Stage 1 - Background Research Report | A Baseline for Abbotsforward

October 23, 2014

abbotsfwd

Contents

Executive Summary

A Snapshot of Today & Looking Ahead

Before creating a vision for tomorrow, we must understand how our city functions today. This Background Research Report provides a baseline or "snapshot" of existing conditions in Abbotsford, an overview of existing City plans and strategies, as well as early community engagement activities.

Involving Residents

Diverse engagement activities have been used to both inform residents about the process and seek their input. Early input suggests that residents:

- value Abbotsford's parks, trees, agriculture, active transportation infrastructure, character and natural areas;
- want to see transit as a viable option in the future, improved housing affordability, more active transportation opportunities, more liveliness, and greater physical accessibility; and
- see a growing importance in transit and affordable housing.

Abbotsford as it is Today

The Fraser Valley Regional District (FVRD) is comprised of six member municipalities and seven electoral areas and features a wide range of communities, from small rural settlements to the fifth largest city in British Columbia, Abbotsford. Abbotsford is growing, and is expected to reach a population of 200,000 residents by 2035. People in Abbotsford are slightly younger than elsewhere in the FVRD and their incomes are slightly higher, though average incomes vary significantly across the city.

Households are larger than elsewhere in the FVRD, in part due to cultural norms and multi-generational households. Immigration numbers in Abbotsford are similar to elsewhere in British Columbia, with 27% of the population being immigrants. Concentration of immigrants vary significantly across the city.

Compared with the rest of the province, more people own homes in Abbotsford, housing is generally more affordable, and rental vacancy rates are healthy. The most common housing type is single detached houses, however new home starts are showing significant increases in apartments and a decrease in single detached houses.

Most workers are employed in the retail trade, construction, health care, and manufacturing industries, and Abbotsford has a more diversified economy than elsewhere in the FVRD. Jobs are concentrated in the city centre, and Abbotsford has a relatively balanced employment picture in terms of inflow and outflow of workers.

Existing City Plans & Strategies

Since the adoption of the last OCP update in 2005, dozens of plans and strategies have been developed by the City to guide decision making in Abbotsford. They encompass land use planning and urban design, transportation, infrastructure (water, sanitary, stormwater), parks and recreation, energy and greenhouse gas emissions, and much more. They need to be considered in the OCP update process, with some components fully incorporated, others adjusted, and others completely rethought.

Elements of Great Cities

Great cities include many different elements that enrich the lives of individuals and communities. This document focuses on urban form, or the general pattern of development that defines a city's structure.

In Abbotsford, opportunities for recreational walking and cycling abound, with a valued network of trails and cycling paths that are integrated with parks and natural areas. However the concentration of people (homes) and jobs is generally not high enough to support diverse transportation choices that include walking, cycling, and transit use for purposes of mobility.

There are several semi-private opportunities for social gathering that are greatly valued by residents, including religious institutions such as temples and churches. On the other hand, concentrations of people are also generally not high enough to create the critical mass of consumers needed to support certain neighbourhood amenities like locally-serving shops and restaurants. Since this relates to the ability of residents to access amenities close to home, local destinations influence sense of community, street life and overall vitality. It also influences transportation choice and the community's greenhouse gas emissions.

Many residents value the unique agricultural or "country" character of the city, recognizing that it truly sets Abbotsford apart from other places.

Next Steps

The information in this document will drive the development of observations – ideas to be further explored – that will eventually inform the creation of strategies, concepts, and land use scenarios, which will comprise the blueprint for Abbotsford's new OCP.

Preface

Developing this Report

The purpose of the Background Research Report is in part to recognize the current state of Abbotsford and better understand the supply and demand of various uses. This was completed through an analysis of a variety of information including demographic information, and residential, commercial, and industrial inventory and projections. The analysis was supplemented by a review of existing City plans and strategies, and analysis of existing conditions relating to elements of great cities. Much of this information forms the basis of the project going forward.

This report was developed by DIALOG (urban planning and design consultants), Colliers International (real estate consultants), and Bunt (transportation planning consultants), in collaboration with City of Abbotsford staff. It synthesizes existing data from sources ranging from the City of Abbotsford, Statistics Canada, and other third-parties (e.g. Environics). For the component on "elements of great cities" (Section 5), this report also draws upon extensive research and common discourse in urban planning on the relationships between land use, urban form, transportation, and other factors.

The topics of this report were selected in order to provide the necessary information for creating a new OCP, including an emphasis on issues and opportunities that have emerged through a preliminary review of the existing OCP.

The information is primarily presented within the context of 18 communities. These communities were developed by the City primarily to assist with understanding demographic information in smaller geographic areas, and they do not necessarily correspond to what a resident may refer to as his or her neighbourhood. However sometimes data are presented at a finer scale (e.g. at the scale of census tracts and dissemination areas) in order to provide a greater level of detail.

OCP Update Process & Using this Report

The purpose of the OCP update is to articulate the community's vision and shape the next phase of Abbotsford's growth and evolution as a city. The guiding principles, outlined in Section 1 of this document, further articulate the objectives of this process.

This report marks the end of Stage 1 - Background Research, and the beginning of Stage 2 - Explore New Concepts. At the beginning of Stage 2, the information in this document will be used to develop themes of focus for strategy development. Along with the community vision, the themes will then drive the development of various city-wide concepts that will be tested and refined into more detailed land use scenarios. In Stage 3, the preferred land use scenario will be used as the basis of a new draft OCP, and in Stage 4, the draft OCP will be refined into the final OCP.

Throughout Stages 3 and 4, this information will continue to be a key point of reference while testing strategies, concepts, and scenarios to ensure they move Abbotsford toward its vision. Finally, as a baseline document, this report also offers a benchmark against which performance of the new OCP can be measured moving forward, after adoption and well into the future.

Stages of the OCP Update Process

1 BACKGROUND RESEARCH — MAY - OCTOBER 2014

2 EXPLORE NEW CONCEPTS — OCTOBER 2014 - MAY 2015

3 CREATE THE PLAN — MAY - OCTOBER 2015

4 COMPLETE THE PLAN — OCTOBER - DECEMBER 2015

1.
Introduction

Abbotsford in Context: Heart of the Fraser Valley

The Fraser Valley is in the midst of a time of growth, and at the heart of the region is the City of Abbotsford, accounting for nearly half of the Fraser Valley's population. With 140,000 residents and the largest city by area in all of British Columbia, the City of Abbotsford is faced with an exciting opportunity to leverage this growth – while managing its associated pressures – in a way that helps achieve the community's vision for its future.

Abbotsford is known as the "City in the Country", which accurately captures a unique contrast that sets Abbotsford apart from most other communities. A large portion of land area in Abbotsford is agricultural, with the majority of these lands falling within the Agricultural Land Reserve. Agriculture has been a key force in the local economy for over a century, and there is a keen desire among residents to maintain its important role and the special character it creates.

Yet Abbotsford has a relatively dense urban core, most of which is contained within the designated "Urban Development Boundary". Indeed, Abbotsford is both rural and urban. The focus of the OCP update and of this report is the urban areas. By maximizing the efficiency of land use and effective management of infrastructure and urban design, this OCP update can serve to enhance the "City" while preserving the "Country".

Figure 1.1 | City of Abbotsford with the Urban Development and Community Area Boundaries

District of Mission

Fraser River

Fraser Valley Regional District Electoral Area G

Township of Langley

Bradner-Mt.Lehman

Matsqui Prairie

Highway 11

City of Chilliwack

Auguston

Sumas Mountain

Fairfield

Old Clayburn

West Townline

East Townline

Clearbrook Centre

Babich

West Abbotsford

W.Clearbrook

South Fraser Way

McMillan

Whatcom

Highway 1

Highway 1

S.Clearbrook

Abbotsford Centre

Mill Lake

Aberdeen

Sumas Prairie

South Poplar

Highway 11

United States

N

Urban Development Boundary

City of Abbotsford Boundary

Community Area Boundary

First Nations Reserves

Kilometers

0   1   2   4   6   8

Abbotsforward & the Importance of a Baseline

Abbotsforward, the update to the City of Abbotsford's Official Community Plan (OCP), is inherently a forward looking exercise. Creating an updated OCP involves working with the community to identify goals, which becomes a starting point for developing new strategies and policies. However before effective strategies can be developed for tomorrow, there needs to be a sound understanding of where we stand today. Indeed, much has changed in Abbotsford since the existing OCP was created in 2005, so understanding land use – including existing inventory, current and future demand trends, and its impacts on everything from servicing to housing – is a critically important part of this OCP update.

This Background Research Report provides a snapshot of existing conditions in Abbotsford, and it is the culmination of data analyses that cover OCP-relevant topics ranging from demographics, to housing, to the way the city is laid out, and more. It offers a thorough baseline for present-day Abbotsford, providing context for the opportunities and challenges that lie ahead in moving where we aspire to be.

This baseline is also necessary to ensure early alignment of the OCP process with the guiding principles, endorsed by City Council.

Guiding principles include:

- Undertake a robust community engagement process
- Understand the current land use inventory and future trends
- Align with City plans and strategies
- Clarify and detail the City's land use designations
- Integrate with servicing capacity and strategies
- Establish infill and redevelopment guidelines
- Create a framework for neighbourhood planning

In one way or another, each of these guiding principles point to the value of a comprehensive baseline-setting process, helping create a sound understanding of existing conditions and trends. This enables the new OCP to address identified weaknesses such as general land use vagueness and inconsistency with other plans and servicing strategies.

2.
Involving Residents

Why engage?

The first guiding principle for the OCP update is to "undertake a robust community engagement process", and the City of Abbotsford has indicated that OCP engagement will be broad, inclusive, and innovative, and incorporate various methods to reach out to identified groups and the community. Indeed, the best plans are ones built with local aspirations and knowledge.

Further, community engagement during an OCP review or amendment is a legislative requirement, whereby "[d]uring the development of an official community plan... the proposing local government must provide one or more opportunities it considers appropriate for consultation with persons, organizations, and authorities it considers will be affected" (Local Government Act, Part 26, 879 (1)).

The overarching purpose of this engagement process is to open up a conversation with citizens and provide them with opportunities to shape their community – within the parameters of an OCP's scope and local government's jurisdiction – including a vision and set of directions for the OCP. More specifically, engagement objectives are to:

- Raise awareness about the process and opportunities for involvement;

- Build capacity among citizens to participate in a highly informed dialogue about issues, trends, and best practices;

- Obtain input on community hopes and aspirations for the future of Abbotsford, reaching a broad and diverse group of citizens; and

- Generate excitement and ownership over the development and implementation of the OCP.

2.1 Community Engagement

Engagement activities in Stage 1 were designed to launch the process, offer information about the OCP update, and provide early opportunities for participation.

Engagement Activities

Engagement activities focused on primarily getting information "out", including raising awareness and informing about the process. These activities involved a variety of methods described below, and specific examples of material used is included in Appendix A.

Prior to launching Abbotsforward, the project team worked with a local marketing and design company to develop an easily recognizable and uniform brand identity. The goal for this approach was to ensure the community could quickly recognize and understand when there was an opportunity to get involved in Abbotsforward. As the engagement continues to evolve, the brand identity will be used through all engagement activities.

Traditional engagement

 The project was launched on July 1 at the Canada Day events at Exhibition Park and included several traditional media methods. A news release introduced the project name, provided general information, and encouraged residents to get involved in helping shape their city. A radio interview was also conducted with Brent Toderian, a city planner and consultant strategic advisor working with the project team. Finally, newspaper ads were published inviting residents to participate at events and apply for the Official Community Plan Citizen Advisory Commission.

Following the launch, another news release was used to update the community about the completion of the engagement activities that occurred during the summer, and introduce the appointed Citizen Advisory Commission members.

Information letters were also sent to government agencies, special interest groups and First Nations to raise awareness of the project and its process, and invite preliminary feedback and involvement in future stages.

Online Engagement

Early in the process the City created a project Twitter account – @Abbotsforward – and began using it to tweet regularly about events, facts about Abbotsford, news and articles about city planning, and the overall process. Twitter also acted as a conversation starter and facilitated the Picturing Your City photo activity over the summer. The City of Abbotsford's Facebook account is also being used to share information and updates on a weekly basis.

A project website was created – www.abbotsforward.ca – that has continually been updated during the process. The site is being used as a central location for providing project information, everything from the initial staff reports and Council presentations that began the project, to the facts about Abbotsford. Over the life of the project the site will continue to stay live and be updated on a weekly basis, enabling the project team to keep the community updated on all the engagement activities.

Road Show

The Road Show was a mobile booth set up at events in high visibility locations to reach a broad audience, including people who might not otherwise participate in a planning process. The booth was interactive, offering both background information and opportunities for input. Project staff handed out brochures, stickers, tattoos, and colouring sheets; invited people to provide feedback; and answered questions. The booth also had chalk boards at the first few events that asked residents to describe and draw the "Abbotsford of their dreams". At the remaining events, display boards asked residents to describe what they wished to keep and re-think about Abbotsford, how people will move around, and if housing will need to change.

Between July and early September, the Road Show was set up at the following events: Canada Day festivities at Exhibition Park, Berrybeat Festival in Historic Downtown, Envision Concert Series at Mill Lake Park, Agrifair at Exhibition Park, Jam in Jubilee in Jubilee Park, and UFV Welcome Week at the University of the Fraser Valley.

Citizen Advisory Commission

The Community Advisory Commission is a resident group created to help guide the OCP update project by shaping the future of Abbotsford through reviewing land use policy, helping with community engagement activities, and giving feedback on new planning ideas. A call for applications was conducted for members from June 27 to July 21 and a number of methods were used to get the word out. The advertisement was put in the local newspaper, booths were set up at Canada Day and Berrybeat Festival, and it was shared online through the City website, Twitter and Facebook.

More than 30 applications were received and put through a review process that included confirming eligibility requirements, categorizing by age and gender, and selecting members from each category. On September 8, 2014, Council appointed a Commission of nine members (refer to Appendix A for a list of members) that maximizes the demographic and geographic makeup of Abbotsford. The first meeting was on September 24, 2014.

abbotsfwd

1359 UNIQUE VISITS TO WEBSITE

565 MENTIONS + RETWEETS

237 NEW TWITTER FOLLOWERS

393 ROAD SHOW COMMENTS

585 ROAD SHOW VISITORS

77 FAVOURITES

95 SUBMITTED PHOTOS

8 ROAD SHOW EVENTS

Figure 2.1 | Snapshot of engagement numbers by activity (as of September 30, 2014)

Input Received

Throughout the engagement activities, a range of early input was received from the community through the following methods.

Picturing Your City

The community was invited to submit photos of aspects of Abbotsford they liked and/or disliked, as well as photos that captured qualities they would like to see more of in Abbotsford. Ninety-five photos were received by the City and are contained in the appendix, however a few common themes that emerged include:

Likes - Parks, trails, playgrounds, and green and natural areas comprised the most common type of "like" photo. Other types of photos receiving multiple entries include public art, transit, and well-used public space and urban environments.

Dislikes - Underused or poorly designed public spaces was the most common type of "unlike" photo (e.g. lack of public seating). Other photograph types received included lack of heritage protection and issues with parks.

Wish - Most "wish" photos either promoted arts and culture (e.g. public art, cultural destinations, and public spaces for artistic expression and events) or enhanced street life vitality (e.g. sidewalk cafés, attractive public and private realms, and generally walkable streets). Other photograph types received included preservation of heritage assets and cycling infrastructure.

@Abbotsforward - Tweets

Although the function of Twitter for Abbotsforward is predominantly to inform and raise awareness, as a social media platform, it can create useful feedback from engaged residents and spur conversations about the project between users. Much of the input received over Twitter was generated through the Picturing Your City photo activity. Other responses were mostly answers to questions tweeted out, the same ones asked in the Road Show. Feedback largely reaffirmed what was received throughout the Road Show consultation: keeping and improving upon the quality of parks; protecting natural and green

spaces; supporting more affordable and age appropriate housing; improving urban design to create a livelier public space; and improving mobility in the city through transit, pedestrian and cycling network improvements.

Road Show

The greatest amount of input was received via the Road Show. The following pages offer a summary of each question asked, and includes input from social media that arose from posing the same questions via Facebook and Twitter. In the summary charts, each topic (e.g. "Parks and Trails") receives one count for every time it is mentioned in community comments.

Abbotsforward Road Show Set-Up

Question 1:

As Abbotsford grows and changes, what are the most important aspects to keep?

The five most commonly referenced aspects are Abbotsford's existing:

- parks and trees;
- ALR and agriculture;
- active transportation infrastructure;
- character (namely within existing neighbourhoods and "country" feel); and
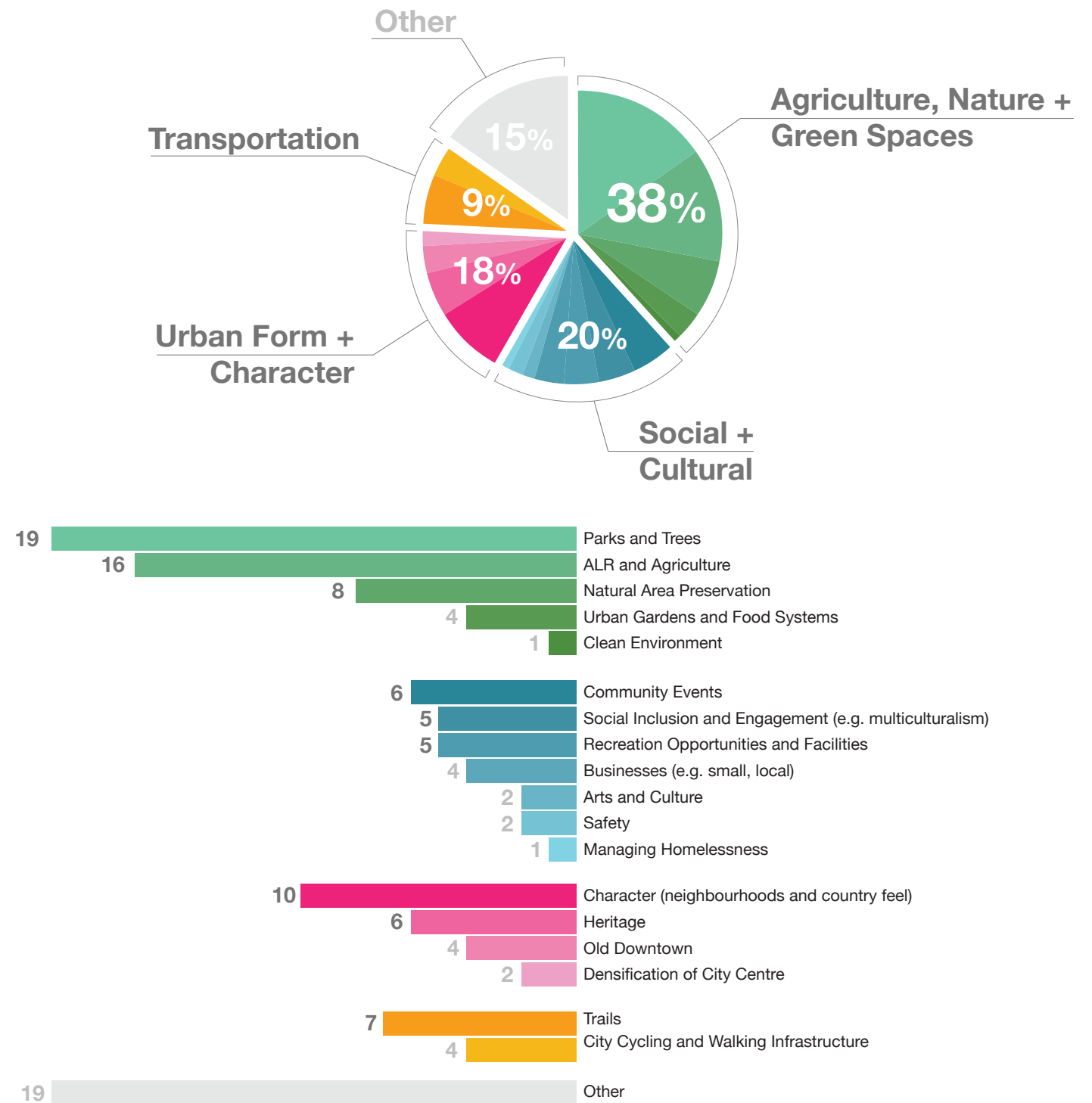- natural areas.

Figure 2.2 | As Abbotsford grows and changes, what are the important aspects to keep?

Question 2:

As Abbotsford grows and changes, what are the most important aspects to re-think?

This question generated the greatest diversity of responses, with the five most commonly referenced aspects requiring improvements:

- improved transit (which ranged from enhanced servicing in terms of scheduling and physical coverage, to better regional connections);

- reduced homelessness;

- more active transportation opportunities, which included infrastructure for walking and cycling, as well as generally a movement toward greater "walkability";

- generally more life and liveliness, including more events;

- and greater accessibility for seniors (e.g. "age-friendliness") and people with disabilities.

19	Improved transit
13	More active transportation (e.g. walkability, cycling infrastructure)
4	Reduced traffic / domination of vehicles
14	Reduced homelessness
9	Greater accessibility and age-friendliness
7	Increased safety
12	More events and liveliness generally
5	More street life and/or walkable, mixed-used neigbourhoods
3	More youth life
3	More destinations and life in the old downtown
3	More arts and culture
2	More destinations and life at UFV
6	Enhanced parks and green spaces
6	Specific recreation or sports enhancements
4	More/better public washrooms
6	Enhanced environmental initiatives
4	Enhanced water management
5	Greater density to support walkability and reduce sprawl
3	Stronger protection of ALR and natural areas
11	Other

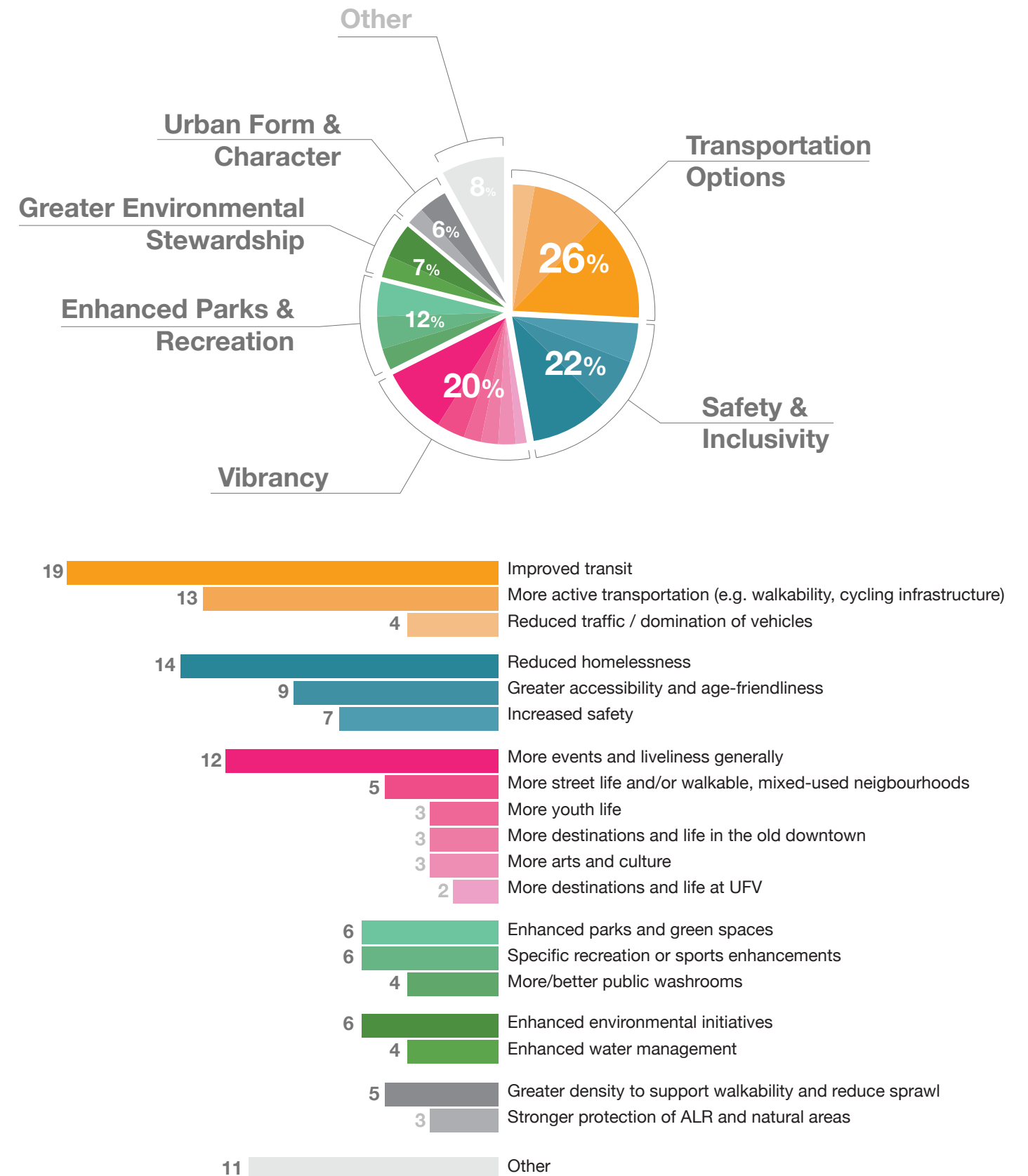Figure 2.3 | As Abbotsford grows and changes, what are the most important aspects to re-think?

Question 3:

In Abbotsford's future, how do you think people will move around?

Nearly half of comments referenced some form of transit within Abbotsford or across the region, and approximately one-third referenced active transportation modes.
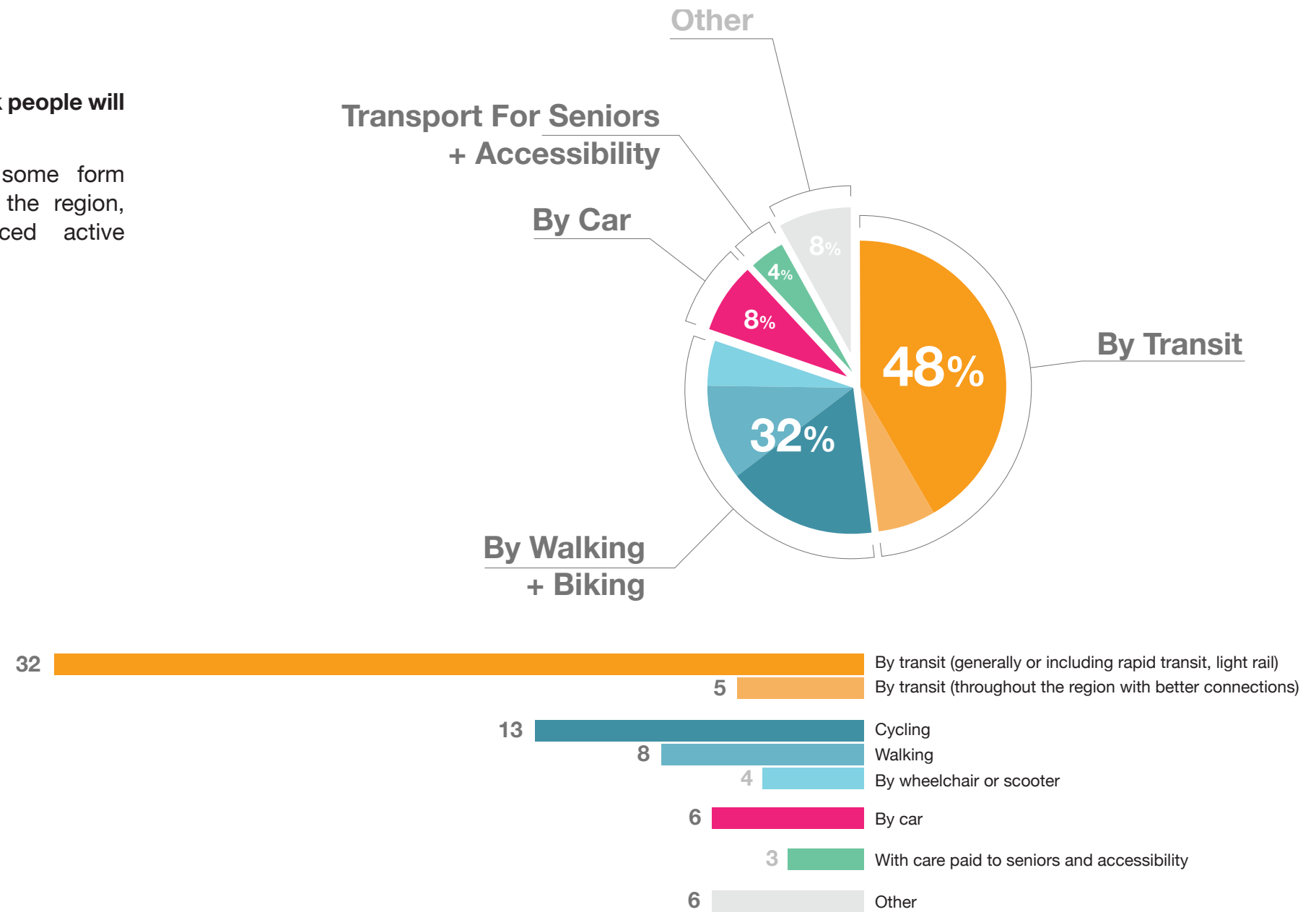

Figure 2.4 | In Abbotsford's future, how do you think people will move around?

Question 4:

In Abbotsford's future, will housing need to change? How?

Over half of comments referenced either reduced homelessness, greater affordability generally, or more low income housing.

Approximately one-third of comments focused on wanting to see more multi family housing, with references to different types and also to higher densities in an effort to support a compact urban form.

Safer Housing

Greater Housing Supply & Diversity

3%

15%

52%

30%

Increased Density

More Inclusive & Affordable Housing

16 Reduced homelessness
11 Greater affordability (generally)
8 More low income housing

7 More apartments, condos, townhouses, and mixed-use buildings
7 Higher density housing generally
6 Higher density in existing areas to preserve ALR or natural areas

5 More housing for students and youth
3 More housing for seniors
2 More rental housing

2 Safer housing

Figure 2.5 | In Abbotsford's future, will housing need to change? How?

Question 5:

In 3 words, the Abbotsford of my dreams looks like...

The size of the words below are a proportional representation of the number of instances they were referenced in response to this question.

Using Community Input & Next Steps

The City of Abbotsford is using many different levels of engagement throughout the OCP update process, however it is expected that most engagement will reach the "involve" level, which includes the following commitment to the community:

We will work with you to ensure that your priorities and aspirations are understood and considered in the OCP, and we will report back to you to demonstrate how public input influenced the development of the plan.

More specifically, the early input received during Stage 1 will be used alongside the background research detailed in this report to develop "observations" - or ideas worth further exploration - for the next stage of the process, which includes new concepts and eventual land use scenarios for Abbotsford.

3.
Abbotsford as it is Today

There are countless ways to describe the qualities of a community, and they cover diverse realms that include natural systems, social and economic aspects, and buildings and public spaces. This section begins to build a baseline for Abbotsford, focusing on key factors that are important to understand in creating OCP policies for growth.

These key factors include existing conditions and projections for:

• population growth;

• demographic and socio-economic characteristics;

• housing tenure, type, and other characteristics;

• employment;

• retail and industry; and

• community facilities and institutions.

Unless otherwise stated, information is based on census data from 2001, 2006, and 2011. It is important to note that existing community boundaries have been used by the City to summarize and organize demographic information. The boundaries do not necessarily correspond to what a resident may refer to as their neighbourhood. For example, the primarily rural community of Sumas Mountain includes the urban development of Auguston, and the primarily rural community of Aberdeen includes the urban development of West Abbotsford. Some maps in this report have been adapted to help clarify these issues.

3.1 People

A Growing City

At the time of the last census in 2011, the population of Abbotsford was 137,830 people. In 2014, it is estimated to be approximately 140,000 people.

Historic growth in Abbotsford has been steady, as shown in Figure 3.1, with the average annual growth rate of 1.3% between 2006 and 2011. The greatest rates of growth in that period has been in Sumas Mountain, primarily in the area of Auguston (10.3%), Aberdeen, primarily in the area of West Abbotsford (4.4%), and West Townline (3.1%). Negative rates of growth in that period have taken place in Matsqui Prairie (-0.6%), Bradner-Mt.Lehman (-0.2%), and South Clearbrook (-0.2%).

Based on growth trends and a medium growth scenario of 1.7% per year, Colliers International Consulting (CIC) expects that the City of Abbotsford will reach a total population of **200,000 residents by the year 2035.**

At a lower assumed growth rate of 1.0% per year, this population threshold would not be reached for 35 years, by 2049. At a higher assumed growth rate of 2.3% per year, this population threshold would be reached within 15 years, by 2029.

Detailed estimates by community are provided in Appendix B, however it is important to note that the role of the new OCP will be to help shape where growth occurs, so these estimates are preliminary.

Figure 3.1 | Population growth 1921-2014
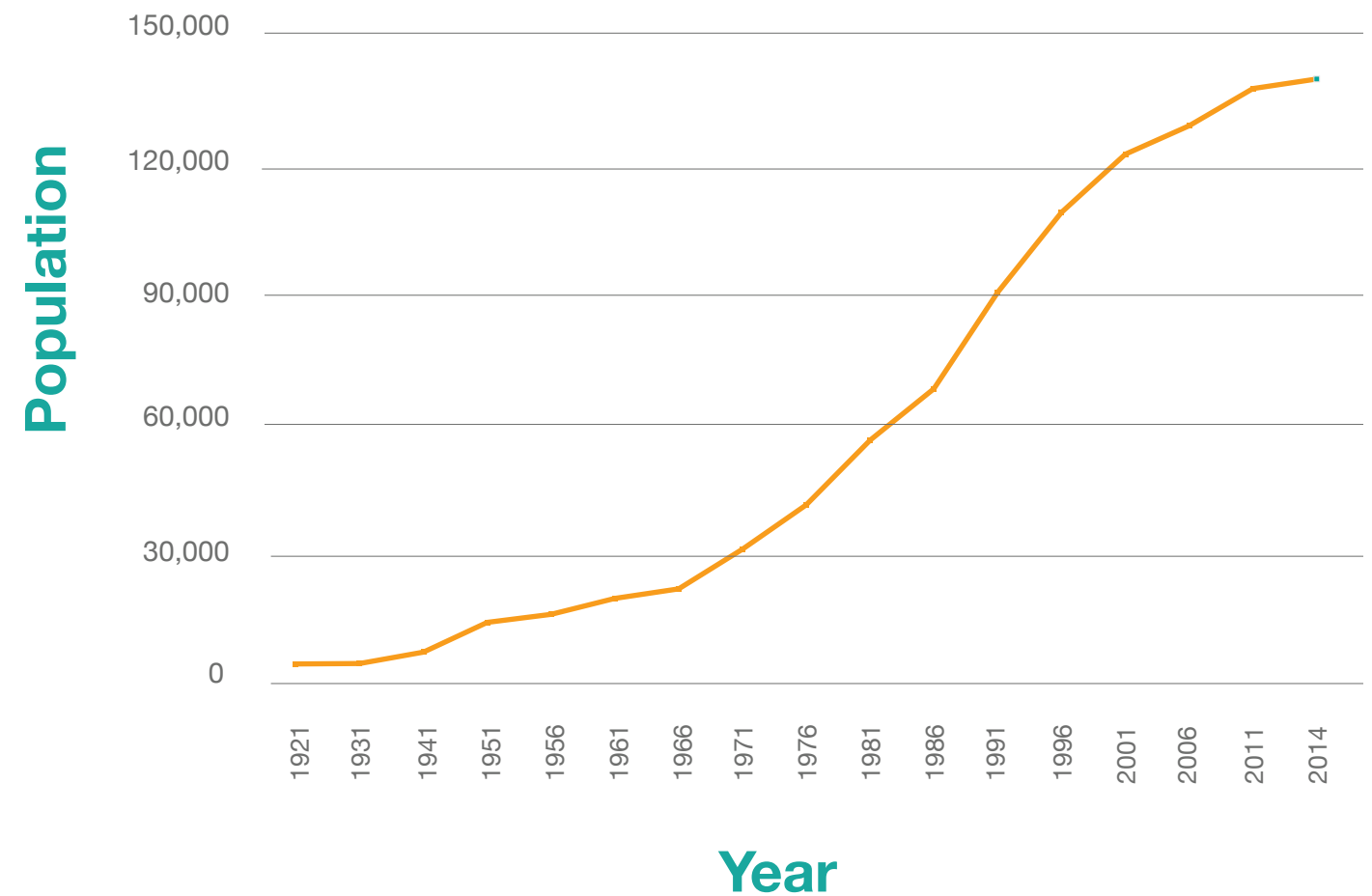
The Face of Abbotsford

This section highlights key demographic characteristics of Abbotsford residents, including age, income, household size, home ownership, and immigration, while further characteristics such as family structure and education are detailed in Appendix B.

It is important to note that there are many other important "people" characteristics that are not captured here but will be considered during the OCP process. For example, health, education, and other aspects of well-being are strongly influenced by the way neigbourhoods are designed, and so they will be carefully considered in creation of planning concepts for the new OCP.

Age

The median* age in Abbotsford increased from 35.1 years old in 2001 to 36.7 years old in 2006, to 37.8 years old in 2011. While Abbotsford is aging, it is a younger population than in the Fraser Valley Regional District (FVRD) overall, (which has a median age of 39.6 years) and Metro Vancouver (which has a median age of 39.3 years).

Median ages in communities range from 32.7 years in West Townline, to 48.1 years in Mill Lake.

Figure 3.2 | Abbotsford median age by community
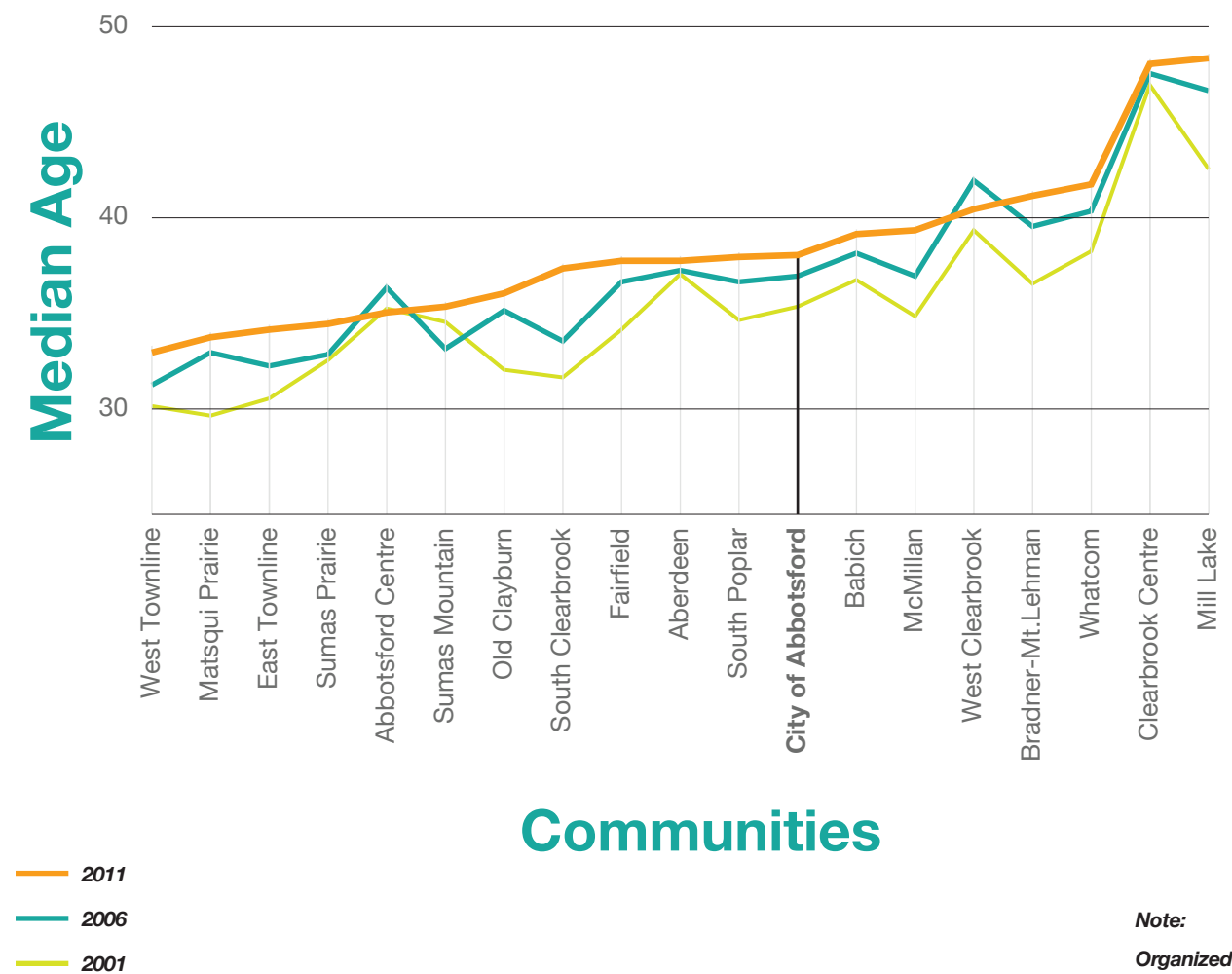
Note:

Organized from youngest to oldest for 2011

*Median refers to the midpoint value of all values. For example, the median age in Abbotsford is 35 years old, which means that there are an equal number of people older than 35 years and an equal number of people younger than 35 years.

Income

The average household income in Abbotsford increased by $25,268 between 2001 and 2011, from $56,194 to $81,462. While average household incomes in Abbotsford are lower than Metro Vancouver's ($89,693), they are higher than other communities in the FVRD and in the province overall ($69,150).

Within individual communities, average household incomes range from $52,983 in Clearbrook to $125,708 in Bradner-Mt.Lehman.

Figure 3.3 | Abbotsford's average household income
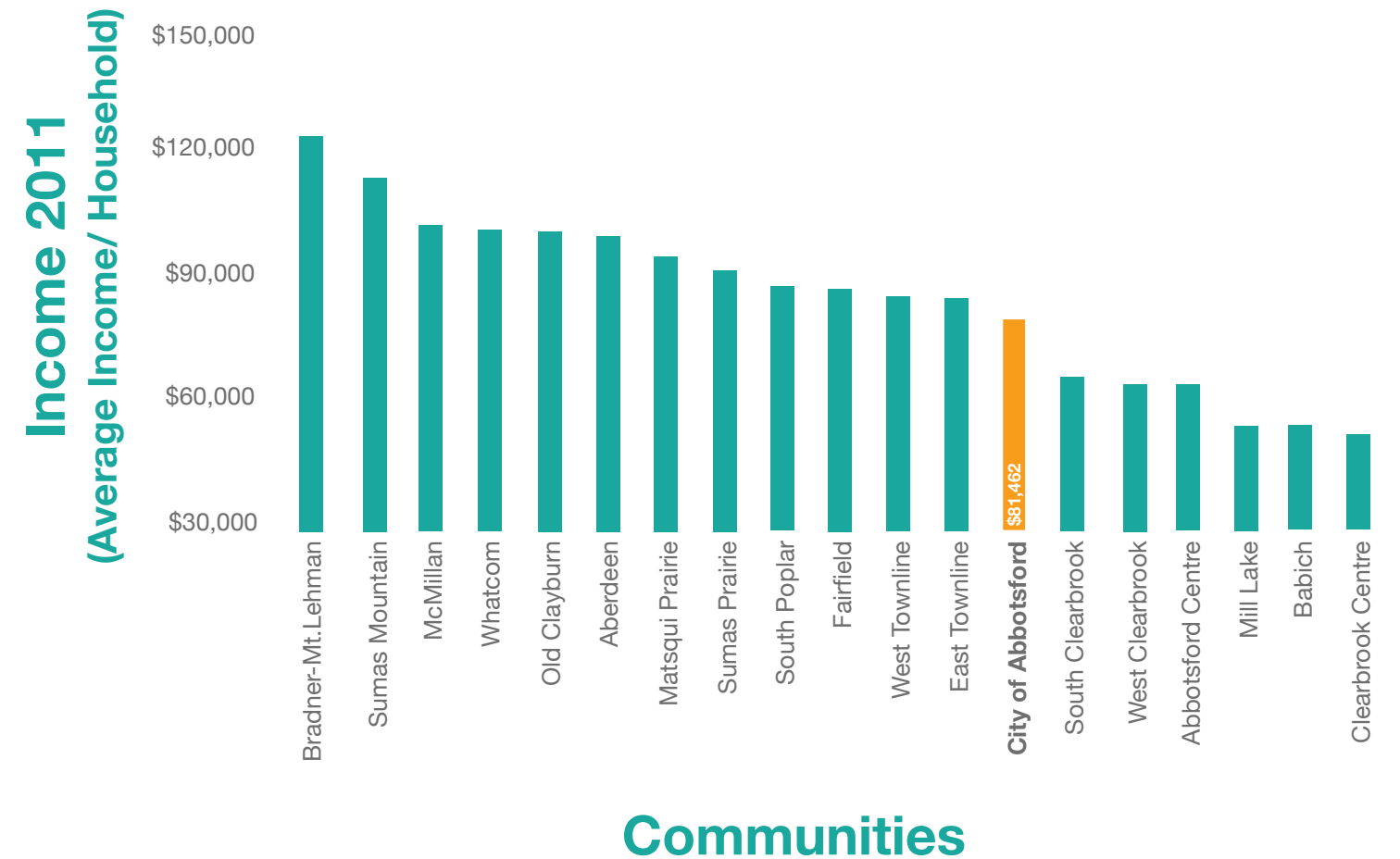
Household Size

The average number of persons per household has remained constant at 2.8 from 2001 to 2011, which is higher than in the FVRD overall (approximately 2.5 persons per household) and Metro Vancouver (2.5 persons per household).

In 2011, Clearbrook Centre has the smallest average household size at 2.0 persons, while West Townline had the largest average households at 3.7 persons. In Abbotsford, household size is often a reflection of cultural norms and multi-generational households.

Figure 3.4 | Abbotsford's average persons per household
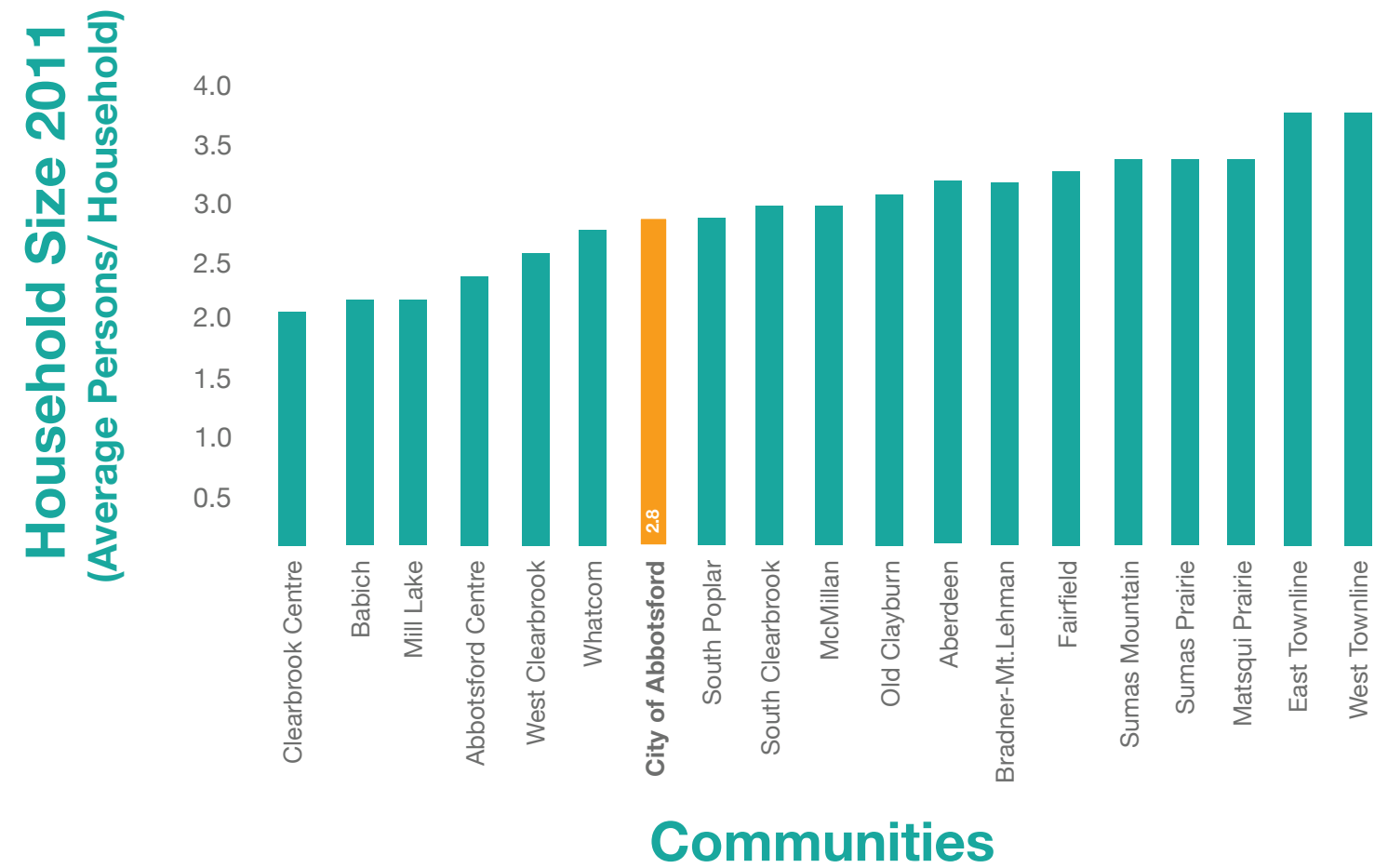
Immigration

In Abbotsford, 27% of residents are immigrants, which is slightly lower than in British Columbia overall. Approximately 16% of Abbotsford's immigrants arrived after 2006.

The majority of immigrants were born in South Asia (with 52% of immigrants being from India), followed by the United Kingdom (7%), the Netherlands (4%), United States (4%), Germany (2%), and the Phillipines (2%). The "other" category in Figure 3.5 below includes other places in Asia (10%), Europe (8%), the Americas (6%), and elsewhere (5%). In comparison, the top countries of birth of immigrants living in British Columbia are: China (14%) and India (12%). As such, while immigration numbers in Abbotsford are similar to elsewhere in British Columbia, there is less diversity in terms of countries of origin for the majority of immigrants.

The highest concentrations of immigrants reside in East Townline and West Townline, and the lowest concentration of immigrants reside in Old Clayburn and Abbotsford Centre.
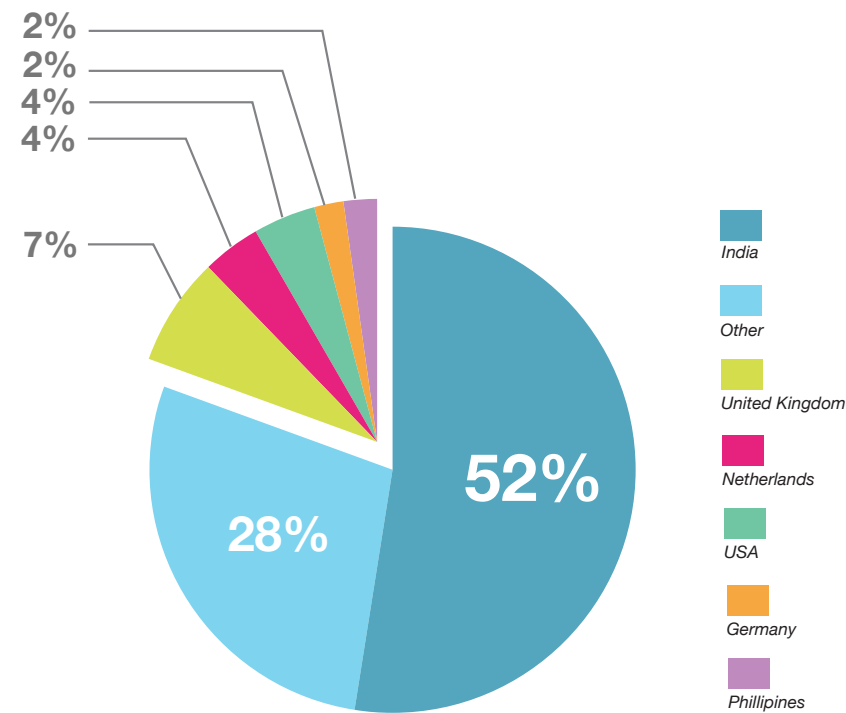
Figure 3.5 | Immigrants by top six countries of origin

Figure 3.6 | Community by immigrant status
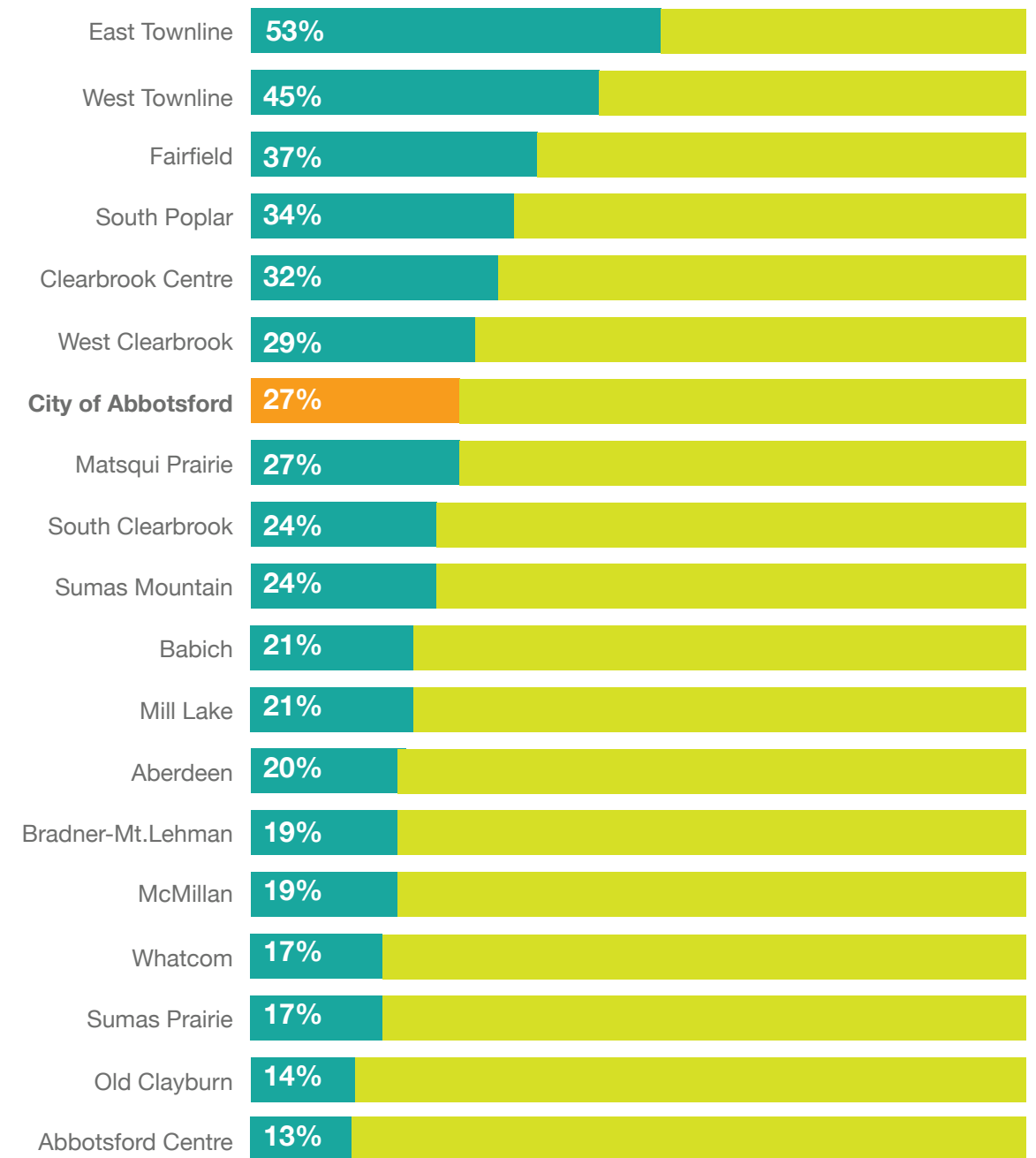
Immigration Status 2011

3.2 Homes

Housing Tenure & Cost

Home ownership in Abbotsford has risen from 70% in 2001 to 72% in 2011, ranging within communities from 46% (Mill Lake) to 91% (McMillan). Home ownership in Abbotsford is slightly higher than in British Columbia overall (approximately 70%).

In the Abbotsford-Mission Census Metropolitan Area (CMA), the average price of a single family house – for new construction – in 2014 (as of September) was $567,529, compared with $1,471,498 in the Vancouver CMA (CMHC, 2014). In 2010, the percentage of residents spending more than 30% of their income on housing was 28%, compared to 30% provincially and 25% nationally.

A healthy rental vacancy rate is generally considered to be 3%, providing sufficient housing supply for renters. CMHC tracked rental vacancy rates in Abbotsford and British Columbia at different points in the last year, reporting them in April 2014 at 3.1% in Abbotsford-Mission CMA, compared with 1.9% in Metro Vancouver and 2.4% in British Columbia.

The average cost of renting a 2-bedroom apartment in Abbotsford in 2014 is $840, compared with $1090 in British Columbia overall.

Figure 3.7 | Community by home ownership rate

Home Ownership 2011
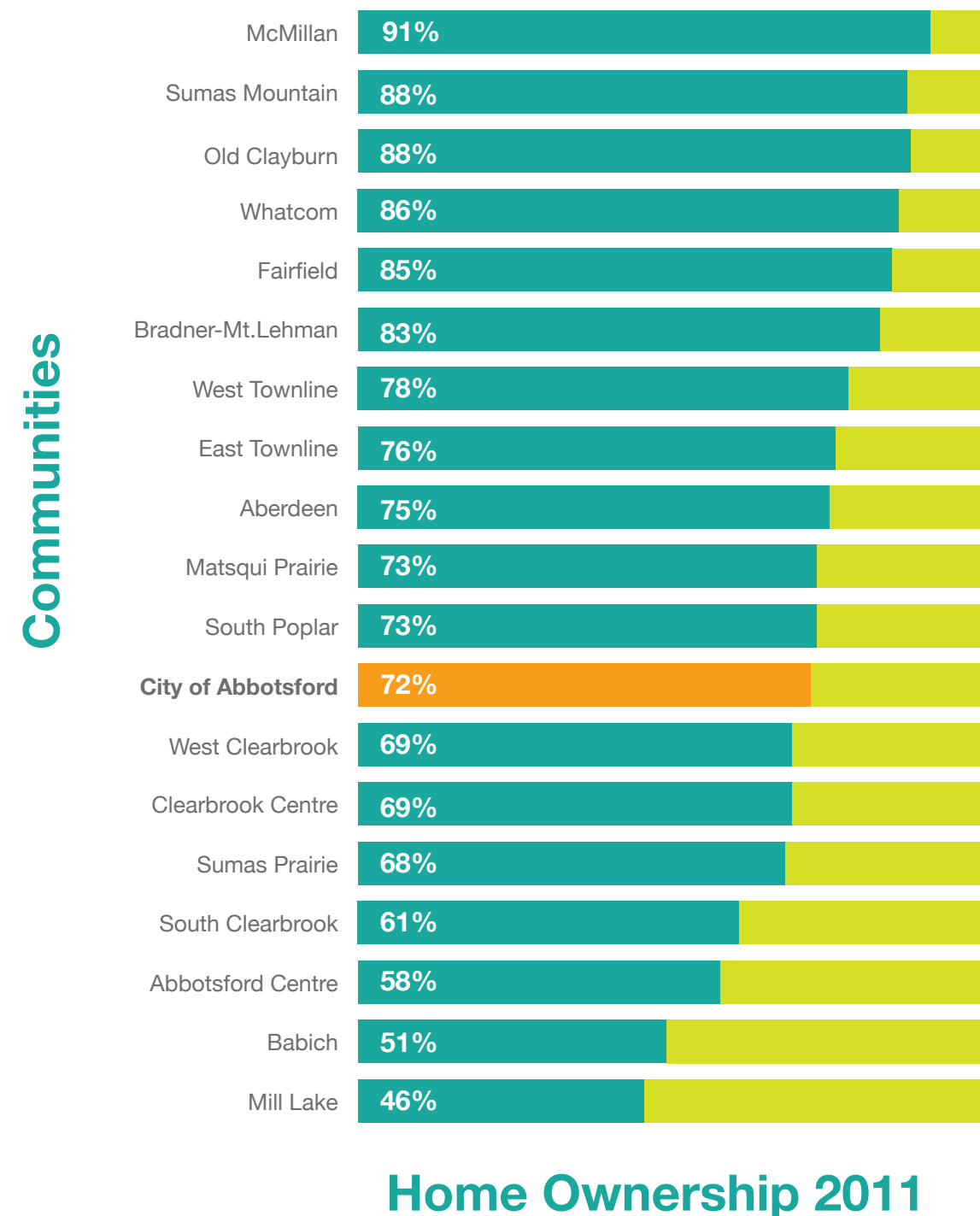
Housing Type

Housing types are presented in Figure 3.8, showing that almost half of homes in Abbotsford are single detached houses. However in the Abbotsford-Mission Census Metropolitan Area, new home starts between 2010 and 2013 showed a significant increase in apartments (over 200%), and a decrease in single detached houses (-22%), suggesting a trend toward more multi family housing (CMHC, 2013). An increase in semi-detached/duplexes/rowhouses is also forecasted.

Concentrations of apartments are situated in more central areas, such as Clearbrook Centre, Babich, and Mill Lake, while the largest concentrations of single detached houses are in more peripheral/suburban areas, such as Matsqui Prairie, Brader-Mt.Lehman, and Sumas Prairie.

Figure 3.8 | Housing by type
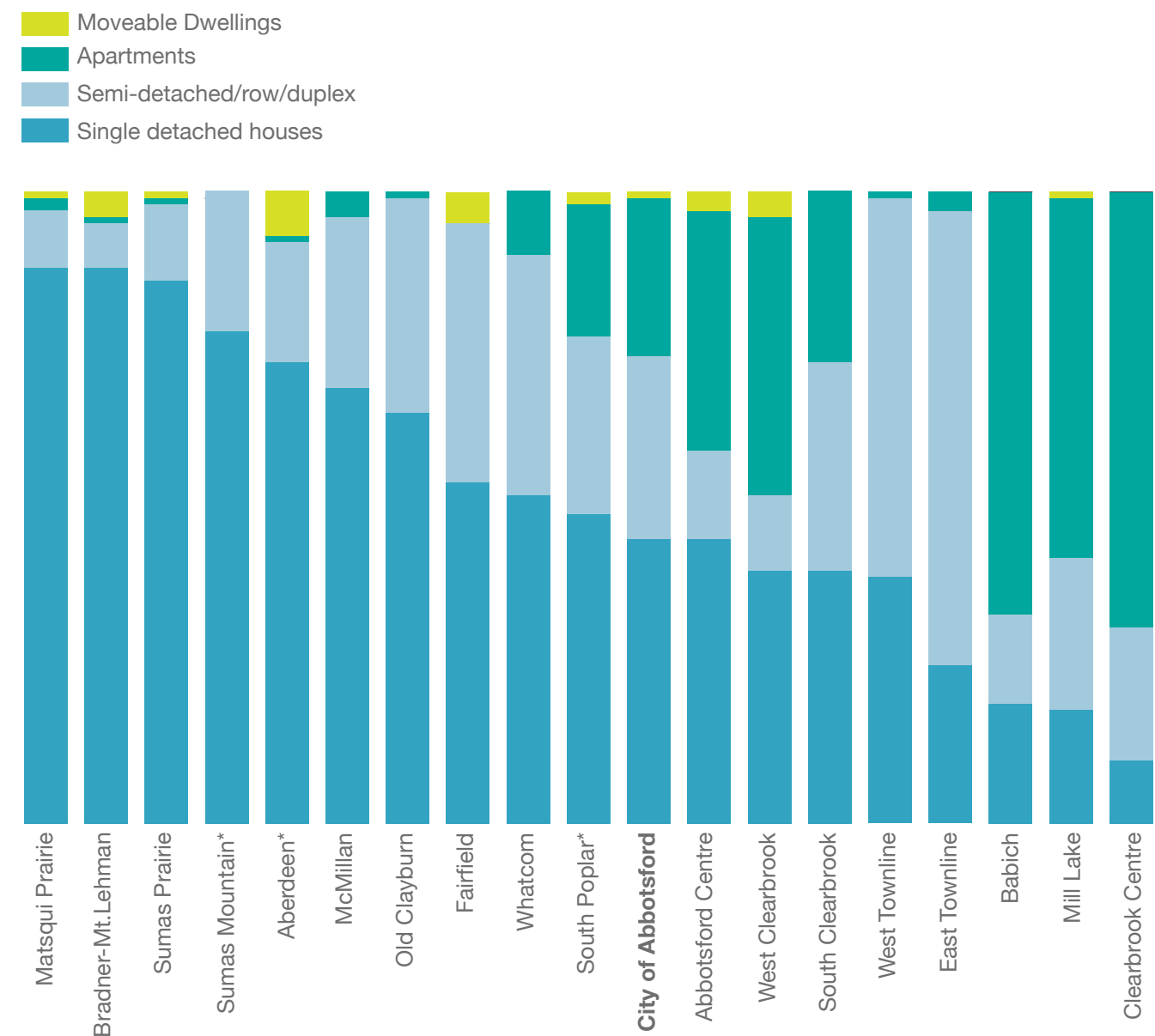
Note:
* Apartments and/or semi-detached homes are located in urban developments such as Auguston, West Abbotsford, and the U District.

Age of Housing Stock

All but 5% of housing in Abbotsford was constructed after 1960, with 27% of homes built between 1961 and 1980, and 49% built between 1981 and 2000.

The greatest concentrations of homes built since 2001 are situated in Sumas Mountain (Auguston), Aberdeen (West Abbotsford), and West Townline. Concentrations of the oldest housing stock (1960 or earlier) are situated in Matsqui Prairie, Sumas Prairie, Abbotsford Centre, and Bradner-Mt.Lehman.

Figure 3.9 | Housing by period of construction

- 1960 and earlier
- 1961-1980
- 1981-2000
- 2001-Present
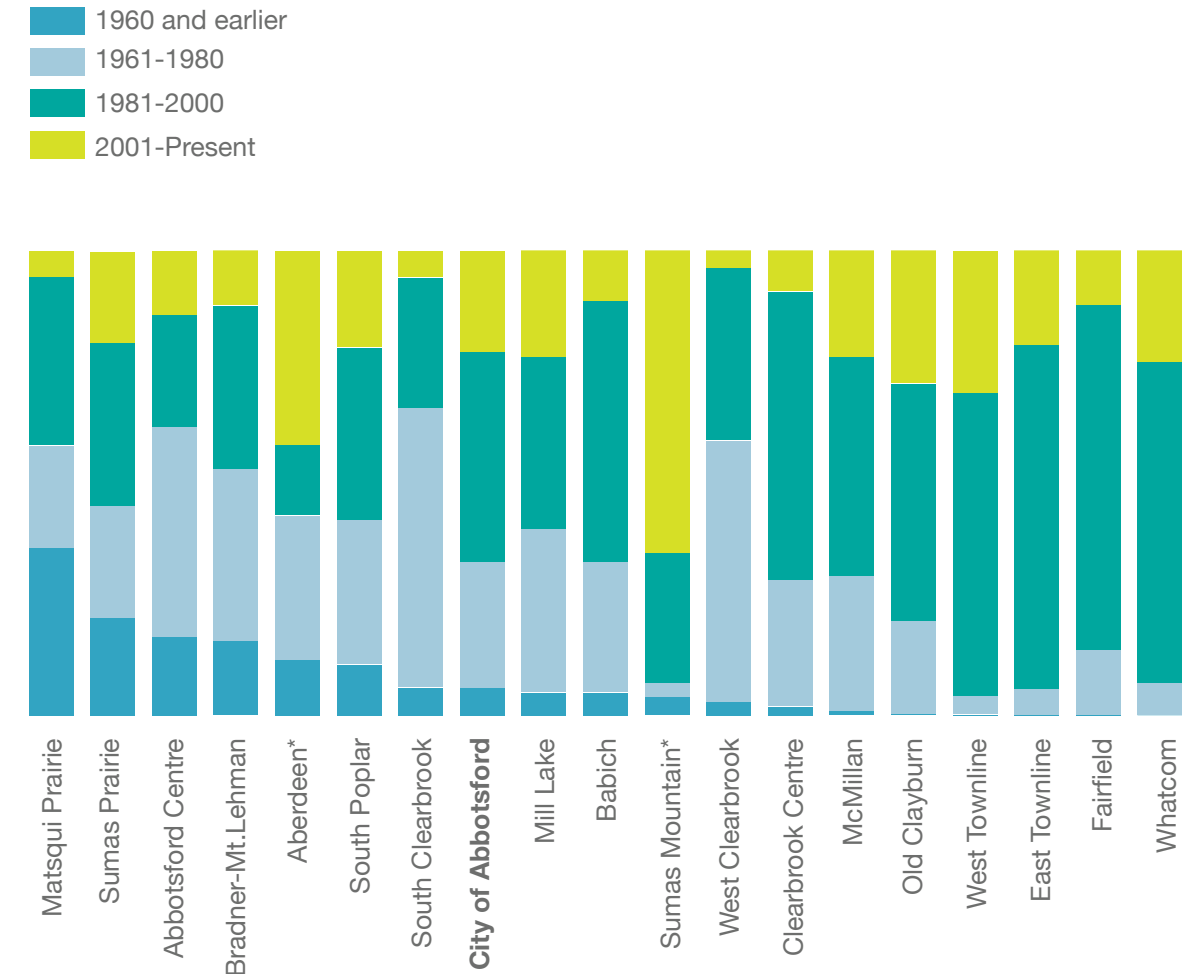
Note:
*Most new home construction has been concentrated in Auguston and West Abbotsford.

3.3 Jobs

Labour Force

In 2011, 70,000 residents comprised the labour force. The majority of workers in Abbotsford are in the retail trade, construction, health care, and manufacturing industries.

As the largest community in the FVRD, Abbotsford has a more diversified economy with a larger share of manufacturing, retail trade, and construction, and often acts as a supplier of commercial services to small communities.

Employment density – or the location of jobs throughout Abbotsford – is presented in Section 5.

Figure 3.10 | Labour force makeup
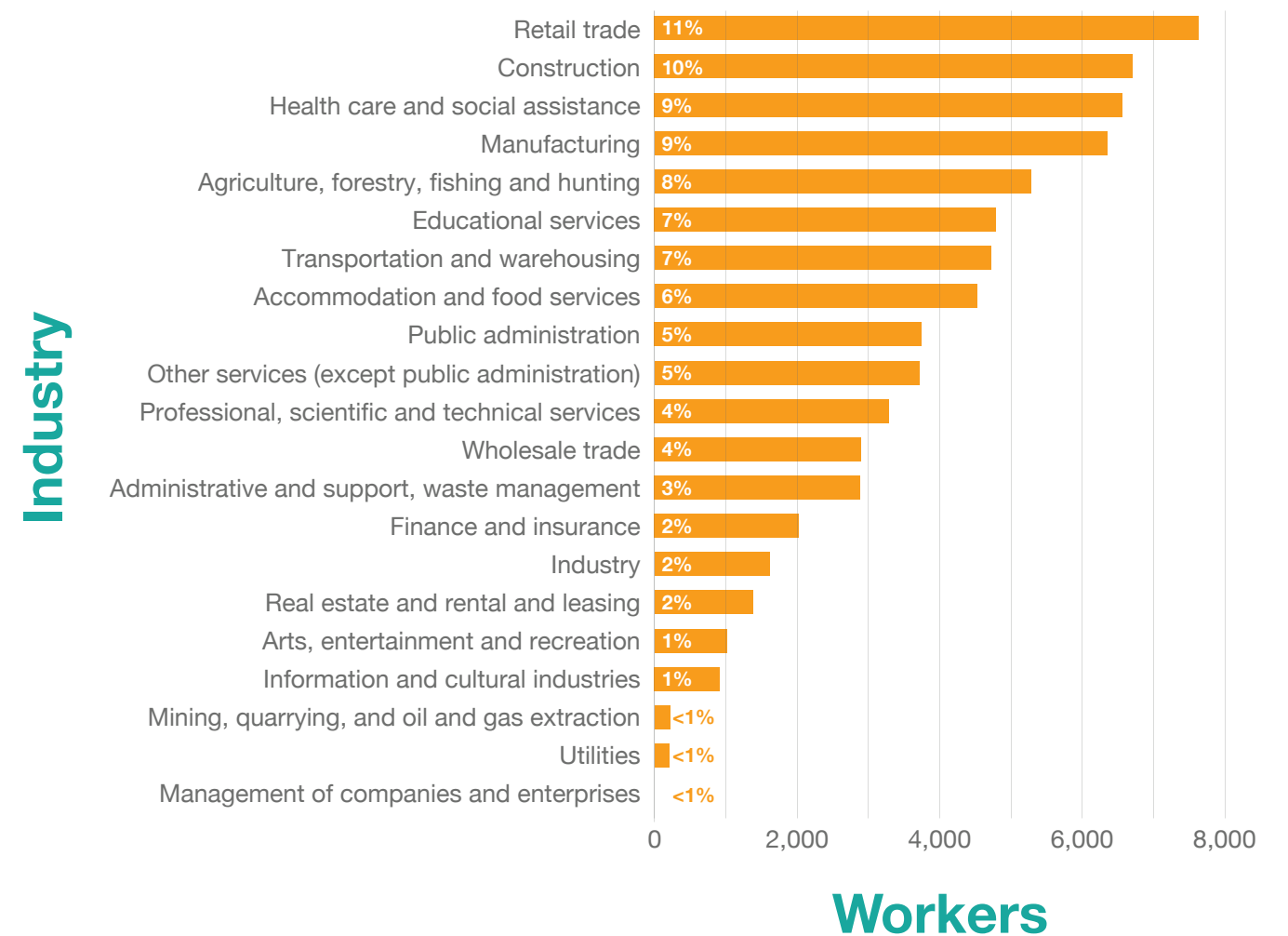
Job Growth Estimates

According to Urban Futures, Abbotsford received 4,070 net additional jobs between 2006 and 2011, ranking fifth out of all Lower Mainland municipalities. This represents an 8% growth rate, which is higher than both Metro Vancouver and FVRD overall growth rates of 6%. It was noted that the Lower Mainland's more peripheral communities are experiencing relatively rapid job growth compared to the historical core of the region.

Longer term projections for the FVRD sees continued employment growth that will continue to focus on the three largest centres: Abbotsford, Chillwack, and Mission. Between 2011 and 2041, employment is expected to increase regionally by 91,000, or 70%. Of this growth, 49% is slated for Abbotsford.

Figure 3.11 | Job Growth Estimates 2014-2041

Abbotsford 45,083

FVRD 91,201

Worker Movement

Based on commuting flow data, Abbotsford has a net outflow of workers of 1,005, which means that there is a greater number of Abbotsford residents working outside of the city, compared with the number of residents from outside the city working in Abbotsford. As shown in Figure 3.12, this net outflow is minimal compared to neighbouring communities of Surrey and Chilliwack, indicating a relatively balanced employment picture.

Figure 3.12 | Net inflow/outflow of workers FVRD

Legend:
- Residents working elsewhere
- Residents from other areas working here
- Net inflow/outflow of workers
- Abbotsford residents working in Abbotsford
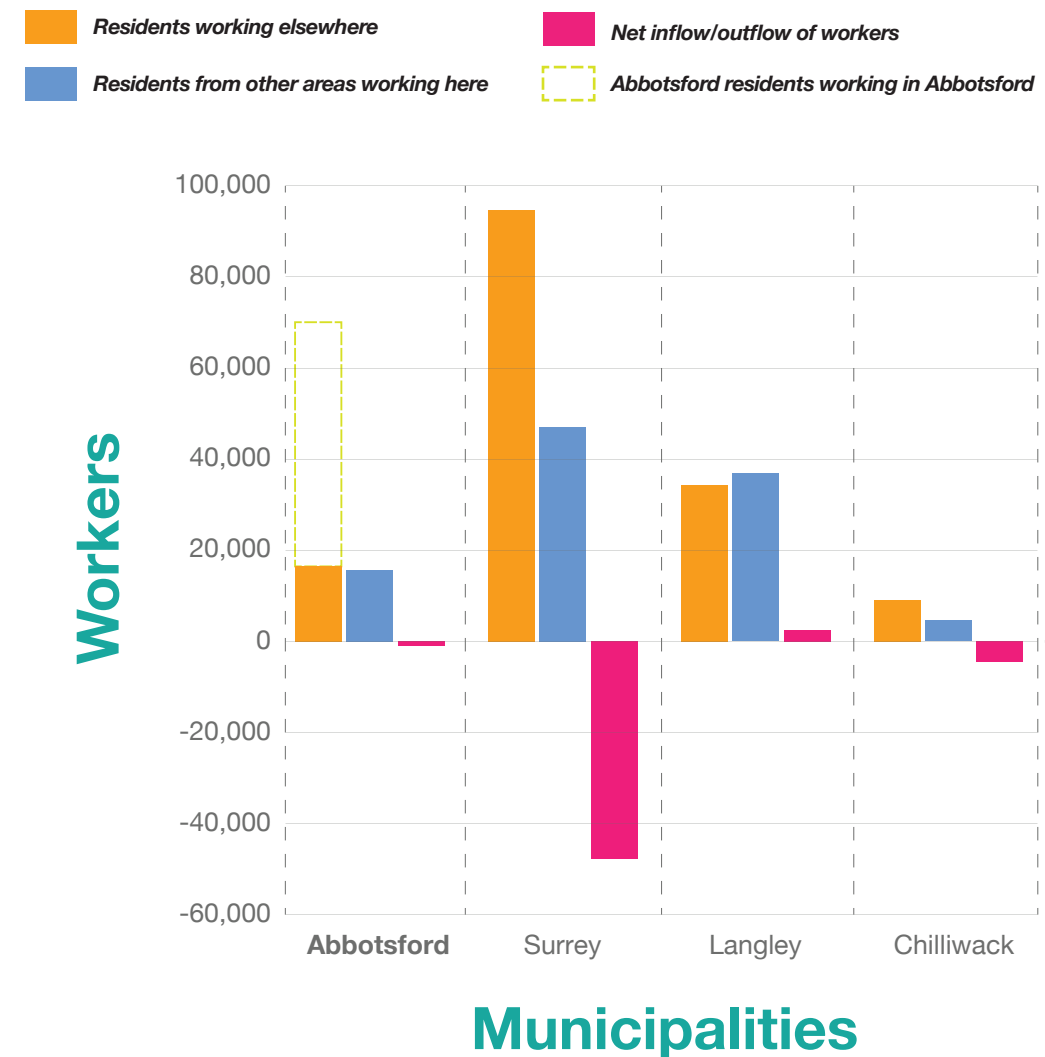
3.4 Shops, Business & Industry

Current & Projected Future Retail

Colliers International Consulting has created an inventory of Abbotsford's current retail supply by community, focusing on major centres and street front retail in prominent locations for which industry standards apply. This information is presented in Figure 3.13, along with projected growth in retail demand, which is based on demographic profiles and estimates of personal disposable income.

The estimated existing retail inventory in Abbotsford is **over 3,900,000 square feet.** Projections for 2034 – when Abbotsford is expected to approach a population of 200,000 residents – is for almost an **additional 1,500,000 square feet**. The greatest proportion of this retail demand is expected to fall within the following retail trade categories: supermarkets and other grocery stores, and general merchandise stores.

It is important to note, however, that the inventory does not necessarily include some independent standalone retail tenants with lower productivity rates, though their presence in some areas may be important to encouraging complete communities. Also, as is the case with location of projected population growth, location of future retail can be shaped by OCP policies.

It is also worthwhile to note that the existing retail value are high in: Bradner-Mt. Lehman because of the Fraser Valley Auto Mall; West Townline because of Highstreet; Mill Lake because of Seven Oaks Shopping Centre; and Clearbrook Centre because of South Fraser Way / City Centre.

Figure 3.13 | Existing retail and estimated growth per community

Retail Area
(Square feet)

- *Existing retail*
- *Incremental retail growth 2014 - 2035*
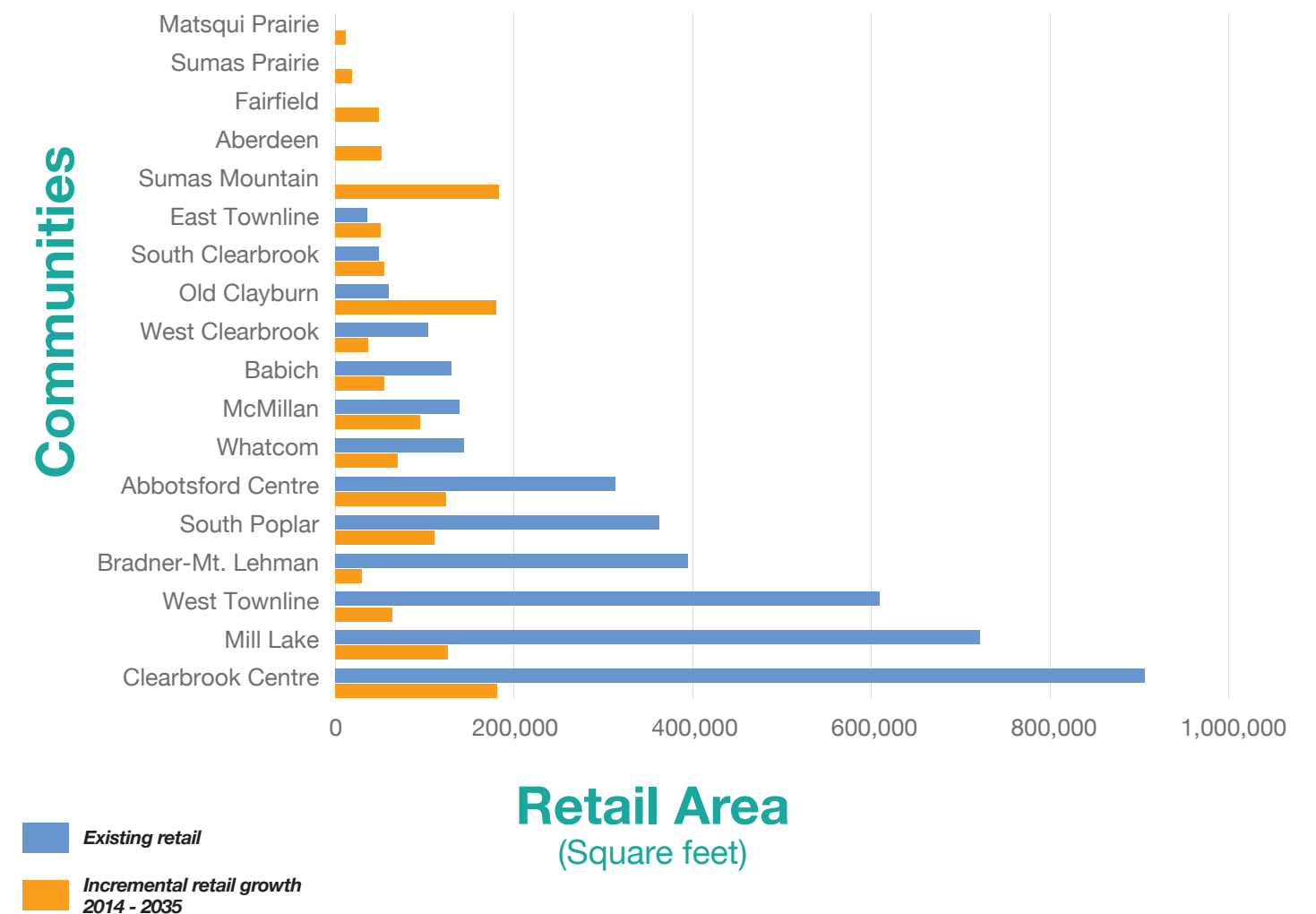
Industrial Buildings

There are approximately 7,600,000 square feet of industrial buildings in Abbotsford, with a market that is smaller than both Surrey and Langley, but larger than neighbouring Chilliwack. The largest proportion of the City's industrial-zoned land includes warehousing, industrial strata, cold storage, and manufacturing buildings.

Abbotsford's industrial building inventory also has a larger proportion of older buildings but smaller proportion of manufacturing buildings than other municipalities in the FVRD.

Abbotsford's industrial building inventory growth, although slow since 2010, has mirrored other major markets in the FVRD, which also saw a lull in construction due to economic uncertainty.

Abbotsford's industrial market has experienced volatility in absorption, construction, and vacancy rates over the past decade. Absorption volatility could be attributed to a few large users and tenants entering and exiting this smaller market, however construction activity has decreased significantly since 2010. The last large speculative development, located on the 2200 block of Queen Street, was delivered in 2008, with only smaller developments at Maclure Business Park and mid-sized built-to-suit developments since constructed.

Based on employment growth projections, the inventory of industrial building is expected to increase to approximately 11,500,000 square feet by 2034, which translates into land requirements of approximately 260 acres.

Figure 3.14 | Projected industrial inventory based on employment

2014 — 7,606,362 sf
2024 — 9,571,786 sf
2034 — 11,500,491 sf
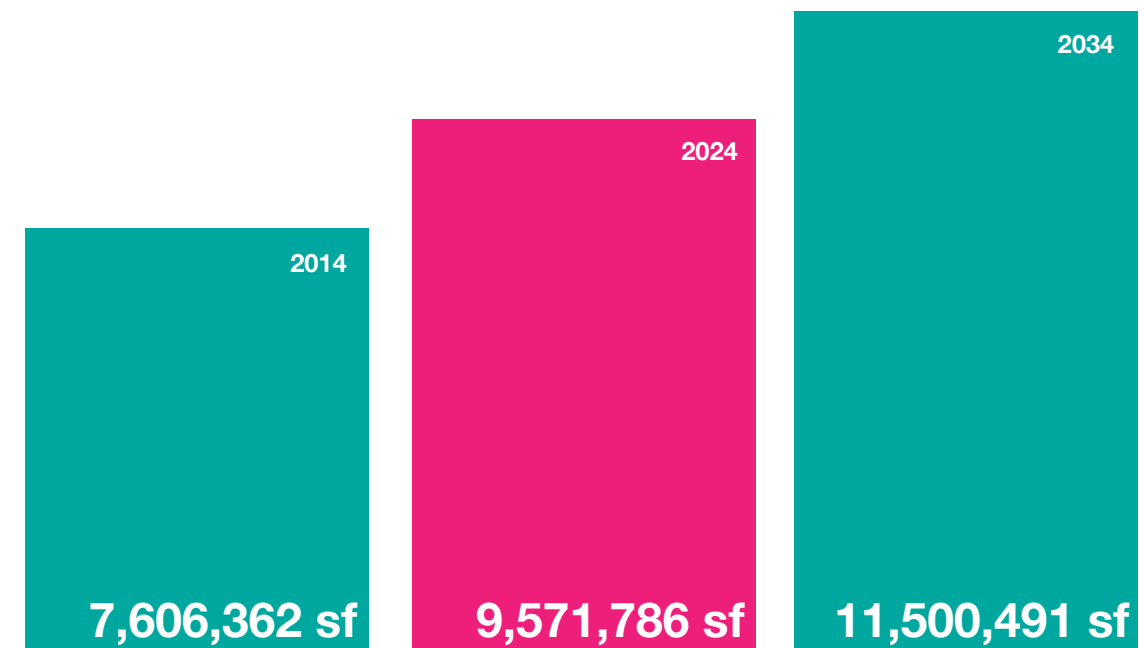
3.5 Community Facilities & Institutions

Once anticipated growth by community is more clearly understood and planned for, the City of Abbotsford can effectively plan for how to best meet increased demand for:

- Fire protection;

- Police and public safety;

- Recreation and cultural facilities;

- Public school facilities;

- Library services;

- Health services; and

- Religious facilities.

The current distribution of some of these facilities is presented in Section 5.

4.
Existing City Plans & Strategies

Since the adoption of the existing OCP in 2005, dozens of plans and strategies have been developed by the City to guide decision making in Abbotsford. As such, one of the guiding principles for this process is to align the new OCP with existing City plans and strategies, which involves integrating relevant directions, while updating or overhauling other directions.

To begin this process, the City of Abbotsford worked with the consulting team to review existing plans and strategies, and to identify preliminary strengths and potential areas of improvement of each. These plans and strategies will undergo further review in Stage 2 as new concepts are developed, at which point recommendations will be developed that identify whether the OCP-relevant components contained within each plan should be kept, tweaked, or rethought.

With an eye toward the guiding principle of integrating the OCP with servicing capacity and strategies, this section begins with an overview of existing plans and strategies relating to water, sanitary, and stormwater infrastructure. Discussion is also offered for transportation and parks, with the understanding that existing plans and strategies offer insights and directions that will ultimately help shape future policy directions in the new OCP.

4.1 Water

Water supply to developed lands is essential for health, safety, and quality of life of Abbotsford residents. Supporting and managing population growth through the new OCP requires both an adequate source of supply, and a distribution system capable of delivering water to developed areas, for both domestic water use and fire protection.

The City currently draws its water supplies from a variety of sources including Norrish Creek and groundwater wells. These sources are treated and either flow by gravity or are pumped through pipes to homes, businesses, and other developments. When demand growth exceeds the capacity of existing supply sources and treatment, additional sources are required to maintain minimum fire protection and service levels. Similarly, the distribution system must grow along with increased demands to maintain minimum service levels.

Supply improvements are also generally required based on total growth in demand, regardless of where it occurs. Distribution improvements – how and where water is supplied – depend on the location of growth. In general, compact communities on flat ground are less expensive to service than wide spread communities with greater elevation changes.

Current water plans are characterized by reduced consumption, due to water conservation and the deferral of using new water sources. The maximum day demand peaked in 2007 at approximately 140 million litres per day (MLD) and dropped steadily to approximately 100 MLD in 2014. The City's water conservation program, including an automated meter reading and bimonthly billing system is credited with this significant decline in demand.

With a current combined hydraulic capacity in the system of a one day supply and distribution of approximately 155 MLD, City demand had been rising close to capacity in 2007. With reduced demands, the City supply does not anticipate capacity upgrades in the short term. Meanwhile, the City has time to implement additional conservation programs that may further reduce demand, and optimization programs that will increase the distribution of water supply throughout the system.

The Abbotsford Mission Water Sewer Commission (WSC) received and endorsed a staff report dated June 18, 2013 with recommendations to:

- Maintain existing water conservation programs;

- Review demands annually to identify any need to plan for increased capacity through additional supply, optimization and conservation; and

- Defer further investigation into future source options.

The WSC also received a staff report dated September 26, 2013, with recommendations to:

- Defer future source project planning or initiation for at least three years; and

- Undertake reviews, some system optimization projects, aquifer studies, and an update to the 25 year capital plan.

Should significant demand growth occur, the City has options to increase capacity and/or optimize water distribution. Meanwhile, there are assumptions that the observed decline in water demand as a result of automated meter reading and bimonthly billing is a reliable indication of future continued low consumption. As a result, major source capacity increase projects may be deferred for decades. The OCP may therefore plan for growth and rely on the City to assess specific population projections and development patterns.

4.2 Sanitary Sewer

Wastewater is collected and conveyed through a series of pipes and pump stations, and conveyed to the Joint Abbotsford Mission Environmental System (JAMES Plant) for treatment. The original JAMES Plant was constructed in 1980 to 1981, and operational by November 1981. Various expansions have been required due to continued population growth in the area.

The two main components of the wastewater system are collection and treatment. Treatment is based on the flow and various characteristics of the wastewater, and generally indifferent where the sources are located. The collection and conveyance components dependent on the geographic development patterns. In general, compact communities are less expensive to service than wide spread communities.

There have been a few recent studies of the system, including:

• JAMES 2009/2010 Update of Wastewater Master Plan, August, 2011 – This Wastewater Master Plan Update for the JAMES Plant provides an update to the previous 2006 Master Plan. The review of population growth is presented in increments of 5 years from the year 2009 to 2034.

• Wastewater System Master Plan, Draft Report, September 2006 – This wastewater Master Plan was to be the basis for updating and funding the 25-Year Capital Works Program and the Development Cost Charge (DCC) Bylaw.

• Wastewater System Master Plan, Final Draft Report, December, 2013 – This report provided a basis for updating and funding the 25-year Capital Works Program and the DCC Bylaw.

Similar to the water system, the wastewater system has reportedly experienced recent reductions in flows. Wastewater flows are directly proportional to water use, and the reductions described above in Section 4.1 are understood to have led to a similar reduction in sewage flows. In turn, reduced flows will partly extend the planned schedule for capacity improvements as flow volumes, together with biological and solids loading, determine plant capacity.

The works that were already planned in the reports may still be implemented in support of the OCP, but possibly over a longer period. However, major food processing developments could accelerate the need for plant capacity increases due to biological and solids discharge. The City plans to update the scheduled works in response to the OCP update information provided.

4.3 Stormwater & Related Considerations

The City has completed three Integrated Stormwater Management Plans (ISMPs) to date – Marshall Creek, Downes Creek, and Clayburn Creek – and is planning on completing several more over the next few years. There have also been numerous master drainage plans and drainage studies completed since the 1980s covering the Matsqui Prairie and the Sumas Prairie lowlands areas, and the uplands areas. The findings of and recommendations from these studies that would affect an OCP are summarized below.

Streamside & Species-at-Risk Setbacks & Natural Areas

These studies identify watercourses and their streamside setbacks. The City has a Streamside Protection Bylaw (No. 1465-2005) that defines the setback widths depending on existing stream and streamside conditions. The ISMPs also identify the need for non-streamside areas such as parks, forested habitats, and wildlife corridors and species-at-risk setbacks from known habitat locations. The OCP should take these natural areas into account.

Geotechnical Setbacks

Some of the City's streams are within ravines with steep sided slopes. The studies identify the need for geotechnical assessments to define the setbacks from top of slopes to the nearest structure and also to the nearest infiltration facility. The OCP may benefit from including a "steep slope adjacent" land use that includes a large rear yard that would accommodate the geotechnical setback.

Flooding Hazards

The studies identify areas of potential flooding including the lowlands floodplain areas and areas where the drainage system capacity is inadequate to prevent upland flooding. The studies provide recommendations to address the capacity issues and identify where development should not occur. The studies also identify the need to set flood construction levels in the floodplain for habitable space. These floodplain areas should be identified in the OCP.

On-Lot & Regional Stormwater Requirements

The above studies and the City's Development Bylaw (No. 2070-2011) provide recommendations on stormwater management which includes on-lot stormwater source controls (such as absorbent landscaping, rain gardens, and infiltration/retention rock pits) and neighbourhood-scale detention facilities. Land use types and densities in the OCP must account for space for stormwater detention provisions.

Some of the natural, environmental, and agricultural features that limit or influence growth patterns are presented in Figure 4.1.

Figure 4.1 | Natural, environmental, and agricultural features that influence growth patterns

Environmental Development Permit Areas

Natural watercourses

Channelized watercourses

Water bodies

Floodplain

10 metre elevation contours:

0

200

400

600

800 <

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Data Source:

City of Abbotsford

Kilometers
0   1   2   4   6   8
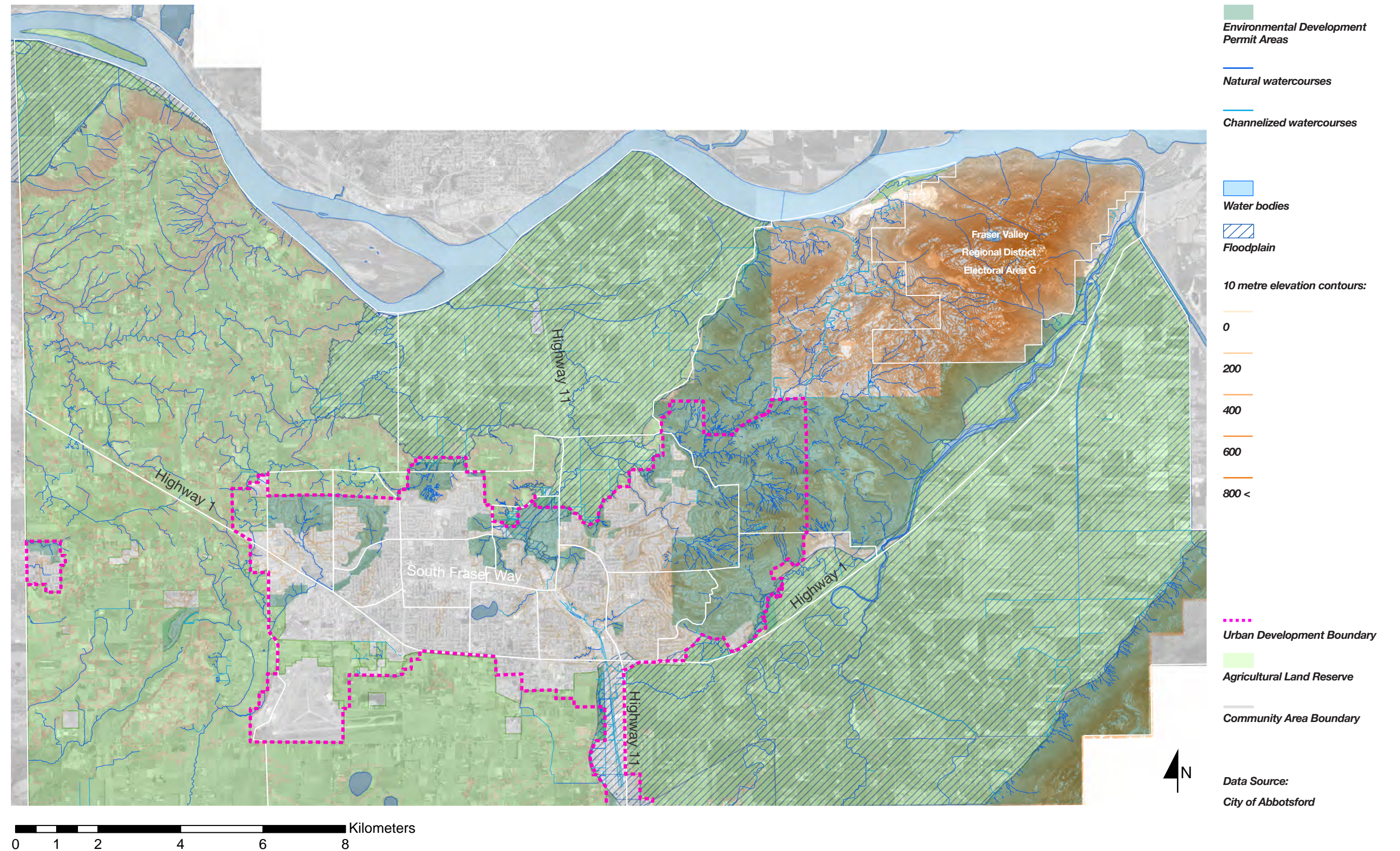
4.4 Transportation

Transportation plays a central role in OCPs. Transportation and the urban structure - including buildings and the way land is used - are intricately linked, each having a profound impact and influence the other. Indeed, decisions about the location and type of future development have a major impact on how people travel, as well as the character, cost, and functionality of the urban structure.

While a more robust analysis of existing transportation conditions is outlined in Section 5, this section offers a snapshot of highlights from existing transportation planning documents. Major plans that have significant and direct influence on transportation in Abbotsford include the current OCP (2005); Master Transportation Plan (2007); and Transit Future Plan (2013), the last of which is a BC Transit document.

Targets for How People Move

These plans identify directions for Abbotsford's modal split, which refers to the relative proportions of trips taken by walking, cycling, transit or car as passenger or driver. For example, the Transit Future Plan outlines a Mission- and Abbotsford-wide target to reach an 8% transit proportion.

Transportation Networks

The Transportation Master Plan outlines directions for different components of the transportation system, including a cycling plan, transit plan, road network plan, and truck routes plan. Maps for each are outlined in the following pages.

Road Network Plan

The road network plan, which is the most extensive of the Transportation Master Plan, identifies a number of projects to address issues with connections, road and intersection safety issues, and capacity issues on roads and at intersections.

Figure 4.2 – the Road Hierarchy map – identifies the primary roads within the city, including Highways 1 and 11, which are provincial routes. South Fraser Way is an "urban major arterial" that runs east-west through the centre of the City. Other major east-west routes through the city centre include Maclure Road and George Ferguson Way, and north-south routes are less well defined but the main streets in the city centre are Clearbrook Road and McCallum Road. Sumas Road is another provincial road that connects Highways 1 and 11, and outside the city centre there are a number of rural collector routes that generally run within a grid system (though it breaks down in the eastern hillside areas).

Figure 4.2 | Road hierarchy

Urban Arterial

Urban Collector

Urban Major Arterial

Urban Local

Urban Industrial

Urban Regional Arterial

Rural Collector

Rural Local

Rural Regional Arterial

Provincial Highway

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Data Source:
City of Abbotsford

Kilometers

0 1 2 4 6 8
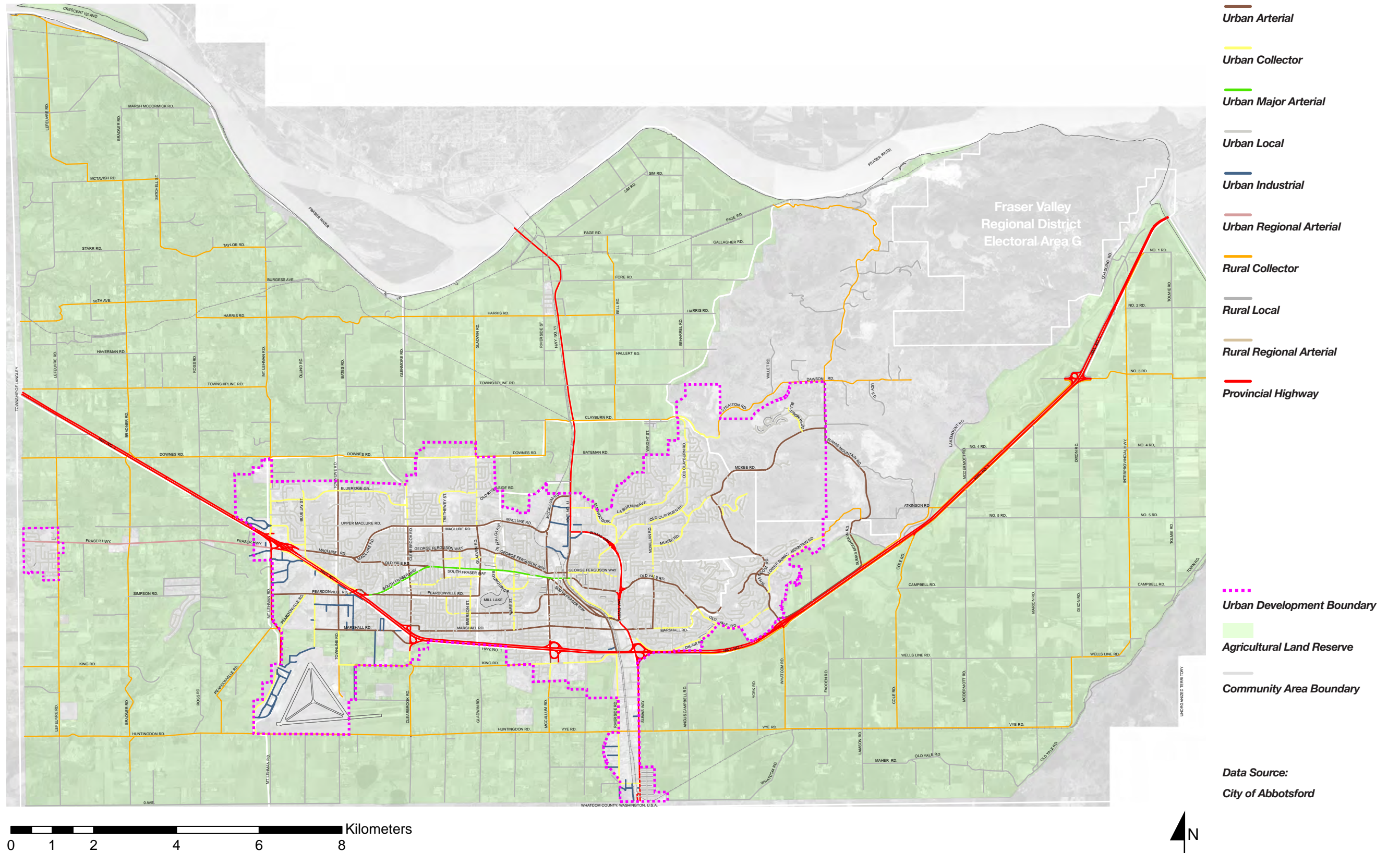
Cycling Plan

The cycling plan identifies facility upgrades to several internal streets within Abbotsford, as well as future connections in the perimeter road and supplemental routes to ensure a better connectivity to major destinations.

Figure 4.3 – the Bicycle Routes and Trails map – shows the extent of different bicycle facilities throughout Abbotsford. The length of separated routes is relatively low, however they are in close proximity to residential areas. The off-street trail network mainly caters to recreational use rather than transport/utility use, and they are situated predominantly by outlying arterials and collector routes.

Truck Route Plan

The truck route plan was created to reduce the impacts on sensitive development areas. The key elements of this plan are to improve connectivity, minimize congestion, and decrease travel times. Main truck routes are presented in Figure 4.4.

Transit Plan

The transit component of this plan focuses on investment options to improve existing ridership and cost recovery. Bus stops and bus routes with relatively high frequency are mainly consisted of BC Transit's 'GoLine' branded services. Resident access to this service and other discussion on existing transit conditions are outlined in Section 5.

Figure 4.3 | Cycling and trail routes

BICYCLE LANES:

Designated Marked Bicycle Lane

Paved Shoulder

Wide Curb Lane

Provincial Designated Marked
Bicycle Lane

TRAILS:

Unclassified

Multi-use (Soft)

Multi-use (Hard)

Nature

Recreation

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Data Source:
City of Abbotsford

0   0.5   1   2   3   4
Kilometers

N

Figure 4.4 | Truck routes

Provincial Truck Routes

Municipal Truck Routes

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Fraser Valley
Regional District
Electoral Area G

ABB MISSION HWY

NO.3 RD   NO.3 RD

NORTH PARALLEL RD

DIXON RD

MACLURE RD

MCCALLUM RD

FRASER HWY

FRASER HWY

SUMAS WAY

SOUTH PARALLEL RD   HIGHWAY NO.1

LEFEUVRE RD

MT LEHMAN RD

PEARDONVILLE RD

MARSHALL RD

KING RD

KING RD

KING RD   KING RD

HIGHWAY NO.1

CLEARBROOK RD

MT LEHMAN RD

HUNTINGDON RD

RIVERSIDE RD

SUMAS WAY

VYE RD

POWERHOUSE RD

4TH AVE

Kilometers
0   1   2   4   6   8

Data Source:

City of Abbotsford

N

4.5 Parks

Parks and other open spaces are important components of an OCP. They offer opportunities for both passive and active recreation, and they provide access to and protect natural areas. The City's Parks and Recreation Master Plan (2005) is nearly 10 years old, and much of the information will be reassessed during the OCP process.

Directions in the City of Abbotsford's Parks and Recreation Master Plan (2005) are based on the following objectives:

- Develop a balanced and diverse system of parks and open space;

- Provide a network of routes including multi-use pathways, trails, bicycle lanes, and attractive pedestrian streetscapes that link the City's parks, facilities, schools, and business areas;

- Develop new and improved recreation facilities to support everyday community leisure needs related to recreation, sport, and culture;

- Provide recreation programming that encourages socializing, skill development, and better sense of community;

- Encourage community development;

- Ensure the parks and recreation system is cost effective and affordable;

- Plan for inclusivity;

- Serve the community as an environmental leader; and

- Address issues related to safety and security.

It is important to note that there are many different types of parks, ranging from city-wide parks, to community and neighbourhood parks (with smaller catchment areas), to other open spaces, which include natural areas, public cemeteries, public golf courses, and other areas.

Figure 4.5 presents the City of Abbotsford's park system, identifying the estimated number of residents within 500 metres of a park. While parks vary in quality and type, and topography and access are not captured in the map, it nonetheless offers a picture of the extent and proximity of parks and open space to Abbotsford residents.

Figure 4.5 | Parks

2014 Abbotsford Approximate Population:
140,000

Estimated number of people within 500m of a park:
118,219 or 84%

Fraser Valley
Regional District
Electoral Area G

Highway 11

Highway 1

Highway 1

South Fraser Way

Highway 11

Parks

500m Distance

Urban Development Boundary

Community Area Boundary

Kilometers

0   1   2   4   6   8

N

Data Source:

City of Abbotsford
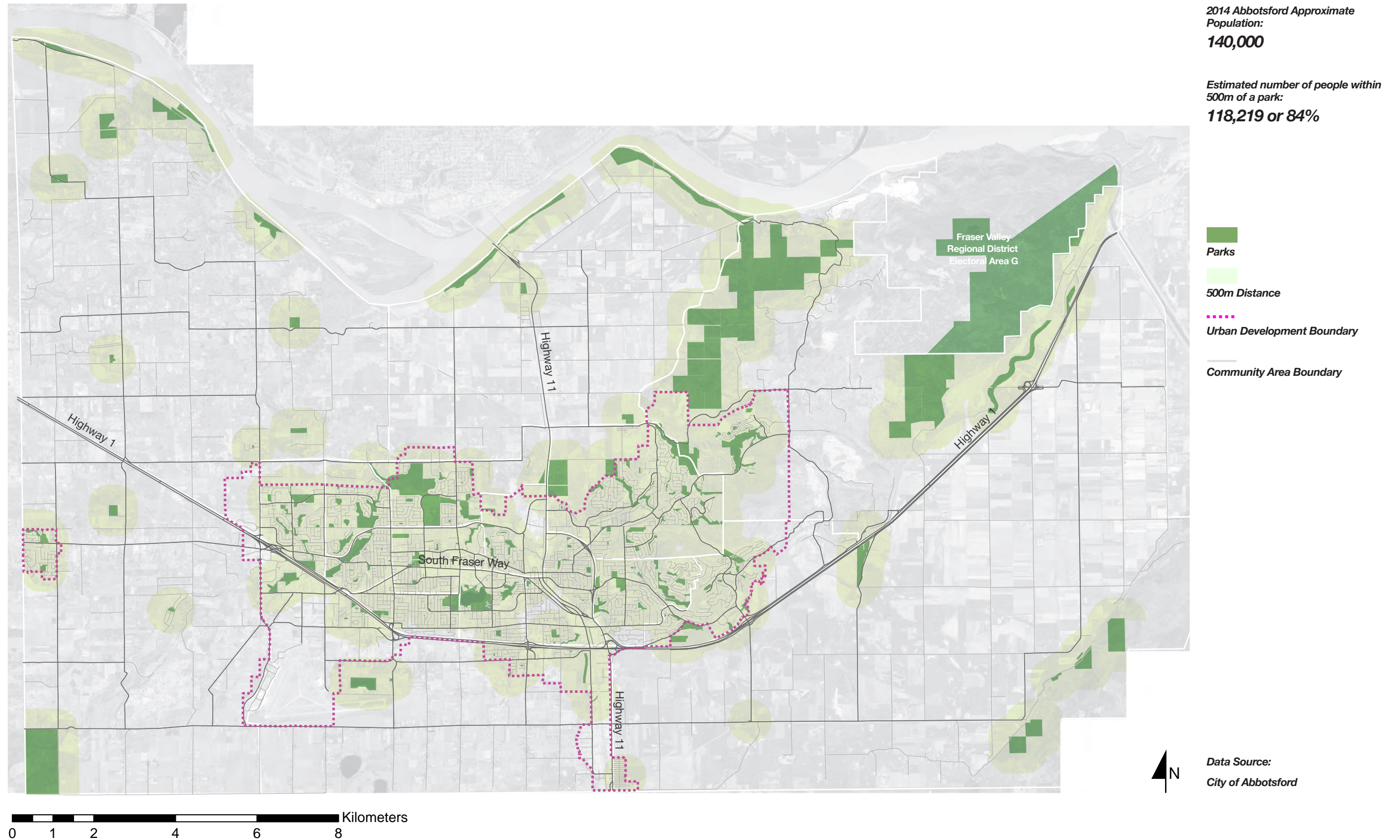
4.5 Summary of All Major Plans & Strategies

The summary in this section lists numerous plans and strategies, and includes preliminary commentary on its applicability to the OCP update. This represents a **preliminary review**, and further review will be undertaken with the City's Technical Advisory Group – with staff representation across departments – in Stage 2 as new concepts are developed. Further review will provide a better understanding about which components of each of the plans and strategies should be unchanged/maintained, tweaked, or rethought in a more significant way.

Policy Document	Comments
Planning & Development	
Abbotsford Cares: Agenda for Social Planning (2006)	Identifying social challenges and opportunities as Abbotsford grows and changes, this Plan contains many relevant directions (e.g. affordability, accessibility) related to land use planning for consideration in the OCP. However some aspects of this Plan are outdated and likely need refreshing.
Abbotsford Seniors Housing Study (2010)	This study contains important guidance and policy recommendations for the OCP to enhance seniors housing, such as support for different housing types, pedestrian-friendliness, and Crime Prevention Through Environmental Design.
Affordable Housing Strategy (2011)	While the OCP cannot regulate housing affordability, this strategy contains objectives, policies, and actions that can be translated into OCP policies that support affordable housing. Examples include support of affordable housing in close proximity to transit, jobs and services, and reducing parking requirements to reduce the cost of units.
Agriculture Strategy (2011)	While the focus of the OCP is on urban areas, this recently adopted strategy contains objectives that will influence the development of OCP policies related to land use (e.g. agri-industrial, rural residential, etc) and urban food systems, such as urban agriculture.
Auguston: A New Traditional Town (January 1998)	This plan offers a blueprint for development of this area, however it has not been adopted and it is dated, suggesting that there may be updates based on the outcomes of the OCP.
Child and Youth Friendly Abbotsford Community Strategy (2009)	While this plan is a few years old, it nonetheless contains relevant strategies that can enhance the OCP's ability to influence the child and youth friendliness of Abbotsford, including design guidelines and other strategies for land use, the built environment, and transportation.
City in the Country Plan (2004)	This plan is an economic development plan, however it contains directions relating to employment lands and agricultural lands, which should be reassessed through the OCP process.
Civic Precinct Vision (2013)	This vision is new and still relevant, clearly laying out goals and planning and design directions for the City's precinct. It also offers an example of a neighbourhood plan that may be considered during the development of a framework for neighbourhood planning.

Policy Document	Comments
Crime Prevention Through Environmental Design (CPTED) (2013)	This manual includes crime prevention design principles for land use and spaces that are intended for integration into the OCP Development Permit Guidelines.
Crime Reduction & Community Safety Strategy (2010)	This strategy contains directions for the CPTED manual that are intended for inclusion in the OCP, so integrating the principles from the CPTED manual should account for directions contained in this strategy.
Community Sustainability Strategy (2013)	This strategy was recently adopted and contains a framework for policies that are relevant to the OCP. For example, the new sustainability vision and "future states" should replace the OCP's current Sustainability Charter, and the overall vision should be reflected throughout the OCP. The GHG targets should be reviewed and updated as they are based on the current OCP.
Economic Development Action Plan (2013)	This plan includes a number of directions relating directly to the OCP, including support for transit improvements, complete communities, and infill development. It also contains direction in support of at least one OCP guiding principle endorsed by Council, which is the development of a neighbourhood planning framework.
Green Community Plan (2013)	This plan was recently adopted and identifies strategies for built form, natural areas, and shared stewardship that are relevant and applicable to the new OCP.
Green Energy Plan (2013)	This plan was recently adopted and contains important strategies for reducing greenhouse gas emissions that are relevant to the new OCP with respect to land use and transportation, buildings, solid waste, agriculture, and the economy.
Green Economic Investment Study (2013)	This study provides recommendations for greening Abbotsford's economy, including in areas that have relevance to the OCP update including green development, district energy, densification of the city centre, transit, eco-industrial networking, and more.
Homelessness Action Plan (2014)	This recently adopted plan is comprised of actions falling within five strategic areas, most of which do not directly relate to the OCP update. However the Action Plan calls for integration with local plans and bylaws in areas relating to residential land use, which will be relevant to the OCP update.
Mayors Task Force on Commercial Truck Parking: Moving Forward (2011)	This strategy is already being used by staff to guide industrial truck parking and to discourage use in ALR locations. It currently supports the OCP.
McKee Peak Planning Study (November 2005)	This planning study is relevant to greenfield planning discussions as part of the OCP update. It is outdated and some information contained within it is no longer applicable, and therefore requires review.
U District: A Place to Grow (May 2012)	This document offers a vision and directions for the U District that can be integrated into the new OCP, potentially with some updates to information and concepts. It will also be turned into a detailed neighbourhood plan and accompanying servicing strategy.
Parks, Recreation & Culture	
Parks & Recreation Master Plan (2005)	While this plan outlines objectives and directions that are still relevant today and should be integrated into the new OCP, some aspects may need revisiting, such as some cultural considerations, and others may need to be added.
Civic Cemeteries Master Plan (2007)	This plan has components that potentially relate to the OCP update, including considerations for integration with walking and cycling infrastructure, and policies relating to heritage assets.
Arts and Heritage Master Plan (2004)	This plan was adopted by Council around the time of the creation of the current OCP, and there are specific arts and heritage policy recommendations that are appropriate for the new OCP. Given the age of the document, some aspects will likely need to be revisited as part of the new OCP process.
Heritage Strategic Plan (2005)	This plan was also adopted by Council around the time of the creation of the current OCP, and it contains recommendations for conservation and management of heritage resources that are applicable and should be considered during development of the new OCP. Given the age of the document, some aspects may need revisiting.
Statement of Significance (2005-2006)	The heritage resources identified in this document may offer guidance for OCP policies related to built form character and heritage preservation.

Policy Document	Comments
Library Master Plan (2005)	With an emphasis on a new model for library branch development, the directions in this plan may relate to the OCP with respect to institutional land use policies, the neighbourhood planning framework, and possible more.
Mill Lake Park Action Plan (2003)	This plan offers guidance for this important park that will be relevant to OCP policies, however given the date of the plan, aspects may need to be revisited.
Abbotsford Trail Development Strategy (2004)	This strategy outlines concepts and directions that may influence park and transportation planning as part of the OCP, however there have been alterations and identified omissions since the adoption of this plan that will need to be addressed as part of the new OCP.
Engineering	
2007 Transportation Master Plan (2009)	The new OCP will fully integrate transportation planning, and so this master plan contains a significant amount of relevant information and recommendations for consideration in the new OCP. Depending on the outcomes of the new land use scenarios – which direct and focus density and land use mix – there may be some changes required.
Transit Future Plan (2013)	This plan was developed by BC Transit and it contains implementation strategies for rapid, frequent, local, targeted and regional/inter-regional transit that will be integrated into OCP policies for land use and transportation.
Clayburn Creek ISMP (2012)	Stormwater, wastewater, and water plans contain relevant information that will be important in ensuring that the new OCP aligns with existing service capacity. They will be fully integrated into the OCP process, with aspects being re-examined as needed once land use scenarios are developed and tested.
Marshall Creek ISMP (2006)	
Downes Creek ISMP (2010)	
2006 Wastewater Master Plan (2006)	
2010 Wastewater Master Plan (2010)	
2009/2010 JAMES Master Plan (2010)	
2006 Wastewater Master Plan (2006)	
Sumas Mountain Aggregate Resource Study (2009)	Aspects of these soil removal studies will inform discussions related to greenfield development as part of the OCP process.
Draft SW Abbotsford Soil Removal Study (2008)	

5.
Elements of Great Cities

What makes a city, a great city? While this a subjective question, most can agree that a great city is rich with places that people enjoy experiencing. Great cities create a sense of place, vitality, and connectedness. Great cities enrich public life.

More broadly, a great city is one that enhances all facets of human quality of life, while ensuring fiscal responsibility and ecological health. Elements of great cities encompass diverse urban elements such as buildings and destinations, open spaces, housing, movement and accessibility, infrastructure, culture including arts and heritage, ecology and natural environment, economic development, and more. An OCP contributes to a city's greatness in part by helping shape its urban structure.

The Importance of Urban Form

Urban form refers to the general pattern of development that define a city's structure. This includes the intensity and distribution of buildings, and other physical elements such as open space, transportation networks, natural features, and public facilities. It goes hand-in-hand with land use, which refers to the type of activities that take place within a particular area, including residential, commercial, industrial, institutional, and other uses.

Along with land use, urban form is one of the most significant policy tools at the disposal of municipalities to help realize their community visions. Within its legislated obligation to regulate land use, a local government regulates the density and form of development, which greatly influences:

- Servicing

    This includes civic infrastructure, ranging from roads to sewers to transit. The efficiency of providing these services to citizens across the city is influenced by the distribution and intensity of development, which is why integrating OCP directions with servicing capacity and strategies is an important guiding principle for this process.

- Municipal Finances and Taxes

    Servicing efficiency in turn impacts the cost of providing services, which affects the City's financial bottom line and ultimately the taxes paid by residents.

- Community Character

    This refers to the "look and feel" and overall attractiveness of a city. The height and type of buildings, and the uses within them, influence street life and help shape a distinguishable visual identity that creates a unique sense of place. Establishing infill and redevelopment guidelines – an OCP guiding principle – is an important means in maintaining or enhancing community character.

- Housing Choices

    Different building types offer different housing choices, including the types of homes (e.g. single family house, townhouse, apartment) available for individuals and families. Clarifying and adding detail to the land use designations in the OCP – a key guiding principle – will help shape available housing options in Abbotsford.

- Transportation Choices

    The intensity and distribution of buildings, along with land use and transportation infrastructure, greatly impact how people choose to move around. Some forms of development make it convenient, safe, and desirable to move around on foot, by bike, or by transit, while other forms of development effectively limit transportation choices to travel by car.

The intensity and distribution of development influences everything from infrastructure costs to social capital to the ability to access services and

Transportation choice in turn influences an individual's level of physical activity, and thus their health and safety. It also greatly influences a community's greenhouse gas emissions, for which the OCP is legislated to set reduction targets.

- **Protection of Agricultural Land and Natural Areas**

  The physical footprint of a city and the degree to which growth is managed within existing built up areas greatly influences a community's ability to protect its surrounding natural areas and agricultural lands from encroaching development.

- **Neighbourhoods and Access to Amenities**

  One of the guiding principles of the OCP process is to create a framework for neighbourhood planning. Understanding how to define neighbourhoods is a first step in the process, which involves identifying how urban form relates to the functioning of distinct and relatively self-sustaining sub-areas of the city.

Assessing Urban Form in this Report

In order to create a baseline for urban form in Abbotsford, a number of key characteristics are explored in this section: mix of land use; residential and employment density; connectivity; and proximity to transit. Baseline information related to transportation behaviour is also included.

These characteristics are further described in this section, and reveal both opportunities and challenges within Abbotsford. As such, they also offer concrete means with which to clarify and add detail to OCP land use designations, removing vagueness and helping establish guidelines for infill and redevelopment.

5.1   People & Jobs

The Importance of Density

Density refers to the number of people, homes, or jobs within a given area, and it is often a measure of development intensity. Compact development (i.e. medium to high densities) facilitates transportation and housing choice, and it also results in lower per capita costs of roadways, water and sewer infrastructure, transit, and other municipal services like fire stations, recreation centres, and schools (Litman, 2014). This is an important consideration for addressing the guiding principle of aligning land use planning with servicing capacity and strategies.

Residential Density

While density can be facilitated in many different ways, within a neighbourhood it usually includes some multi family housing. With shared walls and living spaces that are generally smaller than in single family houses, multi family housing saves energy, reduces household utility expenditures, and helps communities move toward their OCP's greenhouse gas reductions targets. Multi family housing also supports increased housing choice.

Also, beyond a certain threshold, residential density increases the attractiveness of frequent transit. Transit demand is partly based on a critical mass of users in a given area and - while nuances are context specific and involve many factors - research shows that a doubling of residential density will generally more than double transit demand to a threshold. Gross density of up to 50 units per hectare creates demand that rises faster than density (Walker, 2012).

Figure 5.1 | Residential density and transit demand
Source: Adapted from David Jones in Jarret Walker, 2012
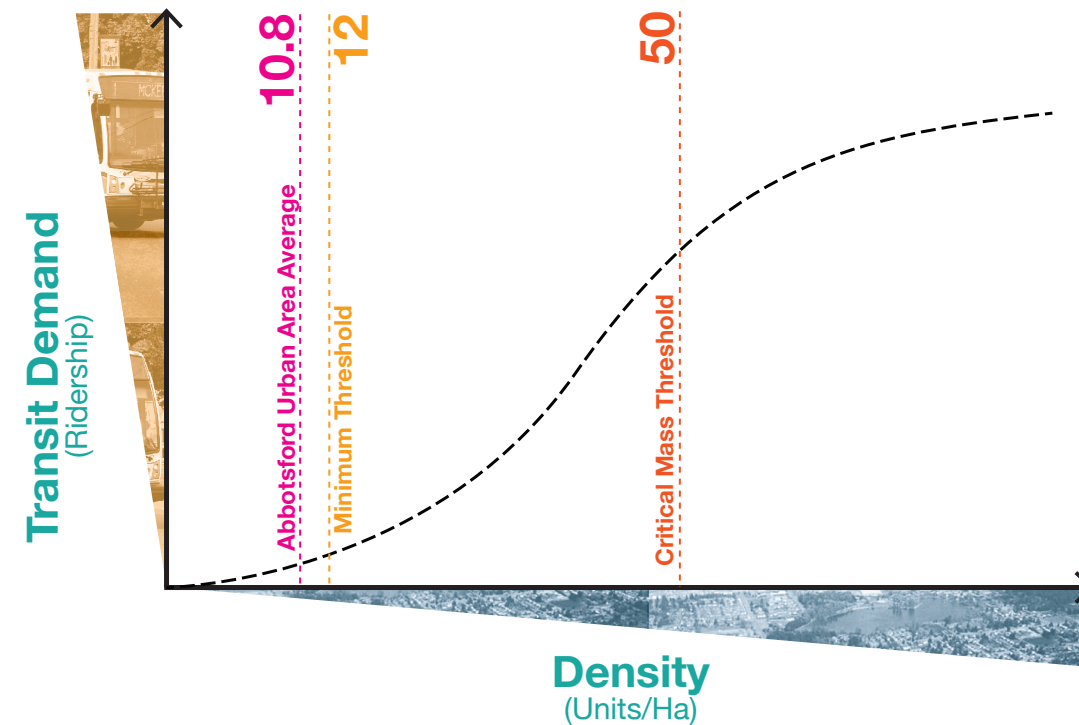
Higher density neighbourhoods also support vibrant street life. Along with mixed use development, higher densities improve access to a variety of complementary activities, such as shopping, jobs and recreation resulting in shorter, walkable (or cycle-friendly) distances between homes and destinations. Research shows that gross residential densities need to exceed approximately **32 people per hectare,** before even a minor shift away from predominant vehicle use is seen

(Leslie, 2007; Frank and Pivo, 1995). This translates into a base minimum of approximately **12 units per hectare** based on average household size in Abbotsford (refer to Figure 5.2 for housing type examples for this density). It is important to note, however, that this is considered a bare minimum, with even higher densities needed to support significant transportation choice and amenities.

A commonly held perception is that achieving a compact urban form requires the development of towers. However the basic density thresholds described here can be easily met in neighbourhoods through a mix of diverse housing types that range from single family homes on narrow lots (some with secondary suites), to townhouses, to low and medium rise apartments of 4 to 6 storeys. Figure 5.2 presents a conceptual snapshot of how net densities may vary in different areas of the city.

Further discussion on Abbotsford's mix of housing types is contained in Section 3.

Figure 5.2 | Visualizing density

| 0-1 units/ hectare Agricultural land, with few homes | 1-12 units/ hectare Single family homes on large lots | 12-40 units/ hectare Compact lot single family, duplex, triplex, coach house | 40-70 units/ hectare Single family homes on smaller lots and ground-oriented buildings up to 4 storeys | 70-125 units/ hectare Buildings are generally 4-6 storeys (but can be higher) | 125+ units/ hectare Predominantly high density buildings of 6 storeys or more |

Countryside | Suburban | Compact Neighbourhood | General Urban | City | City Centre

Employment Density

Employment density is also very important. To continue with the example of enabling transportation choice, the concentration of jobs in a particular area can affect transit ridership even more strongly than the concentration of its residents (Walker, 2012). For employment, research shows that a minimum threshold of anywhere from **50 to 185 jobs per hectare** is needed for a significant modal shift from single-occupancy vehicle use to walking and transit use (Neptis, 2003; Taylor and Fink, 2012).

For activity centres and corridors, employment densities could be considered in tandem with residential densities, as they both contribute to transit viability (for example) in central/nodal urban areas.

Existing Densities in Abbotsford

Most of Abbotsford does not have residential densities that meet or exceed the minimum thresholds to be considered walkable or supportive of frequent transit service, which partly explains why the modal split currently favours vehicle use. Many of these residential densities are also insufficient to create the amount of customers needed to support neighbourhood-serving businesses like cafés and neighbourhood grocers, which in turn influences access to amenities, street life, and overall vitality.

Figure 5.3 presents gross residential densities based on housing units by dissemination area, discounting Agricultural Land Reserve (ALR) areas in order to fully convey the conditions of the urban / built up areas and to recognize that ALR lands are not intended for development. The pattern on this map is very similar to the pattern shown on residential densities by population map (Figure 5.3), however there are a few differences in some communities. For example, in East Townline, residential densities by population are higher than residential densities by housing, likely due to the tendency of some cultural groups to have multiple generations living within one single family house. Understanding these nuances are important to guiding principles that address servicing capacity and strategies, and infill and redevelopment.

Figure 5.4 presents gross residential densities (population) by dissemination area, also discounting ALR areas. This map shows pockets of residential densities mainly throughout the western side of Abbotsford, with concentrations that exceed minimum thresholds in support of transportation choice predominantly in parts of Abbotsford Centre, Mill Lake, Babich, Clearbrook Centre, South Clearbrook, West Clearbrook, East Townline, West Townline, and Fairfield. Generally speaking, these areas also tend to have higher rates of active transportation and transit use, and lower rates of private vehicle use (refer to Section 5.3) than other communities in Abbotsford.

Figure 5.5 presents employment densities by census tract, also discounting ALR lands. As one would expect, the greatest densities including those that meet or exceed stated minimum thresholds, are situated along the primary commercial corridor, South Fraser Way. The focus of the highest employment densities both within the city centre and along a frequent transit corridor can be considered a positive urban condition in Abbotsford.

Figure 5.3 | Gross residential densities by dissemination area (housing units)

Dwellings per Hectare

0 - 3

3 - 7

7 - 12 — — — — Transportation choice bare minimum threshold

12 - 20

20 - 30

30 - 70

Agricultural Land Reserve

Urban Development Boundary

Community Area Boundary

Data Source: Statistics Canada 2011

Note: Data not shown for areas within Agricultural Land Reserve
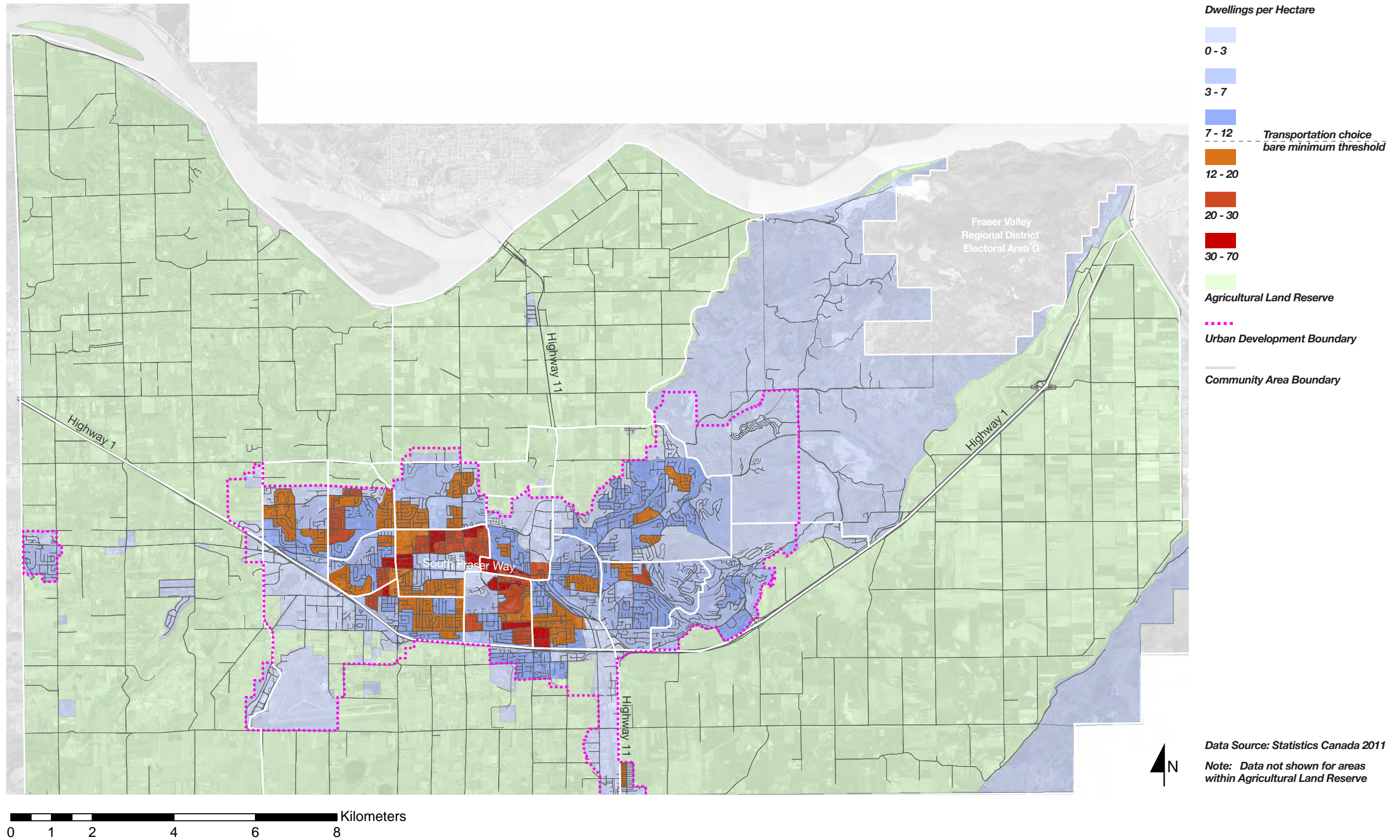
Figure 5.4 | Gross residential densities by dissemination area (population)

Persons per Hectare

- 0 - 10
- 10 - 20
- 20 - 32 — — — *Transportation choice bare minimum threshold*
- 32 - 50
- 50 - 80
- 80 - 125

Agricultural Land Reserve

Urban Development Boundary

Community Area Boundary

Fraser Valley Regional District Electoral Area G

Highway 1

Highway 11

South Fraser Way

Data Source: Statistics Canada 2011

Note: Data not shown for areas within Agricultural Land Reserve

N

Kilometers
0   1   2   4   6   8

Figure 5.5 | Employment densities by census tract

Jobs per Hectare

0 - 5

5 - 15

15 - 30

30 - 50 — *Transportation choice bare minimum threshold*

50 - 55

55 - 65

Agricultural Land Reserve

Urban Development Boundary

Community Area Boundary

Data Source: Statistics Canada 2011

Note: Data not shown for areas within Agricultural Land Reserve

Fraser Valley Regional District Electoral Area G

South Fraser Way

Highway 11

Highway 1

Highway 1

Highway 11

N

Kilometers
0 1 2 4 6 8

5.2   Community Places

The Importance of Diverse Community Places

Land use mix refers to the diversity or variety of land uses (e.g. residential, commercial, industrial, institutional, agricultural, etc) within a given area. Higher degrees of land use mixes are associated with "complete communities", wherein residents have easy access to a variety of amenities and services within their neighbourhood. These include shops and restaurants, cultural and civic facilities (e.g. museums, libraries, galleries), employment opportunities, recreational destinations (e.g. parks, community centres), and more. This mix allows residents to live, work, shop, play, and learn close to home.

Land use mix is important for creating distinct, vibrant neighbourhoods that support businesses and offer housing and transportation choice. For example, with other variables such as residential density held as constants, the odds of a person walking are twice as high in areas with a high degree of mixed uses than in areas with a low degree of mixed uses. Residents living near multiple and diverse retail destinations also generally make more frequent and shorter shopping trips, and more by walking and cycling (Leslie, 2007; Brown, 2009; Frank and Pivo, 1995).

A higher degree of land use mix also translates into a stronger sense of community, where residents are more likely to know their neighbours, participate politically, trust others, form community networks, and be socially engaged (Nabil, 2014; Leydon, 2003).
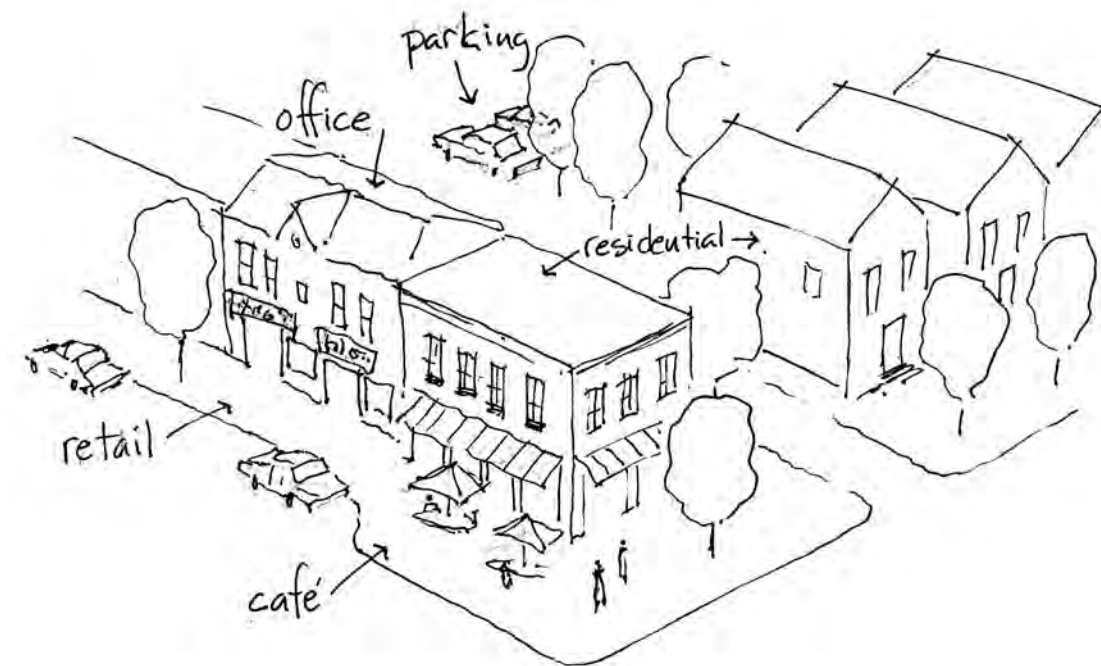

Figure 5.6 | Mixed use neighbourhoods have multiple destinations and create choice in housing, shopping, recreating, and transport

Existing Diversity of Community Places in Abbotsford

Figure 5.7 presents the Land Use Plan for urban areas within the existing OCP. By area, the majority of Abbotsford falls within land use designations that do not explicitly include a mix of services and amenities. For example, commercial uses are permitted in the City Centre, Choice of Use, and City Residential, however they are not explicitly permitted in Urban Residential and Suburban Residential, which comprise the greatest amount of land area in Abbotsford.

Figure 5.8 presents current commercial zoning, current OCP land use designations that include commercial uses, and main shopping centres. These comprise areas that have existing or the potential for shops and related destinations and community places. Likewise, these locations are generally limited to major corridors (e.g. South Fraser Way, Highway 11), where most residents cannot access them close to home.

Assessing land use mix at a finer scale is complex, however there are a number of useful representative examples that can be used. For example, grocery stores offer a useful reference point for assessing land use mix as they are one of the greatest trip generators in transportation surveys (Walkscore, 2011).

Figure 5.9 presents the estimated percentage of people in Abbotsford (approximately 25%) within 800 metres – or a 10-minute walk as the crow flies – of a grocery store. As the 10-minute threshold appears to be the most significant determinant of walking from a destination standpoint, ideally the majority or all of residents would be within 800 metres of a grocery store. In general, this is a useful metric to take forward into the next stage of the Abbotsforward process, to see the measurable impacts of creating more mixed use, compact development patterns, including within the context of creating "complete" neighbourhoods as part of the guiding principle of developing a neighbourhood planning framework.

Figure 5.10 includes other amenities such as schools, museums, galleries, and religious centres, which are well used in Abbotsford. The pattern on this map shows that while amenities are concentrated along corridors and in the centre of the city, there is some distribution across the city and well past the Urban Development Boundary, with most residential areas being within 800 metres of at least one amenity.

Access to parks is presented in Section 3.

photo credit: Flickr - Scott Robertsen Montreal

Grocery stores offer a great proxy for assessing the "completeness" of communities in terms commercial land use mix.

Figure 5.7 | Existing OCP Land Use Plan

Legend:
- Commercial
- City Centre
- City Residential
- Choice of Use
- Institutional
- Industrial - Business
- Industrial - Business (CICP)
- Industrial - Reserve
- Residential
- Resource / Conservation
- Suburban Residential
- Urban Residential
- Urban Development Boundary
- Agricultural Land Reserve
- Community Area Boundary

Kilometers
0   1   2   4   6   8
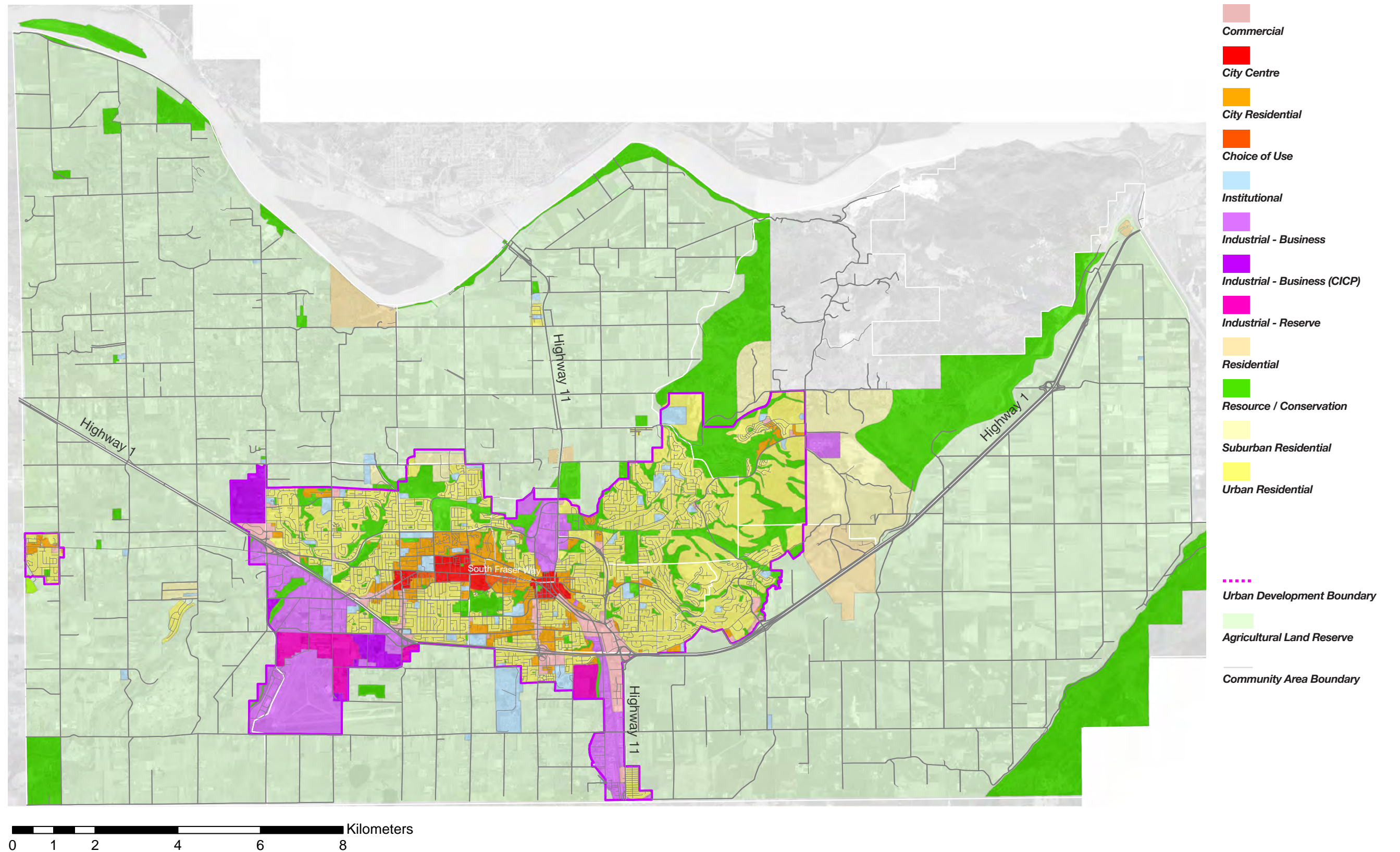
Figure 5.8 | Commercial zoning and current OCP commercial land uses

Commercial zoning:

(C1, C2, C3, C4, C5, CHR, CGS, CRC, CGC, C7)

Current OCP commercial land uses:

(C, CC, CU)

● Main Retail Centres

● Farm-Based Groceries

(Not a Complete Inventory)

▪▪▪ Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Data Source:

City of Abbotsford, Colliers

N

Kilometers

0   1   2   4   6   8
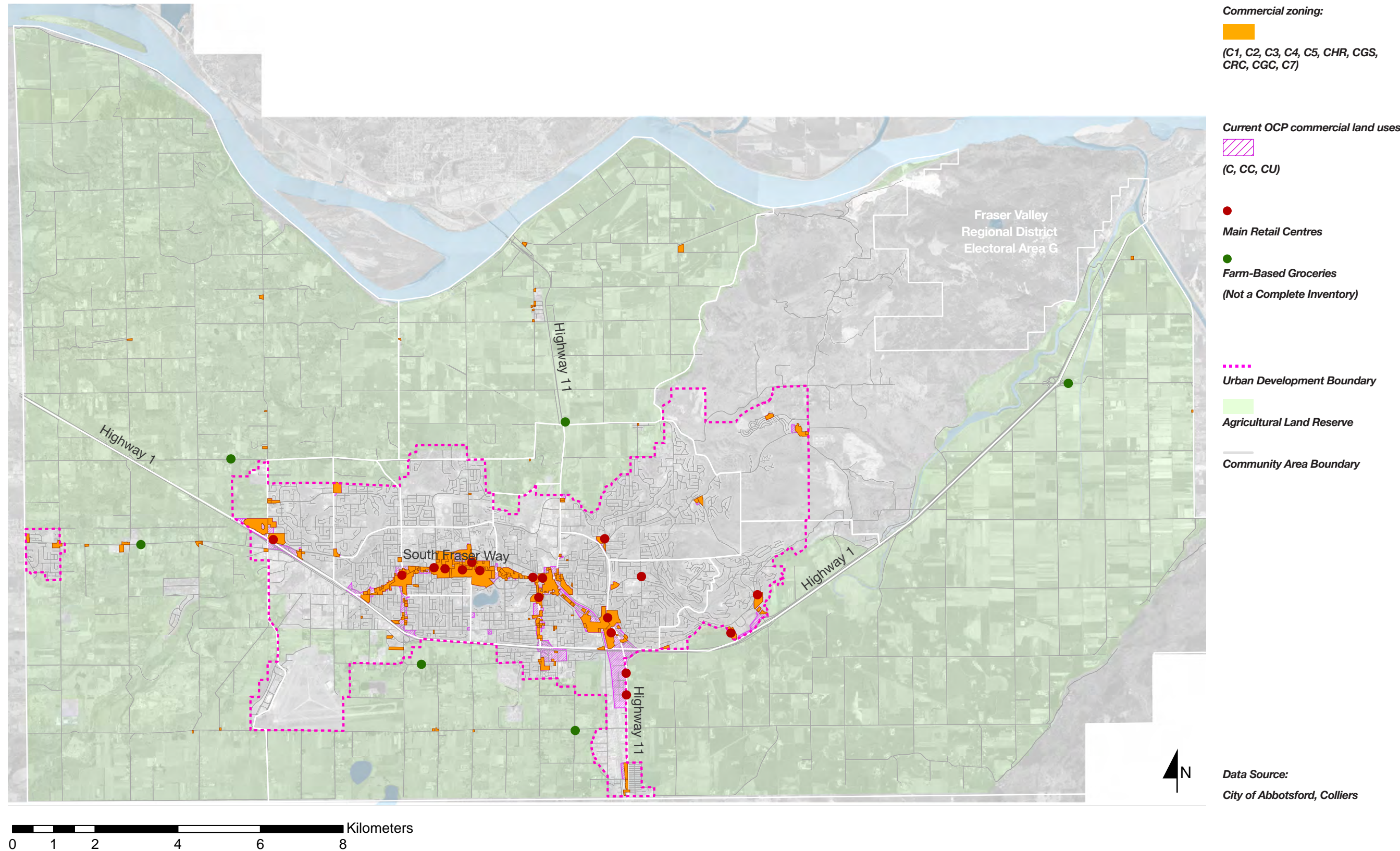
Figure 5.9 | Proximity of residents to grocery stores

2014 Abbotsford Approximate Population:
140,000

Estimated number of people within 800 metres of a grocery store:
~ 35,000 or 25%

● *Grocery Stores*

▨ *800 m Buffer*

Population Density:
(Persons per Square Kilometre)

☐ *20 - 1,500*

▨ *1,500 - 3,500*

▨ *3,500 - 6,500*

▨ *6,500 - 12,500*

┅┅ *Urban Development Boundary*

▨ *Agricultural Land Reserve*

▬ *Community Area Boundary*

Note: Grocery stores were defined as being a traditional grocery store, that would offer meat, fresh produce, baked goods and dairy items. These locations are full service, and would allow a person to do a full weekly food shop.

N

Kilometers
0   1   2   4   6   8

Figure 5.10 | Amenities

AMENITIES:

⬠ **Galleries**

✳ **Libraries**

★ **Museums**

◆ **Police Stations**

⬡ **Community Centres**

✚ **Religious centres**

▲ **Firehalls**

■ **Schools**

● **Shopping Centres**

800 metre radius

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Data Source:

*Colliers, Canadian Church Directory,
City of Abbotsford, DIALOG*

Highway 11

Highway 1

South Fraser Way

Highway 11

Highway 1

Kilometers

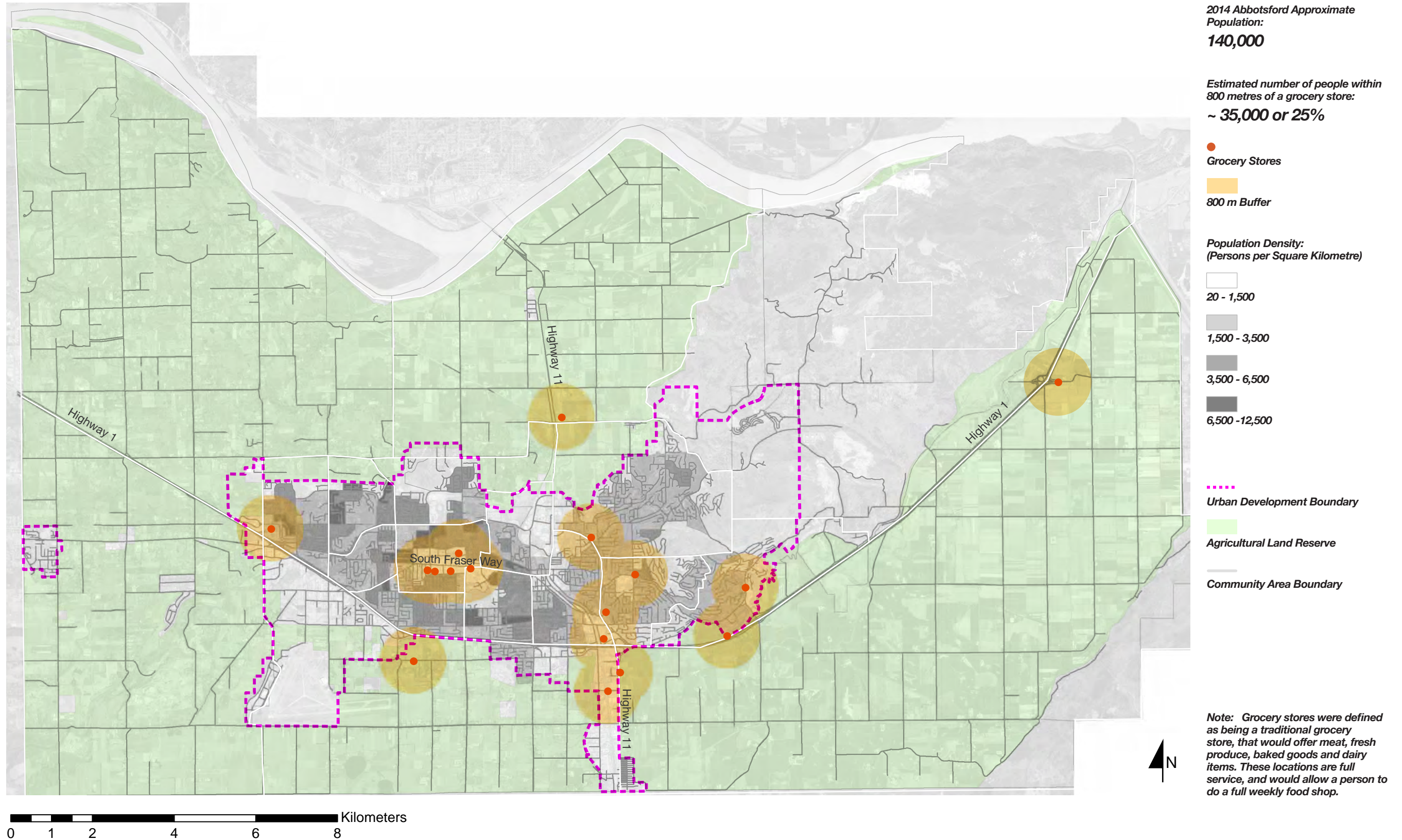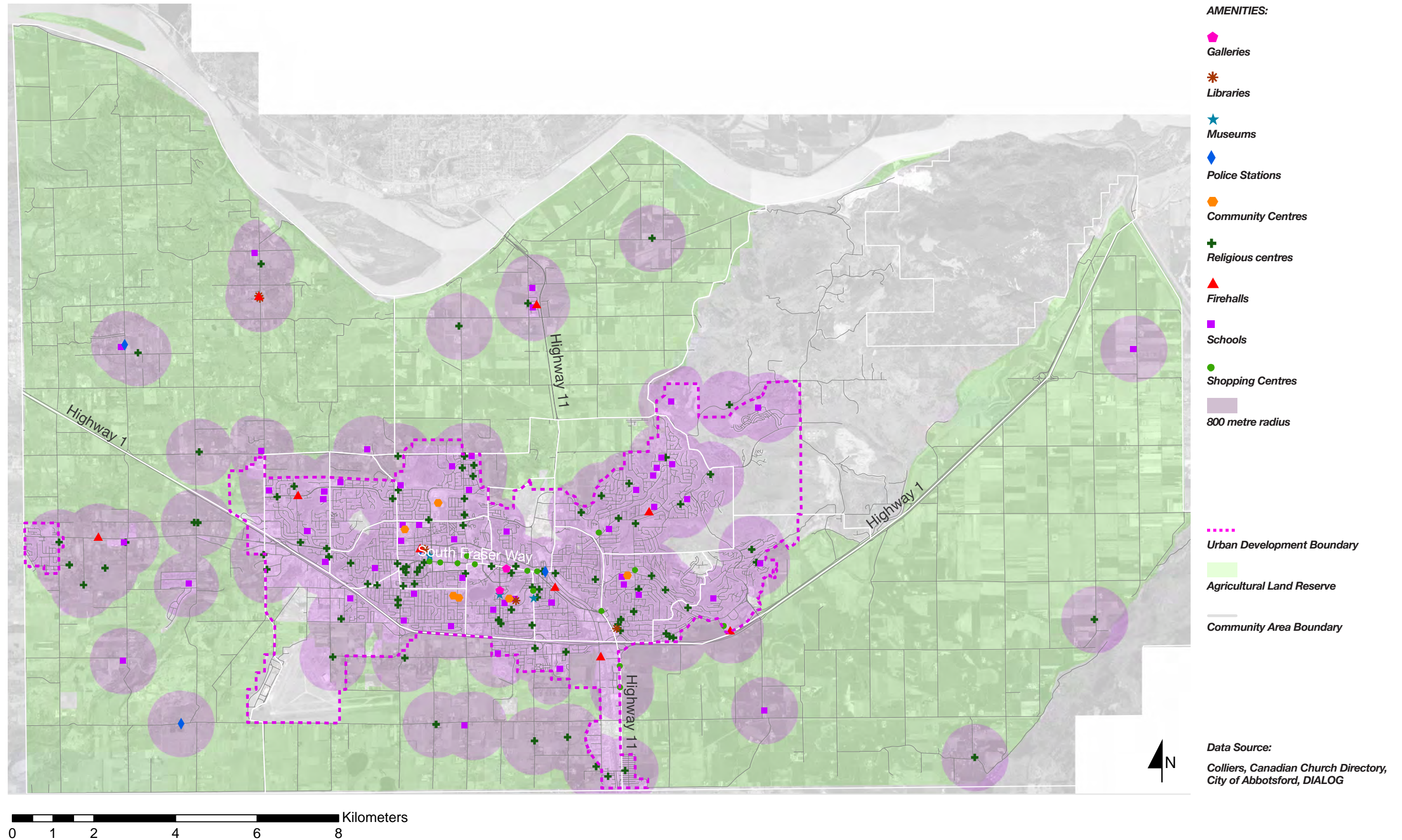0   1   2   4   6   8

5.3 Streets & Movement

The Importance of Integrating Transportation & Planning

Transportation is critical to the success of the OCP. As noted, land use and transportation are intricately linked, with one able to profoundly impact and influence the other. As decisions are made as to the location and type of future development, accompanying decisions will be required about how to provide access from these new developments to existing services and residents. These decisions will have a major impact on how people travel, as well as the form and character of the urban environment.

It is important to note that streetscape quality – including relationships between buildings and public spaces like sidewalks – have tremendous influence on the experience and therefore desirability of walking in a city. Indeed, streets are places for people as much as are parks and shops. Further consideration will be given to the design of streetscapes as the OCP process evolves.

By way of introducing the analysis of urban form through the lens of transportation in Abbotsford today, modal splits are outlined here.

City-Wide Modal Split

Modal split refers to the proportion of trips taken by various types of transport, including walking, cycling, transit, and driving as a driver or passenger. The commute travel mode split for the Abbotsford, based on the 2006 census (as 2011 census data are not available due to the loss of the long form survey), is presented in Figure 5.11.

This figure summarizes the mode of transportation to work, which represents typical weekday commuter patterns. Vehicle use, combining travel by drivers and passengers, is high at 93%, whereas rates of active transportation modes - which include walking and cycling - are low. At 2%, transit use falls well below the 8% ridership target identified for Abbotsford and Mission in The Transit Future Plan.

Figure 5.11 | City-wide modal split - census data (2006)

1%
2%
4%
10%
83%
2006

Vehicle Driver

Vehicle Passenger

Public Transit

Walked or Bike

Other
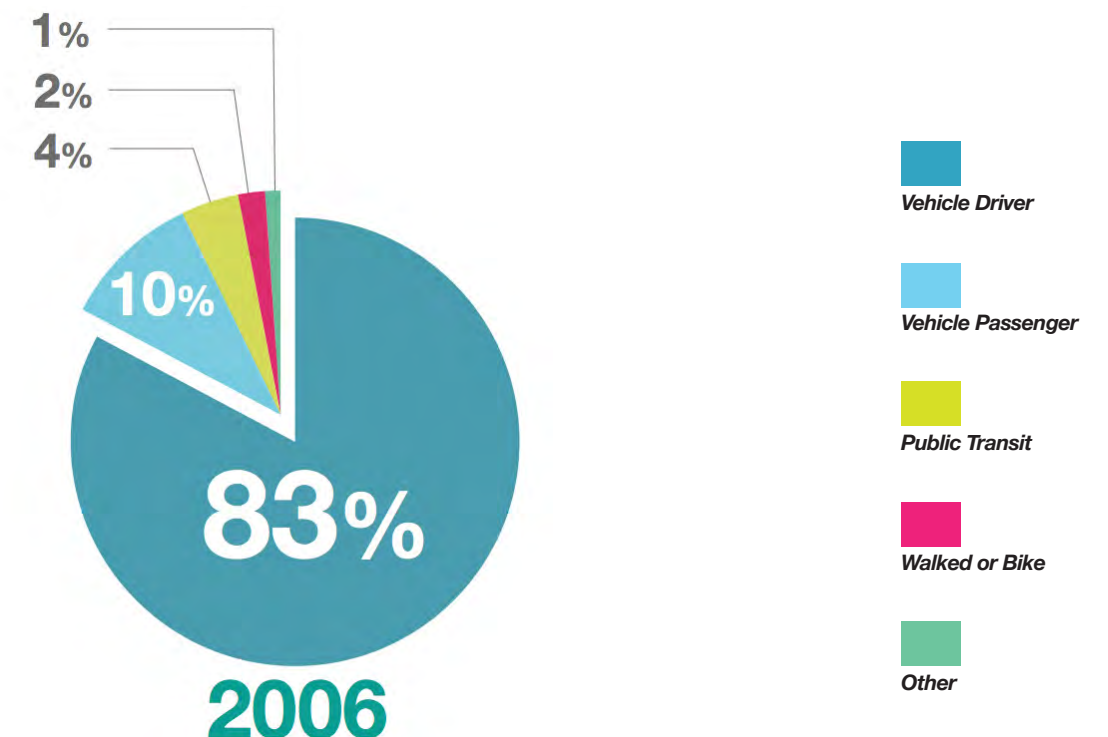
Supplementing the census work commute data, 2011 National Household Survey (NHS) data are available from Statistics Canada, and 2011 Trip Diary data are available from the Fraser Valley Regional District. Figure 5.12 below displays this information (Statistics Canada, 2011 National Household Survey (POW/POR BC Consortium - FVRD)). While the census and NHS data are based solely on commute trips, the trip diary information is based on all trips taken. Based on the 2011 trip diary survey, only 20 – 25% of trips are work or post-secondary related, which results in some expected differences. For example, the number of vehicle passengers is significantly higher when all trips are considered.

It is important to note that the census data is collected for 20% of each dissemination area and is "mandatory", which means that the sample could be considered representative. In comparison, the NHS and trip diary information include information that was collected in a voluntary manner, thus the significance of the results based on the overall population is different.

Modal Splits by Dissemination Area

On the following page, Figures 5.13, 5.14, and 5.15 present the percentage of car drivers, transit users and pedestrians and cyclists by census dissemination area. These maps, also based on the 2006 census data, show a variety of changes in mode splits across the city, with the city centre not being less car dependent as may be imagined. The lowest recorded auto driver mode split is 72%, and the highest recorded is 98%.

Some of the more rural areas recorded a higher walk and bicycle mode split than some might assume, with some rates between 14% and 27%, whilst the city centre appears to have similar levels of walking and cycling than the rest of the city. Transit mode share is generally very low outside of the city centre area, with higher usage, up to 13%, in the more central areas. These splits are typical of suburban communities, although it is encouraging that there are pockets of higher transit use in the central areas.

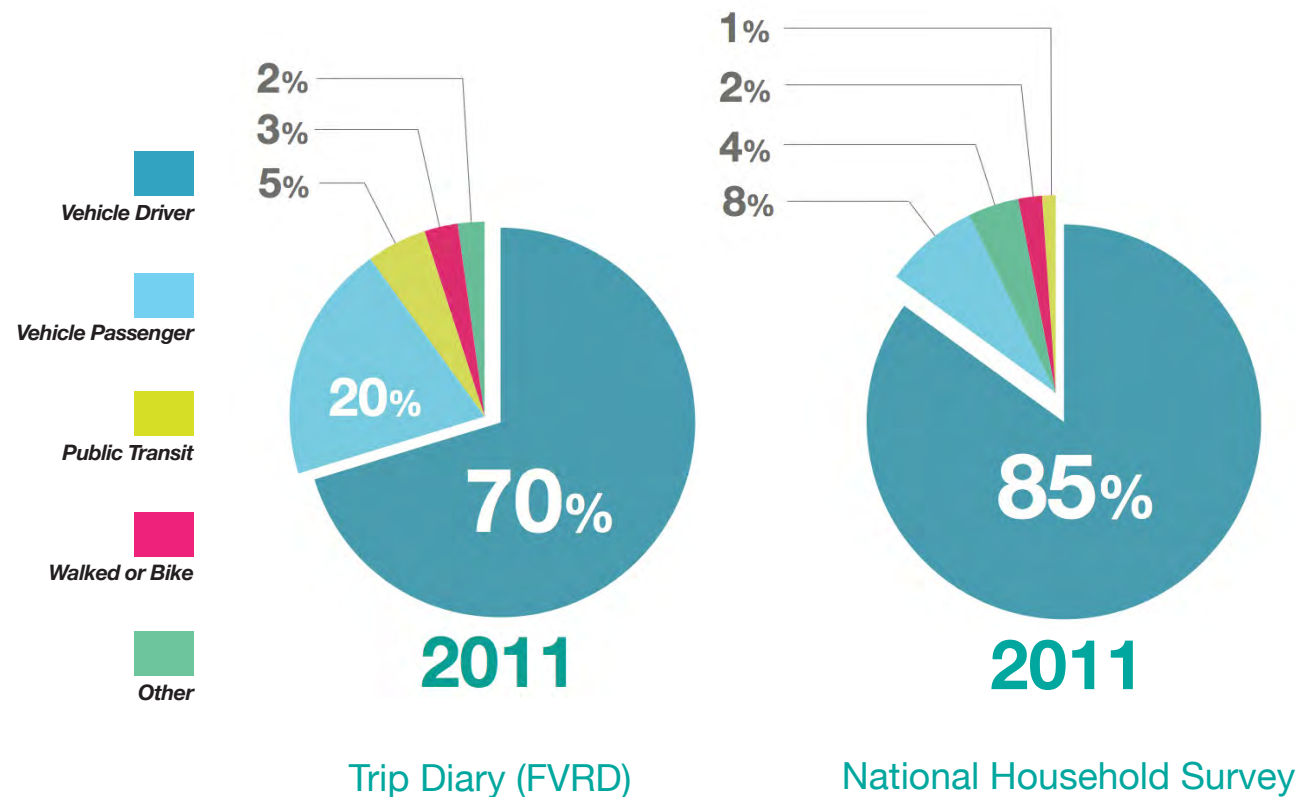Figure 5.12 | City-wide modal split – other data sources (2011)

Trip Diary (FVRD) National Household Survey

Figure 5.13 | Modal split to work - private vehicle

Private Vehicle Use:

- 72% - 84%
- 84% - 93%
- 93% - 100%
- No Data
- Urban Development Boundary
- Agricultural Land Reserve
- Community Area Boundary
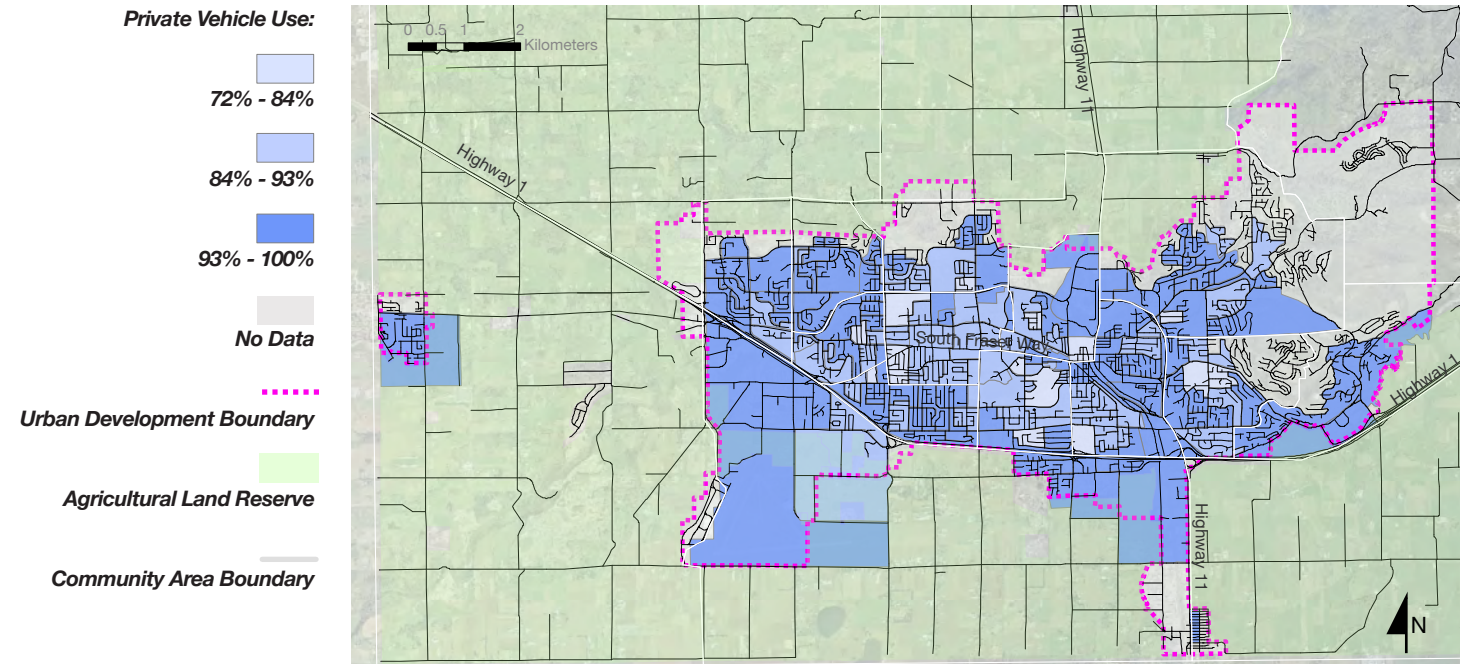
Figure 5.14 | Modal split to work - walking and cycling

Walking & Cycling

- 0 - 2%
- 2% - 7%
- 7% - 14%
- 14% - 27%
- 27% - 50%
- No Data
- Urban Development Boundary
- Agricultural Land Reserve
- Community Area Boundary
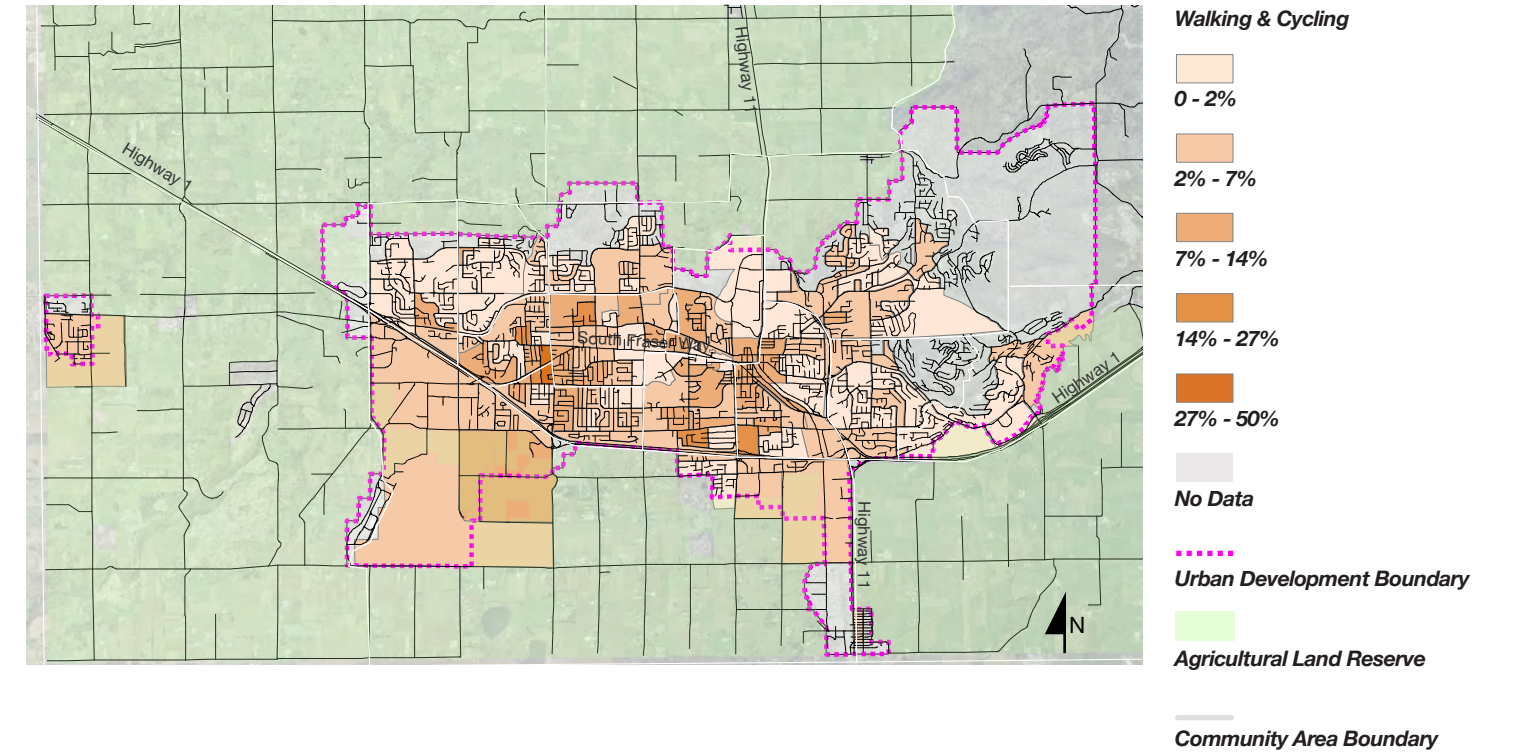
Figure 5.15 | Modal split to work - transit

Transit Ridership:

- 0- 1%
- 1% - 4%
- 4% - 8%
- 8% - 13%
- No Data
- Urban Development Boundary
- Agricultural Land Reserve
- Community Area Boundary
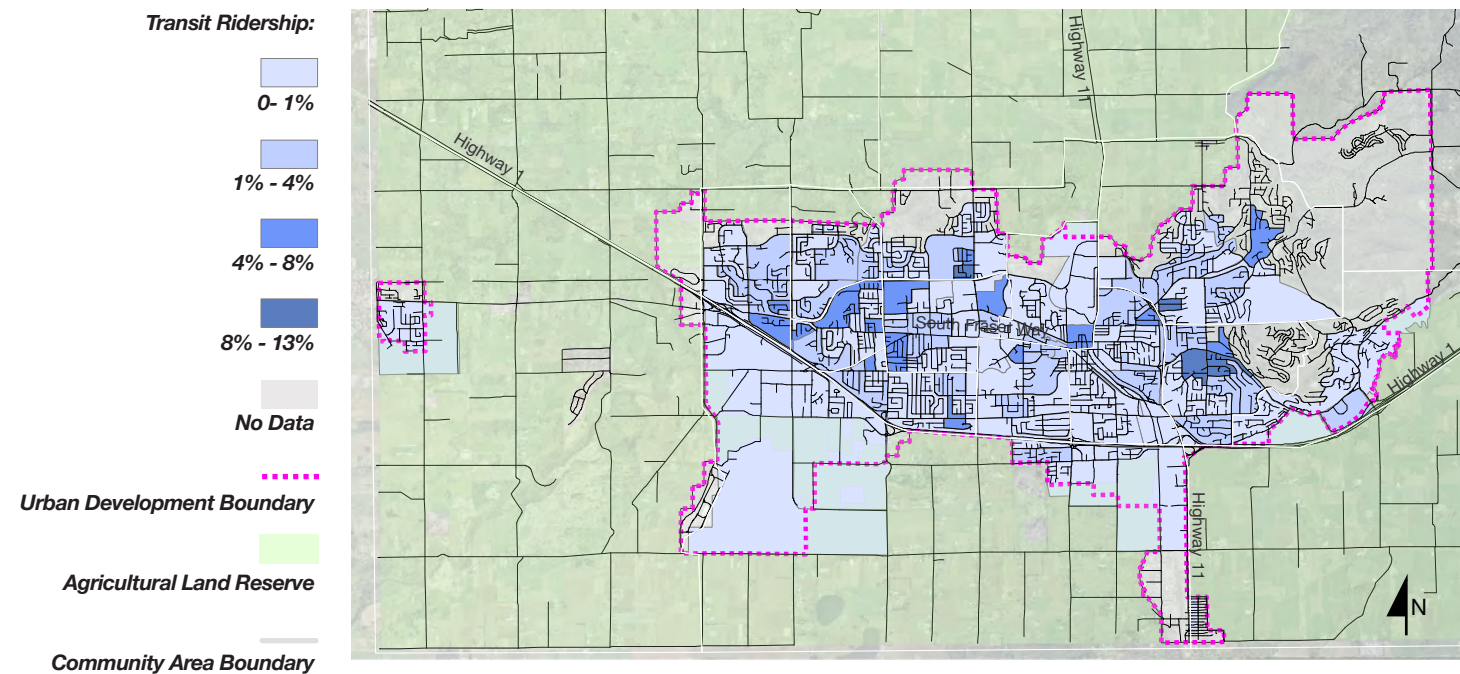
Data Source: Statistics Canada, 2006 Census

Note: 2006 Mode Split to work based on 20% sample data

Trip Destination & Length

Approximately 80% of trips starting in Abbotsford stay within the city (2004 Translink Trip Diary), and just over 60% of Abbotsford residents commute within the city.

The median commuting distance for Abbotsford residents is under 7 kilometers, and most trips (71%) are under 30 minutes (2011 National Household Survey). Longer trips associated with public transit is likely a reflection of West Coast Express activity, with over 20% reporting their travel time of over 90 minutes. Most personal vehicle trips to work take 30 minutes or less, which is a reflection of the ease and convenience of driving in Abbotsford.

The relatively short distance of trips in Abbotsford presents an opportunity to manage transportation demand and choice within the city.
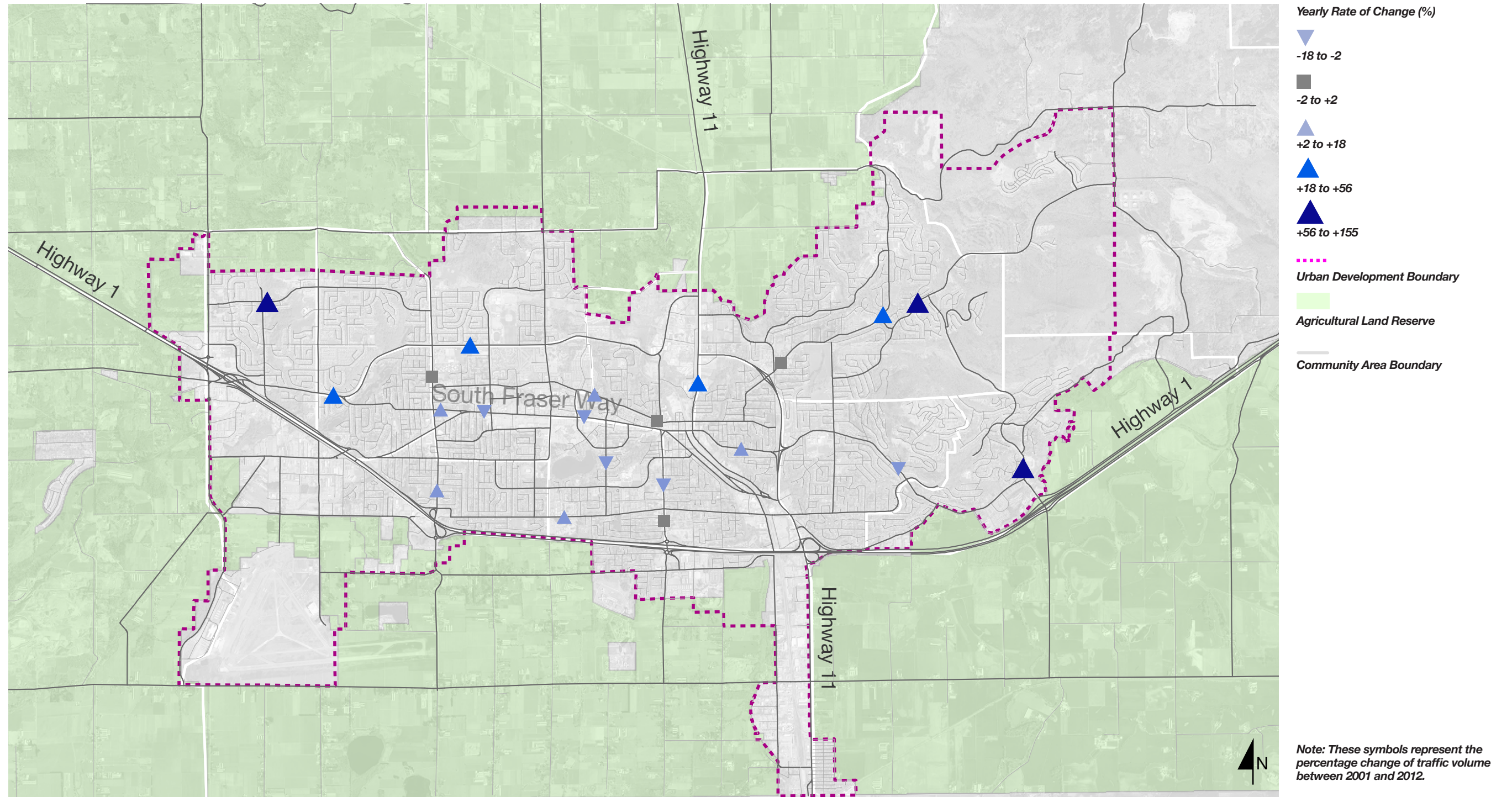
Traffic Volume

Figure 5.16 shows a wide range of traffic volume changes over an 11 year period, from 2001 to 2012. The range of changes are partly reflective of new development and new road construction over this time period which have resulted in relatively dramatic average annual changes along some streets in the city. Interestingly however, traffic volumes along streets in core neighbourhoods have not changed significantly.

Bicycle Routes & Trails

Figure 5.17 presents bicycle routes and trails. The length and connectedness of separated routes is relatively low, with the off-street trail network mainly catering to cycling for recreation rather than for transportation.

Although the length of routes are short and do not penetrate the city centre areas, they are close to where people live, located on outlying arterials and collector routes. Some routes are well-integrated with the park system, while many are not.

Figure 5.16 | Traffic volume yearly rate of change 2001 - 2012

Yearly Rate of Change (%)

▽ -18 to -2

■ -2 to +2

▲ +2 to +18

▲ +18 to +56

▲ +56 to +155

⋯ Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Note: These symbols represent the percentage change of traffic volume between 2001 and 2012.

Data Source: Bunt

Figure 5.17 | Trails and cycling paths

Parks

Bicycle lanes (Including Proposed)

Trails

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary
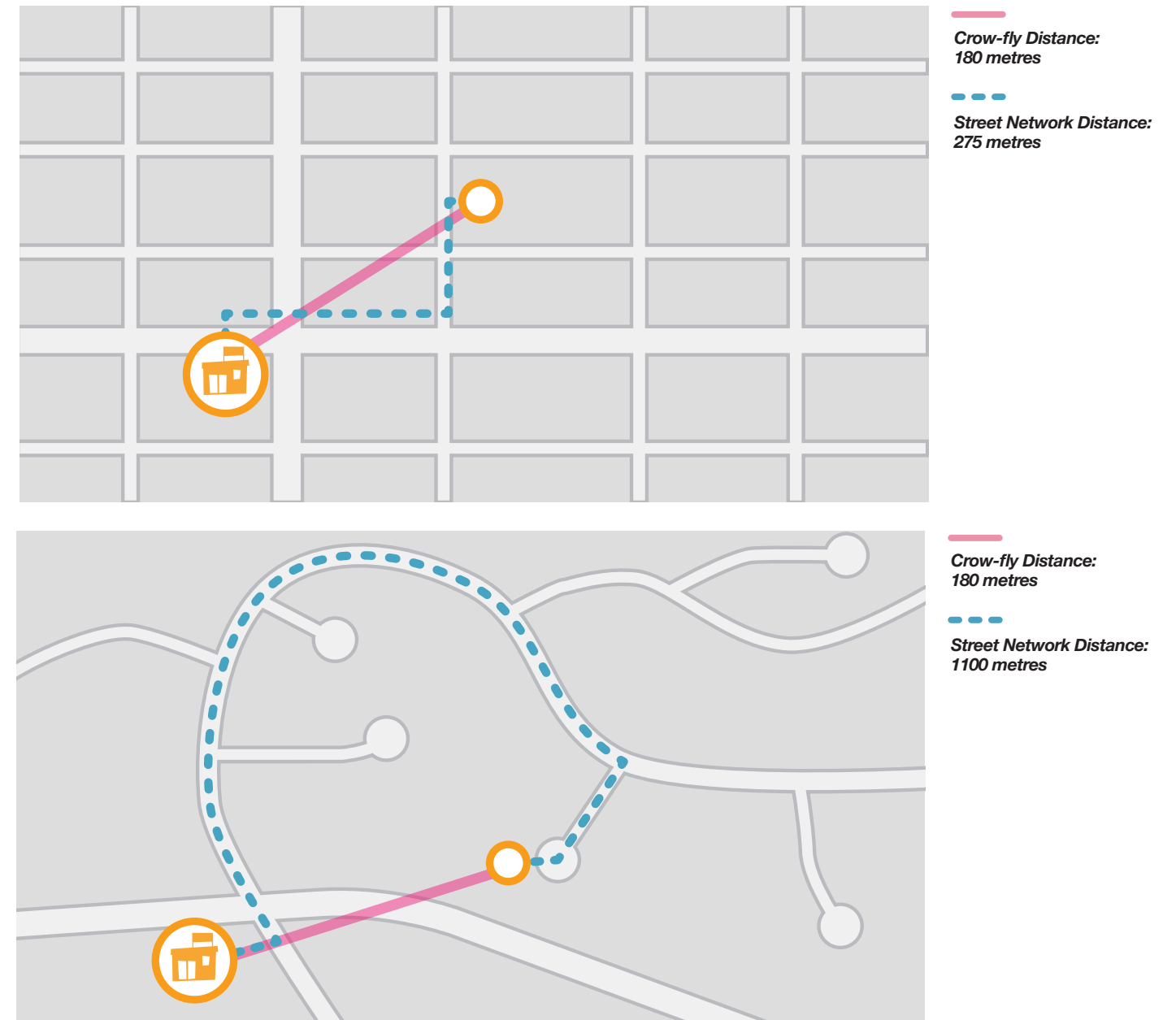
N

Data Source:

City of Abbotsford
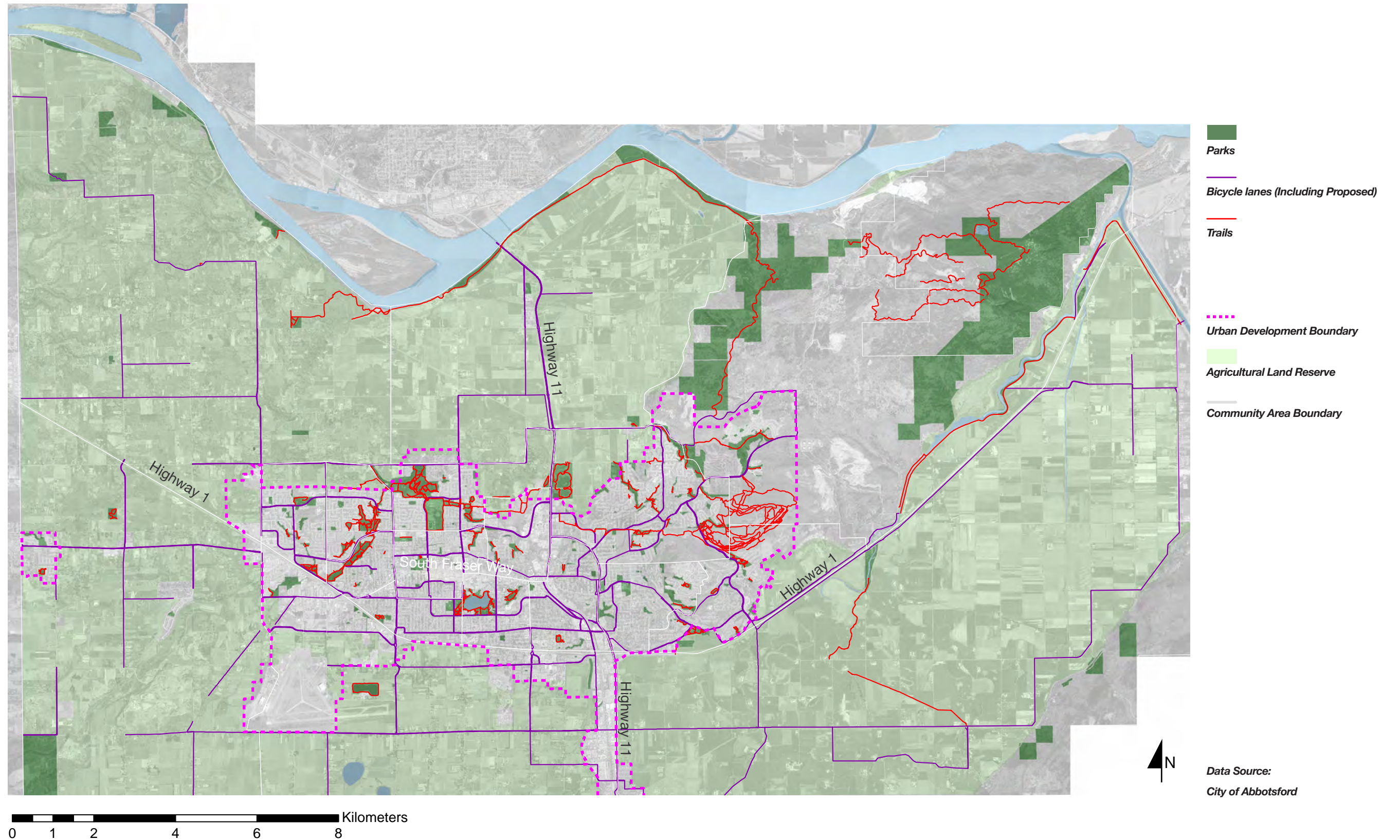
Connectivity

Street connectivity is a measure of travel directness and availability of alternative routes through a network, which influences the real distance traveled between a point of origin (e.g. home) and a destination (e.g. transit stop, retailer, etc). In fact, connectivity is one of the most significant factors in the frequency and quantity of walking trips, which in turn also supports transit (Handy, 2002; Leslie, 2007).

Figure 5.18 illustrates the significant difference between crow-fly distance and street network distance in a poorly connected and well connected urban network. Generally speaking, communities with smaller blocks – and therefore more opportunities to change direction while on foot – are considered highly connected (Barrgan, 2010). However there are many ways in which to measure connectivity; one of the most common is intersection density, with research demonstrating that a minimum of **50 intersections per square kilometre** is needed before pedestrian travel becomes more commonplace (Frank and Pivo, 1995).

Figure 5.19 presents connectivity across Abbotsford, as defined by the number of intersections with a minimum of three intersecting connections in a given area. Areas that meet or exceed the minimum threshold of 50 intersections per square kilometre are shown in orange/red (darkest) tones. As is the case in most cities, these areas are often grid-like and found in the older areas near the city centre. In Abbotsford, there appears to be some correlation between walking (Figure 5.14) and high connectivity.

It is important to note, however, that some roads shown in Figure 5.19 are private or part of larger parking areas, which means that they are not as connected "on the ground" as are the public roads. To reinforce this distinction, private roads are shown as white in Figure 5.19.

Figure 5.18 | High versus low connectivity

Crow-fly Distance:
180 metres

- - -

Street Network Distance:
275 metres

Crow-fly Distance:
180 metres

- - -

Street Network Distance:
1100 metres

*This is a conceptual diagram and is not drawn to scale.

Figure 5.19 | Intersection density map

Intersections per Square Kilometre

<20 - 50   *Transportation choice bare minimum threshold*

50 - 100

100 - 150

150 - 190

•   *Intersections*

Private Roads (white)

- - - - *Urban Development Boundary*

Agricultural Land Reserve

Note: Community Area Boundaries not shown for legibility of data

Highway 11

Highway 1

Highway 1

Highway 11

South Fraser Way

0   0.5   1   2   3   4
Kilometers

N
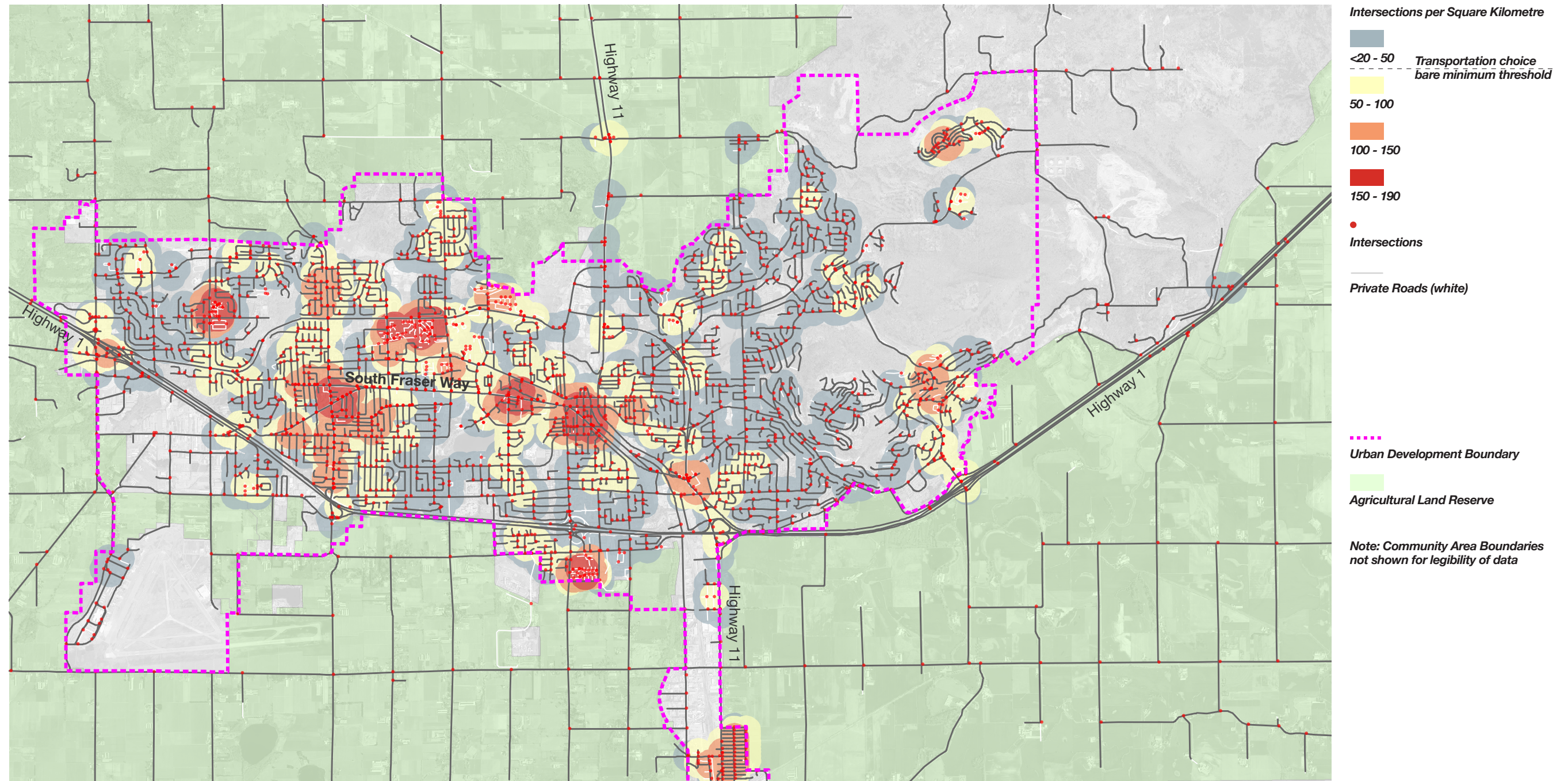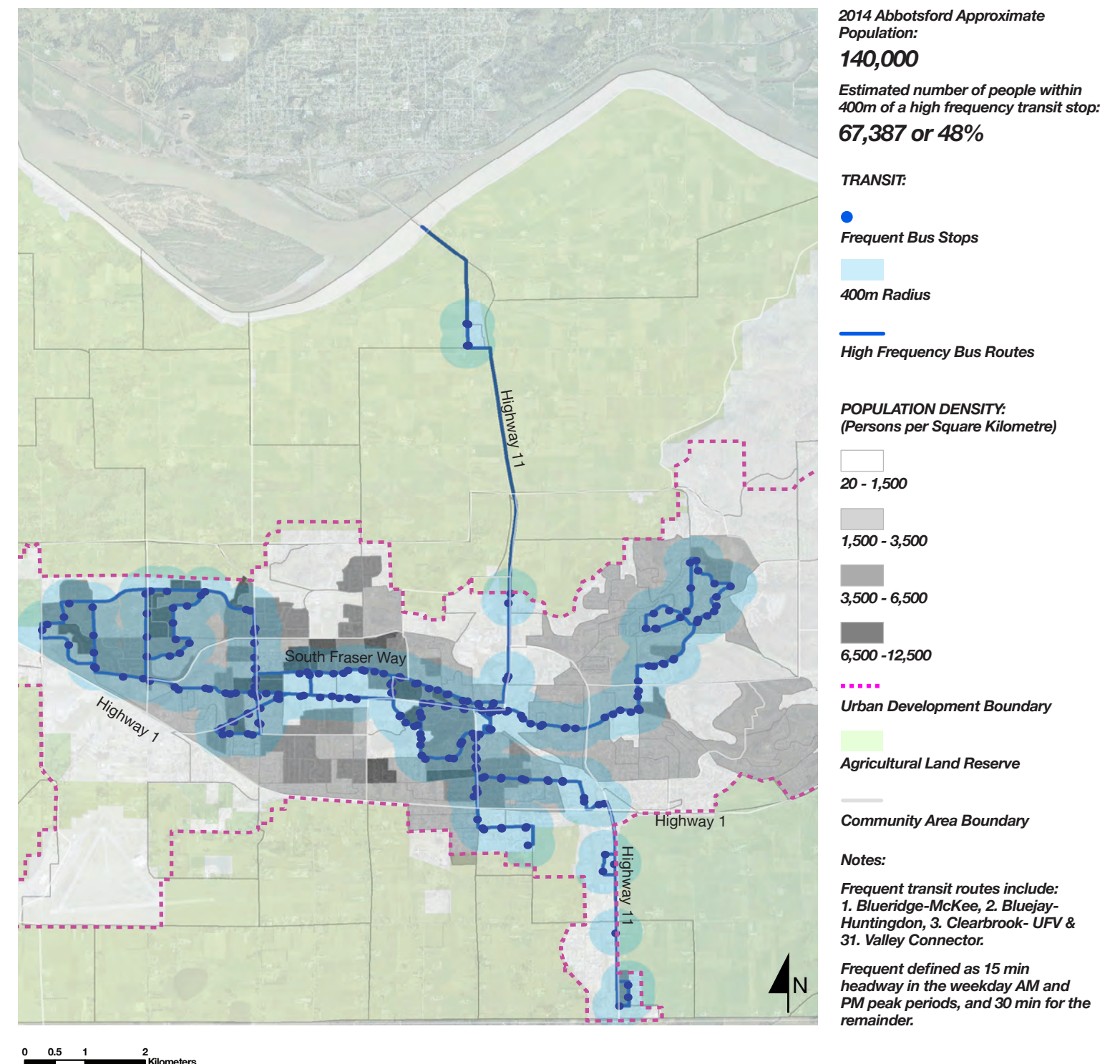
Proximity to Frequent Transit

Related to density, the proximity of residents and employees to destinations and transit infrastructure will greatly influence their willingness and ability to choose transport modes other than the personal vehicle. "Distance decay" - which refers to the effect of distance on transportation behaviour - is less of a factor in areas with higher densities, when a greater proportion of residents live within walking distance of a transit stop, for example.

A 400 metre distance translates into a 5 minute walk – based on an average walking speed of 4.5 kilometres per hour – which research shows is an ideal upper bound for walking. Eight hundred metres – or a 10 minute walk – is also considered "walkable". As distance increases, the effects of distance decay grow stronger (Walk Score, 2011). To fully account for the full picture of proximity in a city, it must be considered alongside connectivity and land use mix.

One important measure of proximity is the proportion of residents within a 5 minute walk of frequent transit, as this is generally the distance that people are prepared to travel by foot to a transit stop. This map focuses on routes and stops that have a relatively high frequency, which mainly consist of BC Transit's 'GoLine' branded service. Forty eight percent of the population is within a 400 metre walk of one of these transit stops. As these lines all provide access to the centre of Abbotsford, these residents are therefore able to access key retail and other services without the use of a car.

This data suggest that a relatively high quality service is available to nearly half the population of Abbotsford, however transit ridership is currently very low. This is likely due to two main reasons: easy access to free and plentiful parking at destinations; and uncompetitive journey times, when factoring in walking to the bus stop and wait times at the stop. Nonetheless, when compared against transit modal split (Figure 5.11), the frequent transit network does seem to have some influence on ridership.

Figure 5.20 | Residents within 400 metres of a frequent transit stop

2014 Abbotsford Approximate Population:
140,000

Estimated number of people within 400m of a high frequency transit stop:
67,387 or 48%

TRANSIT:

● *Frequent Bus Stops*

400m Radius

— *High Frequency Bus Routes*

POPULATION DENSITY:
(Persons per Square Kilometre)

20 - 1,500

1,500 - 3,500

3,500 - 6,500

6,500 -12,500

Urban Development Boundary

Agricultural Land Reserve

Community Area Boundary

Notes:

Frequent transit routes include: 1. Blueridge-McKee, 2. Bluejay-Huntingdon, 3. Clearbrook- UFV & 31. Valley Connector.

Frequent defined as 15 min headway in the weekday AM and PM peak periods, and 30 min for the remainder.

5.4 Summary

Urban Form Across Abbotsford

Figure 5.21 brings together analyses of residential densities, employment densities, and connectivity in a summary chart, presenting these urban form characteristics by community. The chart includes important thresholds or minimum targets identified throughout this section, offering a point of reference or performance standard against which to review the results by community.

Unlike the analysis maps throughout this section, Figure 5.21 does not discount ALR lands, in an effort to convey inherent differences between communities. Viewed within four conceptual categories of rural, suburban, transition, and core, a clear pattern emerges that distinguishes communities from one another.

For example, the presence of ALR land obviously reduces densities and connectivity in the rural communities, and to a lesser degree in suburban communities. The difference between residential densities in transition and core communities is relatively small, however the latter has significantly higher employment densities as it is home to the "working centre" of the city. (It is worth noting that high employment densities can exist without high residential densities, and vice versa). Finally, connectivity generally increases in communities from rural to suburban, to transition to core.
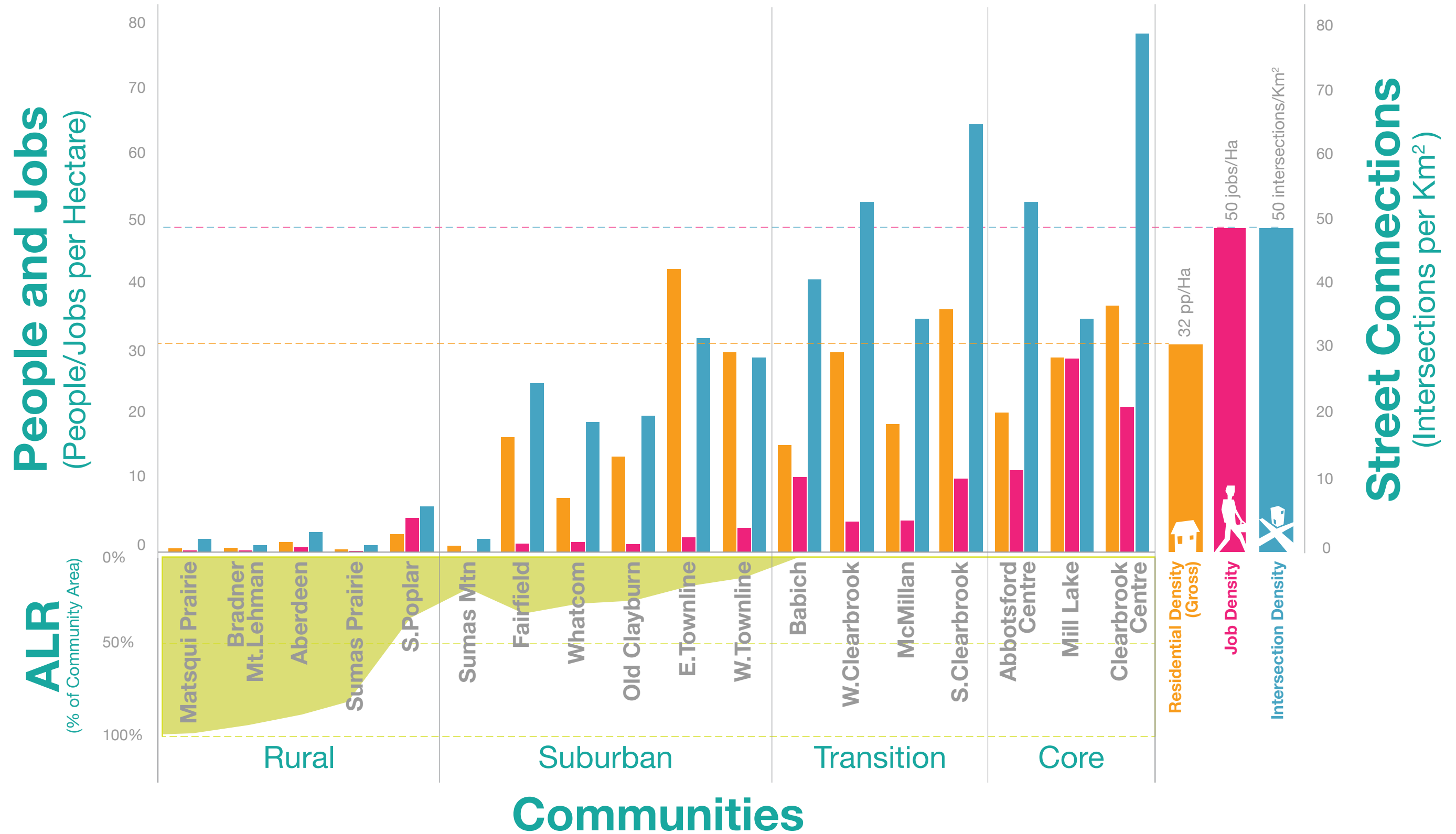
Communities that perform the best in terms of the stated thresholds – and assuming employment densities should not be held to the same standard in all communities – are generally situated in Western Abbotsford, and include East Townline and West Townline (considering a portion of their lands are agricultural), Clearbrook Centre, South Clearbrook, and West Clearbrook. Mill Lake and Abbotsford Centre also perform relatively well. Other suburban communities generally do not come close to meeting thresholds, even when agricultural lands are considered. This suggests that development in Abbotsford over time has become more suburban in nature, with lower densities and lower connectivity than older areas.

In brief, a more compact, connected form of development which promotes complete communities will enable better integration with servicing capacity and strategies, and alignment with many of the strategies outlined in recently adopted City plans and strategies. Shifts in lifestyle preferences and Abbotsford's trend toward relatively more multi-family housing starts suggest that new forms of development are likely or at least certainly possible.

This urban form information serves as a baseline for exploration of different future land use scenarios, as well as a guide in realizing several of the guiding principles such as: clarifying and adding detail to the City's land use designations; establishing infill and redevelopment guidelines; and creating a framework for neighbourhood planning.

Figure 5.21 | Selected "great city" elements in Abbotsford

People and Jobs (People/Jobs per Hectare)

Street Connections (Intersections per Km²)

ALR (% of Community Area)

Rural: Matsqui Prairie, Bradner Mt.Lehman, Aberdeen, Sumas Prairie, S.Poplar

Suburban: Sumas Mtn, Fairfield, Whatcom, Old Clayburn, E.Townline, W.Townline

Transition: Babich, W.Clearbrook, McMillan, S.Clearbrook

Core: Abbotsford Centre, Mill Lake, Clearbrook Centre

Communities

Residential Density (Gross) — 32 pp/Ha
Job Density — 50 jobs/Ha
Intersection Density — 50 intersections/Km²

6.
What's Next

This report marks the end of Stage 1 – Background Research, and the beginning of Stage 2 – Explore New Concepts.

The elements of this report, including resident input, baseline information, and the overview of existing plans and strategies, will be drawn upon to create a series of "observations". The observations, which are ideas requiring further exploration, will be used as context for a community-wide visioning process early in 2015 that will establish the desired outcomes for the new OCP.

Along with the vision, the observations will also drive the development of city-wide concepts that will be tested and refined into more detailed land use scenarios. In Stage 4, the preferred land use scenario will be used as the basis of a new draft OCP, and in Stage 4, the draft OCP will be refined into the final OCP.

After adoption of a new OCP, the information contained in this report can continue serving as a useful point of reference. It will be a benchmark against which performance of the new OCP can be measured moving forward and well into the future.