-term returns bias;

2. The market leans towards standardization of real estate products;

3. Downtown development performs financially differently than conventional suburban development.

Given these realities, public initiatives must work to reign in the conventional market development wisdom – short-term investment bias, standardization, and largely blind to the inherent financial viability of progressive development – and steer developers in the direction of progressive development.[2]

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[1] Note: The following arguments are drawn primarily from: Leinberger, 2001.

[2] Progressive development is pedestrian oriented, with a complex mix of different uses within walking distance (400 meters). These areas must include a multitude of shops, offices, housing, public institutions, and other things for pedestrians to look at. These create the key elements of person mass and a feeling of safety. Multiple transportation options are required. Progressive development may take the form of a "green-field" project – one in which critical mass builds slowly, requiring much additional investment in the interim – or the extension of existing pedestrian oriented sections. In either case, once a pedestrian-oriented district is established, real estate values in and around that area tend to escalate to the highest levels in the metropolitan area (Leinberger 2001).

The reality in Calgary and other Western Canadian markets is that developers are often willing to develop high quality environments themselves, and/or to engage in municipal negotiations that typically result in contributions to municipal public realm improvement initiatives.

According to Leinberger (2001), the three inherent realities listed above can be circumvented, and progressive development can be initiated and sustained if:

1. Mid- to long-term returns are superior to conventional development;

2. Appropriate investors are connected with appropriate investments; each piece of the debt ("frames") of a project must be divided according to the risk associated with each of them.

In general terms, downtown revitalization does not financially perform as well as conventional development in the early years, but accelerates during the mid-long term. This is particularly evident in downtowns that have not developed a critical mass of residential and pedestrian-scale environments. As a result, each additional development builds on the efforts of the ones before, and over time the cumulative effect is a beneficial environment for residential development.

Using this model of greater returns in subsequent years, investors can be connected to associated debt pieces according to their return timeframe.[3] Short term investors - construction lenders and the like - will receive the bulk of their cash flow in the first 5 years. This allows only a portion of the costs of a project to be amortized over the first 5 years, resulting in a higher quality project. Mid-term investors – equity investors and the like – receive the bulk of their cash flow in the second time frame. They are willing to trade off financial returns in the early years for a larger share of mid-term returns. The third time frame investors receive their returns in the long-term.

Cities can initiate or induce public realm investment by acting as third frame investors. The city could come in as a development partner, investing in infrastructure, re-directing increased tax revenues to help finance projects, and providing land on which both public and private structures may be built. The city would, in exchange, receive its cash flows in the latter time frame, and will of course benefit from net tax revenues generated from improved areas and surrounding blocks.

Types of Public Realm Investments

A literature review has generated the following discussion of key categories and types of discretionary public sector investments:

[3] *Described in greater detail on pages 12-15 of Leinberger, 2001.*

Improving public safety

Creating a public realm that provides both the appearance and reality of safety is a complex and multifaceted issue. People can feel "safe" or "unsafe" in many different ways, and in varying environments. For instance, increased traffic, lack of sidewalks, or inadequate bicycle routes may create feelings of anxiety. The lack of people on a street in an urban area may make people feel unsafe on those streets or in an urban environment in general.

Whatever the reasons are for people feeling unsafe in the public realm, the end goal must be to create pedestrian traffic and street-level vibrancy. Many safety concerns can be addressed through discretionary investments in the following areas:

- Creating pedestrian friendly streetscapes that are pleasant, well-lit, visible, and green can bring people to the street and populate the public realm;
- Building ground-level, street-facing residences with porches and stoops that are strategically located to create the reality and perception of "eyes on the street;"
- Create transparency so pedestrians can see what is going on in particular locations;
- Improve lighting, provide safety call boxes;
- Increase the presence and visibility of police, security, fire protection and health services; police/security/transit kiosks may be desirable.

Often the creation of real and perceived safety in the public realm is reliant on bringing critical mass to an area; "people will walk 1500 feet or more only if they have an interesting and safe streetscape and people to watch along the way."[4]

[4] *Leinberger, 2005.*

Façade Improvement and Heritage Preservation

The success of a downtown can be distilled down to an ability to attract people and assuring that they remain in the area to pursue their activities. To attract and retain the upper socio-economic-level demographics, the downtown must possess a magnet to give people a reason to live and work in the area, and pay price premiums to do so. One way to do this is through enhancing the look of public spaces. Another way, which may or may not be associated with the first, is emphasizing the historical character of an area, or creating an area that alludes to commonly held urban histories. To do this, investments in the public realm may be made in the form of façade improvements and heritage preservation/rehabilitation; investments may be made by the public sector, private sector (with public incentives), or in partnerships with land/business owners. Investments may include:

- Tile Work
- Re-painting
- Awnings
- Various creative and historical touches
- Courtyards, fountains
- Modernization and upgrades for building code compliance

Mechanisms for these improvements could range from direct investments, investment matching, density bonuses, tax abatements, and so on.

Streetscape improvements

Creating a pedestrian friendly streetscape can be accomplished through a variety of streetscape improvement mechanisms, used in any number of combinations. Improvements might include:

- Building Plazas
- Installing urban/outdoor furniture
- Increasing levels of street and sidewalk lighting – note that lighting fixtures with historical relevance to a neighbourhood can create a greater sense of community 'ownership.'
- Investing in pedestrian scale public art
- Providing assorted public landscaping
- Protecting existing landscaping, trees and shrubs

Public building construction

Another key area of public realm investment comes in the form of developing public buildings. Construction may occur in partnerships with the private sector; buildings may also be privately funded and publicly owned (or revert to public ownership over time). Some examples of public building construction include:

- Build Convention centres, courthouses, municipal offices;
- Build Parking structures;
- Purchase derelict/dilapidated structures for demolition or renovation; this could be consistent with heritage preservation.

Transportation and parking

Making transportation and parking related investments can significantly improve the look, feel and safety (both perceived and actual) of an urban area. Possible investment options include:

- New roads or bridges to connect or reduce distance to an area
- Traffic Calming measures
    - Improved signage
    - Speed humps
    - Landscaped street islands with plants
        - Clearly designates a residential area and marks the entry into this zone for motorist.
        - Islands must 'stick out' far enough to slightly impede traffic
        - Islands should alternate from one side of the street to the other, staggering 65-95 metres
        - Islands placed slightly away from curb to allow for drainage
- Pedestrian malls
- Municipally run parking facilities
- Control of parking lots and street parking
- Flex boulevards
- Increase transit options and availability

Natural amenities and Land Conservation

An urban environment that builds itself around, or connects itself to surrounding natural amenities can be both attractive and pedestrian friendly. Cities that invest in parks, greenways, open spaces, land conservation, guided development and urban trails see significant increases in private investment, property values, and property tax revenue. Many planners and developers see the economic advantages of making investments in parks and open space: such investments can pay themselves back quickly through increased occupancy rates and increased rents, simply due to the attractiveness of the surrounding location. Investments in amenity use and improvement might include:

- Restoring and/or developing of riverside properties;
- Opening, improving or connecting pedestrian friendly corridors to riverside sites (e.g. paths connecting downtown to the riverfront);
- Creating easy access to natural amenities (e.g. Access to water unfettered by developments such as waterside freeways - (Filion et al. 2004; 332));
- Building new parks; creating protected open spaces;
- Buying tracts of land for conservation or urban growth boundaries – businesses are attracted by forests, orchards, creeks and the like on the outskirts of liveable urban areas.

Much has been written on the economic benefit of making public realm investments in the form of natural amenities, parks and open spaces, but little attention has been given to the costs associated with *not* making these investments. Some planners have noted that natural amenity investments and land conservation, while imposing costs on municipalities, are often less expensive for local governments than standard suburban-style development. Open lands, rather than being a drain on local taxes, can actually subsidize local government by generating far more in property taxes from surrounding properties than they demand in services.

Increasing visibility of downtown through marketing and event programming

Through a downtown marketing partnership – between the City, developers, and businesses – a city can promote the downtown area and actively work to attract investment. In the process of promoting and attracting investment, the partnership actively recruits new businesses, maintains and monitors pedestrian and parking statistics, analyses marketplace trends and statistics, undertakes and implements a marketing and promotion plan for downtown, liaises with Business Improvement Areas, undertakes corporate advertising and direct mailings.

Attracting and retaining employment

Studies undertaken by the Arcadia Land Company, The Brookings Institution and others show that public investments are key for downtown revitalization and other urban development/ redevelopment efforts to succeed. Public investment must come "up front", during the early years of the redevelopment process. "These are by far the most risky and, therefore, most 'expensive' dollars."[5] But the bulk of public investment must come in the early years to set the stage for private development.

Mechanisms and Effects

A number of mechanisms can be put to work to realize effective public realm investments and garner the necessary and desired response(s) from the private sector. Discussed in this section are a series of public investment mechanisms that have been implemented successfully in North America.

Formation of a Catalytic Development Company (CDC)

To encourage private sector investment in a revitalizing downtown, the municipal government may encourage the **formation of a catalytic development company** (CDC) to build an initial assemblage of private sector projects; these will in turn act as anchors for subsequent projects. A CDC may be useful (and in fact necessary) in cases where market and consumer research show there is potential demand, but where the risk level is 'above market'. "The catalytic development firm demonstrates to the rest of the development community and their investors that downtown development can make economic sense."[6]

Beyond acting as a bellwether for the development community, the CDC has a unique ability to pursue higher-quality projects and create the pre-conditions for progressive developments that are mixed-use, pedestrian-oriented and mixed-income. It has this ability because its unique corporate structure allows it to have a much longer-term investment time horizon. As Leinberger describes, the CDC is generally a for-profit/non-profit joint venture; a development company with a 'new urbanism'[7] vision joins with one or

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[5] *Leinberger, 2002.*
[6] *Leinberger, 2005; 12*
[7] *New Urbanism – a movement promoting the creation and restoration of diverse, walkable, compact, vibrant, mixed-use communities composed of the same components as conventional development, but assembled in a more integrated fashion, in the form of complete communities. These communities contain housing, work places, shops, entertainment, schools, parks, and civic facilities essential to the daily lives of the residents, all within easy*

more non-profits with longer-term social and community perspectives (2005). The non-profits are able to offer the for-profit component low interest-rate loans - 'patient capital' - allowing for high quality projects to be built "with the kind of construction walkable urbanity demands."[8]

How does this relate to public realm investment? The municipality has a key role to play in the formation and financial feasibility of the CDC's project(s) and in turn the success of the entire revitalization effort. In the interest of creating a higher-quality built environment, the city will agree to receive the bulk of its returns in the long-term (i.e. in a later time frame), well after those investors with shorter investment time horizons have received their capital and return. The city, in lieu of subsidies to the developer, will assume the role of partner in the venture; it could invest in the form of:

- Land purchase and assembly
- Parking structures
- Infrastructure
- Tax abatements (discussed further below).
- Zoning and development approvals

The activities of the CDC may include, but may not be limited to:

- Land assemblage and land development to prepare lots for construction
- Financing the gap between conventional financing and the amount required for a project
- Developing complete buildings from beginning to end (more likely if large-scale redevelopment is necessary and private market judges the risk is too high to be pioneers)

If successful, the CDC will prove the viability of a given development area, the private market will step in, and the CDC will join such ventures through land provisions, as provider of market and consumer research, and the like. The CDC may eventually be redundant once the private sector fully takes hold.

For the city, public realm investments made as a development partner will lead to financial returns once critical mass is reached. Initial investment return will occur over a longer-term; net tax revenues will be garnered from land value increases in the renewed district; indirect tax revenues will be reaped from surrounding areas as the 'core' values increase.

Tax Tools, Re-investments and Loan Guarantees

Tax Incentives

The public sector may chose to provide tax incentives for new real estate development as a means of inducing private investment. Tax incentives can be distributed based on the developers' plans vis-à-vis the vision for the community. Decisions on eligible properties and scales of incentive availability can be taken based on the needs of the municipality.

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walking distance of each other. New Urbanism promotes the increased use of trains and light rail, instead of more highways and roads (Johnston et al., 2004).

[8] *Leinberger 2005; 15.*

Tax Abatements and Re-Investments

As development proceeds and walkable urbanity is created, there will generally be an upward trend of value creation as a result of more people wanting to live there and increased potential for businesses to be profitable in that location. Through this upward spiral, the municipality will benefit through increased tax revenues. To help finance the project, in which the city is an active partner (potentially via a CDC partnership), the city may choose to abate some of these taxes, or actively re-invest tax income back into further land or infrastructure work. In the abatement scenario, the municipality may freeze taxes for a period of ten years. The "cost" to the municipality is the foregone tax revenues if the land appreciates in value, which is zero if the development occurs as a direct result of the abatement. The benefit to the municipality is the eventual higher tax revenues from the site (after the abatement period expires), and any increased taxes from surrounding sites that increase in value or revenue as a result of the development project.

Loan Guarantees
Another means of public sector financial support to stimulate private investments may come through loan guarantees and a series of other incentive programs.

Encourage formation of Business Improvement Areas (BIAs)

A Business Improvement Area (BIA) is essentially a "quasi-government for the downtown, [providing] services the city government cannot deliver."[9] It is funded by property owners who voluntarily increase their property taxes to pay for BIA functions. The tax is collected through normal city channels, and the funds are controlled by the BIA's board of directors. The BIA manages and implements the strategy. Some possible roles for the BIA follow:

- Developing and pushing for approval of form-based zoning codes
- Marketing the downtown to new developers
- Increasing safety (perceived and actual)
    - Safety ambassadors
- Increasing public realm cleanliness (to draw consumers)
- Creating festivals and events to draw consumers
- Improving area's image

It is in the interest of the city to encourage the formation of a BIA for a number of reasons:

- BIA can generate extra funds (through voluntary tax increases), reducing city expenses
- BIA takes it upon themselves to promote their region to developers
- BIA creates cleanliness, safety and excitement in the public realm. This induces more travel to the area, increasing critical mass, and thus increases the desirability of the area for private developers.

[9] *Leinberger 2005; 11*

Implementation Opportunities

This section includes a number of implementation opportunities for Nelson to consider in its planning and eventual development of lands in the Waterfront area.

Catalyst Investment

While there are already productive uses on the Nelson Waterfront lands, in some master-planned redevelopment scenarios where there has been a reluctant or tentative development industry response to a new plan, the local government and/or stakeholder groups have undertaken a catalytic development to spur private sector investment. Catalytic developments do not need to be large scale, but they need to show a real commitment on the part of the local government and broader community that it supports the plans for the area. A catalytic development with community investment, such as a civic building, roadway or other infrastructure improvements, or public sector improvements can act as a catalyst.

Transitional Uses First

If a phasing strategy is required in order to transition between the current uses on the site and the eventual future uses as laid out in the new Waterfront plan, rather than go through a long period with incremental developments, larger-scale projects can be undertaken if they are transitional uses – land uses that can co-exist with the current and the future land uses on the site. In areas that will move from industrial to residential/mixed-use, some transitional uses could be:

- Educational institutions and student residences
- Light industrial and warehouses,
- call centres and low-density commercial and offices
- Live-work in some cases

Tax Incentives

Tax incentives can be judiciously applied to incentivize private sector investment. One tax incentive that has seen strong response in Canadian contexts is the tax deferment. In a tax deferment, the owner of a property pays the amount of property tax in year 1 all the way through to year 5 or year 10, and the improvements made on the property are essentially property tax-free until the time at which the deferment period is over. At that point, the property tax increases over a period of 5 years until the taxes collected are at the normal mill rate and assessed value (with improvements) calculated rate. This has been a useful tool in accelerating residential developments, as the developer can pass the tax 'holiday'

on to buyers directly. The City has 'invested' in the project, but without any outlay of funds – only as delayed property taxes.

Public Realm

Public realm improvements have been shown to be 'revenue neutral' in some instances, and can spur investment in redevelopment. The amount spent on improving the public spaces has been recaptured in the property tax lift resulting from the improvements in the area. Some common public realm improvements that could precede and promote redevelopment include: The only stipulation is that the investments need to be tangible, visible, and localized.

- Parks and trail systems
- Lighting and sidewalks
- Street furniture
- Building façade improvement grants

Opportunities for Nelson

Nelson has the potential to take advantage of one or more of these investment and development initiatives. The tax tools are relatively easy to implement, but still generally rely on outside initiative and private interests assuming the risk (albeit reduced risk).

The fact that the City of Nelson is a large land owner in the Waterfront planning district affords it many opportunities for kick-starting development and investment activity. While land costs are typically not the most significant cost item in a development pro forma, if a developer can achieve cost savings of any sort, such as through reduced land costs, it is more likely that they will initiate a project.

Finally, with the City's control of much of the waterfront, the opportunity to create a waterfront trail or linear parks system is highlighted above as one example of how a city can increase the development interest by increasing access to the natural environment and investing in the public realm. As discussed above, the costs of public realm improvements such as trails and parks systems can be recovered through the increased value of neighbouring land, and the resulting taxes paid by landowners.

It is important for the City to identify what their end goal is in order to determine the best mechanism to use. For example, if a revenue-neutral approach is preferred, then a land subsidy or tax abatement approach could be used. If a small up-front investment is possible, then public-realm improvements such as parks and trails could be considered.

Larger public investments, such as infrastructure improvements or creating a CDC could yield more significant or faster private sector response, but the initial cost to the City is higher.

Ultimately, the City should not work at cross-purposes with itself. For example, if public realm improvements are made, then any tax holidays or tax incentives on benefitting properties should be considered carefully, as that type of investment is typically made with the expectation of recouping the cost through increased property taxes.

Appendix B

Environmental Conditions

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Via E-mail: **cowen@ibigroup.com**

IBI Group
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Attention: **Cameron Owen**

RE: PRELIMINARY ENVIRONMENTAL CONSTRAINTS AND OPPORTUNITIES SUMMARY – SUSTAINABLE WATERFRONT AND DOWNTOWN MASTER PLAN, NELSON, BC

Pottinger Gaherty Environmental Consultants Ltd. (PGL) is pleased to provide this summary report outlining our findings for biological environmental constraints and opportunities applicable to the Nelson, BC Sustainable Waterfront and Downtown Master Plan project (the project).

SCOPE

PGL was retained to complete an overview desktop review to identify potential development constraints and opportunities from a biological perspective. Sources of information for this review included:

- The City of Nelson (City) Official Community Plan (OCP);
- MAPSTER (V2.2) and/or Habitat Wizard;
- iMapBC; and
- BC Conservation Data Centre – BC Species and Ecosystems Explorer.

FINDINGS

The desktop review was completed as outlined above, with no site visits or ground-truthing done to assess the information compiled. A summary of our desktop review is provided below.

General

Based on aerial imagery and other mapping sources, the majority of land associated with the project appears to be characterized by disturbed/developed lands. Mixed-land uses including commercial, industrial and residential are apparent throughout. Some green spaces do exist along the southern shore of the Kootenay River (e.g., Lakeside Park); however, these areas are sparse relative to the less-developed northern shore.

Vegetation

The entire project area is located in the West Kootenay variant of the Dry Warm subzone of the Interior Cedar-Hemlock Biogeoclimatic Classification (BEC) zone (ICHdw1). This variant occurs on valley bottoms and lower slopes of the Kootenay Valley between 450 to1,200m elevations on south-facing slopes, and 450 to 1,000m on north facing slopes. The climate influencing vegetation in this variant is characterized by very hot and moist summers with very mild winters experiencing little snowfall. Soil conditions can experience long dry periods in late summer, which will influence the plant species occurring in this region.

Vegetation characteristics for undisturbed zonal sites (i.e., areas where typical plant communities occur and are influenced by neutral soil moisture and nutrient regimes) in the ICHdw1 variant include climax forests dominated by western redcedar (*Thuja plicata*) and western hemlock (*Tsuga heterophylla*). Younger, seral forests on zonal sites include a mixed canopy potentially containing Douglas-fir (*Pseudotsuga menziesii*), paper birch (*Betula papyrifera*), western larch (*Larix occidentalis*), and western white pine (*Pinus monticola*). Understorey species typically include falsebox (*Pachistima myrsinites*), Douglas maple (*Acer glabrum*), black huckleberry (*Vaccinium membranaceum*), baldhip rose (*Rosa gymnocarpa*), twinflower (*Linnaea borealis*), prince's pine (*Chimaphila umbellata*), queen's cup (*Clintonia uniflora*), and wild sarsaparilla (*Aralia nudicaulis*).

As noted, much of the lands within the project area have been disturbed through historical development, and are therefore not likely to contain plant community characteristics expected to naturally occur there. Existing vegetation is likely heavily influenced by disturbance, development, and managed lawns and gardens. It is also likely that there are occurrences of significant populations of invasive plant species, as these plants typically inhabit disturbed environments.

Wildlife

The entire project area occurs in the Southern Interior Mountains (SIM) Ecoprovince, which is home to a variety of ungulates including mule deer (*Odocoileus hemionus*) and white-tailed deer (*Odocoileus virginianus*). Mountain goats (*Oreamnos americanus*) are also widely abundant, as well as the "Rocky Mountain" elk (*Cervus canadensis*) in mountains and valleys in the southern portion of this Ecoprovince. Grizzly bear (*Ursus arctos*) and black bear (*Ursus americanus*) inhabit the area as well as a variety of small mammals including the long-eared myotis (*Myotis volans*), pika (*Ochotona* sp.), hoary marmot (*Marmot caligata*), Columbian ground squirrel (*Spermophilus columbianus*), golden-mantled ground squirrel (*Spermophilus lateralis*), and water vole (*Microtus richardsoni*).

A pocket of the project area on the southwest shore of the Kootenay River is designated as ungulate winter range (UWR) for mule deer. The quality of this habitat in this specific area is likely degraded due to the extensive development that exists there. The portion of the project area occurring on the north shore of the Kootenay River, in its entirety, is also identified as UWR. This habitat is likely superior in quality relative to the south-western UWR due to the surrounding, less-developed lands.

The SIM Ecoprovince supports a significant number of bird species known to occur in British Columbia (~70%), and is home to the second highest diversity of breeding species. The only known breeding locations of Forster's Tern (*Strena forsteri*) occur in this Ecoprovince. It is also home to one of the highest breeding concentrations of Ospreys (*Pandion haliaetus*) in the world. It is possible that Osprey nests occur throughout the project area, in which case they would require protection and appropriate buffers from future development.

The provincially rare Western Grebe (*Aechmophorus occidentalis*) and Long-billed Curlew (*Numenius americanus*) are also known to breed in this Ecoprovince. Significant seasonal populations (i.e., autumn and winter) of waterbirds can be found on large ice-free lakes, and flocks of Clark's Nutcracker (*Nucifraga columbiana*) inhabit the valley bottoms during autumn and winter. The numerous water bodies occurring in this Ecoprovince are important migration staging areas for several species including Tundra Swans (*Cygnus columbianus*) and Canada Geese (*Branta canadensis*).

Reptile species found in the SIM Ecoprovince include the painted turtle (*Chrysemys picta*), as well as common garter snake (*Thamnophis sirtalis*) and western terrestrial garter snake (*Thamnophis elegans*). The long-toed salamander (*Ambystoma macrodactylum*), western toad (*Anaxyrus boreas*), and northern leopard frog (*Lithobates pipiens*) are typical amphibians occurring here.

Fish Habitat

According to the provincial Habitat Wizard database, there are four tributary watercourses associated with the project area, in addition to the Kootenay River. The Kootenay River is the most productive and valuable fish habitat in the project area, and is home to a diverse population of fish species (Table 1). The additional tributaries flowing through the project area all appear to discharge into the Kootenay River, and include Cottonwood Creek, Anderson Creek, and a small unnamed watercourse west of Anderson Creek on the south shore of Kootenay River. An additional unnamed watercourse flows through a small portion of the project area on the north shore of Kootenay River discharging into the river just north of the Nelson Bridge.

It is anticipated that additional minor, unnamed tributaries and drainage ditches (i.e., roadside ditches) not identified in available mapping resources are likely present throughout the project area. These watercourses may contribute to downstream fish habitat and will require consideration in development planning and application of best management practices during construction to minimize impacts.

According to the provincial Fisheries Information Summary System, a variety of fish species have been found in the Kootenay River, Cottonwood Creek, and Anderson Creek. A summary of fish species occurrences is provided in Table 1. There are no known reports of fish presence in the unnamed watercourses and drainage ditches onsite; however, they will be considered fish habitat if they provide food and nutrients to downstream fish-bearing habitat.

As indicated in the City's OCP, any proposed development within 30m of a watercourse will require a detailed assessment under the provincial Riparian Areas Regulation (RAR). A detailed RAR assessment will determine the Streamside Protection and Enhancement Area and final setback requirements based on the existing conditions of the watercourse in question. In addition to this, the OCP states that any proposed development within 15m of watercourses will require approval through a development permit. Development with the potential to cause a harmful alteration, disruption or destruction of fish habitat will require approval from Fisheries and Oceans Canada, who may also require that significant compensation efforts be undertaken to ensure that there is no net loss of fish habitat as a result of the development.

Species at Risk

A search of the provincial Conservation Data Centre (CDC) database was completed for the project area. The CDC search identified a variety of Red-listed (endangered in BC) and Blue-listed (special concern in BC) animal and plant species at risk (SAR) that potentially occur in the project area. Under the Canadian *Species At Risk Act* (SARA), some species are identified at a federal level and are protected under Schedule 1 of the Act (see Appendix 1 for full status definitions for both provincially and federally identified species). In addition, the CDC was consulted to recognize provincially listed ecosystems at risk in ICHdw1 variant.

Detailed surveys for focal wildlife, plant, and ecosystems of conservation concern (i.e., listed by the CDC and/or protected under the *SARA*) were not completed as part of this desktop review. Therefore, it is assumed that the listed species and ecosystems that use habitat types provided in or around the project area may potentially occur in this area.

All animal and plant species at risk potentially associated with the project area are listed in Tables 2 and 3, respectively. The lists provided are comprehensive; however, species that prefer habitat conditions not likely present onsite are acknowledged. A detailed habitat suitability assessment would likely result in a smaller, more site-specific list.

Our search of the CDC database indicated that there is only one Red or Blue-listed ecosystem at risk occurring in the ICHdw1 variant of the Kootenay Lake Forest District. This search was based on search criteria including the Kootenay Ministry of Environment region, the Regional District of East Kootenay, and the Northern Columbia Mountains Ecoregion. The ecosystem at risk potentially occurring in the project area is listed in Table 4 below.

Table 4: Ecosystem at risk potentially occurring in the project area

Scientific Name	English Name	BC Status	BEC Site Series	Ecosystem Group
Pseudotsuga menziesii/ Mahonia nervosa/ Cryptogramma acrostichoides	Douglas-fir/ dull Oregon-grape/ parsley fern	Red	ICHdw1/02	Woodland, forest

Search Criteria: Red or Blue Provincial Status; Endangered, Threatened or Special Concern status with COSEWIC; Kootenay Lake Forest District; Kootenay Ministry Of Environment Region; RDCK; ICH BEC Zonel; Lacustrine, Palustrine, Riverine, Subterranean, and Terrestrial habitat types.

Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Ministry of Environment, Victoria, B.C. Available: http://a100.gov.bc.ca/pub/eswp/ (accessed Oct 1, 2010).

According to the CDC, there are several mapped known occurrences of SAR occurring in or within close proximity to the project area. Occurrences outside of the project area should be considered as they may indicate that suitable habitat may be present within the project area and species presence is possible, but not yet been confirmed. Confirmed occurrences of SAR include:

- White sturgeon (*Acipenser transmontanus*) in the Kootenay River (Red-listed fish species protected federally under Schedule 1 of the SARA);
- Nuttall's waterweed (*Elodea nuttallii*) off the southern shore of Kootenay River at the northwest end of Hall Street (Blue-listed plant species); and

- Western skink (*Plestiodan skiltonianus*) outside of the project area on the north side of Kootenay River up the Grohm Creek watershed (Blue-listed reptile species protected federally under Schedule 1 of the SARA).

Development planning throughout the project area should be aware of these known occurrences and applicable SAR best management practices must be implement to avoid impacts to these sensitive species.

CONSTRAINTS AND OPPORTUNITIES

Based on PGL's desktop review of available resources, we conclude that there are several potential environmental constraints that will require consideration during the planning process. Opportunities exist in the fact that the majority of the project area has been previously disturbed through a variety of development initiatives. Environmental values on developed and/or disturbed lands are likely minimal to insignificant and should not pose a significant constraint providing standard best management practices are applied (e.g., sediment and erosion control measures, environmental monitoring during construction, etc.).

Known potential environmental constraints for new development in the project area identified through our desktop review are shown in Figure 1 and include:

- Fish Habitat:
  - There is a high level of environmental value within 15m of all watercourses and water bodies and impacts should be avoided completely;
  - Proposed development within 15m of a watercourse will require approval from the City and Fisheries and Oceans Canada, as well as significant compensation;
  - There is a moderate to high level of environmental value within the 15–30m zone from all watercourses and impacts should be avoided but may be possible with compensation; and
  - Any proposed development within 30m of a watercourse will require a detailed assessment under the provincial RAR to determine final setback requirements.
- Ungulate Winter Range:
  - The UWR in the southwest corner of the project area has low environmental value where impacts are likely insignificant but may require further investigation to assess habitat suitability, as well as mitigation/compensation efforts, but should not limit development; and
  - The UWR in the northeast corner of the project area has moderate to high environmental value where minor impacts are possible, but avoidance is recommended.
- Known Occurrences of SAR:
  - White sturgeon (Red-listed; Schedule 1) occurring throughout the Kootenay River;
  - Nuttall's waterweed (Blue-listed) occurring along the southern shore of Kootenay River at the north end of Hall Street;
  - Development in and along the shores of Kootenay River is not recommended, as there is moderate to high environmental value for SAR; and
  - Proposed development in and along the shores of Kootenay River will likely require mitigation that could prove difficult along with additional investigations (e.g., species presence/absences surveys, habitat suitability assessments, etc.) and extraordinary compensation measures.

We trust our report meets your needs. If you have any questions, please contact Keven Goodearle or Bruce Nidle at 604-895-7646 and 604-895-7609, respectively.

POTTINGER GAHERTY ENVIRONMENTAL CONSULTANTS LTD.
Per:

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KMG/BHN/mlo
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Attachments: Tables 1–3
Figure – Environmental Constraints
Appendix 1 – Status Definitions for Provincial and Federal Species at Risk

Tables

Table 1
Potential Fish Species Occurring in Identified Watercourses
IBI Group, PGL File: 0585-02.01

Fish Species Name (Common)	BC Status[1]	SARA Status[1]	COSEWIC[2]	Kootenay River	Cottonwood Creek	Anderson Creek
Bridgelip Sucker	Yellow	-	-	●		
Brook Trout	Exotic	-	-	●		
Bull Trout	Blue	-	-	●		
Burbot	Yellow	-	-	●		
Cutthroat Trout, *lewisi* subspecies	Blue	-	Special Concern	●		
Dolly Varden	Blue	-	-	●		
Lake Whitefish	Yellow	-	-	●		
Largemouth Bass	Exotic	-	-	●		
Largescale Sucker	Yellow	-	-	●		
Leopard Dace	Yellow	-	Not at Risk	●		
Longnose Dace	Yellow	-	-	●		
Longnose Sucker	Yellow	-	-	●		
Mountain Whitefish	Yellow	-	-	●	●	
Northern Pikeminnow (N. Squawfish)	Yellow	-	-	●		●
Peamouth Chub	Yellow	-	-	●		
Prickly Sculpin	Yellow	-	-	●		
Pumpkinseed	Exotic	-	-	●		
Pygmy Whitefish	Yellow	-	-	●		
Rainbow Trout	Yellow	-	-	●		
Redside Shiner	Yellow	-	-	●		●
Slimy Sculpin	Yellow	-	-	●		
Sockeye Salmon (Kockanee)	Yellow	-	Endangered	●	●	●
Torrent Sculpin	Yellow	-	-	●		●
Umatilla Dace	Red	3	Threatened	●		
Walleye	Yellow	-	-	●		●
White Sturgeon	Red	1	Endangered	●		
Yellow Perch	Unknown	-	-	●		

Source: BC Ministry of Environment, Fisheries Data Warehouse (Accessed October, 2010).

[1] See Appendix 1 for BC Status and SARA Status definitions.

[2] COSEWIC = Committee On the Status of Endangered Species In Canada.

Table 2
Animal Species at Risk
IBI Group, PGL File: 585-02.01

Scientific Name	English Name	COSEWIC	BC List	SARA	Habitat Type
Reptiles and Amphibians					
Lithobates pipiens	Northern Leopard Frog	Endangered	Red	1	Lacustrine; Palustrine; Riverine; Terrestrial
Plethodon idahoensis	Coeur d'Alene Salamander	Special Concern	Yellow	1	Palustrine; Riverine; Subterranean
Plestiodon skiltonianus	Western Skink	Special Concern	Blue	1	Palustrine;Terrestrial
Chrysemys picta pop. 2	Western Painted Turtle - Intermountain - Rocky Mountain Population	Special Concern	Blue	1	Palustrine; Riverine
Birds					
Aechmophorus occidentalis	Western Grebe	-	Red	-	Lacustrine; Palustrine; Riverine
Ardea herodias herodias	Great Blue Heron, herodias subspecies	-	Blue	-	Lacustrine; Palustrine; Riverine; Terrestrial
Asio flammeus	Short-eared Owl	Special Concern	Blue	3	Palustrine; Terrestrial
Botaurus lentiginosus	American Bittern	-	Blue	-	Palustrine
Contopus cooperi	Olive-sided Flycatcher	Threatened	Blue	1	Palustrine; Terrestrial
Dolichonyx oryzivorus	Bobolink	Threatened	Blue	-	Palustrine; Terrestrial
Falco mexicanus	Prairie Falcon	Not at Risk	Red	-	Terrestrial
Hirundo rustica	Barn Swallow	-	Blue	-	Lacustrine; Palustrine; Riverine; Terrestrial
Icteria virens	Yellow-breasted Chat	Endangered	Red	1	Palustrine; Terrestrial
Megascops kennicottii macfarlanei	Western Screech-Owl, macfarlanei subspecies	Endangered	Red	1	Palustrine; Terrestrial
Melanerpes lewis	Lewis's Woodpecker	Threatened	Red	1	Palustrine; Terrestrial
Numenius americanus	Long-billed Curlew	Special Concern	Blue	1	Palustrine; Terrestrial
Otus flammeolus	Flammulated Owl	Special Concern	Blue	1	Terrestrial
Phalacrocorax auritus	Double-crested Cormorant	Not at Risk	Blue	-	Lacustrine; Palustrine; Riverine; Terrestrial
Sterna forsteri	Forster's Tern	Data Deficient	Red	-	Lacustrine; Palustrine; Riverine; Terrestrial
Bivalves					
Musculium partumeium	Swamp Fingernailclam	-	Red	-	Lacustrine; Palustrine; Riverine
Gastropods					
Anguispira kochi	Banded Tigersnail	-	Blue	-	Terrestrial
Cryptomastix mullani	Coeur d'Alene Oregonian	-	Blue	-	Terrestrial
Fluminicola fuscus	Ashy Pebblesnail	-	Red	-	Riverine
Fossaria truncatula	Attenuate Fossaria	-	Blue	-	Lacustrine; Riverine
Hemphillia camelus	Pale Jumping-slug	-	Blue	-	Terrestrial
Kootenaia burkei	Pygmy Slug	-	Red	-	Riverine; Terrestrial
Magnipelta mycophaga	Magnum Mantleslug	-	Blue	-	Terrestrial
Oreohelix strigosa	Rocky Mountainsnail	-	Blue	-	Terrestrial
Oreohelix subrudis	Subalpine Mountainsnail	-	Blue	-	Terrestrial
Physella columbiana	Rotund Physa	-	Red	-	Riverine
Valvata tricarinata	Threeridge Valvata	-	Red	-	Lacustrine; Riverine

Table 2
Animal Species at Risk
IBI Group, PGL File: 585-02.01

Scientific Name	English Name	COSEWIC	BC List	SARA	Habitat Type
Insects					
Argia vivida	Vivid Dancer	-	Red	-	Riverine
Colias pelidne	Pelidne Sulphur	-	Blue	-	Terrestrial
Danaus plexippus	Monarch	Special Concern	Blue	1	Palustrine; Terrestrial
Epargyreus clarus	Silver-spotted Skipper	-	Blue	-	Terrestrial
Epargyreus clarus clarus	Silver-spotted Skipper, clarus subspecies	-	Blue	-	Terrestrial
Lycaena nivalis	Lilac-bordered Copper	-	Blue	-	Palustrine; Terrestrial
Polites themistocles themistocles	Tawny-edged Skipper, themistocles subspecies	-	Blue	-	Terrestrial
Pyrgus communis	Checkered Skipper	-	Blue	-	Palustrine; Terrestrial
Mammals					
Corynorhinus townsendii	Townsend's Big-eared Bat	-	Blue	-	Palustrine; Subterranean; Terrestrial
Gulo gulo luscus	Wolverine, luscus subspecies	Special Concern	Blue	-	Terrestrial
Martes pennanti	Fisher	-	Blue	-	Palustrine; Terrestrial
Myotis thysanodes	Fringed Myotis	Data Deficient	Blue	3	Palustrine; Subterranean; Terrestrial
Neotamias ruficaudus simulans	Red-tailed Chipmunk, simulans subspecies	-	Blue	-	Terrestrial
Ovis canadensis	Bighorn Sheep	-	Blue	-	Palustrine; Terrestrial
Rangifer tarandus pop. 1	Caribou (southern mountain population)	Threatened	Red	1	Terrestrial
Taxidea taxus	American Badger	Endangered	Red	1	Terrestrial
Thomomys talpoides segregatus	Northern Pocket Gopher, segregatus subspecies	-	Red	-	Palustrine; Terrestrial
Ursus arctos	Grizzly Bear	Special Concern	Blue	-	Palustrine; Riverine; Terrestrial
Fish					
Acipenser transmontanus pop. 1	White Sturgeon (Kootenay River population)	Endangered	Red	1	Lacustrine; Riverine
Cottus hubbsi	Columbia Sculpin	Special Concern	Blue	1	Riverine
Lota lota pop. 1	Burbot (lower Kootenay population)	-	Red	-	Lacustrine
Oncorhynchus clarkii lewisi	Cutthroat Trout, lewisi subspecies	Special Concern	Blue	-	Lacustrine; Riverine
Rhinichthys umatilla	Umatilla Dace	Threatened	Red	3	Riverine
Salvelinus confluentus	Bull Trout	-	Blue	-	Lacustrine; Riverine

Search Criteria: Red or Blue Provincial Status; Endagered, Threatened or Special Concern status with COSEWIC; Kootenay Lake Forest District (DKL); Kootenay MOE Region; RDCK; ICH BEC Zonel; Lacustrine, Palustrine, Riverine, Subterranean, and Terrestrial habitat types.

Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: http://a100.gov.bc.ca/pub/eswp/ (accessed Oct 1, 2010).

= Species most likely not to occur on or around the project area.

Table 2
Plant Species at Risk
IBI Group, PGL File: 585-02.01

Scientific Name	English Name	COSEWIC	BC List	SARA	Habitat Type
Acorus americanus	American sweet-flag	-	Blue	-	Shallow water in the montane zone
Artemisia ludoviciana ssp. incompta	western mugwort	-	Blue	-	Mesic to dry slopes, gravelly river terraces and open forests in the steppe, montane and subalpine zones
Calamagrostis montanensis	plains reedgrass	-	Blue	-	Dry slopes and open forests in the steppe and montane zones
Dryopteris cristata	crested wood fern	-	Blue	-	Wet swamps and meadows in the steppe and montane zones
Elodea nuttallii	Nuttall's waterweed	-	Blue	-	Lakes, ponds and streams in the lowland, steppe and montane zones
Entosthodon fascicularis	banded cord-moss	Special Concern	Blue	1	Humid/damp earth terraces of exposed outcrop knobs; Known collection from Yahk in SE B.C. is highly disjunct from the other known populations (e.g., Vancouver Island and Gulf Islands), but has been verified
Epipactis gigantea	giant helleborine	Special Concern	Blue	3	Moist streambanks, fens, marshes and swamps, and around hot springs in the lowland and montane zones
Heterocodon rariflorum	heterocodon	-	Blue	-	Moist seepage areas in the lowland and lower montane zones
Hypericum scouleri ssp. nortoniae	western St. John's-wort	-	Blue	-	Moist to wet streamsides, estuaries, marshes and open slopes in all zones except the alpine and steppe zones
Impatiens ecalcarata	spurless touch-me-not	-	Blue	-	Moist forests in the montane zone
Leptosiphon septentrionalis	northern linanthus	-	Blue	-	Dry slopes, meadows, sagebrush flats and forest openings in the steppe and montane zones
Lewisia triphylla	three-leaved lewisia	-	Blue	-	Moist gravelly slopes, meadows, open forests and sandy snowbed sites from the montane to alpine zones
Megalodonta beckii	water marigold	-	Blue	-	Lakeshores and ponds in the lowland, steppe and montane zones
Melica spectabilis	purple oniongrass	-	Blue	-	Wet to dry meadows and open forests in the montane and subalpine zones
Mertensia paniculata var. borealis	tall bluebells	-	Blue	-	Wet to mesic meadows, streambanks and open forests in the montane, subalpine and alpine zones

Table 2
Plant Species at Risk
IBI Group, PGL File: 585-02.01

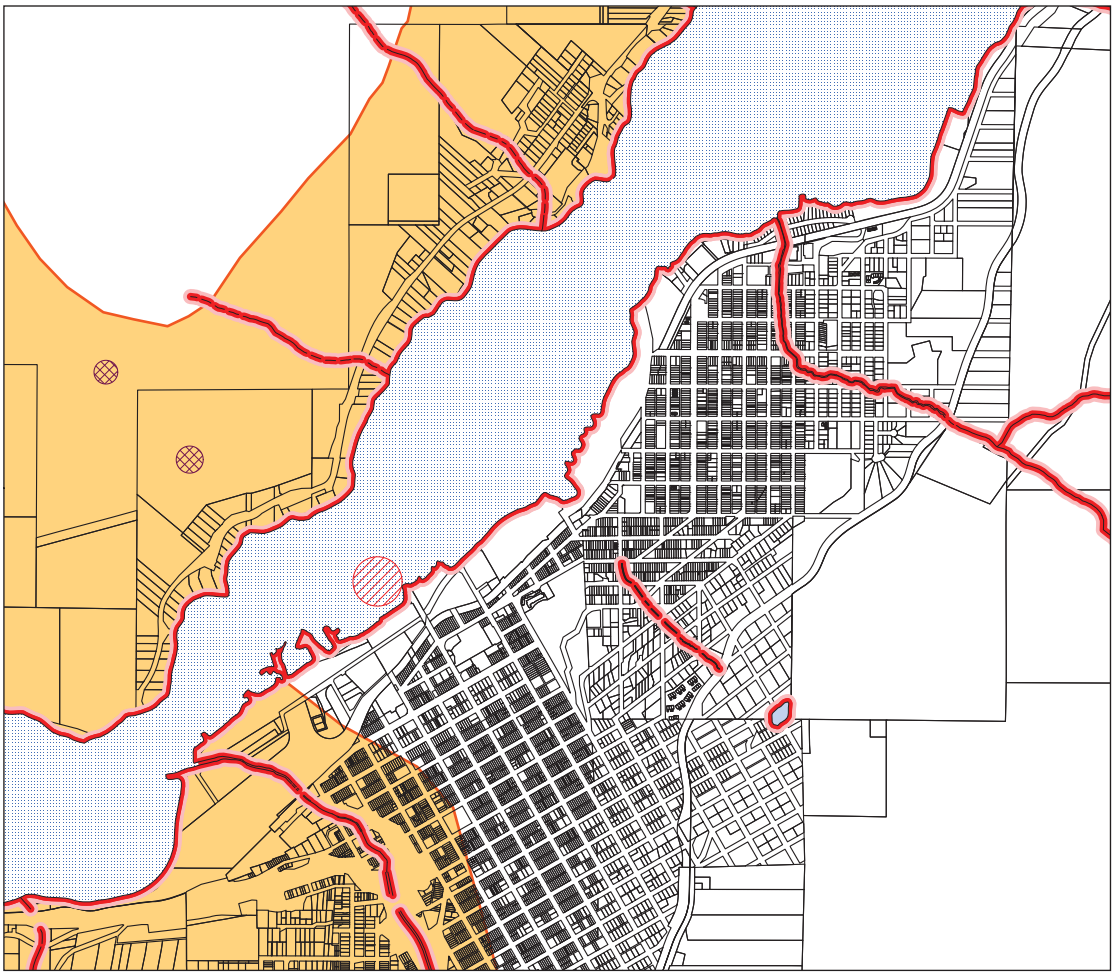
Scientific Name	English Name	COSEWIC	BC List	SARA	Habitat Type
Muhlenbergia glomerata	marsh muhly	-	Blue	-	Wet to moist meadows, streambanks, bogs, irrigation ditches, lake margins, and hot springs in the steppe and montane zones
Myriophyllum ussuriense	Ussurian water-milfoil	-	Blue	-	Lake margins and muddy river banks in the lowland zone
Nephroma occultum	Cryptic Paw	Special Concern	Blue	1	On bark and wood of conifers; old-growth forests on the western slope of the Cascades, dominated by *Pseudotsuga - Tsuga heterophylla*, stands tending to have abundant populations of *Lobaria oregana*; On fallen branches or recently windthrown trees; Near the forest floor only where the forest is somewhat more open; The lichen occurs most frequently in the mid to upper canopy
Polygonum polygaloides ssp. kelloggii	Kellogg's knotweed	-	Blue	-	Wet vernal pools and ditches to dry roadsides and meadows in the montane and subalpine zones
Scouleria marginata	margined streamside moss	Endangered	Red	1	Not much known but appears to be restricted to wet rocks and/ or outcrops along seasonally flooded streams in montane areas
Senecio hydrophiloides	sweet-marsh butterweed	-	Red	-	Wet to moist meadows and forest openings in the montane and lower subalpine zones
Senecio hydrophilus	alkali-marsh butterweed	-	Red	-	Wet, often alkaline swamps and meadows in the montane zone
Sphenopholis obtusata	prairie wedgegrass	-	Red	-	Moist meadows, streambanks, shallow ponds and hot springs in the steppe and montane zones
Stellaria obtusa	blunt-sepaled starwort	-	Blue	-	Wet to moist meadows and streambanks in the montane zone

Search Criteria: Red or Blue Provincial Status; Endagered, Threatened or Special Concern status with COSEWIC; Kootenay Lake Forest District (DKL); Kootenay MOE Region; RDCK; ICH BEC Zonel; Lacustrine, Palustrine, Riverine, Subterranean, and Terrestrial habitat types.

Citation: B.C. Conservation Data Centre. 2010. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, B.C. Available: http://a100.gov.bc.ca/pub/eswp/ (accessed Oct 1, 2010).

= Species most likely not to occur on or around the project area.

Figure



ENVIRONMENTAL CONSTRAINTS

Legend

Watercourse Regulations

- 15m Development Permit Area
- 30m RAR Assessment Area

Known Species at Risk Occurrences

- White Sturgeon (Kootenay Population) – Red-Listed and Schedule 1 of Species at Risk Act
- Nuttall's Waterweed – Blue-Listed
- Western Skink – Blue-Listed and Schedule 1 of Species at Risk Act

Wildlife Management Area

- Ungulate Winter Range

N

0 125 250 500 750 1,000 Meters

PGL Pottinger Gaherty Environmental Consultants Ltd.

Appendix C

Contaminated Sites Audit

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October 5, 2010
PGL File: 585-02.01

Via E-mail: **sjones@ibigroup.com**

IBI Group
700 – 1285 West Pender Street
Vancouver, BC
V6E 4B1

Attention: **Stuart Jones**

RE: CONTAMINATED SITES AUDIT, CITY OF NELSON'S SUSTAINABLE WATERFRONT AND DOWNTOWN MASTER PLAN AREA, NELSON, BC

Pottinger Gaherty Environmental Consultants (PGL) is pleased to provide our environmental audit to determine the extent of identified and reported environmental contamination within the City of Nelson's Sustainable Waterfront and Downtown Master Plan area. PGL's audit included reviewing the BC Ministry of Environment's (MOE) Site Registry to identify registered contaminated sites within the planning area and determine their status.

In addition, PGL has provided an overview of the regulatory framework for contaminated sites and options to meet required land use.

SITE REGISTRY SEARCH

PGL conducted a search of the BC MOE Site Registry using BC Online to identify sites within the study area that are registered with MOE. The Site Registry documents milestones in the screening, identification, and cleanup of all sites in the province's records. It is a database accessible through BC Online. Sites are captured into the Site Registry primarily by Site Profile submissions.

The Site Registry returns information in the following five categories:

1. General – information on a site's location, fee category, overall cleanup status, and current site profile.
2. Notations – information on legal events, such as issuance of pollution abatement, pollution prevention, and remediation orders, Certificates of Compliance, and Approvals in Principle; and administrative notations (for example, onsite investigation and remediation reports).
3. Participants – information on people and organizations involved in a site and their roles.
4. Documents – information on the existence of reports concerning a site.
5. Land Use – information on the land use related to a site.

Our search identified 36 sites on file within the planning area (Appendix 1) of which 12 are considered inactive and do not require any further assessment. Site status according to the MOE is provided in Table 1 and are summarized below:

- Inactive – No Further Action or Remediation Complete (12 sites);
- Active – Remediation Complete (3 sites);
- Active – Under Assessment (10 sites); and
- Active – Under Remediation (11 sites).

REGULATORY FRAMEWORK OVERVIEW OF BC CONTAMINATED SITES

Assessment of the City of Nelson's Sustainable Waterfront and Downtown Master Plan area will consider development and rezoning options. When a Development or Demolition Permit, or Rezoning or Subdivision Application is submitted to most BC municipalities and regional districts, a Site Profile will be required. The Site Profile is typically requested for commercial and industrial properties but may be requested for any property, although certain exemptions apply. The purpose of the Site Profile is to identify current or former high risk use of the property, or 'Schedule 2', use and includes a number of questions about historical site use. Schedule 2 uses are identified by the Contaminated Sites Regulations as a list of industrial and commercial purposes and activities the MOE deems worthy of further assessment to determine whether the site is contaminated. Development of identified contaminated sites in BC is guided by the provincial *Environmental Management Act*, the Contaminated Sites Regulation, and the Hazardous Waste Regulation.

- The ***Environmental Management Act*** is the main law governing contaminated sites in the province. Brought into force in July 2004, it lays out standards for site identification, assessment, and remediation.
- The ***Contaminated Sites Regulation*** provides site-specific numerical criteria based on site use. A site is not a contaminated site if the soil, surface water, groundwater, sediment (if applicable) and soil vapour do not exceed the applicable Standards.
- For contaminated sites work, the **Hazardous Waste Regulation** will come into play when soil or groundwater is heavily contaminated; enough to require special handling and disposal.

A Schedule 2 use may trigger a process that involves assessment, remediation, and review by the MOE. This has implications on process and planning for site redevelopment and may require an approval from the MOE before redevelopment, rezoning, etc. will be allowed to proceed.

If a site has a Schedule 2 use and municipal permits are required for redevelopment, subdivision, or rezoning, then a MOE instrument is required and is triggered by the Site Profile process as described in the Contaminated Sites Regulation. There are three possible instruments:

- Determination;
- Certificate of Compliance; and
- Approval in Principle.

Determination

If contamination is absent, a report (Preliminary Site Investigation) will be prepared for review by a Roster Expert with a request for a "Determination" that the Site is not a contaminated site. A Determination will enable the development to proceed without environmental restriction.

Certificate of Compliance

A Certificate of Compliance (CofC) is issued when a site was found to be contaminated, and has been remediated to either numeric or risk-based standards. Application for a CofC without an Approval in Principle (see below) requires comprehensive reporting of all phases of investigation and remediation. Application for a CofC with an Approval in Principle requires a Confirmation of Remediation report. A CofC is issued when the site meets the standards of the Contaminated Sites Regulation. In some cases, it is not cost effective to meet numeric standards and so risk-based standards are required. This is referred to as a risk assessment.

Approval in Principle

Financing and local government development approvals of sites with contamination can be impeded if a clear process for dealing with contamination is not in place. A local government or a lender may require assurance that a site has been adequately investigated and that acceptable plans have been developed for remediation. An Approval in Principle provides this assurance because it requires review of investigation results, evaluation of remediation options, and preparation of remediation plans.

REMEDIATION AND RISK ASSESSMENT

Redevelopment, rezoning, or subdivision of any of the contaminated properties identified in our audit will require a Ministry instrument which can be obtained through independent remediation or risk assessment. The instrument will be provided based on the applicability of soil criterion on land use. Standards are given in the Contaminated Sites Regulation for five land use categories (Agricultural, Urban Park, Residential, Commercial, and Industrial).

A Ministry instrument can be obtained for whatever land use is required, however obtaining an instrument for the more stringent Residential or Parkland land use may be more expensive and site activities more intensive than if a Commercial land use designation was required. A summary of remediation and risk assessment activities and applicability is summarized below.

Remediation

If assessment findings determine a site is contaminated and exceeds applicable or desired land use standards, independent remediation can be completed to remove contaminated media to meet applicable land use standards. The degree of remediation will be determined by the selected land use.

Risk Assessment

For some contaminated sites remediation may not be possible or practical because of technological, physical, or financial constraints. These substances however, may be managed onsite to ensure they do not pose a hazard to human or environmental health and permit future development. An estimate of risks associated with leaving substances in place is used to design appropriate risk management solutions to eliminate the risks or reduce them to appropriate levels.

Risk assessment can only be used within a site-specific context.

At a minimum, environmental risk assessment reports must assess the following:

- The potential onsite and offsite environmental impacts arising from substances before and after site remediation or redevelopment; and
- The procedures, including monitoring requirements, designed to reduce significant environmental health impacts identified either onsite or offsite from contaminants remaining in place.

Based on PGL's assessment, 36 contaminated sites were identified on the MOE's Site Registry, of which 12 do not require any additional assessment or remediation. The remaining 24 sites and any additional contaminated sites not already identified will require an instrument from the MOE if redevelopment or rezoning is required. This can be obtained through obtaining a Determination if the site is not contaminated or through remediation or site-specific risk assessment if remediation is not practical.

We trust that this meets your needs. If you have any questions or require clarification, please contact Stewart Brown or Duncan MacDonald at 604-895-7612 and 604-895-7639, respectively.

POTTINGER GAHERTY ENVIRONMENTAL CONSULTANTS LTD.

Per:

Stewart Brown, M.Sc., P.Ag., R.P.Bio.
Environmental Scientist

Duncan Macdonald, B.Sc., P.Eng.
Senior Environmental Engineer

CSB/DGM/stm
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Attachments: Table 1 – MOE Site Status
Appendix 1 – Site Registry Search

Table

TABLE 1
Ministry of Environment Site Status
City of Nelson
IBI Group, PGL File: 585-02.01

ENV REMEDIATION SITE ID	FEATURE CODE	SITE ID	Waste Management FILE NO	Waste VICTORIA FILE NO	COMMON NAME	ADDRESS	New Address	PID	Jurroll	Contamination	Status
6713349	EP87010000	2616	26250-20/2616	26250-20/0783	FORMER ESSO KEYLOCK - NELSON	920 SIMPSON ROAD		014-959-615	2191000000	Y	Active - Under Remediation
6713353	EP87010000	2624	26250-20/2624		FAIRVIEW ESSO - NELSON		705 Nelson Avenue	015-975-312	2192049000	y	
6713362	EP87010000	2641	26250-20/2641 26250-20/2749		210 VERNON STREET (FORMER WHYTE RES.)	210 VERNON STREET		012-053-091	219807000	y	Active - Under Remediation
6713533	EP87010000	2690	26250-20/2690 26100-20/2690	26250-20/2690	FORMER KFP SITE - NELSON	GORDON STREET	Nelson Landing	025-180-142	2192265010	y	Active - Under Remediation
6713535	EP87010000	2696	26250-20/2696		BCBC - GOVERNMENT ROAD		95 Government Road	009-004-238	219928100	y	Active - Under Remediation
6713538	EP87010000	2703	26250-20/2703		HIGH STREET DEVELOPMENTS - NELSON	38 HIGH STREET		NES122	42 Units	y	
6713559	EP87010000	2726	26250-20/2726		CANADA SAFEWAY LTD - NELSON	211 ANDERSON STREET		025-594-206	2191716600	y	
6713701	EP87010000	2729	26250-20/2729	26250-20/0956	FORMER BC TEL POLE YARD		End of Baker Street	012-588-211	219836130	y	Inactive - No Further Action
6713701	EP87010000	2729	26250-20/2729	26250-20/0956	FORMER BC TEL POLE YARD	GOVERNMENT ROAD		016-095-332	219933000	y	Inactive - No Further Action
6713701	EP87010000	2729	26250-20/2729	26250-20/0956	FORMER BC TEL POLE YARD	GOVERNMENT ROAD		016-399-684	219937000	y	Inactive - No Further Action
6713716	EP87010000	2743	26250-20/2743		MOHAWK STATION - NELSON	702 NELSON AVENUE		006-530-192	2192050000	y	
6713904	EP87010000	2733	26250-20/2733		FORMER WOOLCO - NELSON		1200 Lakeside Drive	012-571-075	2191003550	y	Inactive - No Further Action
6714044	EP87010000	1678	26250-20/1678		FORMER CHEVRON BULK PLANT - NELSON		99 Government Road	012-588-539	219836600	y	Inactive - No Further Action
6714145	EP87010000	2179	26250-20/2179	26250-20/2179	SHELL OIL BULK PLANT - NELSON	57 GOVERNMENT ROAD		012-588-423	219836500	y	Active - Under Assessment
6714720	EP87010000	2749	26250-20/2749		FORMER NELSON SHELL - NELSON	213 BAKER STREET		013-658-786	219818000	y	Active - Under Remediation
6714731	EP87010000	3407	26250-20/3407 26100-20/3407		KOKANEE CHEVRON SERVICE - NELSON	301 ANDERSON STREET		024-195-154	2191720000	y	
6714923	EP87010000	3413	26250-20/3413		CITY OF NELSON WORKS & UTILITIES COMPLEX	80 LAKESIDE DRIVE		015-297-756	219971250	y	Active - Under Remediation
6714943	EP87010000	311	26250-20/0311	26250-20/0187	CP RAIL YARD-NELSON		95 Baker Street/206 Lakeside Drive	009-888-993	219836050	y	Active - Under Remediation
6715122	EP87010000	624	26250-20/0624	26250-20/0613	FORMER CANADIAN HELICOPTERS - NELSON	99 LAKESIDE DRIVE		012-905-267	219973010	y	Active - Under Remediation
6715640	EP87010000	1684	26250-20/1684		SELKIRK COLLEGE(ROSEMONT CAMPUS)- NELSON	2001 SILVER KING ROAD		014-952-980	2193284000	y	
6715799	EP87010000	1131	26250-20/1131		SCHOOL DIST. #8, NELSON MAINTENANCE YARD		90 Lakeside Drive	013-315-714	219973025	y	Active - Under Remediation
6715800	EP87010000	2711	26250-20/2711		CITY OF NELSON SUBSTATION #2	606 VICTORIA STREET		013-685-287	219186000	y	Inactive - No Further Action
6715801	EP87010000	2170	26250-20/2170	26250-20/2170	FORMER IMPERIAL OIL BULK PLANT - NELSON	45 GOVERNMENT ROAD		016-077-598	219923000	y	Active - Under Assessment
6716133	EP87010000	231	26250-20/0231	26250-20/0222	FORMER MARATHON REALTY PROPERTY		End of Baker Street	012-588-211	219836130	y	Active - Remediation Complete
6716637	EP87010000	6479	26250-20/6479	26250-20/6479	FORMER FINNING (CANADA) SITE	402 LAKESIDE DRIVE		015-362-426	219977060	y	Active - Remediation Complete
6716647	EP87010000	6491	26250-20/6491		202 LAKESIDE DRIVE, NELSON	202 LAKESIDE DRIVE		012-264-920	219977041	y	Inactive - No Further Action
6717435	EP87010000	6751	26250-20/6751 26100-20/6751		606 LAKESIDE DRIVE, NELSON	606 LAKESIDE DRIVE		015-362-426	219977060	y	Active - Under Remediation
6717562	EP87010000	4809		26250-20/4809	556 JOSEPHINE, NELSON	556 JOSEPHINE		008-680-183	21943000	y	Inactive - No Further Action
6717572	EP87010000	5675	26250-20/5675		FORMER WESTAR (KFP) WASTE CELL #2	WATERFRONT PROPERTY				y	Active - Assessment Complete
6717577	EP87010000	5683	26250-20/5683		FORMER CITY OF NELSON LANDFILL - NELSON		70 Lakeside Drive	012-711-292	219971000	y	Active - Under Assessment
6717696	EP87010000	4001		26250-20/4001/08	111 MACDONALD DRIVE, NELSON	111 MACDONALD DRIVE		013-000-187	219972008	y	Inactive - No Further Action
6717748	EP87010000	4848	26250-20/4848		CITY OF NELSON - AIRPORT		Airport Runway	009-970-142	219977020	y	Active - Under Assessment
6717748	EP87010000	4848	26250-20/4848		CITY OF NELSON - AIRPORT		91 Lakeside Drive	012-905-291	219973015	y	Active - Under Assessment
6718053	EP87010000	6992	26250-20/6992	26250-20/6992	BCBC HIGHWAYS MAINTENANCE YARD - NELSON		801 Front Street	012-176-028	219742000	y	Active - Under Assessment
6718053	EP87010000	6992	26250-20/6992	26250-20/6992	BCBC HIGHWAYS MAINTENANCE YARD - NELSON		110 Cedar Street	024-924-661	219998100	y	Active - Under Assessment
6718053	EP87010000	6992	26250-20/6992	26250-20/6992	BCBC HIGHWAYS MAINTENANCE YARD - NELSON		Kutenai Landing	024-924-652	219998050	y	Active - Under Assessment
6718216	EP87010000	5907	26250-20/5907 26100-20/5907		1004 DAVIES & 508 7TH STREET, NELSON		1004 Davies Street	NES3480	7 Units	y	
6718864	EP87010000	7224	26250-20/7224 26100-20/7224		610 RAILWAY STREET, NELSON	610 RAILWAY STREET		018-048-544	219897050	y	Active - Under Assessment
6719017	EP87010000	6207	26250-20/6207 26100-20/6207		FORMER CHEVRON, 1020 HALL MINES , NELSON	1020 HALL MINES ROAD		016-317-726	2191108000	y	
6719248	EP87010000	7342	26250-20/7342 26100-20/7342		CHAHKO-MIKA MALL PROPERTY - NELSON		1200 Lakeside Drive	012-571-075	2191003550	y	Active - Remediation Complete
6719311	EP87010000	4433	26250-20/4433		CP RAIL STATION HOUSE - NELSON		91 Baker Street	017-439-205	219836450	y	Active - Under Assessment
6719865	EP87010000	10654		26250-20/10654	FORMER KFP SITE - NELSON		Nelson Landing	025-180-142	2192265010	y	
6720005	EP87010000	10734		26250-20/10734	908 VERNON STREET, NELSON	908 VERNON STREET		013-708-660	219243000	y	
6720175	EP87010000	10822		26250-20/10822	FORMER SHELL CARDLOCK	206 LAKESIDE DRIVE		017-766-753	219977043	y	Active - Under Assessment
6720362	EP87010000	7768	26250-20/7768		CP RAILWAY RIGHT-OF-WAY - NELSON	NORTH OF 801 FRONT STREET		009-888-993	219836050	y	Active - Under Assessment
6721175	EP87010000	8077	26250-20/8077		SPL - NELSON READY MIX YARD - NELSON	205 LAKESIDE DRIVE		018-065-937	219977046	y	Inactive - No Further Action
6721176	EP87010000	8078	26250-20/8078		NELSON READY MIX DAVIE ST PIT - NELSON		Fairview Heights Sub (Hampton Gray Place /Foster Place)	EP76009, NEP765	31 Lots	y	
6721524	EP87010000	11244		26250-20/11244	1106 - 7TH STREET, NELSON		1106 Seventh Street	027-481-913	2192201190	y	Inactive - No Further Action
6721525	EP87010000	11247		26250-20/11247	1020 - 7TH STREET, NELSON		1020 Seventh Street	027-481-905	2192201175	y	Inactive - No Further Action
6721610	EP87010000	9198	26250-20/9198	26250-20/9198	7-ELEVEN SERVICE STATION	123 ANDERSON STREET		006-275-435	2191715000	y	
6722024	EP87010000	9368		26250-20/9368	1010 7TH STREET NELSON		1014 Seventh Street	026-532-417	2192201300	y	Inactive - No Further Action
		10833		26250-20/10833			206 Baker Street	014-373-602	219856000	y	Active - Under Assessment
6722025	EP87010000	9369		26250-20/9369	JOHN`S WALK DEVELOPMENT		John's Walk Sub (Sproat Drive)	NEP79963	42 Lots	y	Inactive - No Further Action

SITE DIAGRAM

ECOLOG ERIS
Pinpointing Your Environmental Risks
12 Concorde Pl, Suite 800 North York, ON M3C 4J2
416-510-5204

Project Property: Un-named Site
Nelson Waterfront
Nelson, BC

ERIS Project #: 20100928064

Date: SEP-30-2010

LEGEND

- Project Property
- Database Location

Points of Interest
- Chimney
- Silo

Pipe & Transmission Lines
- Pipeline
- Transmission Line
- Transmission Tower
- Transformer Station

Rail
- Railway - Main
- Railway - Sidetrack
- Railway - Abandoned
- Bridge
- Tunnel

Transportation - Other
- Embankment
- Trail
- Runway

Hydrographic Features
- Permanent Waterway
- Intermittent Waterway
- Open Reservoir
- Dyke/Levee
- Dam
- Breakwall
- Wetland

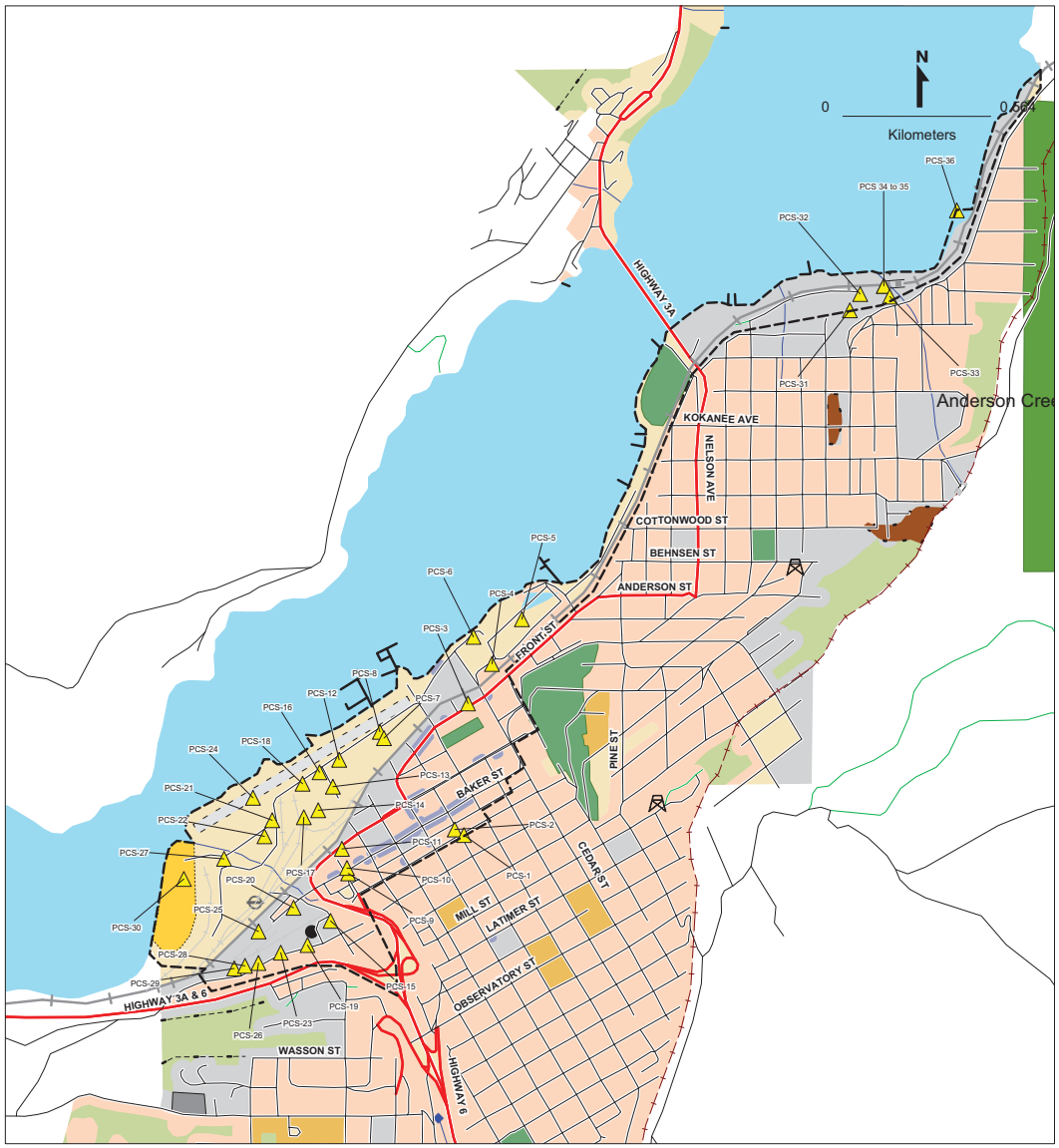
Landuse Classifications
- Open Area
- Residential
- Commercial
- Resource and Industrial
- Government and Institutional
- Parks and Recreational
- Waterbody

Recreation
- Golf Course/Driving Range
- Park/Sports Field
- Other Recreation Area
- Sports/Race Track
- Cemetery
- Campground

Vegetation
- Wooded Area
- Orchard
- Vineyard

Industrial Resources
- Conveyor
- Crane: Moveable
- Crane: Stationary
- Tank
- Rock Cut
- Auto Wrecker
- Lumber Yard
- Pit

This diagram is to be used solely for relative street location purposes. It may not accurately portray street or site positions.



Note: Topographic information not available for entire area.