APPENDIX "II"

South Campbell Heights
Local Area Plan

CITY OF SURREY | Community Planning

Land Acknowledgment

Surrey's first peoples have had permanent and continuous habitation on the land upon which Surrey was founded since time immemorial. While oral history and archaeological record speak to the early Indigenous presence in Surrey and in the Plan Area, the formal recorded history of European settlement disproportionately outweighs that of the local Indigenous peoples. Their collective histories, place names, economies, languages, habitation, and spiritual sites reiterate their connection to this land which is held to the present day. The Plan Area is the ancestral and unceded territories of the Coast Salish Peoples, including the se'mya'me (Semiahmoo), q̓ićəy̓ (Katzie), and q̓ʷɑːn̓ƛ̓ən̓ (Kwantlen) Nations.

South Campbell Heights Local Area Plan

Planning & Development, Engineering,
and Parks, Recreation & Culture
City of Surrey
13450 104 Avenue
Surrey, British Columbia V3T 1V8
Approved By Council _____.

Contents

| What's Included

Introduction
| Why We Plan

The South Campbell Heights Plan is a comprehensive planning strategy. The Plan guides the development of employment lands immediately to the south of the existing Campbell Heights business park. The Plan was developed by City Staff in consultation with community partners and members of the industrial development community.

The South Campbell Heights Plan balances the need to expand the region's industrial-employment land base, while also protecting the area's significant environmental assets. The Plan adds 141.5 hectares (350 acres) of employment land to the Region's constrained industrial-employment land supply. Along with increasing the amount of available employment land, the Plan establishes a framework to protect upland forest stands, the Little Campbell River and its tributaries, as well as the Brookswood Aquifer.

Policy Context

The planning of neighbourhoods and employment centres in Surrey is guided by the citywide Official Community Plan (OCP) under the broad direction of Metro 2050, Metro Vancouver's Regional Growth Strategy (RGS). Together the RGS and OCP provide a policy framework for sustainable growth in Surrey. In addition to these broad policy directives, planning in Surrey is administered under the guidance of the City's other strategic plans, such as Sustainability Charter 2.0, the Biodiversity Conservation Strategy (BCS), the Climate Change Action Strategy (CCAS), the Parks, Recreation & Culture (PRC) Strategic Plan, and the Surrey Transportation Plan.

REGIONAL GROWTH STRATEGY

The RGS is a high-level policy document that coordinates population growth in the Metro Vancouver region. The Urban Containment Boundary (UCB) is one of the key tools of the RGS. All urban and employment growth occurs within the UCB. This allows development to efficiently use existing infrastructure and protects rural and agricultural lands from development. The RGS previously identified South Campbell Heights as "Special Study Area" located outside of the UCB. South Campbell Heights was added to the UCB as part of the planning process. The area is now intended to accommodate employment growth.

OFFICIAL COMMUNITY PLAN

The OCP is a shared vision for Surrey's future. It establishes a high-level policy framework to achieve that vision. The OCP identifies different land uses throughout the City. The OCP designates area of Surrey that can accommodate population growth, the location of employment centres and key natural areas identified for protection. The OCP includes a Regional Context Statement that demonstrates its consistency with the RGS. Secondary land use plans, like South Campbell Heights, are developed under the framework of the OCP. They are meant to provide detailed development considerations that achieve the vision and policies of the OCP.

Figure i: Plan Hierarchy

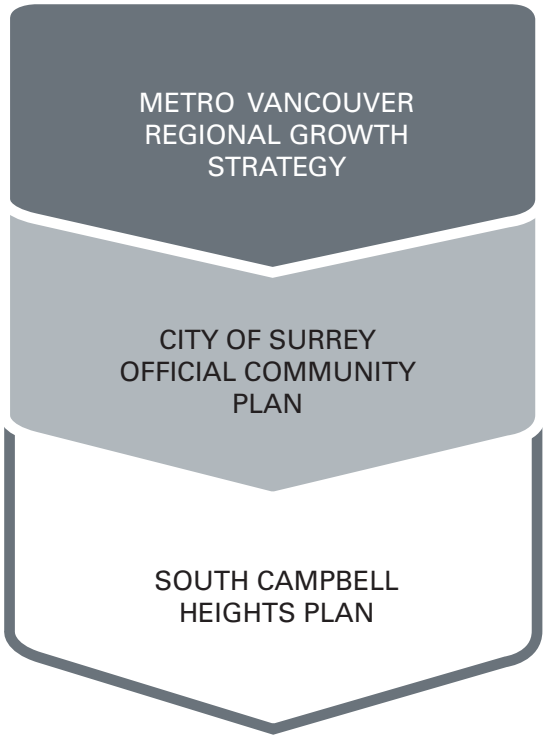
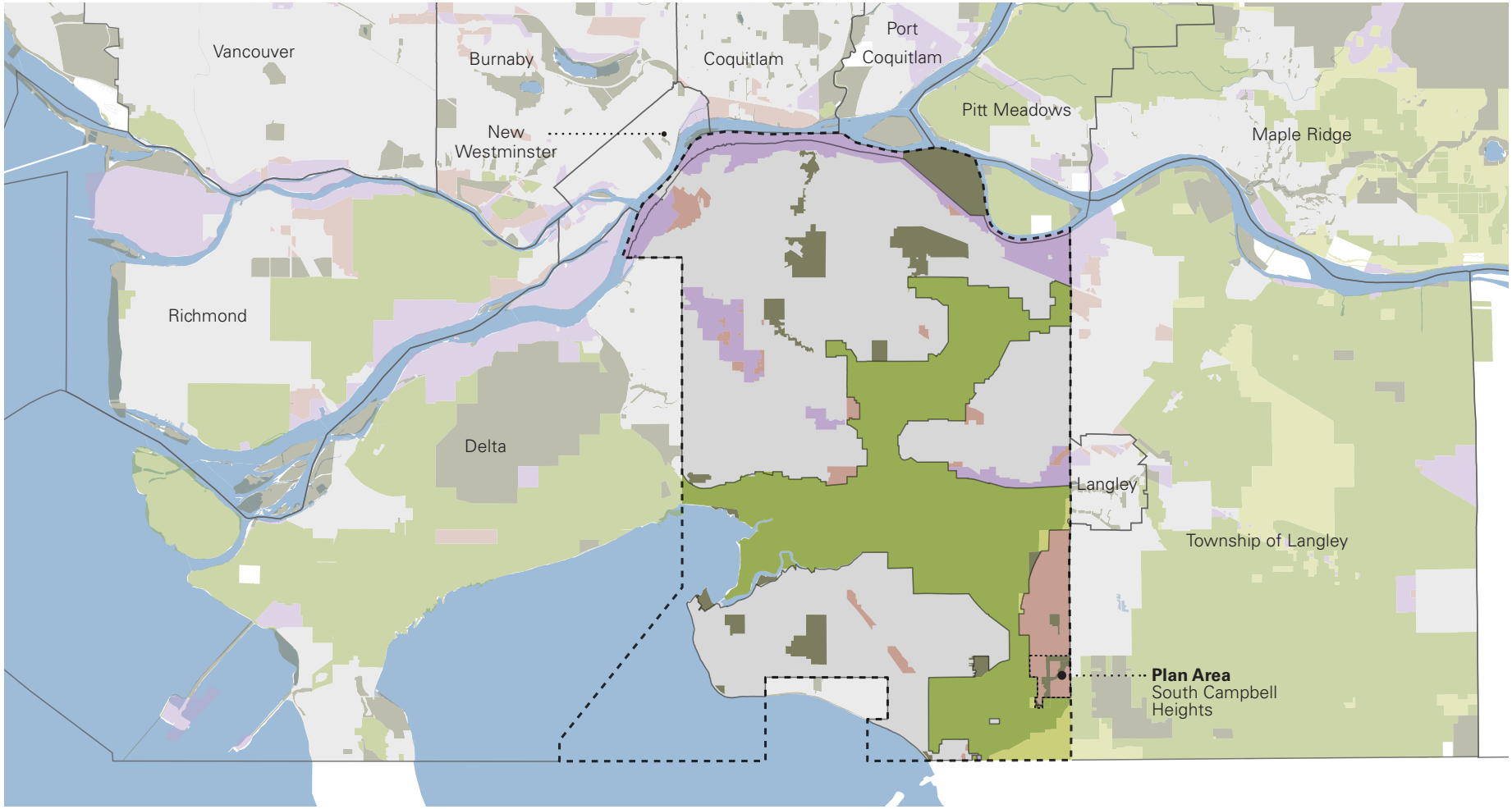


Figure ii: Regional Context Map



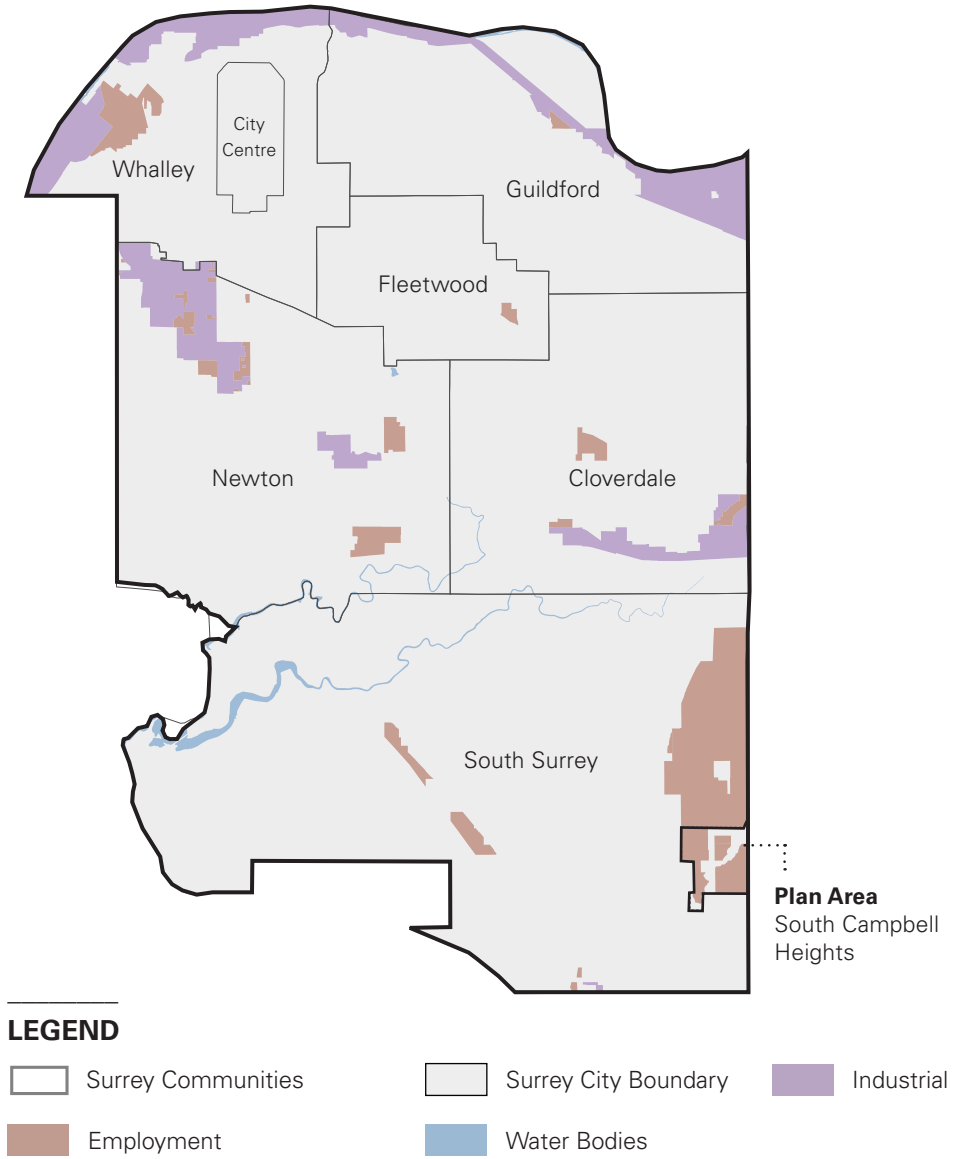
Employment Lands

Since the 2020 Metro Vancouver Regional Lands Strategy was published, Surrey's industrial lands have been relatively stable with no significant loss or growth in the City's industrial land supply. The South Campbell Heights Plan will contribute approximately 141.5 hectares of new industrial land, representing the most significant increase in Surrey's industrial land supply in the past 20 years.

The availability of quality employment land is vital to support a growing region. In Surrey, many different land uses contribute to the employment base, including agricultural, commercial, and institutional land uses. Industrial and Employment areas are especially important contributors to the regional economy, as they accommodate warehousing, distribution, and goods manufacturing that cannot be easily accommodated in other areas. Land within Surrey that is designated Industrial and Employment in the RGS are identified in Figure iii.

A constrained regional land base and strong demand for all types of land uses puts significant pressures on the supply of industrial lands throughout the Metro Vancouver Region. Land uses like retail, commercial, and residential uses can out compete industrial land from a land use economics perspective. These factors put downward pressure on industrial land availability and result in low vacancy rates. Low industrial land availability limits flexibility and growth for existing businesses and makes it harder to attract new businesses.

Figure iii: Employment and Industrial Lands in Surrey.H



South Campbell Heights is a significant expansion to Surrey's industrial land supply and will accommodate business employment development as pictured above.

Climate and Environmental Context

CLIMATE CHANGE ACTION STRATEGY

The global and local impacts of climate change are increasing in severity. The science is unequivocal: human activities are increasing the concentration of greenhouse gases (GHGs) in the atmosphere, leading to rising global temperatures and widespread disturbances to both natural and human systems[1]. Impacts relevant to B.C. and Surrey include rising sea levels, intensifying heat waves, more frequent and devastating wildfires, and increasingly powerful storms and floods.

Recognizing the need for urgent action, Surrey City Council declared a climate emergency in 2019. In March 2020, Council adopted targets to reduce community GHG emissions to net zero and corporate emissions to absolute zero, before 2050. On July 24, 2023 the City adopted the Climate Change Action Strategy (CCAS), which outlines a plan to reach Surrey's emissions reduction targets and improve resilience to climate impacts. CCAS envisions a zero-carbon climate-resilient city by 2050, based on a framework of six components with associated Visions, Goals, Shifts and Actions.

Land use planning influences development patterns, impacting GHG emissions and climate resilience. Locating jobs closer to residential neighbourhoods can reduce commuting times and lead to increased transportation options. Integrating green space and green infrastructure into the urban fabric mitigates urban heat island effects.

Figure iv: Projected Impacts of Climate Change in Surrey

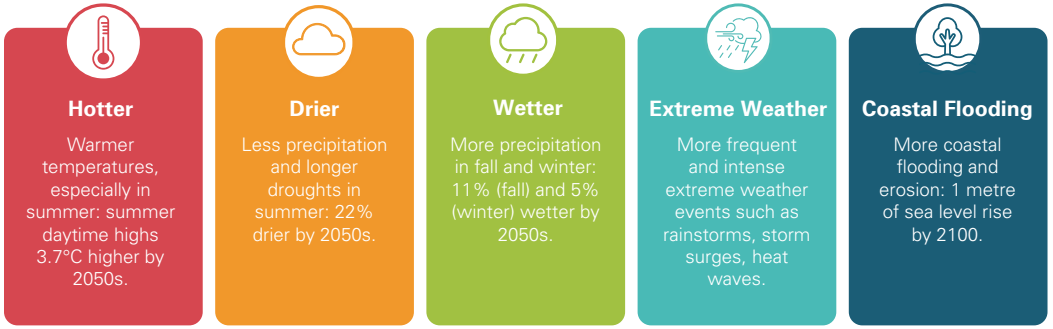
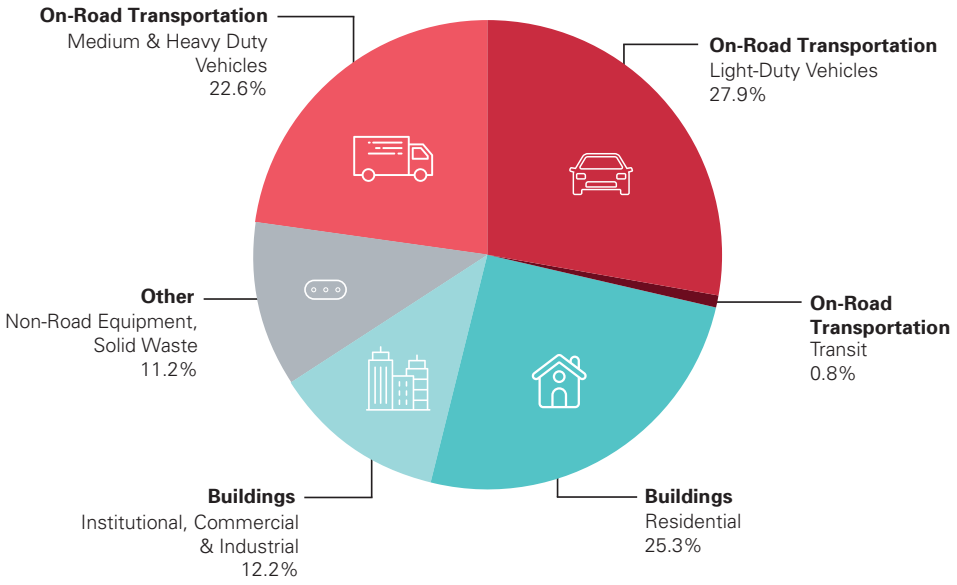


Figure v: Surrey's 2021 Community GHG Emissions Profile



1. Intergovernmental Panel on Climate Change, Sixth Assessment Report, 2023. AR6 Synthesis Report https://www.ipcc.ch/report/sixth-assessment-report-cycle/

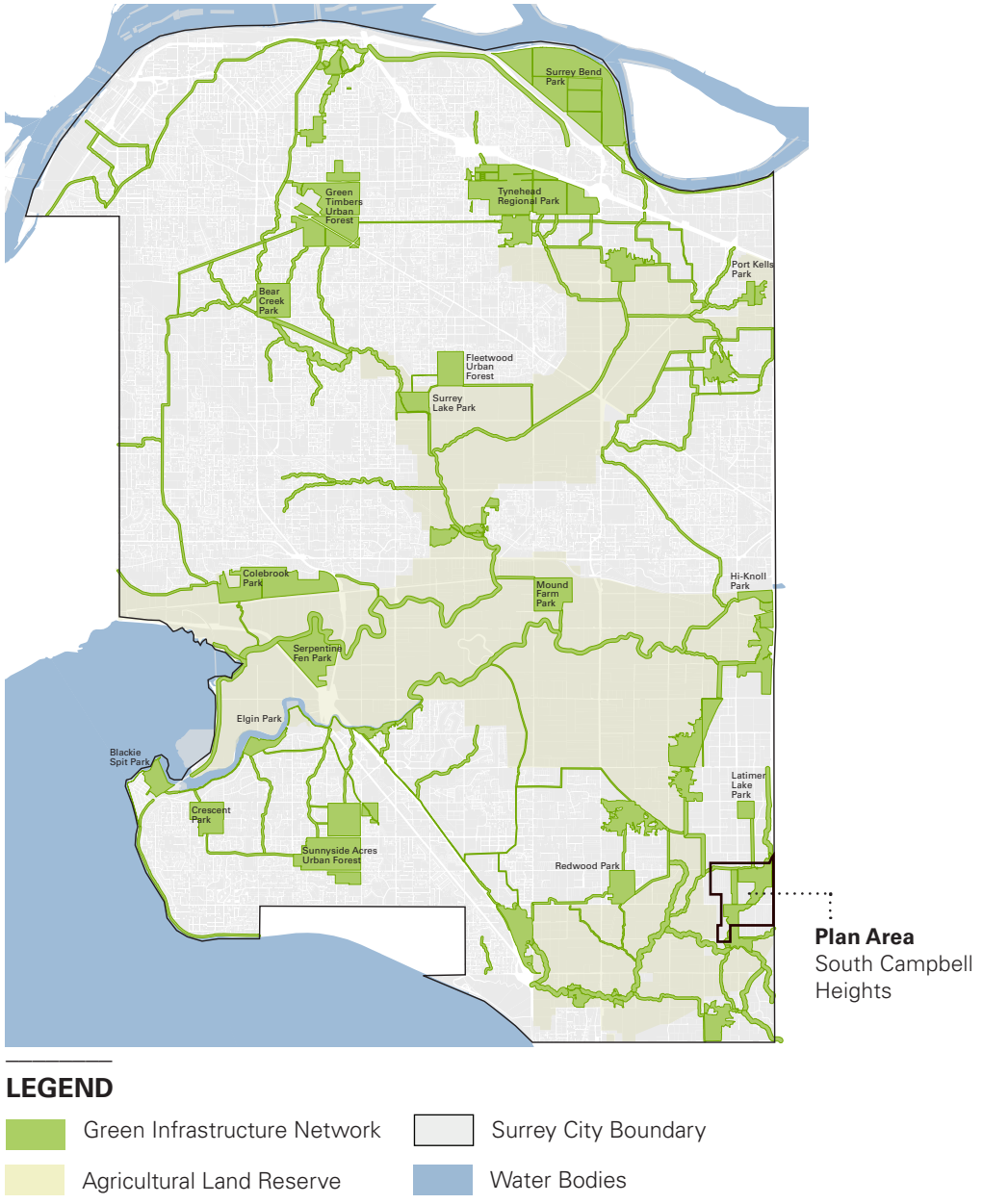
BIODIVERSITY CONSERVATION STRATEGY

The Biodiversity Conservation Strategy (BCS) recognizes Surrey's existing biodiversity as a key foundation of a healthy, livable, and sustainable community. The BCS includes a 3,900 ha network of interconnected natural areas, green corridors and open space identified as the Green Infrastructure Network (GIN).

The GIN follows key landscape ecology principals for biodiversity conservation. It is comprised of 'Sites' and 'Hubs' (which represent potential wildlife habitat), which are connected by movement 'Corridors'. This network allows for wildlife movement, while promoting genetic diversity in existing populations.

The South Campbell Heights Plan identifies key GIN components from the BCS for protection and management. The main features within the BCS include the Little Campbell River, Twin Creeks, Jacobsen Creek, and the surrounding upland forests.

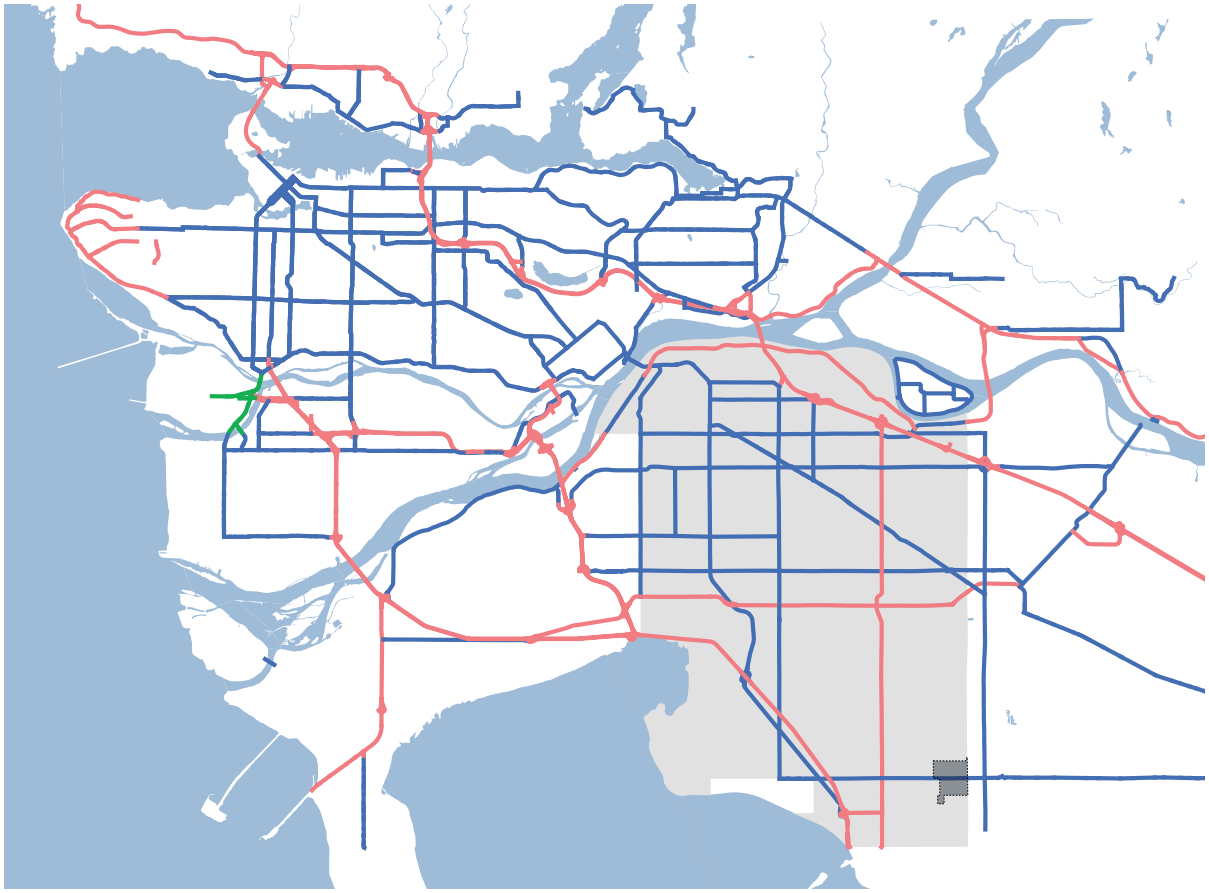
Figure vi: City of Surrey Green Infrastructure Network



Transportation Context

As part of the Regional Transportation Plan, *Transport 2050*, TransLink has identified a regional Major Road Network (MRN). The MRN supports the safe and efficient movement of people and goods across the region and connects local road networks to the provincial highway system. Within the Plan Area, 16 Avenue is identified as part of the MRN. 16 Avenue provides direct access to Provincial Highways 99 and 15 and is the main link to the Fraser Valley from South Surrey. 16 Avenue is vital to the movement of goods in the region and will provide future employment lands with good access to international boarders, the Port of Vancouver and the provincial highway network.

Figure vii: Major Road Network Map



16th Avenue provides a vital connection between future businesses in South Campbell Heights and the Metro Vancouver region.

01

Background
| Setting the Stage

The foundation of any land use plan is its context. Geography, history, and people frame and define the area. They also set the stage for the future and support the direction of the Plan. This section discusses the background on which the South Campbell Heights Plan was created and the process by which it was developed.

1.1 Plan Area
1.2 Geography
1.3 History
1.4 Planning Process
1.5 Engagement Snapshot

South Campbell Heights aerial 192nd and 16th Avenue, 1974. Courtesy of Surrey Archives

1.1 Plan Area

The Plan Area comprises approximately 249 hectares (615 acres) of land in the South Surrey community. Centered around the Little Campbell River, the Plan Area is roughly bounded by 20 Avenue to the north, the 10 Avenue road alignment in the south, 196 Street to the east, and the 190 St road alignment to the west.

The existing Campbell Heights business park is located north of the Plan Area. The Campbell Heights Plan was approved by Council in 2000 and is approximately 60% built out. Lands to the west, south and east of the Plan Area are characterized by rural and agricultural uses, with the Agricultural Land Reserve (ALR) being located to the west and south and the Township of Langley to the east.

Figure 1.1: The Location of South Campbell Heights in the City of Surrey

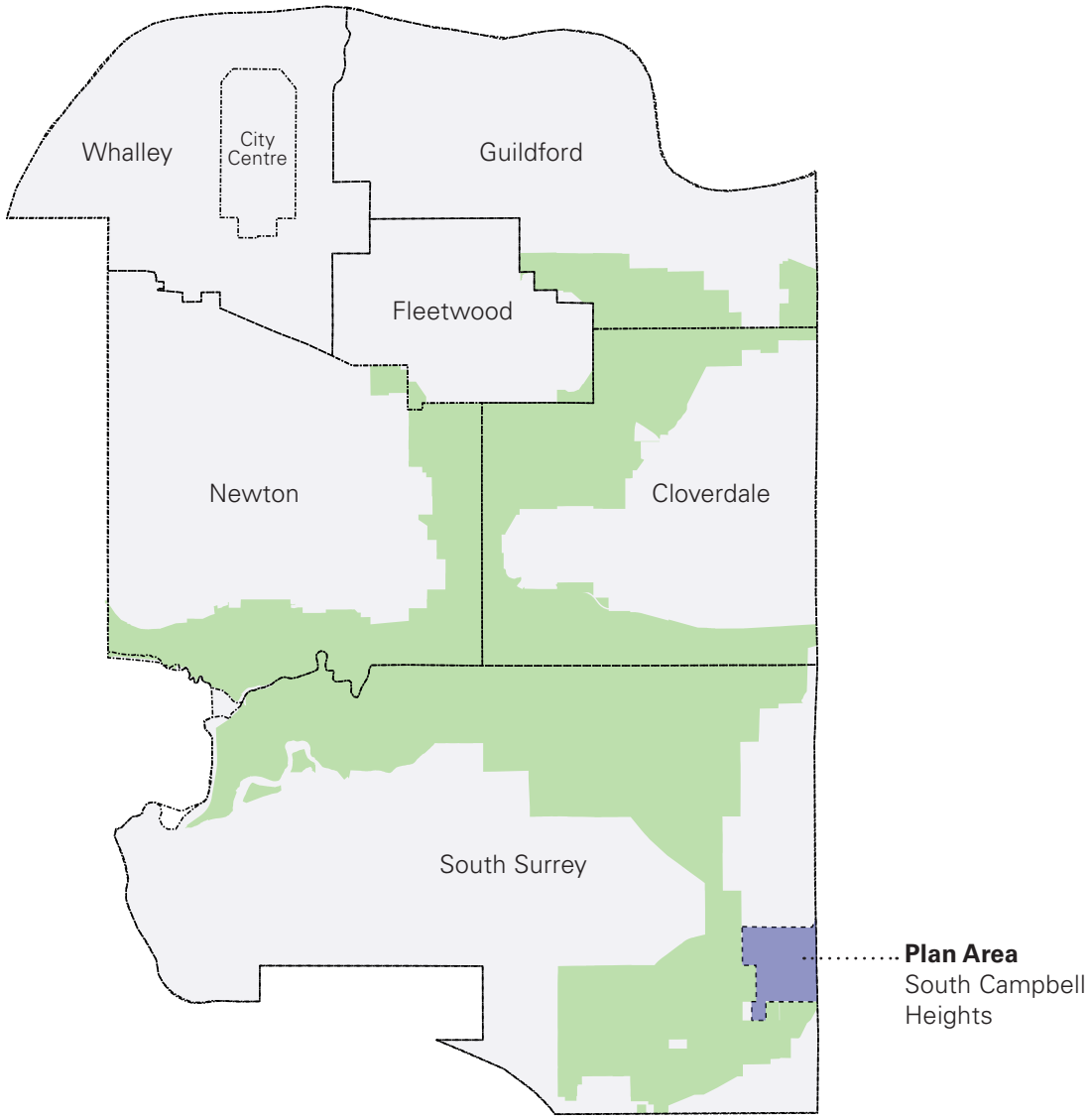
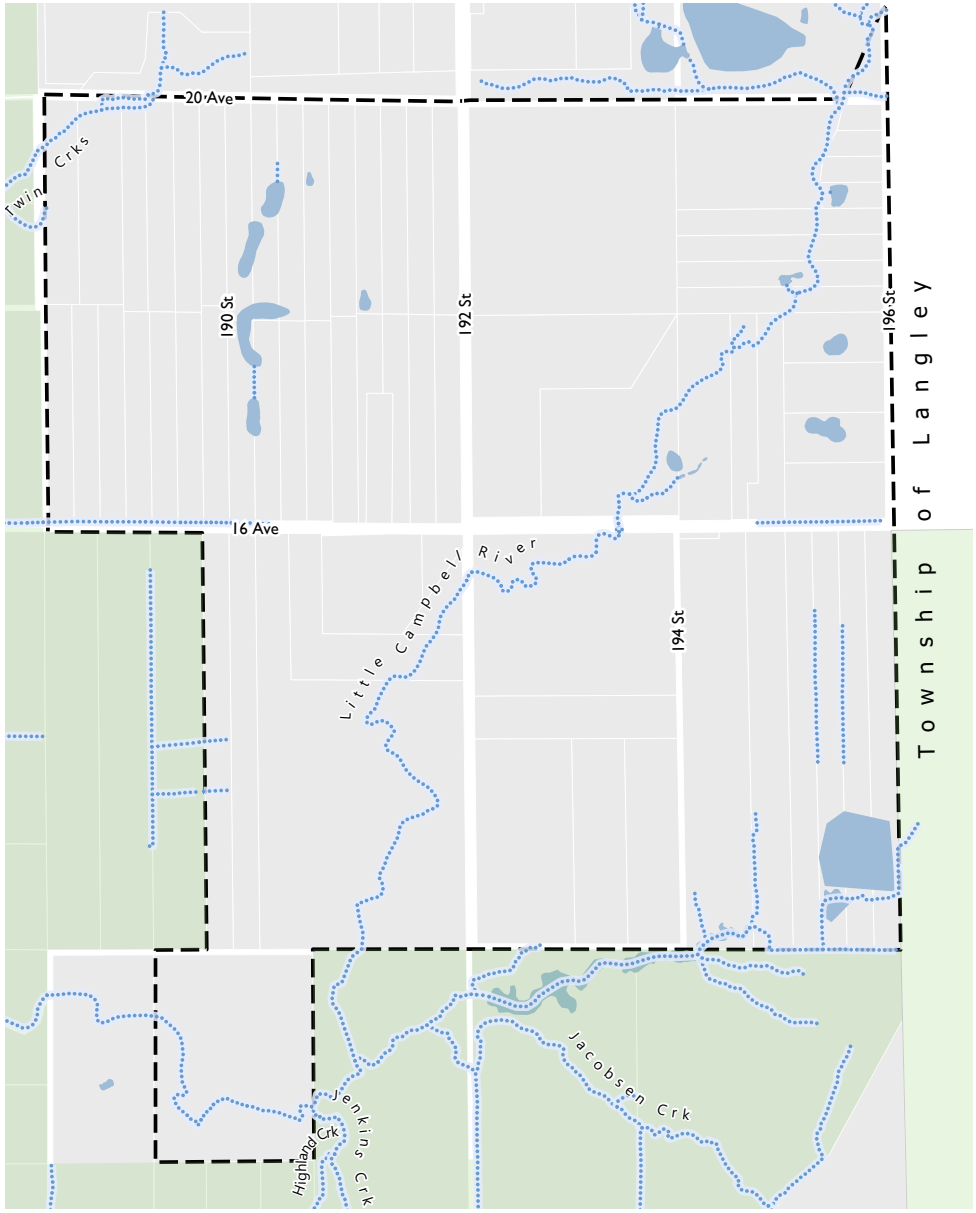


Figure 1.2: South Campbell Heights Plan Area



The South Campbell Heights Plan is centered on the Little Campbell River, one of Surrey's four major rivers. The Plan Area features intact riparian and terrestrial ecosystems and is dotted with agricultural lots and rural residential homes.

1.2 Geography

The Plan Area is centered around the Little Campbell River, which transects the Plan Area in a shallow ravine that flows from northeast to southwest. The Little Campbell River flows from its headwaters in the Township of Langley through Surrey and the Semiahmoo First Nation Reserve where it enters Semiahmoo Bay.

The Plan Area's topography follows the direction of flow of the Little Campbell River. The topography has a southwestern aspect. The northeast portion of the Plan is approximately 40 metres above sea level, dropping to 20 metres above sea level in the southwest portion of the Plan Area. Slopes are more severe at the south and west portions of the Plan Area.

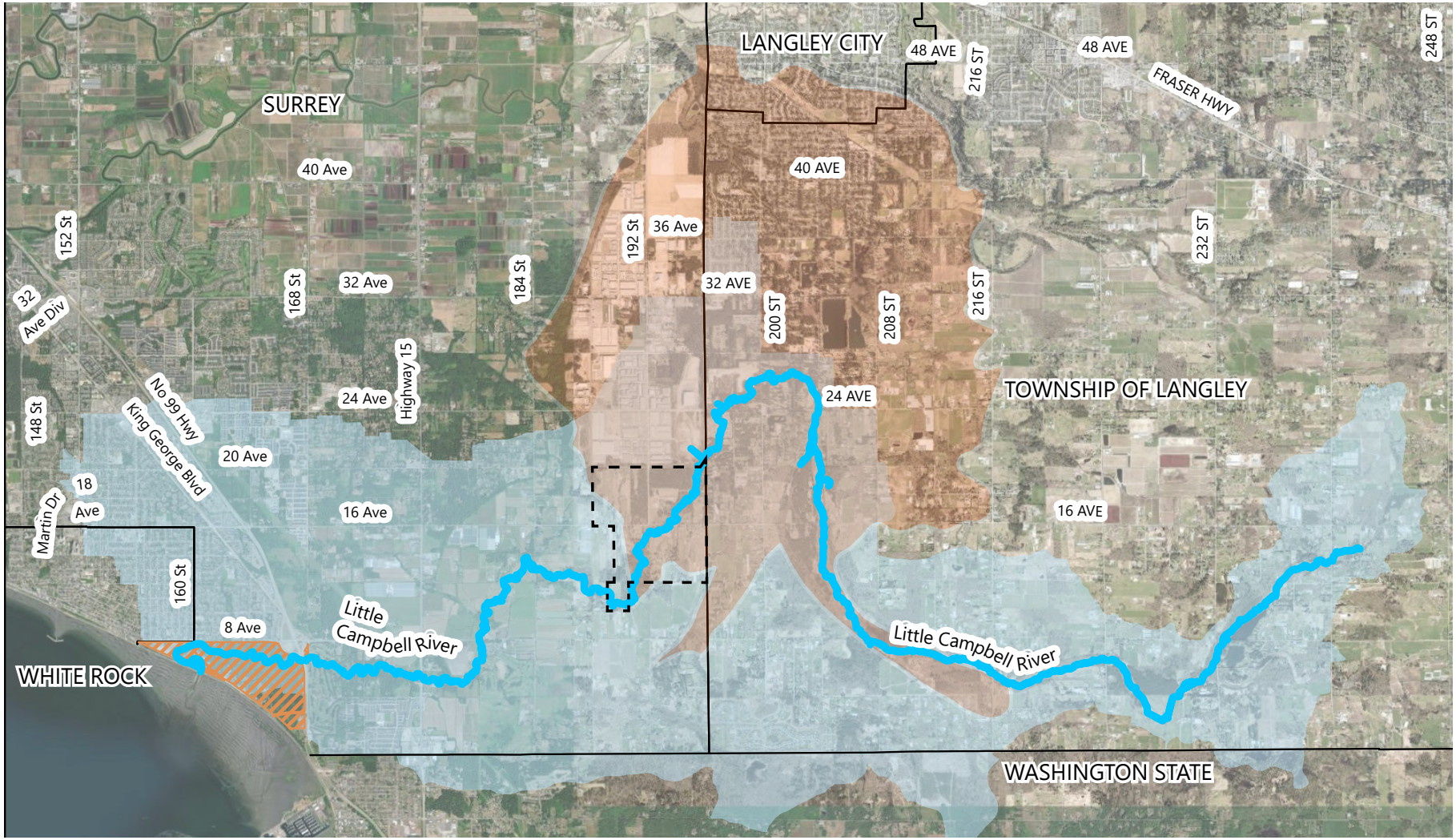
Twin Creeks and Jacobsen Creek, tributaries of the Little Campbell River, are located within the northwest and southern portion of the Plan Area, respectively.

The Brookswood Aquifer is an unconfined aquifer located within the City of Surrey, Township of Langley and City of Langley. Measuring approximately, 38 square kilometres in area, nearly all of the Plan Area is located within the extent of the Brookswood Aquifer. The health of the Brookswood Aquifer and Little Campbell River are linked as the Brookswood Aquifer provides seasonal base flows to the Little Campbell River. The Plan Area is comprised of well draining sandy soils, making the Aquifer vulnerable to contaminates at the surface.

Upland forest stands are found throughout South Campbell Heights, consisting of mature western red cedar, Douglas-fir, and big leaf maple trees. These forests are a unique ecosystem in Surrey given the forest's size, maturity, and the significant habitat value it provides.

The intact terrestrial and riparian habitat of the Little Campbell River and the upland forests provides important breeding, foraging, and connectivity features for several provincially and federally protected bird, amphibian and mammal species, including: the Salish sucker, western painted turtle, northern red-legged frog, Columbian black-tailed deer and barn owl.

Figure 1.3: Little Campbell River Watershed and Brookswood Aquifer Map



LEGEND

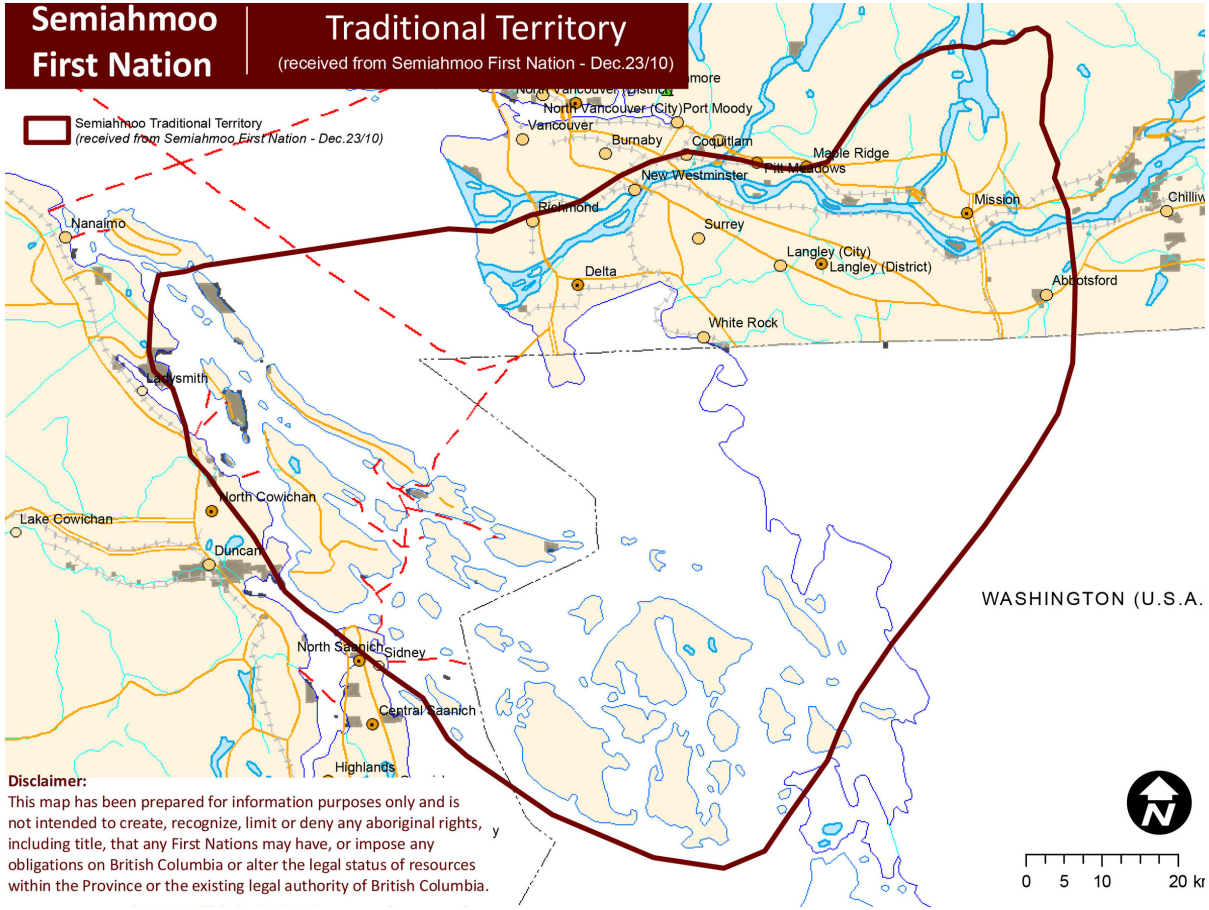
- Little Campbell River Watershed
- Little Campbell River
- Brookswood Aquifer
- Municipal Boundary
- Semiahmoo First Nation Reserve
- Plan Boundary

1.3 History

The Semiahma people are descendants of the Lhaq'temish people, identified as "people of the flood" and Lummi Nation "people of the sea". Thousands of years ago, there was evidence of a great flood or flooding in the Fraser River associated with melting of glacial ice which influenced the settling of the Semiahma people in the general location in which they are today. Their traditional territory includes the areas extending beyond Semiahmoo Bay, Boundary Bay and Birch Bay, including the Plan Area. Extrapolated travel routes show historical Indigenous routes following the Little Campbell River. The area west of South Campbell Heights was traditionally known as Á:lōxwet, or Sto:lo as name for a small area on the Northwest shore of the Campbell River, translating to "put something away"/"save something"/ don't want it to go to waste"/"not much there", "want to save it". It was identified as Pehl-han the "potatoe patch on Tahtulo", as "pétɬxən" the smallest and westernmost of three "Praires" and a name equated with ʔánəwəɬ. Pre-contact archaeological sites are known to exist surrounding the Plan Area.

In the late 18th Century, Europeans had first contact the Semiahma people. Over the next decades, more newcomers arrived for the fur trade and the Hudson's Bay Company established Fort Langley (1827) and Fort Victoria (1843). In 1846, the Canadian-American international border was created along the 49th parallel, dividing the traditional territory of the Semiahma people and cutting them off from traditional village and fishing sites south of the border.

Figure 1.4: Traditional Territory of Semiahmoo First Nation



The 1858 Gold Rush marked the start of large numbers of newcomers arriving on these lands, and the creation of the Colony of British Columbia.

The pre-emption of land by newcomers served to reinforce the belief that the Surrey was empty land available for settlement, discounting the longstanding systems of Indigenous governance and sovereignty. European settlement resulted in the loss of rights to much of Semiahmoo First Nation's traditional territory. In 1887, a 392 acres reserve was established for the Semiahma people, despite the federal government outlining that at least 80 acres be provided per family of five. The Semiahma people could not claim any additional land within their traditional territory as Indigenous people were barred from pre-empting land until 1953.

The settlement of the Semiahmoo First Nation's traditional territory, known by newcomers as Hall's Prairie, (after a perhaps apocryphal individual named Hall, who allegedly, had a native wife who either left him or he killed), began around 1878 and was one of the earliest parts of Surrey to be settled. Initially, the only access to the area was by the Nicomekl, Serpentine, and Campbell Rivers or by a rough trail, the so called "smugglers trail" from Blaine to avoid the charge to enter the Fraser Review, levied by Colonel Moody. In 1881, Hall's Prairie Road (184th Street) was constructed from the Yale Wagon Road (Fraser Highway) to the U.S.A. border, with a bridge at the Campbell River crossing.

In 1891, transportation links were again improved, when the New Westminster Southern Railway was constructed. The local stop was called Hazelmere after the homestead of Henry Thrift, who donated the land for the station. Hall's Prairie was renamed Hazelmere after the rail station.

By the 1880s, logging camps were established along the Nicomekl, Serpentine, Campbell and Fraser Rivers. Much of the logging in the area was conducted by Campbell River Lumber Ltd., who built a mill at the mouth of the Campbell River on leased Semiahmoo First Nation reserve land. The company logged up the Campbell River and the western slopes above Crescent Beach. By the 1920s, logging diminished in Surrey and agriculture became the primary use of the area.

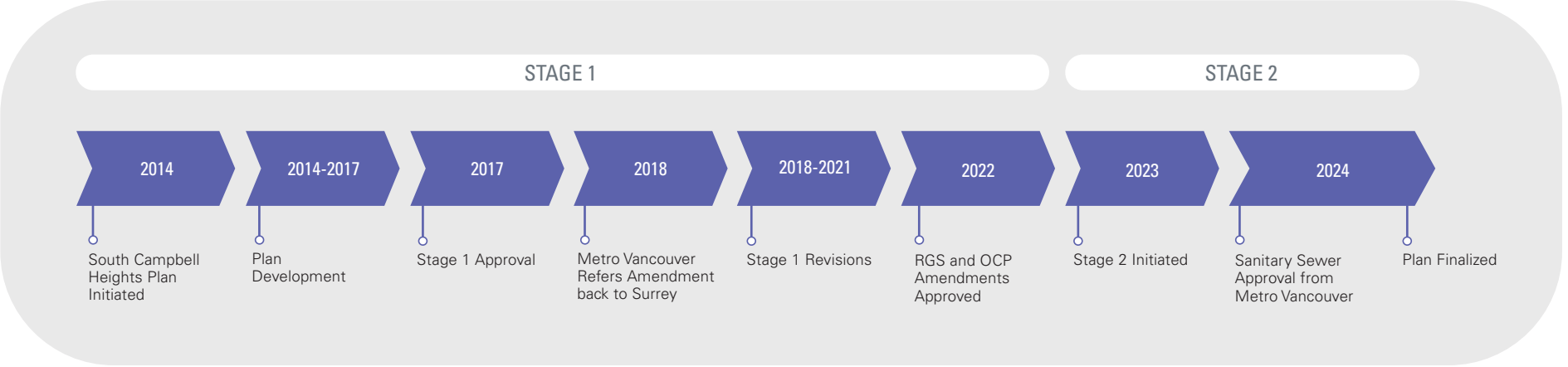
Over the past century, Hazelmere largely maintained its rural, agricultural character. The focus of agriculture shifted over the years. From dairy farming in the early 20th Century, mink farming in the 1960s, to blueberry farming in the 1990s. The area's rich agriculture fostered the development of large farms and estates. Brooksdale Estate (1690 192 Street), built in 1933, is a prime example of the generous lot divisions of the time. The rural character established by the settlers of Hazelmere remains through the preservation of the Brooksdale Estate, providing a reminder of the rural colonial settlement of the area.

The area now known as South Campbell Heights continues to be an important area of traditional use for the Semiahma people, who maintain a deep connection to this land to this day.

South Campbell Heights aerial 192nd and 16th Avenue, 1974. Courtesy of Surrey Archives

1.4 Planning Process

Figure 1.5: South Campbell Heights Planning Process



Planning for South Campbell Heights began in 2008 when Council approved the Employment Lands Strategy, which led to the area be considered for employment lands and its identification as a Special Study Area in the Metro 2040 Regional Growth Strategy (RGS). The Special Study Area overlay set the framework for the planning process and the proposal to extend Metro Vancouver's Urban Containment Boundary.

The South Campbell Heights Plan was formally initiated in the fall of 2014 due to increasing development pressures in the area and a need to resolve the Special Study Area overly. See Figure 1.5 for an overview of the planning process. The Plan was developed in a two-stage process. The first stage involved the preparation of background studies that helped frame the environmental, market, and drainage context of the Plan Area. The first stage also included several forms of community engagement (see Figure 1.6). Together, the background studies and community engagement helped informed the Plan's principles and preferred land use strategy. The Stage 1 Land Use Plan proposed a range of land uses, including: mixed employment, conservation, institutional, special commercial and special residential uses.

In 2018, Surrey submitted an RGS amendment application to Metro Vancouver to align the RGS with the approved Stage 1 Plan. The proposed amendments were referred back to Surrey by the Metro Vancouver Regional District (MVRD) Board, who encouraged Surrey to explore alternative land use options that limited the amount of residential and commercial land uses. In response to the MVRD Board decision, a revised land use plan was developed that better responded to regional planning concerns. The proposed Stage 1 land use strategy was simplified to two land uses, Mixed Employment and Conservation-Recreation, and was endorsed by Council and the MVRD Board in the first quarter of 2022.

Stage 2 planning began in 2022, which involved refinement of the land use plan and the development of the Plan's technical components. Additional studies were undertaken at this stage of the planning process including an update to the environmental study, a traffic impact assessment, and an integrated stormwater management plan (ISMP). Staff also began working more closely with Semiahmoo First Nation during the Stage 2 planning process. Semiahmoo First Nation was consulted in the development of the ISMP and was provided with capacity to develop a Cumulative Effects Assessment for the Little Campbell River watershed.

1.5 Engagement Snapshot

Figure 1.6: Engagement Snapshot

Engagement with residents, land owners, community partners, industrial land development experts, and First Nations occurred over the course of the planning process. In total, there were approximately 2,550 interactions with the public and stakeholders achieved through a variety of engagement methods, as well as legislatively required public hearings for the Official Community Plan amendments that occurred in 2017 and 2021.

Engagement with the broader public primarily occurred during the Stage 1 process. Stage 2 Engagement primarily involved direct meetings with subject matter experts and Semiahmoo First Nation. Semiahmoo First Nation became more involved in the planning of South Campbell Heights during Stage 2, where they met directly with staff regarding the Integrated Stormwater Management Plan and the Traditional Use Study and Cumulative Effects Assessment.

02

Plan Framework
| The Big Picture

This section outlines the plan framework that envisions the transformation of South Campbell Heights into a thriving business park. The vision and principles balance business employment development with the protection and stewardship of the Little Campbell River and other key natural assets. They provide a framework to ensure the Area retains its natural beauty and function, while creating new employment opportunities.

2.1 Vision

A Plan's vision sets the foundation of the area's future. It embodies the values and priorities that emerged through community consultation while being grounded in the City's growth and sustainability goals.

"South Campbell Heights is an innovative business park that provides a diversity of jobs and contributes to the regional economy. Surrounding the Little Campbell River and significant stands of upland forests, South Campbell Heights ensures the long-term stewardship of these important ecological assets and is a leader in sustainable business park design."

2.2 Planning Principles

Building from the vision, the Plan is built around nine planning principles, divided into four themes. These principles were developed using city policies and best practices and were further refined through community engagement. The nine planning principles drive the strategic direction, policy framework, and implementation strategies of the Plan and will shape the growth of South Campbell Heights.

Environmental Stewardship

- Protect and enhance the integrity of the Little Campbell River and its supporting riparian area.
- Protect the integrity of the Brookswood Aquifer and groundwater resource from contamination and depletion.
- Establish and protect significant wildlife corridors and significant forest stands along the Little Campbell River, in conservation areas, and in development areas.

Employment Generation through Thoughtful Design

- Enable flexible site design and development parameters that are responsive to existing and future regional demand for employment land.
- Emphasize a high standard of building and site design including low impact development features such as rain gardens, bioswales, and energy-efficient buildings.

Appropriate Land Use Interfaces

- Establish appropriate buffers between development and the ALR, both in Surrey and the Township of Langley.
- Respect sensitive land uses and sites such as heritage sites and archaeological sites, educational and institutional facilities, conservation areas and cemeteries within by establishing compatible land use interfaces.

Efficient and Safe Roads

- Ensure safe road conditions, intersections and access points, particularly along 16 Avenue and 192 Street.
- Establish an interconnected local street network to distribute traffic effectively and to provide efficient access to sites within the Plan Area.

2.3 Growth Projections

2.3.1 EMPLOYMENT PROJECTIONS

South Campbell Heights is the largest addition to Surrey's employment land base since a slate of employment-based plans were approved in the late 1990s and early 2000s. Currently home to some modest employment generating uses like low intensity agriculture, the Plan Area is expected to generate significant employment growth over the next two decades. The South Campbell Heights Plan is expected to generate between 5,907 and 7,702 jobs and to increase the amount of available employment land in Campbell Heights by 25%.

Employment Lands	**Projected Jobs**
141.5 Hectares	6,800

2.3.2 NATURAL AREAS PROJECTIONS

South Campbell Heights is nestled in the Little Campbell River watershed. It is home to lush second growth forest that surround the Little Campbell River and its tributaries. These natural assets are identified within Surrey's environmental policy framework, notably the BCS. The South Campbell Heights Plan was informed by the BCS, which informed the identification of lands within the Plan's Conservation & Recreation land use which together, make up 33% of the Plan Area.

The Conservation & Recreation is a formal mechanism to protect South Campbell Height's most sensitive natural assets. Conservation & Recreation land use provides an opportunity to connect people to nature and foster natural area stewardship through passive recreation trails. In addition to areas protected in the Conservation & Recreation land use, additional riparian areas may be identified for protection on Business Employment lands.

Protected Lands	**Conservation & Recreation**
82 Hectares	82 Hectares

With Campbell Heights North (pictured above) approaching ultimate build-out, the South Campbell Heights plan provides additional lands for employment uses.

03

Land Use
| How We'll Grow

The land use strategy reflects the vision and principles of the Plan. They show how future business employment development will be integrated into the existing natural areas of South Campbell Heights and how those natural areas will be protected. Council, staff, and residents expect future development proposals to conform to this concept.

3.1 Land Use Strategy

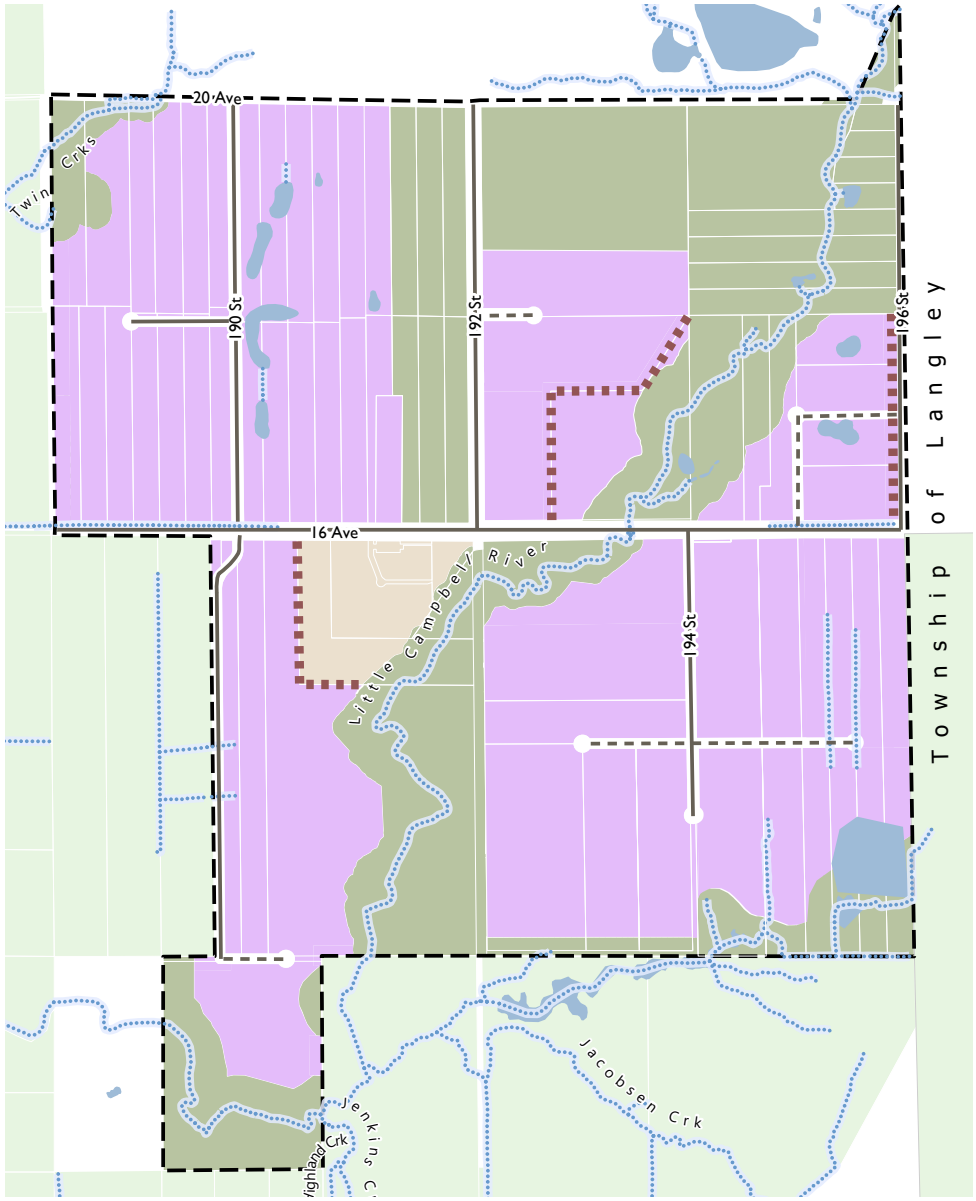
The South Campbell Height Plan establishes a new industrial business park amongst the streams and trees of a mature BC Coastal rainforest. The land use strategy encourages a range of industrial-business uses that have limited external impacts on surrounding areas and generally include light-impact industry, distribution and warehousing, corporate offices, institutional uses and supporting services.

The land use strategy protects the Little Campbell River riparian corridor, its tributaries and upland forests, and seeks opportunities to connect people with nature. Business employment development should recognize the important ecological value of these natural areas to establish the Area's identity and strike a balance between development, conservation and recreation.

Land use designations in the following section further define the intended uses and development forms that are encouraged in the South Campbell Heights Area. Each designation outlines a clear intent, along with development parameters to guide building design and use.

The Plan's vision and the land use strategy will be implemented through individual rezoning and development permit applications. Not all sites will be able to meet the maximum development parameters outlined in each designation due to limitations created by potential site constraints and context (e.g. riparian areas, green infrastructure network, tree retention, topography, roads and adjacent uses). Proposed zoning changes will be reviewed on a case-by-case basis at the time of development rather than through an area rezoning.

Figure 3.1: Land Use Strategy



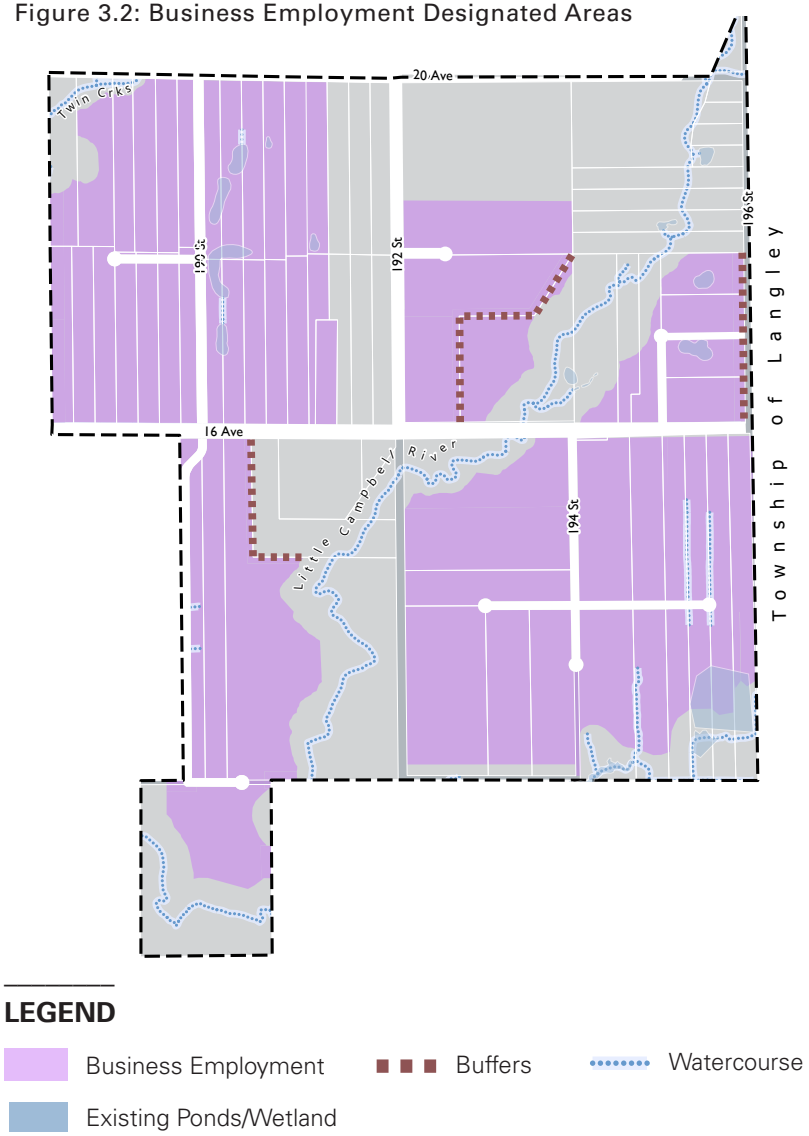
The final location of flex roads will be determined through the development application process and will depend on lot consolidation patterns and other site constraints.

3.2 Land Use Designations

3.2.1 BUSINESS EMPLOYMENT

Intent	The Business Employment land use designation is intended to support a wide range of employment-intensive uses that require access to regional transportation routes and contribute to the regional economy. Complementary commercial uses that serve the needs of the business park are also supported on smaller sites.
Intended Uses	• Light Industry • Warehousing and distribution • Office – excluding professional, service-related office uses • Limited local-serving commercial uses • Institutional and civic uses.
Typical Zones	*IB-1* *IB-2* *CD*
Conditions of Use	1. Truck Parking Facilities are not a permitted principal use. Truck parking is permitted, provided that it is accessory to a principal use on the property that the truck parking is located. 2. Where outdoor storage is proposed it shall be accessory to the principal building in size and fully screened from the public realm. 3. Manufacturing uses must obtain all required environmental permits from Metro Vancouver, including Air Quality and Wastewater Discharge Permits. Appropriate pollution mitigation measures and design features should be considered as part of the initial facility design.
Typical Building Form	Large format structures with building forms that are guided by their function.
Design	Development is subject to urban design approval to ensure appropriate interface treatment with the public realm and Conservation & Recreation. Development should be consistent with the design guidelines presented in Section 4.
Buffers	Special interfaces are required on land adjacent to sensitive land uses (Section 4.5)

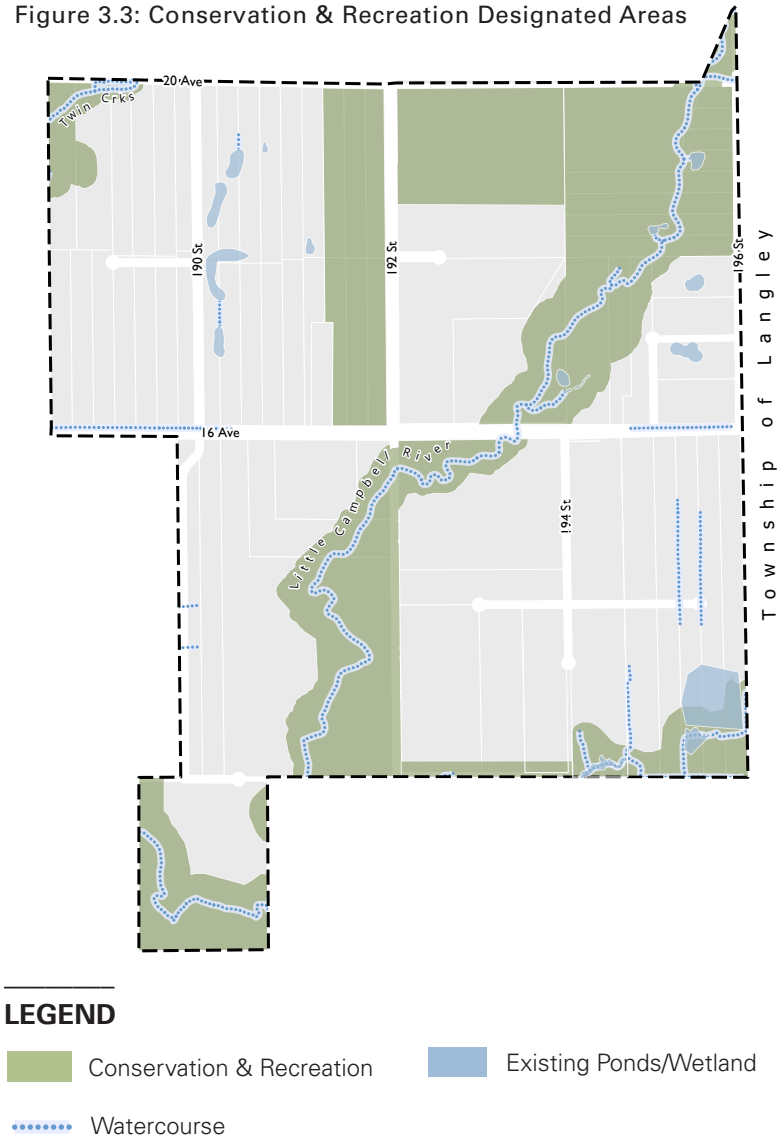
Figure 3.2: Business Employment Designated Areas



3.2.2 CONSERVATION & RECREATION

Intent	The Recreation & Conservation lands include the riparian corridors of Little Campbell River, its major tributaries, and surrounding upland forests. The intent is for these features to be protected in accordance with the Sensitive Ecosystem Development Permit (DP3) guidelines and process. The remainder of the lands in this designation contain areas that can either remain under their current use or can be developed for recreational uses such as campgrounds, or outdoor adventure parks or other such uses that are compatible with the natural environment. These lands are designated as Conservation-Recreation in the RGS.
Permitted Uses	1. Conservation of aquatic and terrestrial habitat. 2. Outdoor recreation, subject to compliance with the RGS and municipal, provincial and federal riparian protection requirements. 3. Existing uses.
Design Consideration	Private development is expected to mitigate all impacts to the Conservation & Recreation designated areas, including limiting light and noise pollution, avoiding tree removal, and creating negative drainage impacts.

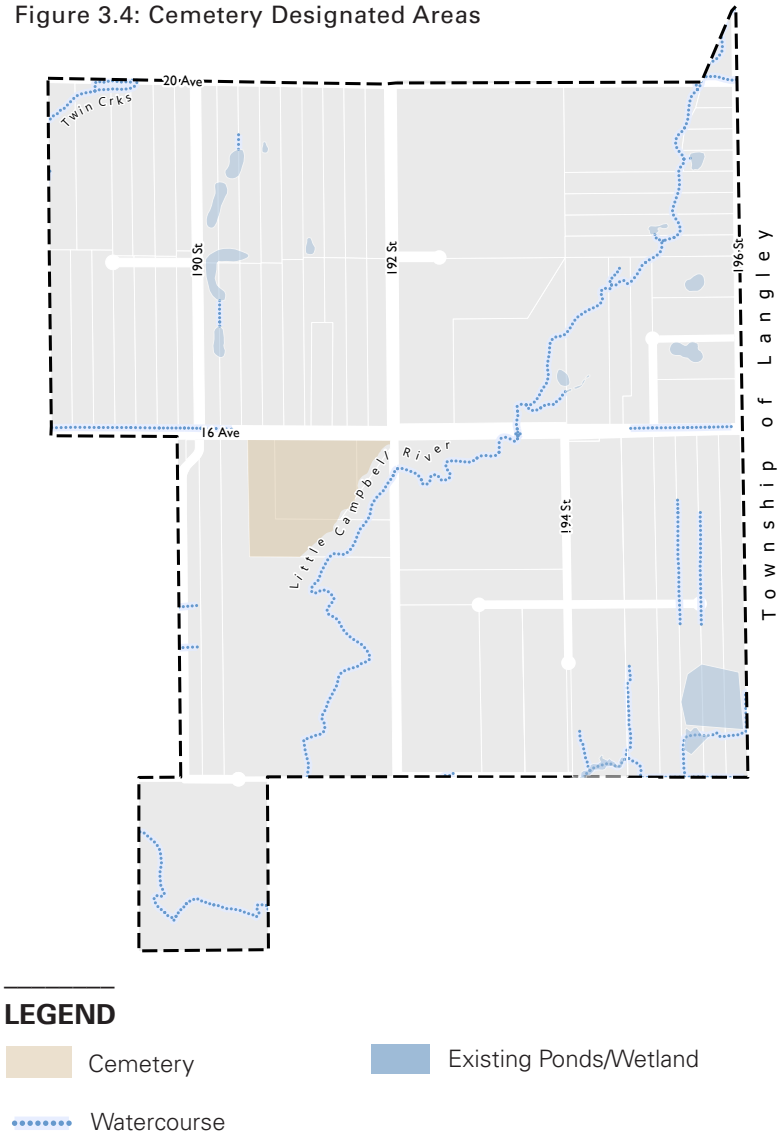
Figure 3.3: Conservation & Recreation Designated Areas



3.2.5 CEMETERY

Intent	The Cemetery land use designation is intended to accommodate existing and future cemeteries and related uses, including the heritage Hazelmere Cemetery.
Typical Zones	*PC*
Design Considerations	Cemetery development should protect the Little Campbell River riparian corridor and limit structures and paved surfaces to ensure compatibility with the underlying Conservation-Recreation land use designation in the Regional Growth Strategy.

Figure 3.4: Cemetery Designated Areas



The Cemetery land use designation is concentrated along the western banks of the Little Campbell River to the south of 16th Avenue.

04

Urban Design
| A Sense of Place

Urban design is the physical pattern of cities, neighbourhoods, streets, buildings, and public spaces. It is a tool used to achieve a functional and engaging built environment by harmonizing relationships between all exterior elements of buildings and their immediate surroundings. The South Campbell Heights Plan establishes an urban design strategy that advances the planning principles, identified in Section 2 of the Plan, into a cohesive vision for the built environment.

The concepts and guidelines in this chapter pertain mainly to development at the scale of individual sites and supplement the Form and Character Development Permit Guidelines of the Official Community Plan.

4.1 Urban Design Concept
4.2 Site Design
4.3 Building Design
4.4 Landscaping
4.5 Unique Interfaces

4.1 Urban Design Concept

4.1.1 A PLACE FOR BUSINESS

South Campbell Heights is envisioned as a light industrial business park that meets the needs of businesses now and in the future. Site design will be flexible, encourage innovation, and respond to the ongoing shortfall of employment lands within the region. To be a place for business, development will:

1. Encourage business investment.
2. Create functional sites that accommodate a wide range of light industrial businesses.
3. Provide innovative building forms that can adapt to changing business needs while being in harmony with the area's natural surroundings.
4. Provide businesses with good exposure to the street and clear wayfinding throughout the business park.

4.1.2 DESIGNED WITH NATURE

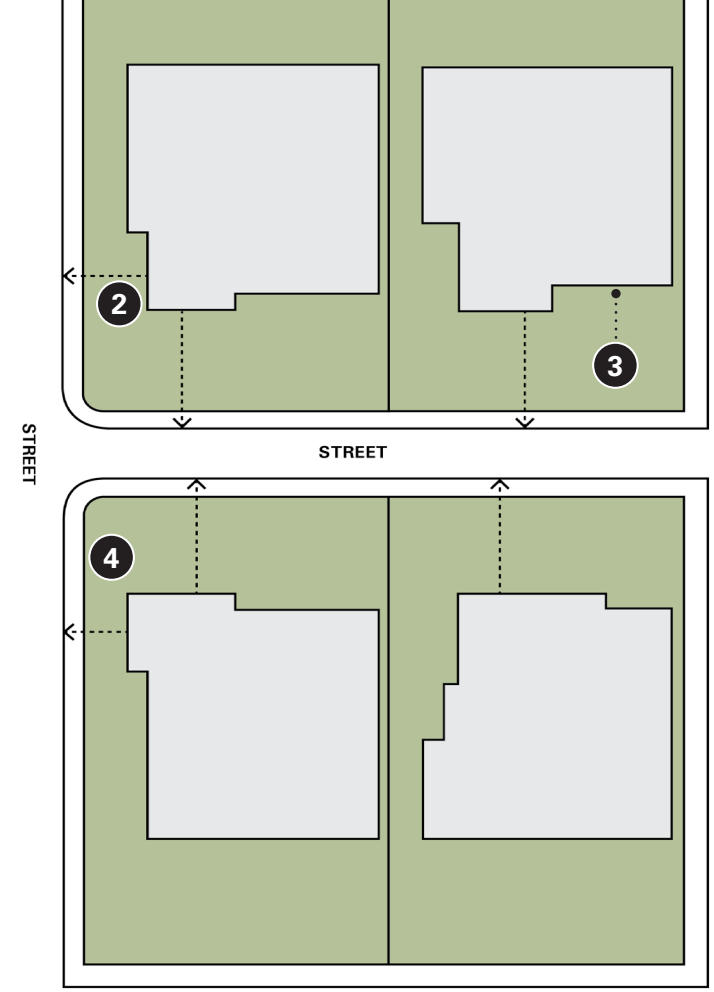
The Little Campbell River, its associated riparian areas, and upland forests are high value natural assets found within the Plan Area. South Campbell Heights will be guided by these natural assets and ensuring development is in harmony with nature and is resilient to the impacts of climate change. To design with nature, development will:

1. Promote local natural assets as part of establishing the Plan Area's identity.
2. Integrate, enhance, and maintain the continuity of the City's Green Infrastructure Network, watercourses and other important biodiversity components.
3. Maintain the health of the Brookswood Aquifer and Little Campbell River by maximizing tree retention, tree planting, and green infrastructure approaches.
4. Apply the City's Biodiversity Design Guidelines to enhance landscaping and reduce the impacts of buildings, roads and other engineered infrastructure on biodiversity values.
5. Appropriately site, design, and grade business employment development to limit light, noise, and drainage impacts on Conservation & Recreation designated land.
6. Design sites and facilities to limit air emissions, wastewater discharge and other forms of pollution.

4.1.3 A WELCOMING PUBLIC REALM

South Campbell Heights provides thoughtful building design, comfortable and engaging open space, and generously landscaped streets, parking areas and frontages that contribute to a welcoming environment to conduct business for employees and visitors alike. To create a welcoming public realm, development will:

1. Promote a cohesive character of development that incorporates design elements that maintain a relatable scale from the public realm.
2. Use thoughtful design, high quality building materials, and good planning principles to create attractive buildings that contribute to a pleasant public realm.
3. Incorporate publicly accessible open space into private developments to serve as outdoor social gathering spaces and amenities for employees.
4. Landscape streetscapes with a generous amount of drought tolerant, structurally diverse planted areas that provide shade for human comfort and contribute to the City's biodiversity and climate change adaptation goals.
5. Ensure that loading, storage and other back-of-house business operations are not visible from public view.
6. Design safe, inviting, and accessible public and private amenity spaces using Crime Prevention Through Environmental Design (CPTED) and universal accessibility standards.



4.2 Site Design

This section is intended to assist in the overall design of individual sites. It provides guidance on the relationship between various site elements to create a comfortable and aesthetically pleasing streetscape, limit impacts on adjacent sensitive environmental areas, and provides flexibility for different operational business needs.

4.2.1 SITE LAYOUT

1. Cooperation and coordination are encouraged between development sites to ensure compatible interfaces, consistent streetscapes, and efficient use of developable land.

2. Generally, buildings should be oriented towards the street, with the primary public functions within buildings located along primary street frontages. Conversely, back-of-house functions should be properly screened from public view.

3. A strong developed edge should be established along 16 Avenue and 192 Street. Facades facing these streets should place additional emphasis on building articulation, architectural treatment, and building entries. Principal buildings facing these streets are encouraged to establish setbacks that are consistent with neighbouring sites.

4. On corner lots, principal buildings should include architectural and siting enhancements which may include the following:
   - Minimizing building setbacks at the street corner;
   - Reducing the amount of parking provided between the building and public realm at the street corner;
   - Architectural accents, building articulation, and material variation;
   - Locating primary entrances and public functions at building corners;
   - The use of highlight landscaping and publicly accessible corner plazas to create a visual and physical connection between the building corner and public realm.

Top Image: An illustrative example of building orientation and corner anchoring to create a connection between buildings and the public realm.
Bottom Image: Example of an approach to anchoring the building at the street corner.

Site Layout - Grading

1. Site design should integrate existing topography and retain natural site functions.

2. Where regrading the site cannot be avoided, cut and fill should be minimized to avoid unnecessary retaining and ensure site grades are set at an elevation that is compatible with the public realm and adjacent sites.

3. Where slopes are used to meet adjacent property and street grades, ensure they are naturalized or landscaped, allowing grading to be designed by a civil engineer and geotechnical engineer based on site constraints.

4. Where retaining walls are used to meet adjacent property and street grades, retaining walls should be tiered with the height of each tier kept as low as possible. Minimizing the height of retaining walls will ensure that business park sites are appropriately interfaced with the street and adjacent uses and that they contribute to a welcoming public realm. Where tiering is not possible, the retaining walls should be screened and include landscape.

5. Modified slopes and retaining walls should incorporate landscaping at top, bottom, or step of wall where possible, to visually soften and naturalize their appearance and complement wildlife connectivity objectives.

Top Image: An example of a tiered retaining wall that provides a stagger between each tier so that landscaping can be incorporated into the retaining wall.
Bottom Image: An example of a landscaped slope along a street fronting property line, which is the preferred approach to meeting property grades with the street.

4.2.2. ACCESS & CIRCULATION

1. All site access points shall conform to City of Surrey Engineering standards, and be located to provide the most efficient and functional flow of traffic while mitigating potential conflicts with adjacent streetscapes, intersections, and site features.

2. Where possible, sites should provide a single point of entry. Sites with multiple frontages and/or high volume truck access may provide separate driveways for trucks and passenger vehicles, which should be clearly marked with appropriate signage.

3. Shared access arrangements for loading areas between adjacent sites may be considered.

4. Parking lots and driveways should be designed to minimize conflicts between truck traffic, passenger vehicles, cyclists and pedestrians.

5. Provide walkways for pedestrian movement to and from building entrances, connecting to parking areas and public sidewalks. Contrasting or specialty paving should be used where pedestrian pathways cross vehicle areas.

Top left and bottom left Image: An example of how access and circulation can be configured between multiple sites. Clearly define and separate access and circulation routes for different users and vehicles modes to ensure that on-site circulation is safe and user-friendly.

4.2.3. OUTDOOR AMENITIES AND PLAZAS

1. Individual sites should provide outdoor amenity areas for employees that are proportional to the size of the development and number of employees. For large developments, outdoor amenity areas should be programmed based on internal business layout to promote connectivity and positive user experience.

2. Consider designing amenity areas to act as a green space extension of adjacent natural areas

3. In addition to employee amenity areas, publicly accessible open spaces should be established on private property along the street frontages to help connect the private development site and the public realm.

4. If employee amenity areas are located adjacent to or combined with the publicly accessible open space, they should be sized and design to function as an employee amenity, while still creating a connection to the public realm.

5. Amenity areas and plazas should provide seating and be well landscaped with shrubs, ground cover and shade trees to ensure spaces are comfortable for people in all seasons. Consider weather protection if appropriate and feasible.

Top right and bottom right: Examples of well landscaped employee amenities.

4.2.4. PARKING REQUIREMENTS

1. To promote more intensive forms of industrial and business park development, rooftop parking, above ground parkades, and parking facilities within building envelopes should be considered.

2. Locate above grade parking facilities and access ramps away from street facing yards and ensure they are architecturally integrated with the principal building.

3. Rooftop parking facilities should be comfortable and user-friendly. Consider incorporating landscaping, hardscaping and other features that contribute to a positive user experience, including: shade trees, landscape islands, pedestrian pathways, and weather protection at entrances. Landscaping on rooftop parkades is not expected to be as extensive as landscaping within grade-level surface parking areas.

4. Avoid locating parking facilities below average existing grade, as defined by ***Surrey Zoning Bylaw, 1993, No. 12000***, due to the Plan Area's high water table and sensitivities of the Brookswood Aquifer. If underground parking facilities are proposed, the parking slab elevation must be above the seasonally high water table as determined by a qualified engineer and accepted by the General Manager of Engineering.

5. Parking facilities are encouraged to include level 2 EV charging facilities and/or EV-ready infrastructure.

6. At grade bicycle storage should be provided close to building entrances and in areas with good lighting and visibility from the public uses of the building.

7. The provision of indoor bicycle parking and end of trip facilities for employees is encouraged.

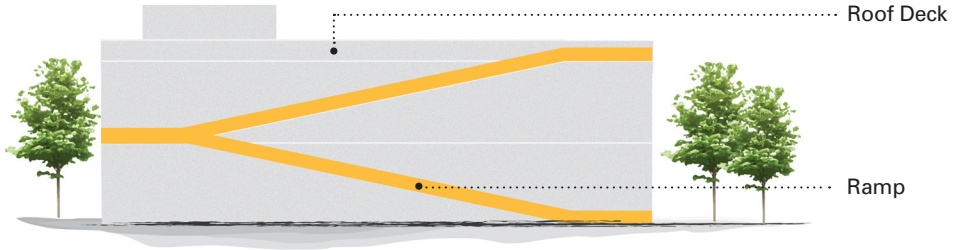


Image above: Exterior ramps to roof top parking facilities should be integrated into the principle building
Left image: An example of rooftop parking on an intensive light industrial building that incorporates landscaping to create a more welcoming environment.

4.2.5. LOADING, STORAGE & DISPLAY

1. Avoid locating loading, outdoor storage, and display areas in yards that abut streets.

2. Where possible, for sites that abut the Conservation & Recreation and/or other riparian areas, loading, storage, and display areas should be located away from sensitive ecosystems consistent with environmental requirements.

3. The storage and display of goods, materials and supplies should occur within the principal building. Where outdoor storage is permitted, it should be located in the rear or side yard, subject to appropriate screening.

4. Active loading areas should be separated from passenger vehicle parking.

5. Loading, outdoor storage, and display areas exposed to the public realm shall be screened by buildings, a solid decorative fence with layered landscaping up front, or a combination thereof.

6. Outdoor storage and display areas should not exceed the lot coverage of the principal building.

7. Loading, storage, and display areas shall be graded to avoid directing storm-water runoff towards sensitive environmental areas.

8. Refuse collection storage should be located within the principal building or fully enclosed within an accessory structure or screened and located away from the public realm.

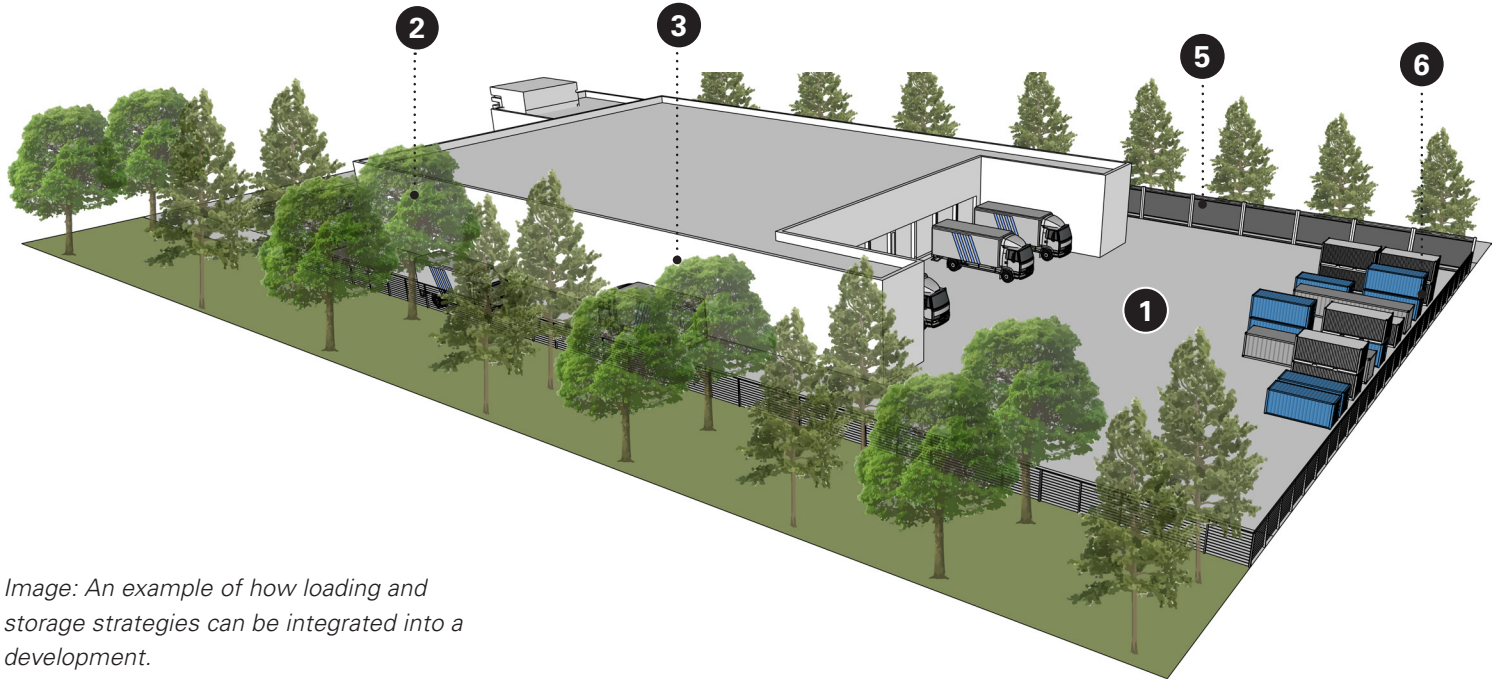


Image: An example of how loading and storage strategies can be integrated into a development.

4.3 Building Design

This section is intended to guide the design of individual buildings. These guidelines aim to create buildings that are of an appropriate scale and massing to their surroundings, have architectural interest, are constructed with high-quality materials, and advance sustainable and innovative construction practices.

4.3.1 BUILDING FORM, EXPRESSION AND DETAILING

1. Building design should be appropriate to the intended use, responsive to site conditions, and should optimize solar orientation to improve energy performance.

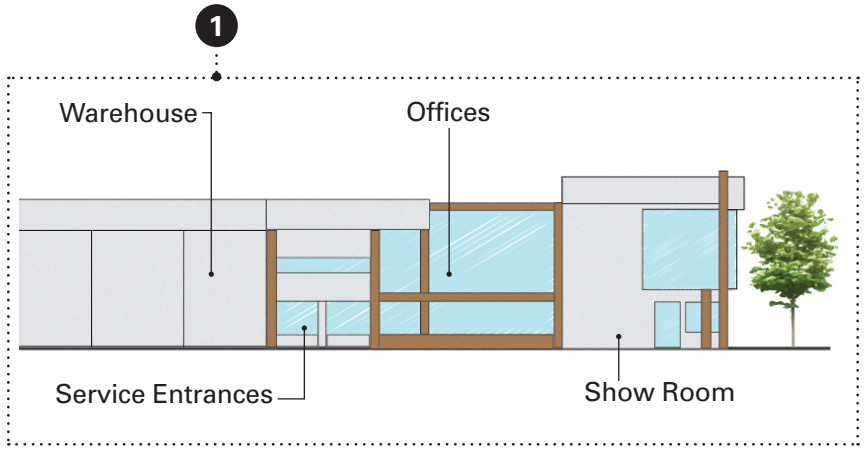
2. Buildings should articulate their massing through vertical and horizontal expressions to differentiate major functional parts within them.

3. Where possible, public facing parts of buildings, including main entrances and offices, should be oriented towards street frontages with a distinct design for clear identification and inherent wayfinding.

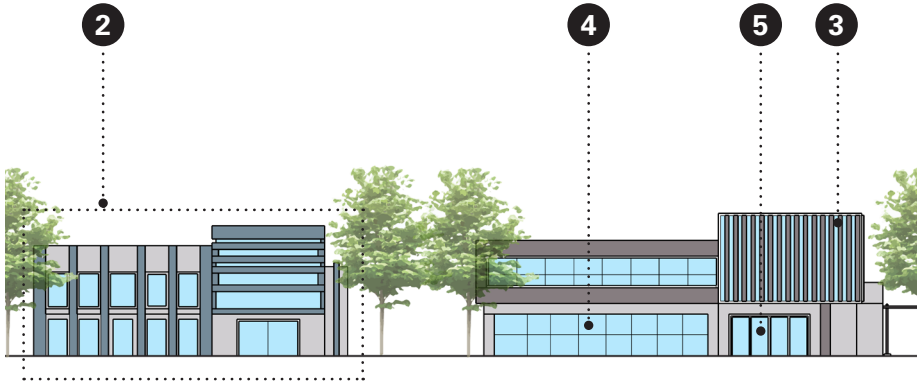
4. Large undifferentiated or blank wall areas are to be avoided, especially on street facing elevations. Variation in textures, patterns, colours, materials parapet height, and building form are techniques that may be used on building facades to create visual interest.

5. Recessed window and door areas are encouraged to create depth and variation in building form.

6. Service access doors and mechanical equipment, including electrical kiosks or gas metres, should be appropriately incorporated into building design, or screened from the public realm.



An example of how a building's form can express its internal uses.



An example of the various design techniques can be used to create appealing buildings that are well connected to the street.

4.3.2. SUSTAINABLE DESIGN

1. The use of mass timber, low- carbon concrete, or other low embodied carbon materials are encouraged.

2. Utilize high performance building materials and mechanical equipment, where possible. Individual developments are encouraged to exceed minimum BC Building Code energy performance standards.

3. Select roofing materials that optimize energy efficiency and help reduce the potential impacts of heat island effect.

4. Rainwater collected on roofs should be infiltrated on site where feasible to support recharge of the Brookswood Aquifer. Where there are complimentary rooftop uses such as parking, rainfall runoff would need to be treated prior to infiltration. Where infiltration is not possible or limited, green roofs are an option for consideration.

5. Consider opportunities to incorporated permeable paving on walkways, publicly accessible plazas, and amenity areas to support the goals of the South Campbell Heights Integrated Stormwater Management Plan (ISMP).

6. Where possible and when aligned with business requirements, buildings should consider designs that reduce energy consumption by incorporating passive design features such as:

    - Optimized shading to allow solar exposure in the winter and restrict it during summer months;
    - Maximizing daylighting strategies to reduce the need for artificial light in interior spaces; and
    - Operable windows to allow cross-ventilation to reduce mechanical heating and cooling requirements.
    - Roofing areas for on-site energy harvesting and use.

Top Image: Example of a warehouse constructed from mass timber in Langford, BC.
Bottom Image: An example of a public plaza that incorporates permeable paving and shade trees to provide a comfortable environment for people, while promoting storm water infiltration.

4.3.3. EXTERIOR MATERIALS

1. Coordinate the exterior building design on all elevations with regard to colours, materials, textures, patterns, architectural form and detailing to achieve design harmony.

2. The strategic use of building materials should be used as a secondary measure to visually scale down buildings, after first modulating the building massing for that purpose.

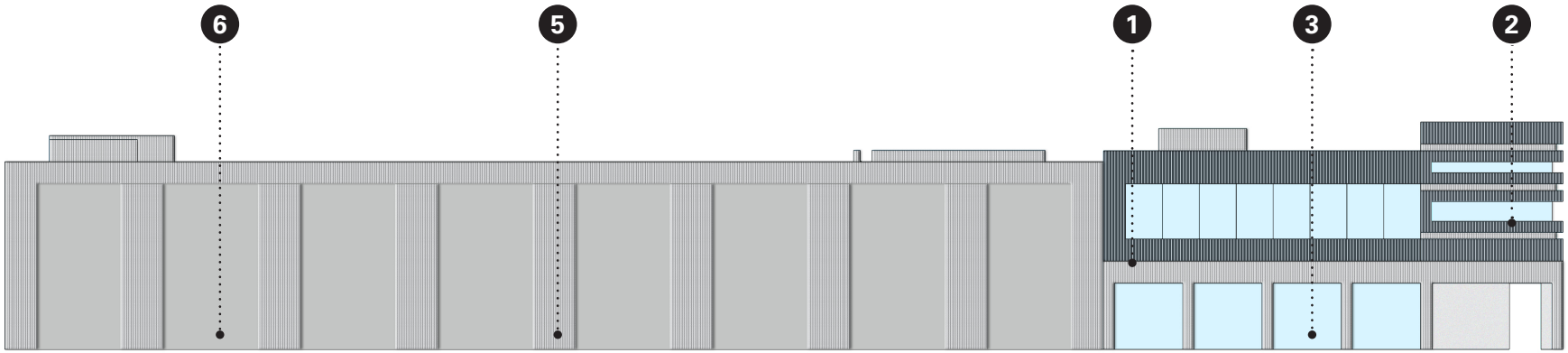
3. Where possible, glazing and curtain walls should be used to highlight public facing uses, such as offices and showrooms, along street elevations.

4. Materials should be of high quality with a sense of permanence.

5. Reveal lines, texturing of materials, and recessing of materials may be used to articulate a building's facade.

6. Blank concrete should be avoided as an exterior material. Where concrete is used as an exterior material, special attention should be paid to colour, pattern, texture and finishing.

7. Consider incorporating living green walls on building facades, especially on facades that abut forests and riparian areas to create a softer interface with the natural areas and support pollinator species.



An example of how a variety of materials and textures may be integrated into a building.

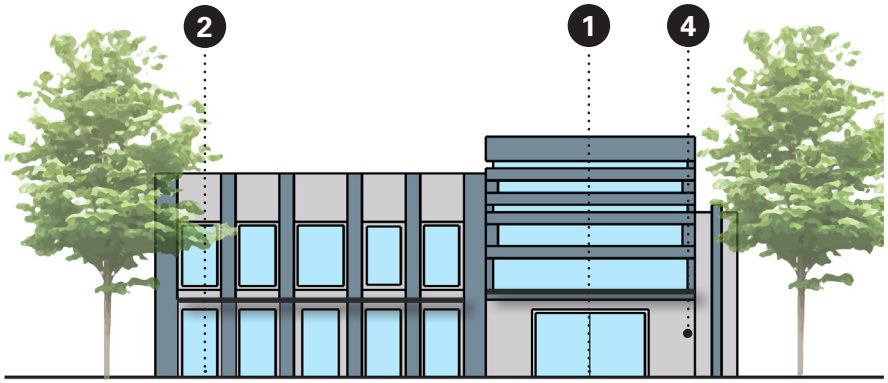
4.3.4. WINDOWS AND ENTRANCES

1. Locate and design major public entrances to be oriented and easily identifiable from the street, with a strong sense of entry that is both in scale with the building and comfortable at the human scale.

2. Enlarge street-facing windows to activate the streetscape with public-fronting functions and to maximize the use of natural lighting.

3. Employee and service entrances should be demarcated through the use of architectural features and signage.

4. Pedestrian weather protection is encouraged into all primary entrances of individual units.



An example of how thoughtful window and door treatment can create a more welcoming pedestrian experience and promote inherent wayfinding.

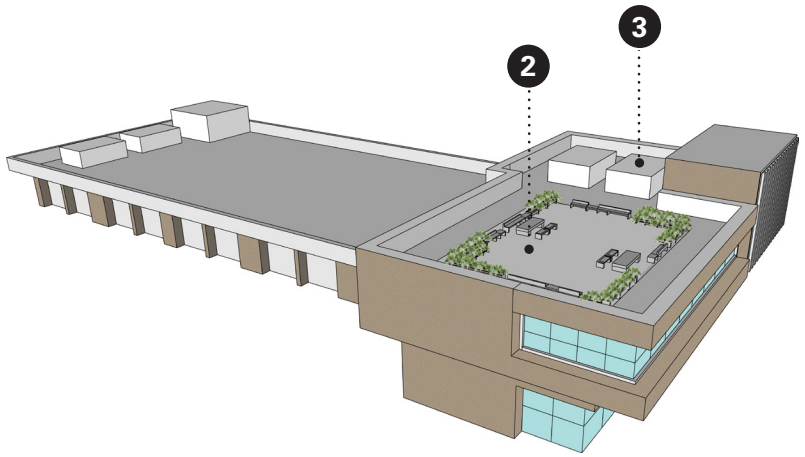
4.3.5. ROOFSCAPES

1. Consider the use of sustainable design element on roofscapes, including: cool roofs, limited use of green roofs, and energy harvesting (Section 4.3.2).

2. If rooftop amenity areas are considered, they should incorporate landscaping to improve both the function and comfort of the outdoor amenity.

3. Roof top mechanical equipment should be set back from the roof edge so it is out-of-view from the public realm. If that is not possible, use screening that is architecturally integrated into the building.

4. If the exact location of rooftop equipment is not yet determined, show a designated area where it will be out-of-view from the street by designating the minimum setback from the roof edge and the maximum height of the equipment. Architectural screening details for placements unable to be out-of-view from the street should be provided.



An example of rooftop elements that may be incorporated into a business park building. It is not excepted that all elements are incorporated in every development.

4.4 Landscaping

This section is intended to assist in the design of landscape works and tenant signage that will enhance the character of South Campbell Heights. The general intent of the landscaping and signage guidelines is to create a coherent landscape that reinforces the character of adjacent streetscapes and is sensitive to riparian areas, critical habitat, and Conservation & Recreation.

4.4.1 GENERAL LANDSCAPING REQUIREMENTS

1. Landscaping should prioritize the retention of natural site features and ecological functions. Thoughtful landscape design is crucial near riparian setbacks and other natural areas to minimize or avoid noise, light and access disturbance.

2. Application of the planting palettes identified in Surrey's Biodiversity Design Guidelines and Parks' Natural Areas Management Plan are recommended for informing landscaping plans.

3. Landscaping should use a diversity of native and/or drought tolerant species that support and benefit local wildlife (e.g., songbirds, pollinators).

4. Where soil conditions are suitable for infiltration, rainwater from the site should be infiltrated, with no runoff leaving the site to maximize aquifer recharge. All paved surfaces would require treatment (e.g. filtration and settlement) in an engineered system, or in a lined bioswale, to remove pollutants prior to infiltration. Opportunities for pervious surfaces include:
    - landscaping strips;
    - parking islands;
    - rain gardens;
    - bioswales; and
    - the retention of existing forest cover, especially stands of mature trees.

5. LIDs may be integrated into Bylaw required street fronting landscaping strips. When locating LIDs in street fronting landscaping, seek opportunities to incorporate appropriate species of shade trees to promote human comfort and create a soft edge between the public and private realm.

6. Landscaping adjacent to public areas should have a clear sightline zone from 1 metre above the ground to 2 metre in order to promote visibility and security. Shrubs shall be a maximum of 1 metre in height with tree canopies starting at 2 metres above grade.

7. Where sites abut Conservation & Recreation designated land, provide a landscaping strip adjacent to side and rear lot lines to ensure that site grading and hardscaping does not result in off-site tree removal.

8. Where possible, retain stands of mature trees in yards adjacent to Conservation & Recreation designated land to establish a natural transition between development and protected sensitive ecosystems and to avoid creating new off-site windthrow impacts in the Conservation & Recreation.

9. Use landscaping throughout parking areas to define parking clusters, highlight pedestrian routes, increase human comfort, provide visual relief, and interrupt paved surfaces to increase natural drainage.

Examples of landscaping that create welcoming streetscapes, user friendly parking areas, and can be used as a tool for drainage infiltration.

4.4.2. LIGHTING

1. Lighting plans, specifications, and photometric plans are to be included as part of the Development Permit submission to demonstrate compliance with the lighting standards in this section.

2. Limit on-site lighting to what is necessary for business function, human safety, comfort, and security.

3. Building entrances are an example of functional lighting. Entrances should be illuminated to enhance their visibility and identity.

4. Non-functional lighting, such as architectural and landscape accent lighting, should be avoided.

5. Design site lighting to minimize glare onto adjacent properties, streets and environmentally sensitive areas. Consider the International Dark Sky standards as outlined in the Biodiversity Design Guidelines.

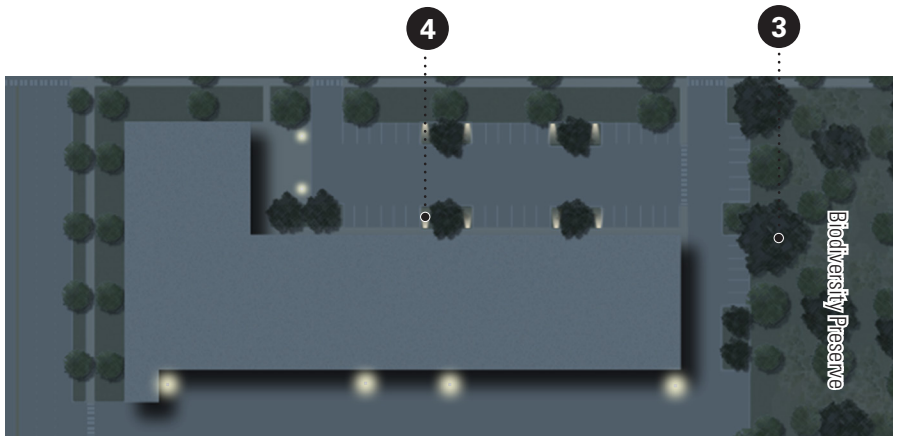
6. Where possible, avoid sight and architectural lighting along riparian and forest interfaces where possible.

7. Where lighting for functional purposes is needed, integrate the lighting with the building's architectural expression and landscape design. Use high quality, full cut-off light fixtures and avoid uplighting or light bleed into the sky. Ensure fixtures are shown on the elevation drawings with clarity of its intent.

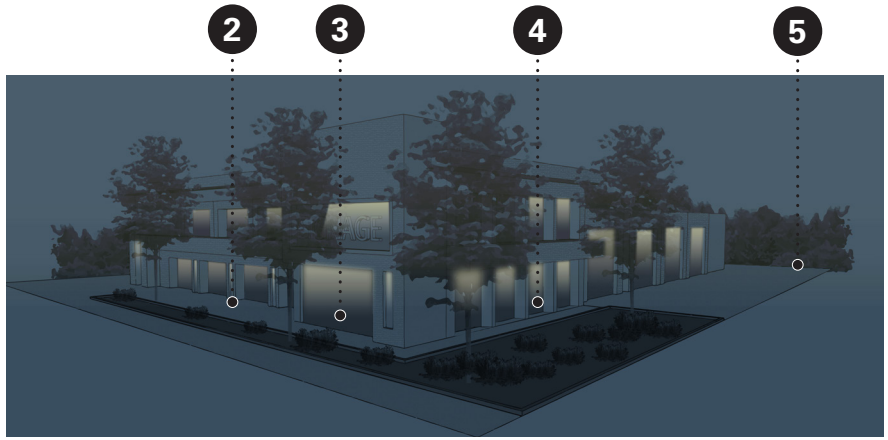
8. Ground-level architectural lighting is preferred to avoid up-lighting and glare.

9. Consider the use of timers, light-sensors, or motion-sensors for site and architectural lighting.

10. To ensure site lighting minimizes impacts to the Plan's wildlife habitat, warm colour temperatures for site lighting is encouraged. Best practices recommend lighting temperatures of 3000 Kelvin (K) or warmer.



An example of how site lighting can be minimized to meet business need and comfort while avoiding lighting adjacent to environmentally sensitive areas.



An illustrative example of the preferred architectural lighting strategy.

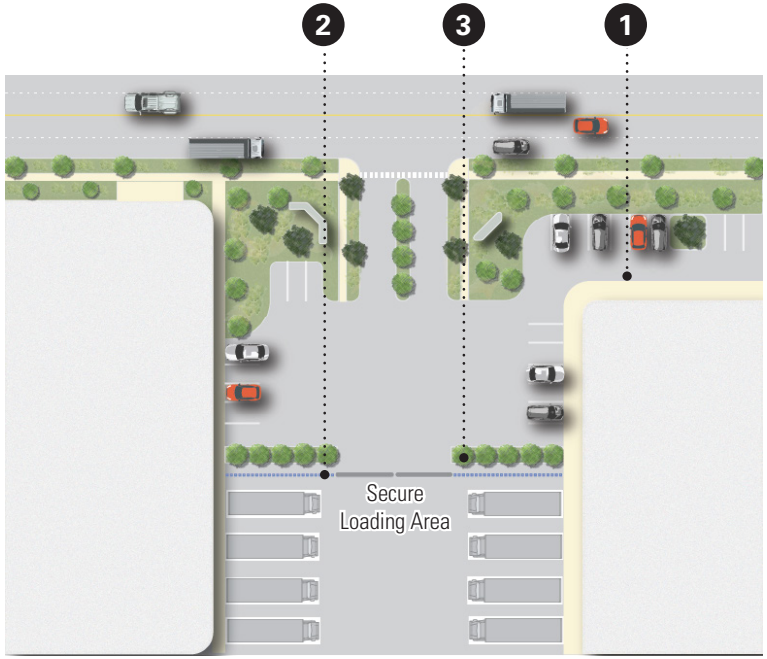
4.4.3. FENCING

1. Site planning and building design should be the primary measures for mitigating security concerns.

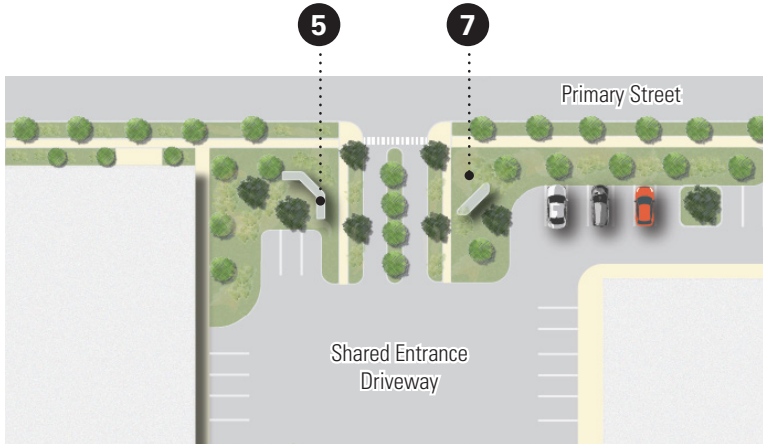
2. When security mitigation cannot be accommodated directly as part of the building or site planning, security fencing abutting the public realm should be located to comply with prescribed setbacks, with landscaping provided between the public realm and the fence.

3. Security fencing along the public realm should be visually minimized, kept to a low height and not create a safety hazard.

4. Riparian areas and protected forested areas should be fenced to prevent trespass and encroachment onto sensitive areas. Fencing along these areas should be comprised of either Paige Wire or chain-link or similar.



Top: an illustrative example of how site planning should be the primary mitigating measure for security and how that if required, security fencing should be sited away from public streets. Bottom: an example of low height and visually unobtrusive security fencing.



4.4.4. SIGNAGE

1. Tenant and circulation signage should be integrated into the building and site design when known or where possible.

2. Fascia signage should be comprised of individual three-dimensional letters. Appropriate signage types include: channel lettering, foam lettering, routed metal panels, or similar.

3. Halo back-lit or internally illuminated signage is preferred. If illuminated from an exterior light source, signs should be lit using downward facing luminaires (consistent with Section 4.4.2).

4. Illuminated signs next to environmentally sensitive areas is discouraged.

5. Free standing signs should be integrated into the site landscaping and designed to complement the architecture of the buildings on site.

6. The height of freestanding signs should be minimized so that signs are not a dominating feature on the streetscape and are relatable at the human scale. The recommended massing for free standing signs is: 1.8 metres in height and 2.4 metres in width.

7. Landscaping immediately surrounding the base of free standing signs should consist of low level planting to ensure that the sign is visible from the street.

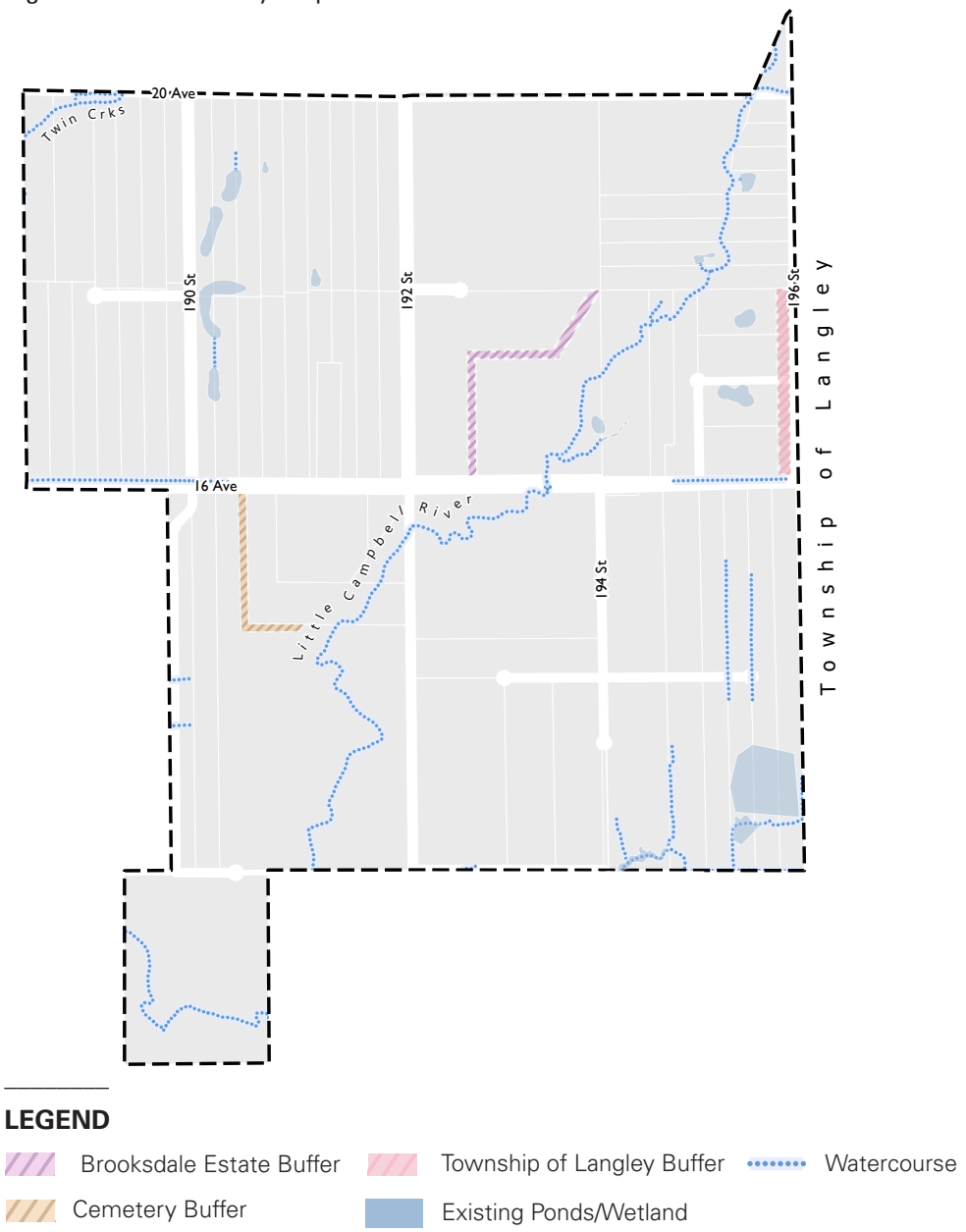
Top Image: Example of free standing signs integrated into the site's landscaping.
Bottom Image: Example of preferred fascia and free standing signage forms.

Example of a business employment building that effectively incorporates siting, architectural design, and landscaping to contribute to a welcoming public realm, while meeting business operational requirements.

4.5 Unique Interfaces

Special interface cross-sections have been developed to accommodate unique design considerations for areas adjacent to sensitive land uses. The locations of these interfaces are shown in Figure 4.1. These unique transition areas are intended to reduce impacts such as light, noise, dust and vibrations onto sensitive land uses. The transition areas noted in are expected to be implemented on private development sites and may be adapted to suit individual site constraints.

Figure 4.1: Buffers Key Map

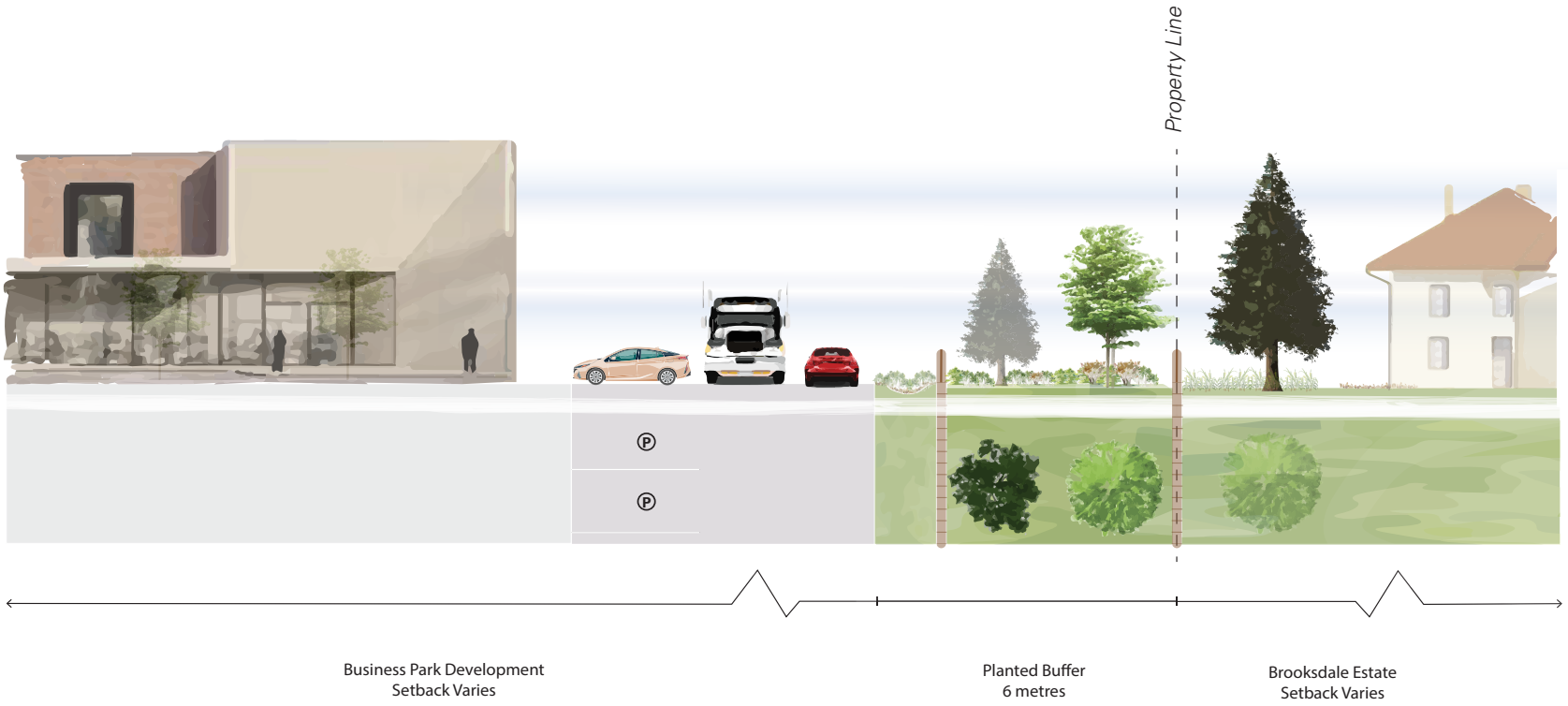


4.5.1 BROOKSDALE ESTATE BUFFER

Business Employment to Brooksdale Estate

Transition 1 applies to the Business Employment lands that directly abut the Brooksdale Heritage Estate, as identified under ***Heritage Revitalization Agreement Bylaw, 2012, No. 17802***. This interface provides an appropriate transition between the rural character of the heritage estate and future business employment development, by establishing a 6 metre wide landscaped buffer on lands adjacent to the protected heritage site.

Figure 4.2: Special Employment to Brooksdale Estate Cross-Section



4.5.2 CEMETERY BUFFER

Business Employment to Cemetery

Transition 2 applies where Business Employment development abuts sites designated as Cemetery. This buffer will match the 3 meter buffer required by the Cemetery (PC) Zone, resulting in a minimum 6 metre wide buffer between Business Employment and Cemetery land uses. This buffer should consist of dense screen planting to buffer business employment uses from adjacent cemeteries.

Figure 4.3: Business Employment to Cemetery Cross-Section

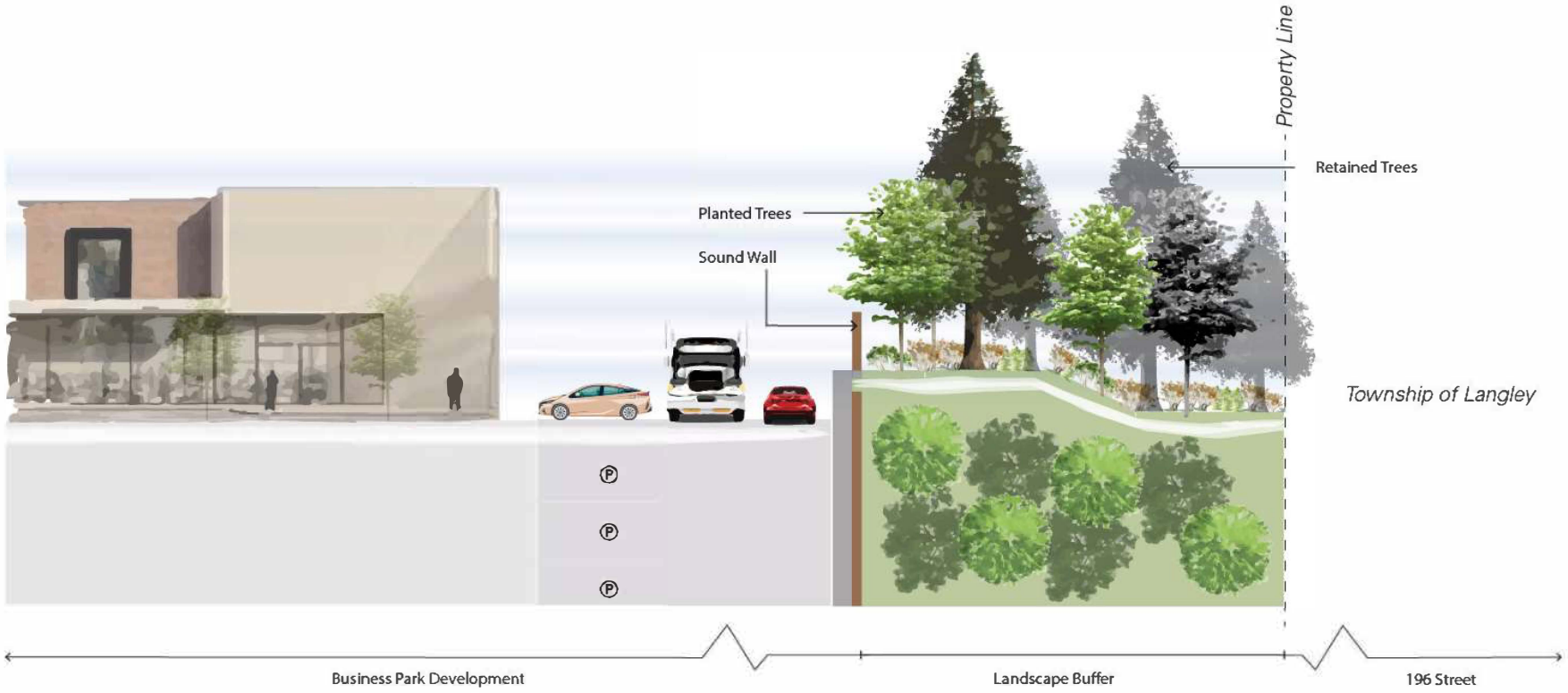
4.5.3 TOWNSHIP OF LANGLEY BUFFER

Business Employment to Township of Langley Residential Uses

Transition 3 applies to Business Employment sites fronting 196 Street, north of 16 Avenue. The purpose of this transition is to create a physical and visual seperation between the Business Employment land and the Township of Langley. This transition will be implemented through a 15 meter-wide landscaped buffer along 196 Street. The buffer should consist of planting informed by the BDG and existing trees should be retained where possible.

Where loading and/or parking are proposed along 196 Street, the buffer should provide 5 metres of vertical screening, which is to be achieved through a landscaped berm, a solid fence, or a combination thereof.

Figure 4.4: Business Employment to Township of Langley Residential Uses Cross-Section



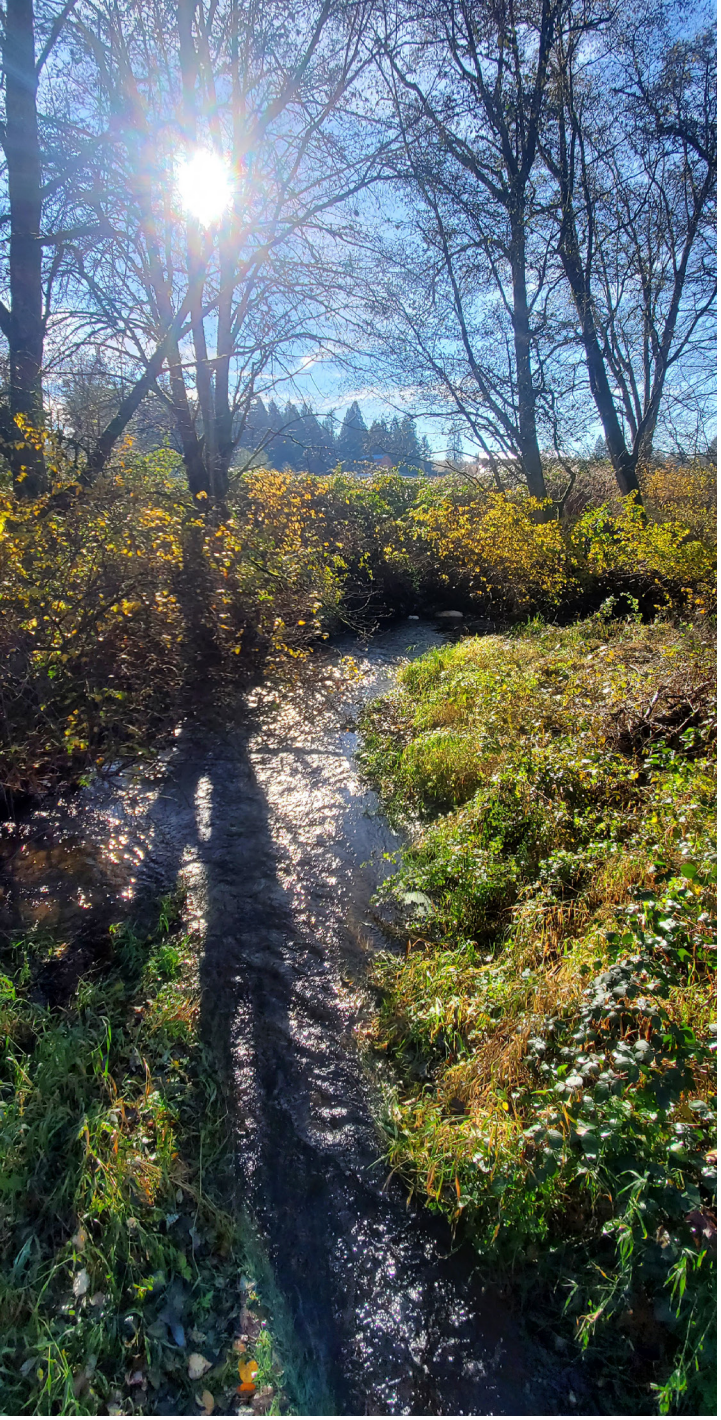
05

Natural Asset Management
| The Little Campbell River

South Campbell Heights is home to a variety of distinct sensitive ecosystems, including the Little Campbell River, two of its tributaries, upland forests, and wetlands. Through the conservation and management of key natural assets, the South Campbell Heights Plan ensures that sensitive ecosystems remain healthy and biodiverse, while incorporating access to, and views of, nature.

The following section provides an overview of the Plan's Natural Asset Management Strategy and details the individual components that make up the strategy.

5.1 Natural Asset Management Strategy
5.2 Natural Asset Management Areas
5.3 Wildlife Crossings



5.1 Natural Asset Management Strategy

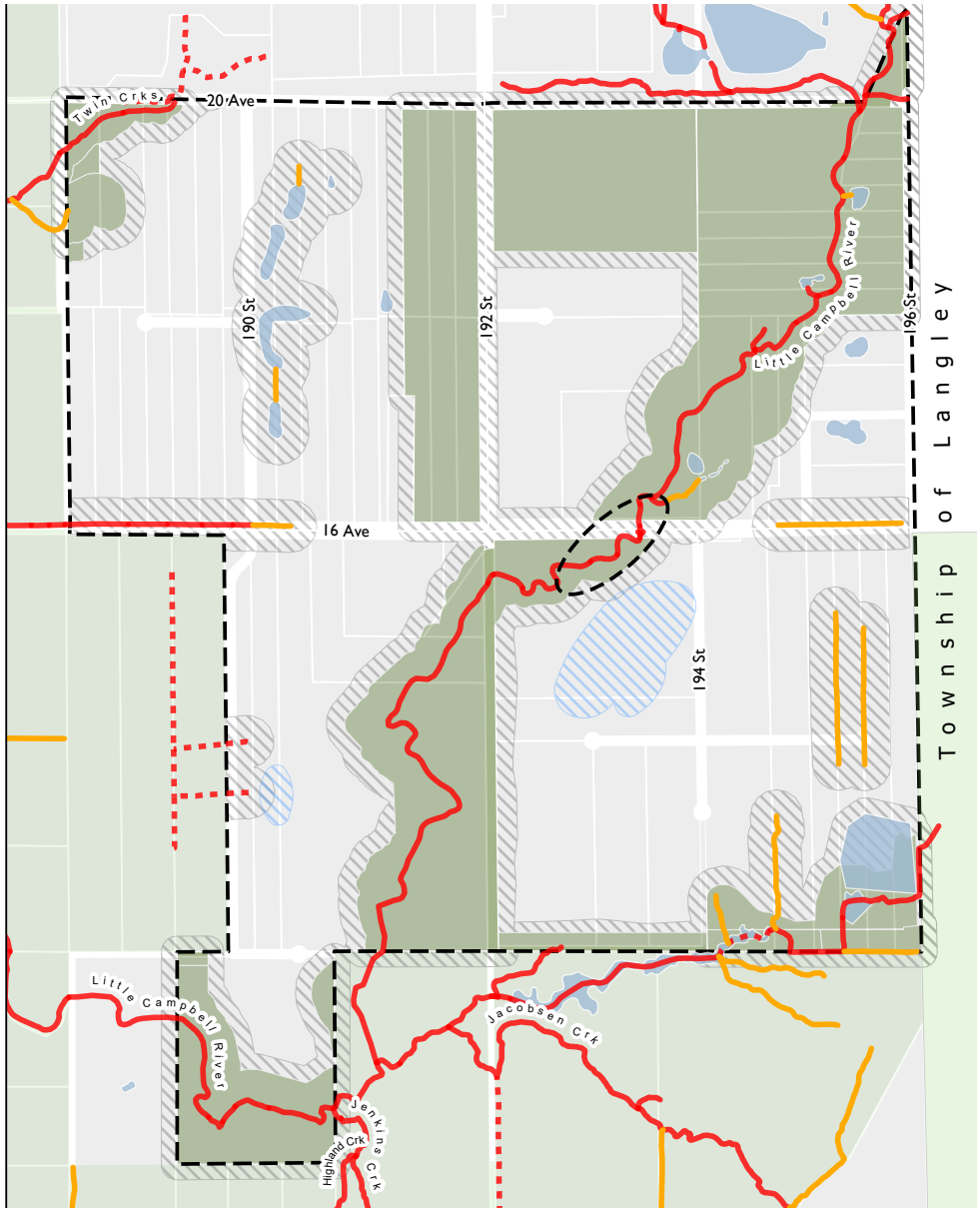
The Little Campbell River is the cornerstone of the South Campbell Heights Natural Asset Management Strategy. Surrey's major watercourses have all been influenced by urban, industrial, and agricultural development. While these forces have influenced the Little Campbell River, development has been less intensive and widespread, leaving several pockets of intact and high-value habitat throughout the watershed. In addition to the Little Campbell River, the Natural Asset Management Strategy addresses the conservation of upland forests, other riparian areas, and critical habitat for species at risk. Through successful natural asset management, South Campbell Heights can be a model business park that balances development with conservation, preserves biodiversity, and connects workers and residents to beautiful natural areas.

Key Objectives

The Natural Areas Concept is guided by four key objectives:

- Protect and enhance the Little Campbell River and surrounding terrestrial habitat.
- Protect riparian areas, wetlands and critical habitat outside of the Green Infrastructure Network and Conservation & Recreation.
- Improve natural area connectivity to support healthy wildlife populations.
- Provide opportunities for people to connect with nature and encourage stewardship of local natural areas.

Figure 5.1: Natural Areas Concept Map



While only occupying 3% of the total watershed, South Campbell Heights features an intact and high-value reach of the Little Campbell River that provides habitat for many aquatic and terrestrial species.

5.2 Natural Asset Management Areas

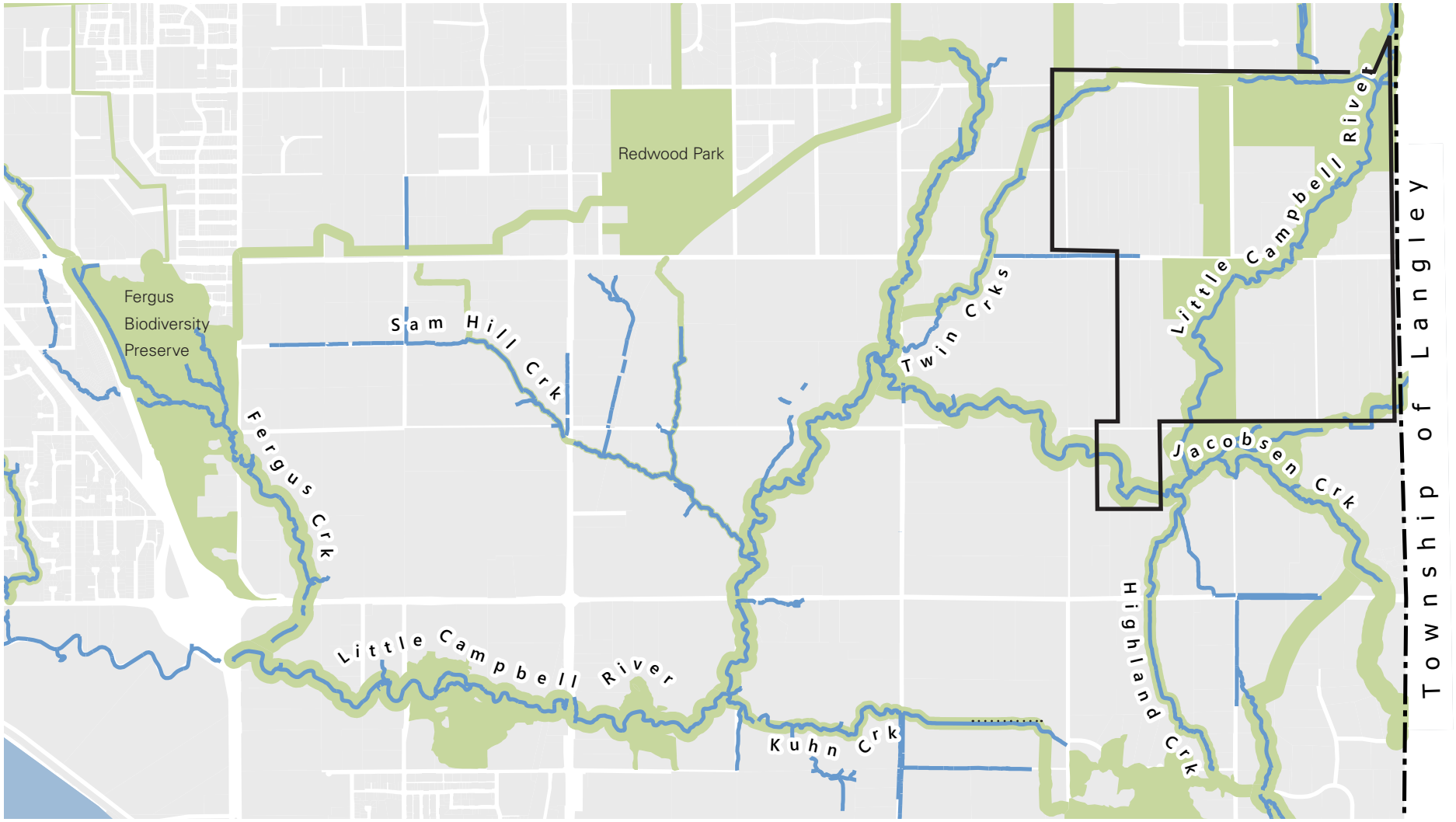
5.2.1 CONSERVATION & RECREATION

The Conservation & Recreation land use designation includes diverse and relatively intact natural assets and is the primary component of the Natural Asset Management Strategy. The primary natural assets found within this area include the Little Campbell River, reaches of two tributaries to the Little Campbell River (Twin Creeks and Jacobsen Creek), and surrounding upland forests. These features are inventoried in the Biodiversity Conservation Strategy (BCS) and form part of a broader city-wide network of environmentally sensitive areas, known as the Green Infrastructure Network (GIN). Site Specific environmental assessments, through the Sensitive Ecosystem Development Permit (DP3) process will be required to inventory and protect the natural assets of the Biodiversity Preserve. The Biodiversity Preserve is made up of four key natural features:

Table 5.1: Four Key Natural Features

Little Campbell River	The Little Campbell River, the mainstem of the Campbell River Watershed, is the primary watercourse within the Plan Area. Within the Plan Area, the River supports spawning habitat for several species of salmon and has a wide riparian area composed of mostly intact forest stands. The Little Campbell River is inventoried as Corridor 49, Hub I and Hub O in the BCS.
East Twin Creek	Twin Creeks is a tributary to the Little Campbell River, joining the mainstem west of the Plan Area at 184 Street. Two small reaches of East Twin Creek with intact riparian areas are located at the northwest corner of the Plan Area. This section of East Twin Creek is inventoried in the BCS as Corridors 51, 52, and 54.
Jacobsen Creek Tributary	A tributary to Jacobsen Creek is located along the southern boundary of the Plan Area and feeds into the Little Campbell River to the south. The riparian corridor of Jacobsen Creek features a mix of second growth forests and a high-value, biodiverse wetland complex . This tributary of Jacobsen Creek is identified as GIN Corridor 48 in the BCS.
Upland Forest	Areas upland from the Little Campbell River and its tributaries feature significant stands of mature forest. These forest stands are dominated by Douglas-fir, western red cedar, and big leaf maple. They feature a relatively natural understory and wetlands, which provide habitat for a diversity of wildlife species from Columbian black-tailed deer to northern red-legged frogs. Upland forests are inventoried as Hub O in the BCS (upland to the Little Campbell River) and adjacent to Twin Creeks.

Figure 5.2: Green Infrastructure Network around South Campbell Heights



5.2.2 RIPARIAN AREA MANAGEMENT

In addition to the Little Campbell River and its tributaries, there are several aquatic habitat features within the Plan Area such as ditches, ponds, and wetlands and their associated riparian areas. These riparian areas provide important ecological functions for fish and wildlife. Additionally, these riparian areas are critical in intercepting and filtering precipitation and runoff. They help replenish the Brookswood Aquifer, protect base level water flows to the Little Campbell River, and provide essential water quality and quantity regulation for the watershed.

Potential wetland habitat has been identified through an initial environmental assessment completed in preparation of this Plan. The approximate locations of these features are shown on Figure 5.3. There may be other aquatic habitat features in the Plan Area that have yet to be identified.

Site specific assessments of all watercourses, ponds and wetlands is required at the development application stage. These assessments shall be undertaken by a Qualified Environmental Professional (QEP), working within their scope of expertise and within the framework of the City's DP3 Guidelines. These assessments are to determine the applicability of the Water Sustainability Act (WSA), Riparian Area Protection Regulation (RAPR), if needed, and city regulation/policy to these water features. QEPs will also need to verify watercourse classifications and determine appropriate riparian protection requirements.

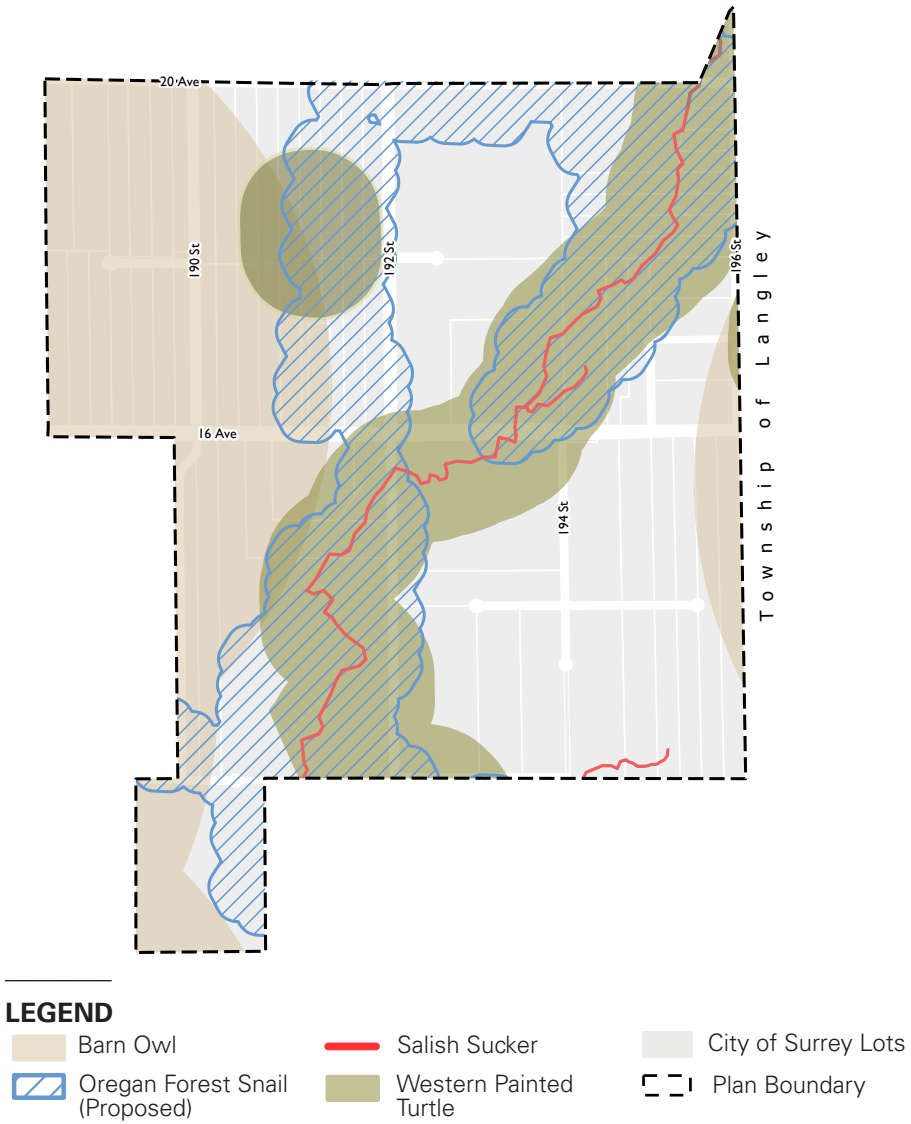
Figure 5.3 Watercourse and Wetland Map

5.2.3 SPECIES AT RISK & CRITICAL HABITAT AREAS

South Campbell Heights features a range of terrestrial and aquatic ecosystems that provide high value habitat for many species, including species listed under the Federal Species at Risk Act (SARA). Through recovery strategies or action plans, critical habitat is identified under SARA for species listed as endangered or threatened. Critical habitat does not necessarily mean the presence of a listed species, but that there is habitat features necessary for the survival or recovery of a listed wildlife species. Critical habitat is identified for four species in the South Campbell Heights Area, detailed in Figure 5.4.

Outside of federal lands, critical habitat must be effectively protected and any activities that may damage or destroy that habitat must be avoided or adequately mitigated. Projects that fall within critical habitat areas should retain a QEP to assess the potential impacts of development on protected species and/or their critical habitats. Assessments should provide appropriate recommendations, including the avoidance of areas where potential species are found, and the utilization of best practices prescribed in Provincial and Federal documents and industry best management practices (BMPs).

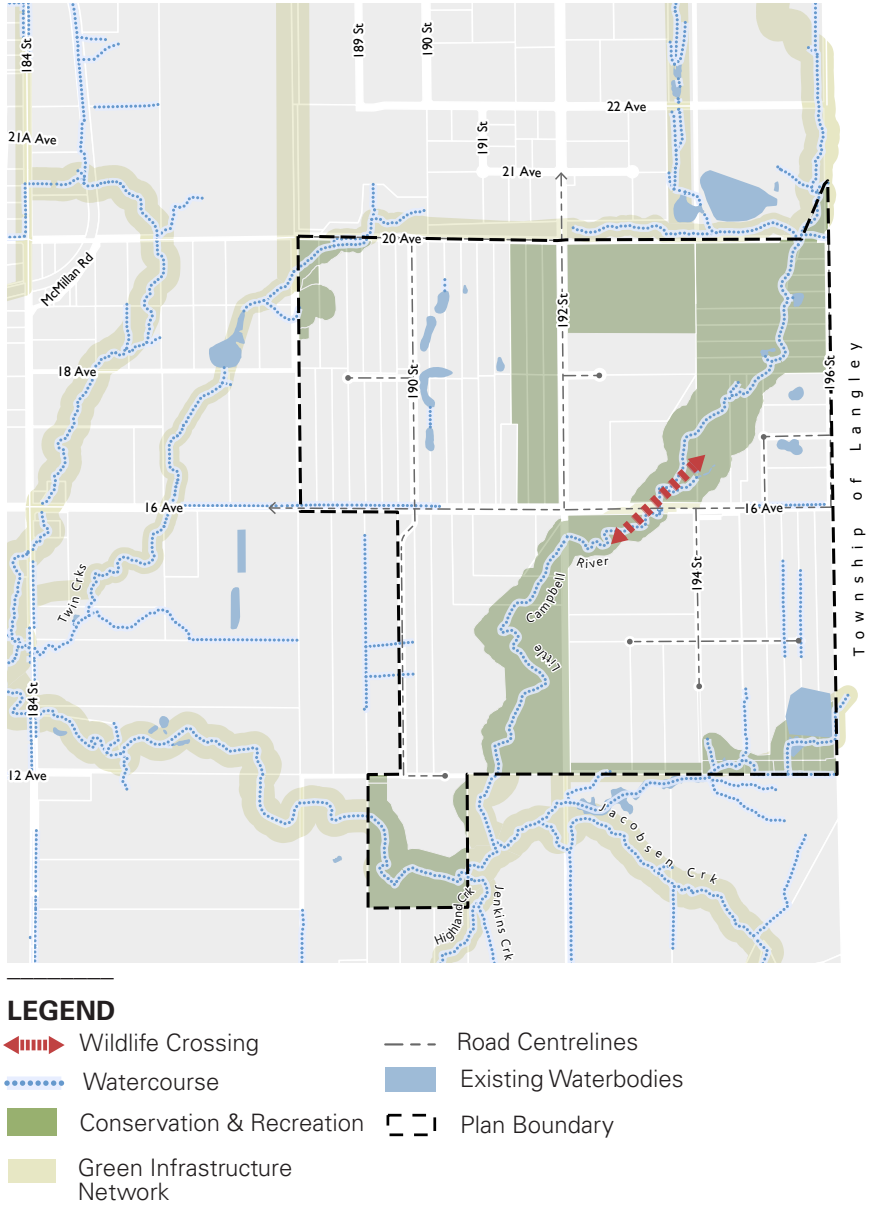
Figure 5.4 Species at Risk & Critical Habitat Areas Map



5.4 Wildlife Crossing

Safe wildlife passage across roadways reduces habitat fragmentation by establishing connections between habitat corridors and hubs. The location of one potential wildlife-friendly crossings have been identified in South Campbell Heights. The purpose of the crossing is to improve the habitat function and connectivity of the Little Campbell River corridor with a free span bridge.

Figure 5.5 Wildlife Crossing Map



Urban forests provide a home for bustling habitat, rich with species vital to urban biodiversity.

06

Transportation Network
| Getting Around

The proposed transportation strategy for South Campbell Heights will support the long-term objectives of the Surrey Transportation Plan through the creation of a complete transportation network that services the transportation needs of new employment lands, by connecting businesses to markets, efficiently moving goods and materials, and providing viable transportation options for individuals to get to their place of work.

6.1 Transportation Network
6.2 Special Road Sections

6.1 Transportation Network

6.1.1 EXISTING ROAD NETWORK

The existing road network and infrastructure in South Campbell Heights were built as part of past subdivisions to serve the surrounding rural and agricultural land uses. The arterial road connections through the Plan Area are currently constructed to a rural two-lane standard and provide direct access to properties in absence of a local or collector road network. Active transportation infrastructure in the Plan Area is limited to painted bike lanes on 192 Street and 16 Avenue. Over the past decade, the road network has experienced significant growth in traffic, servicing regional traffic as well as business employment transportation needs to and from Campbell Heights.

6.1.2 PROPOSED ROAD NETWORK

A transportation analysis evaluated the anticipated traffic demands from the land use changes proposed through the South Campbell Heights Plan. The analysis evaluated existing traffic conditions and projected conditions for 2035 and 2050 to determine required road network and infrastructure improvements. The existing road network was analyzed using two performance measures outlined in the Highway Capacity Manual: levels of service ratios and volume-to-capacity ratios.

The analysis determined that the Plan is anticipated to add approximately 2,600 peak hour trips to the road network by 2035, and approximately 4,000 peak hour trips by 2050.
Improvements to the road network are proposed as part of the South Campbell Heights Plan (see Figure 6.1) to support overall background traffic growth and trips generated from the Plan Area. Notable improvements include:

- a new local road network;
- new traffic signals;
- dual left turn lanes at major intersections; and
- widening of 16 Avenue to five lanes.

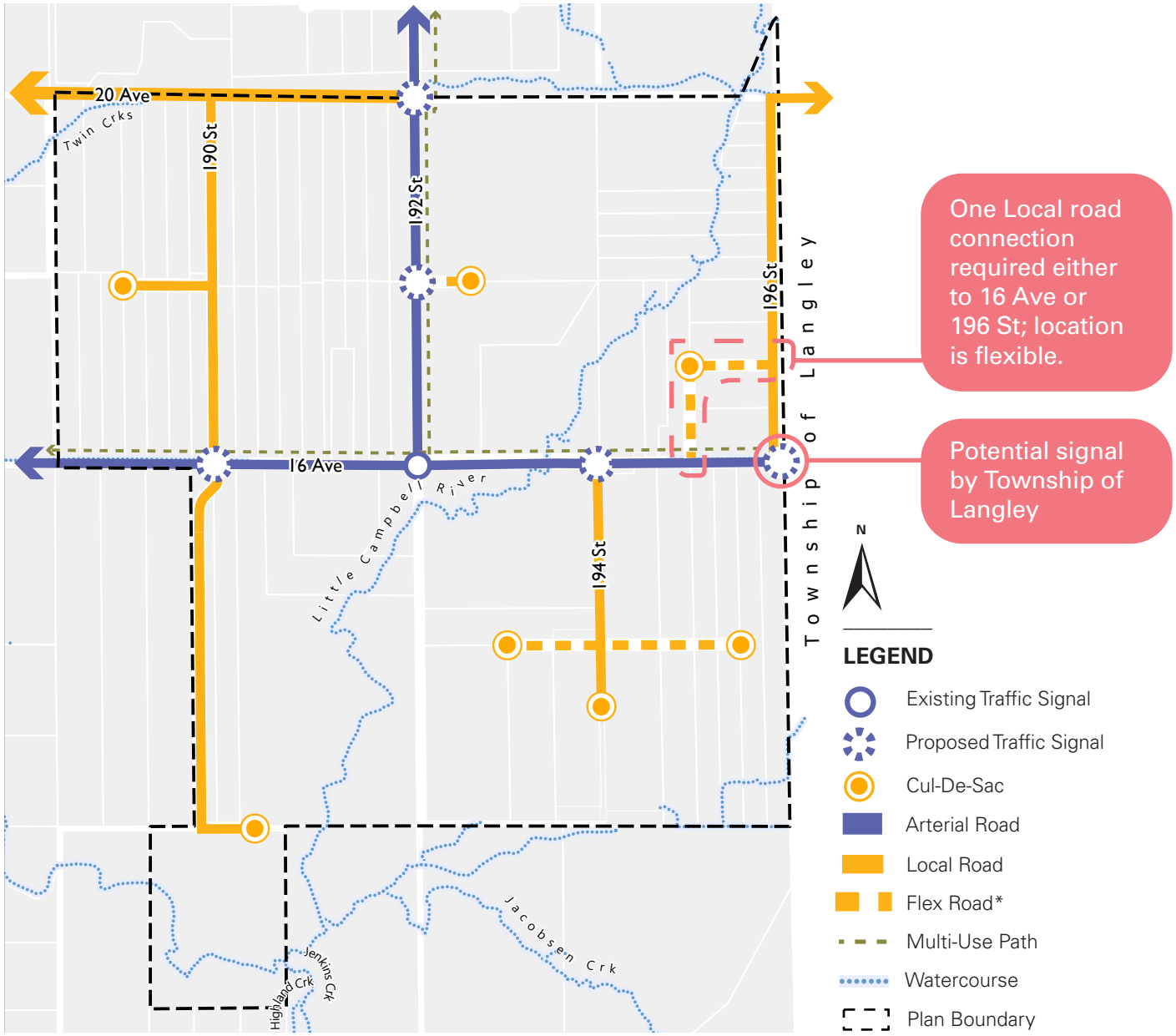
The final alignment and need for proposed local roads are flexible and dependent on proposed consolidation patterns and site-specific constraints.

Most road cross-sections are consistent with the City's Design Criteria Manual. See Section 6.2 for illustrative unique cross-sections for roads that are adjacent to sensitive land uses.

6.1.3 ACTIVE TRANSPORTATION IMPROVEMENTS

The South Campbell Heights Plan will use the expanded road network to deliver walking and cycling infrastructure consistent with contemporary standards. These improvements consist of cycling facilities on 16 Avenue, 192 Street, and sidewalks on all local roads. The planned cycling and pedestrian facilities provide connectivity to the City's broader active transportation network, provide last-mile connections to future public transit, and support increased transportation choice to and from the employment lands.

Figure 6.1: Road Network and Active Transportation Map



One Local road connection required either to 16 Ave or 196 St; location is flexible.

Potential signal by Township of Langley

*The final location of flex local roads will be determined through the development application process and will depend on lot consolidation patterns.

6.2 Special Road Sections

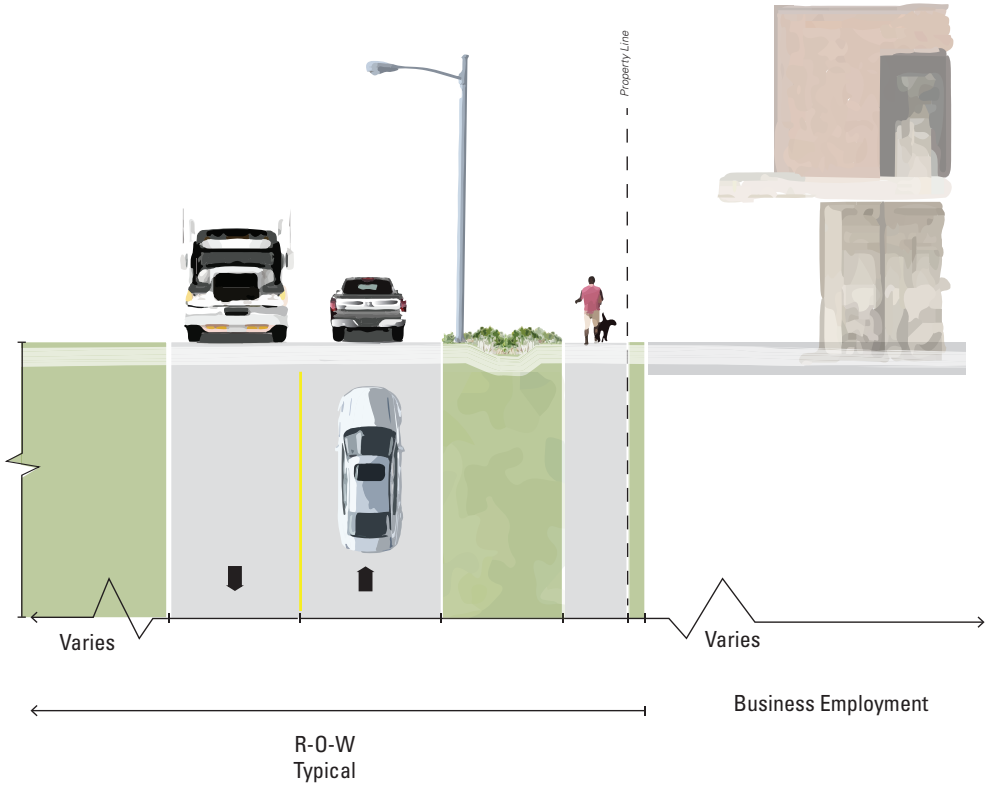
6.2.1 ENVIRONMENTAL CONSIDERATIONS

Improvements to the road network in South Campbell Heights is necessary to adequately service land uses proposed under the Plan. To limit the impact of roads on the Conservation & Recreation, the road network was designed to minimize impacts on existing habitat.

Road designs adjacent to the Conservation & Recreation land use will be informed by minimizing the road footprint, stromwater management, and tree preservation to extent where applicable (Typical local road design as shown in Figure 6.2).

The Plan also identifies one road crossing at 16 Ave and Little Campbell River, where the future crossing will be designed in consideration of fish and small mammal crossings that remain subject to established engineering standards and guidelines.

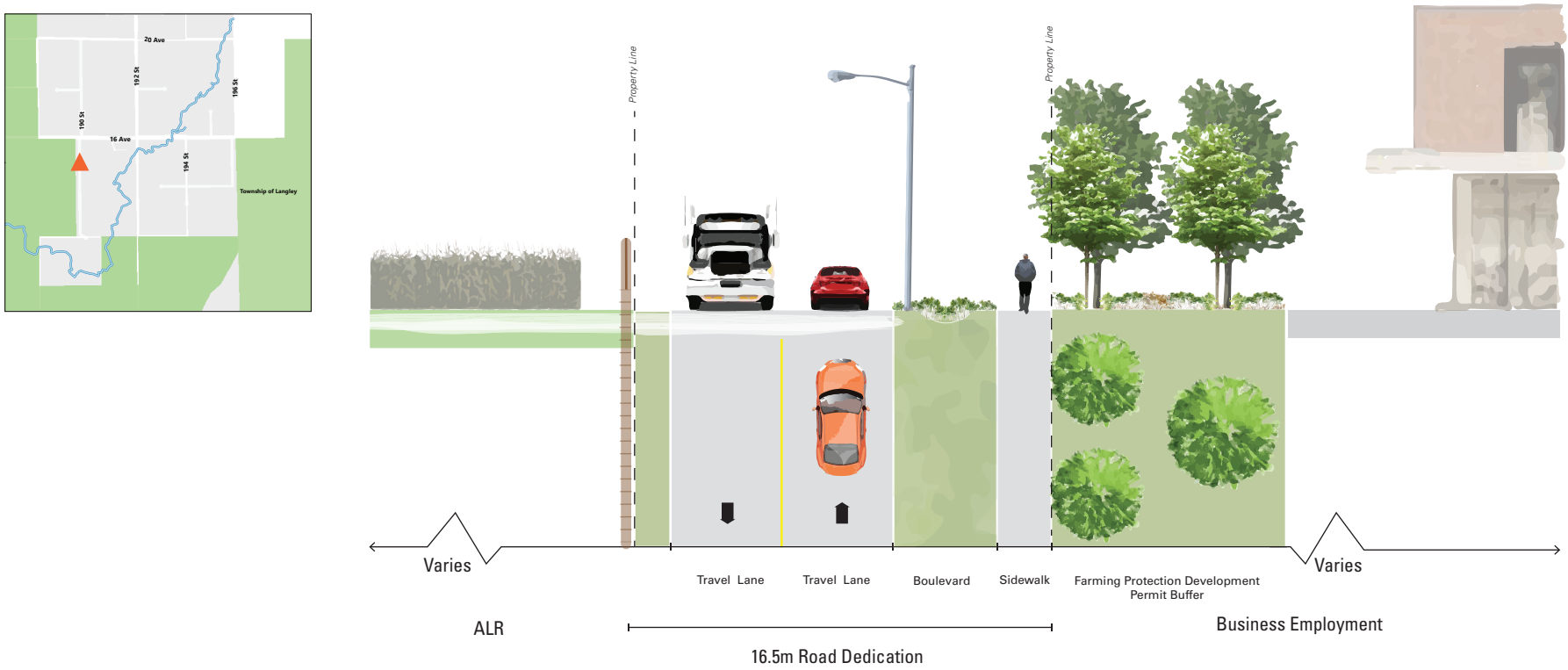
Figure 6.2: Typical Local Road with Bioswale



6.2.2 AGRICULTURAL LAND RESERVE CONSIDERATIONS

The proposed 190 Street, south of 16 Avenue, will be designed to a narrowed 16.5m road dedication cross-section as this road travels parallel to the Agricultural Land Reserve (ALR). As depicted in Figure 6.3, the planned cross-section accommodates two travel lanes and a functional development-side boulevard, while minimizing the required width through eliminating on-street parking and limiting ALR-side boulevard features. Development along this road is expected to provide functional ALR buffers and setbacks on private property, as per the Farming Protection Development Permit guidelines.

Figure 6.3: ALR Adjacent Road Design



07

Utilities
| Servicing Growth

The Plan Area encompasses approximately 245 hectares and includes portions of the sub-watersheds for Little Campbell, Jacobson Creek, LCR sub-watershed 8 and Twin Creeks. A reliable infrastructure network that is designed around the ecological framework of the Plan Area is critical in meeting the Plan's vision of balancing business park development while managing the Plan Area's natural assets. Development enabled by the Plan's land use strategy will necessitate a new utility network that provides dependable utility servicing. This section outlines the utility servicing strategies that will support the Plan Area.

7.1 Drainage
7.2 Sanitary
7.3 Water

7.1 Drainage

7.1.1 EXISTING DRAINAGE CONDITIONS

Little Campbell River Watershed

The Little Campbell River (LCR) watershed drains approximately 7,600 hectares of land, with the mainstem of the river extending 37 km from its headwaters in the Township of Langley, through the City of Surrey, and passing through Semiahmoo First Nation (SFN) lands before discharging into Semiahmoo Bay.

The watershed is comprised primarily of agricultural land with several smaller urban areas, and pockets of forested lands. The LCR provides important habitat for certain species at risk, various wild salmonid species, rare plant species and other wildlife. There is future development planned throughout the watershed, with particular focus in Brookskwood-Fernridge (Township of Langley), Campbell Heights, and Grandview Heights.

Plan Area

The Plan Area encompasses approximately 245 hectares and includes portions of the sub-watersheds for Campbell Heights, Jacobsen Creek, LCR Sub-watershed 8, and Twin Creeks. Stormwater runoff within the Plan Area is directed to various tributaries of the LCR, including Jacobsen Creek and Twin Creeks, as well as to the mainstem of the LCR, which bisects the Plan Area.

The existing drainage system within the Plan Area primarily consists of open, linear ditches along roads and property lines, with some short, piped sections and culverts. Aerial imagery indicates the presence of a few private storage ponds, most of which are former gravel pits. The water levels in these ponds typically reflect the seasonal groundwater table. The current drainage system lacks the capacity to support future development in the Plan Area. A sustainable drainage servicing strategy is essential to accommodate future growth while preserving the health and natural resources of the LCR watershed.

Much of the Plan Area is underlain by the Brookswood aquifer, a shallow, unconfined aquifer composed of sand and gravel soils. This aquifer is a critical resource, supplying potable and irrigation water as well as contributing directly to baseflows in the LCR and its tributaries. Baseflows are essential for maintaining high-value aquatic habitats.

7.1.2 PROPOSED DRAINAGE SYSTEM

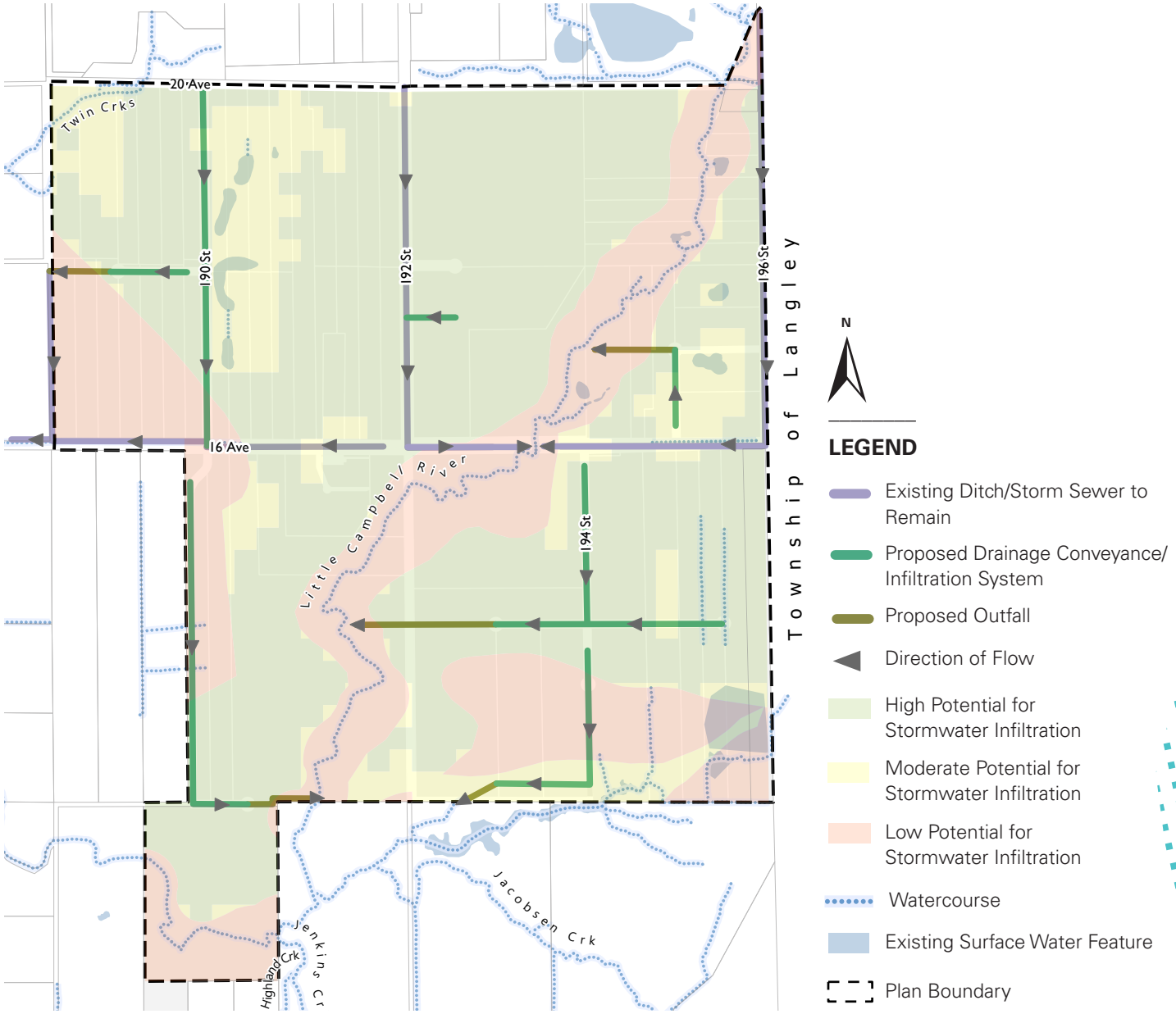
The proposed drainage system for the Plan Area will reflect the current pathways with portions of the northwest quadrant of the Plan Area being conveyed to Twin Creeks, portions of the southeast quadrant being conveyed to Jacobsen Creek, and the remainder of the Plan Area being conveyed to the Little Campbell River. The drainage servicing strategy is based on the work outlined in the South Campbell Heights ISMP and servicing requirements will need to conform with the ISMP, with the objectives of:

- mitigating increases to peak flows;
- providing water quality treatment of stormwater runoff; and
- maximizing recharge of the Brookswood Aquifer.

These objectives are intended to be achieved through a series of low impact development (LID) approaches that are as follows:

- maximize on-site LID approaches to limit runoff generation;
- utilize enhanced water quality treatment (e.g. bioswales and engineered membrane systems) to remove pollutants from runoff;
- maximize recharge of treated runoff through on-site infiltration systems;
- on local roads, maximize the use of roadside infiltration and conveyance bioswales off-site to further remove pollutants and allow infiltration;
- minimize the need for site level service connections, traditional storm sewers, and catchbasins, and
- optimize new outfalls to receiving watercourses.

Figure 7.1: Existing Drainage System and Proposed Upgrades



The overarching intent of the proposed drainage servicing strategy is to capture stormwater runoff close to its source, treat it to remove any pollutants, then infiltrate to ground to recharge the aquifer and support baseflows to the local watercourses.

7.1.3 ON-SITE DRAINAGE CRITERIA

Sites in South Campbell Heights will have varying on-site drainage criteria based on infiltration potential and geotechnical conditions. Parts of the Plan Area have high infiltration potential, other areas have very low infiltration potential, and some areas have infiltration limitations based on topography and geotechnical risks. A one year assessment of groundwater levels through on-site monitoring will be required to support the design of infiltration facilities.

For sites with high infiltration capacity and low geotechnical risk (see figure 7.2), the servicing strategy shall be:

- All rainfall up to the 100-year return period shall be infiltrated on-site and no service connection shall be provided.
- All infiltration facilities shall be at least 1.5 m above the wet season high groundwater table, as established by monitoring results.
- All rainfall from roofs (without complimentary uses such as rooftop parking) shall be directly infiltrated in above grade or below grade infiltration facility, subject to the BC Building Code requirements.
- All rainfall from paved surfaces (or parking areas) shall be treated with enhanced water quality treatment prior to infiltration. Use of lined bioswales are encouraged to keep treatment facilities open and shallow to limit the need for deep drainage utilities.
- An inspection chamber or manhole is required upstream of any infiltration system, including a Statutory Right of Way (SRW), for water quality sampling.
- All sites shall be graded to allow safe conveyance of storm events that exceed the 100-year return period storm.

For sites with moderate to poor infiltration and/or higher geotechnical risk (see figure 7.3 and 7.4) would need to balance the level of infiltration with more traditional detention. In these cases, the servicing strategy shall be:

- Rainfall shall be infiltrated insofar as feasible as outlined above.
- All excess rainfall that cannot be infiltrated shall be detained onsite in a private detention system, up to and including the 100-year return period, and released at corresponding pre-development rates.
- All rainfall from paved surfaces (or parking areas) shall be treated with enhanced water quality treatment prior to infiltration. Use of lined bioswales are encouraged to keep treatment facilities open and shallow to limit the need for deep drainage utilities.
- An inspection chamber or manhole is required upstream of any infiltration system, including a statutory Right of Way (SRW), for water quality sampling.
- A flow monitoring manhole shall be provided near the property line on the drainage service connection.
- All sites shall be graded to allow safe conveyance of storm events that exceed the 100-year return period storm.

On-Site Monitoring

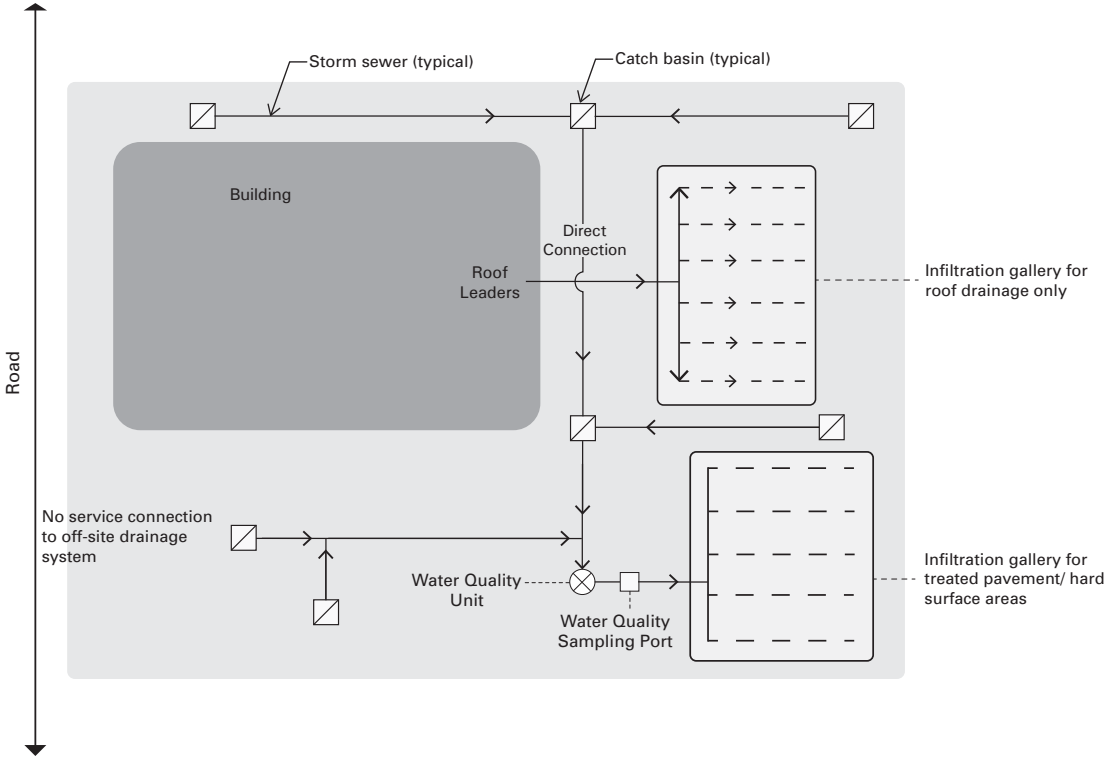
On-site groundwater and water quality monitoring is required for the first two years following occupancy of the site, with water quality monitoring occurring during both the wet and dry seasons, on a monthly basis to provide a geometric mean representation. Samples shall be taken at the sampling port upstream of the infiltration system to demonstrate the effectiveness of the treatment system. Groundwater levels shall also be measured monthly for the first two years.

For sites with a drainage service connection, it will be necessary to monitor the discharge from the site. A flow monitoring manhole will be required near the property line, and would be fitted with a controlled orifice or similar hydraulic control, with no overflow, so that monitoring could be undertaken for the first two years following occupancy of the site to assess the peak daily flow.

Monitoring reports for each year of the first two years of operation shall be provided annually to the City to document the performance of the on-site drainage works.

The City will require a Restrictive Covenant or similar instrument to allow the City entry to the property to inspect, monitor and sample the performance of on-site drainage works.

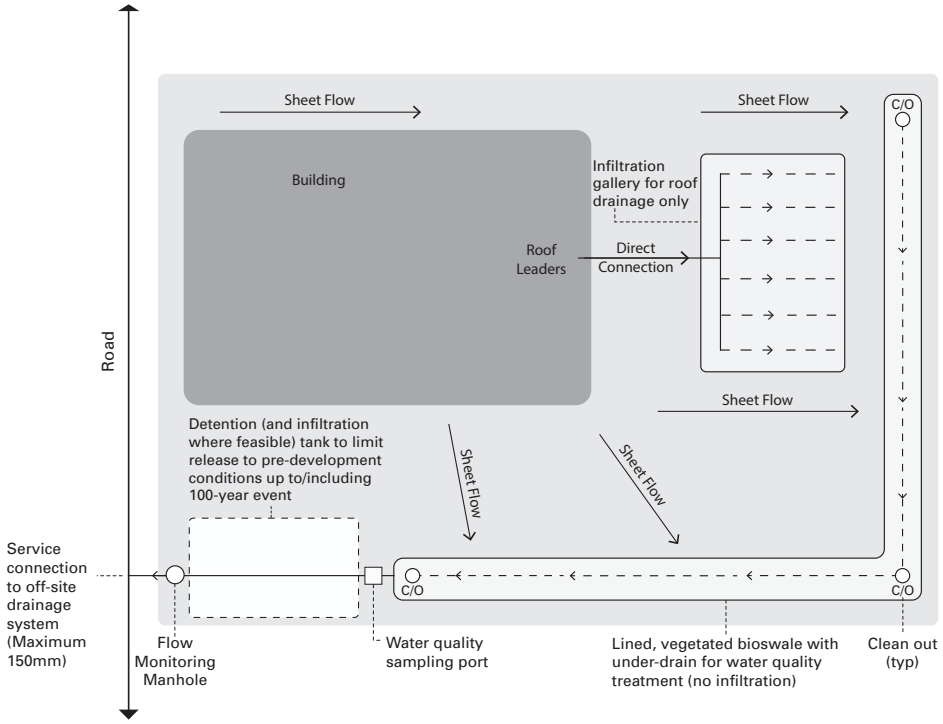
Figure 7.2: High Potential for Stormwater Infiltration: On-Site Drainage Servicing



1. *Base of all infiltration facilities shall be at least 1.5 m above the wet season high groundwater table, as established by monitoring results.*
2. *Adjust on-site drainage infrastructure configuration to suit local topography.*
3. *Site shall provide for 100% on site infiltration up to and including 100-year event.*
4. *Restrictive covenant shall be registered on title for City access to the water quality unit, sampling port and infiltration facility(s).*
5. *Property owner shall submit inspection/maintenance reports, groundwater level summary, and water quality sampling results to the City for the water quality unit and infiltration facility(s).*

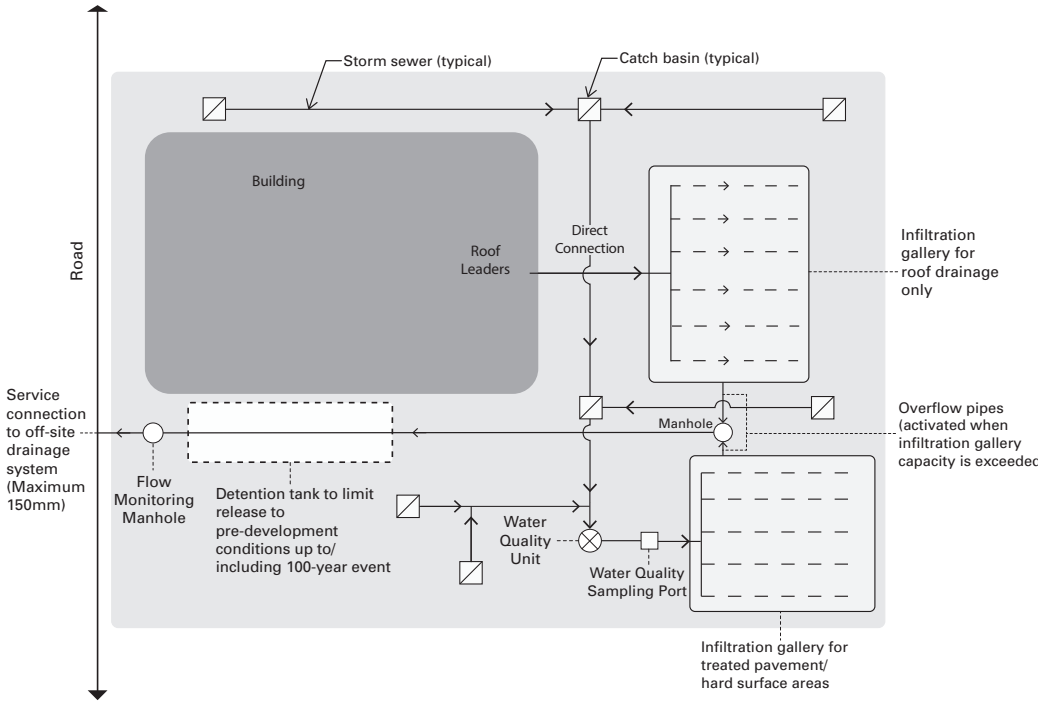
level summary, and water quality sampling results to the City for the water quality and detention/infiltration facility(s).

Figure 7.3: Moderate to Low Potential for Stormwater Infiltration: On-Site Drainage Servicing (Option 1)



1. *Base of all infiltration facilities shall be at least 1.5 m above the wet season high groundwater table, as established by monitoring results.*
2. *Adjust on-site drainage infrastructure configuration to suit local topography.*
3. *Maximize on site infiltration of treated water as permitted by local soil and groundwater conditions.*
4. *Restrictive covenant shall be registered on title to permit City access to the bioswale, sampling port, flow monitoring manhole, and detention/ infiltration facility(s).*
5. *Property owner shall submit inspection/maintenance reports, groundwater level summary, flow monitoring reports, and water quality sampling results to the City for the water quality and detention/ infiltration facility(s).*

Figure 7.4: Moderate to Low Potential for Stormwater Infiltration: On-Site Drainage Servicing (Option 2)



1. *Base of all infiltration facilities shall be at least 1.5 m above the wet season high groundwater table, as established by monitoring results.*
2. *Adjust on-site drainage infrastructure configuration to suit local topography.*
3. *Maximize on site infiltration of treated water as permitted by local soil and groundwater conditions.*
4. *Restrictive covenant shall be registered on title to permit City access to the water quality unit, sampling port, flow monitoring manhole, and detention/infiltration facility(s).*
5. *Property owner shall submit inspection/maintenance reports, groundwater level summary, flow monitoring reports, and water quality sampling results to the City for the water quality and detention/ infiltration facility(s).*

7.1.4 OFF-SITE DRAINAGE CRITERIA

Conveyance drainage works in public road dedication for local roads in the Plan Area should be open channel bioswales that treat runoff and facilitate infiltration insofar as possible. Swales should incorporate a minimum of 0.3 m of storage with weirs at regular intervals to provide areas of low gradient infiltration. Swales, together with the roadway, shall be able to convey the 100 year return period design event safely.

Where drainage service connections require deeper storm sewers, roadway drainage shall be serviced by bioswales and storm sewers shall be used to convey treated and attenuated drainage runoff from development sites. An overflow from the bioswale to the storm sewer may be required if conditions are not conducive to full infiltration.

Where outfalls to streams are needed, end of outfall energy dissipation will be provided to enable a final point of capture for any discharge to streams.

Off-Site Monitoring

In accordance with the South Campbell Heights ISMP, a monitoring will be implemented to assess the effectiveness of the drainage strategy and allow for adaptive management. The monitoring approach will include:

- Groundwater monitoring at a series of groundwater wells in the Plan Area;
- Hydrometric monitoring at the downstream boundary of the Plan Area in the Little Campbell River; and
- Water quality monitoring upstream and downstream of the Plan Area, and at outfalls throughout the Plan Area.

7.2 Sanitary

7.2.1 EXISTING SANITARY SYSTEM

There is no municipal sanitary system in the South Campbell Heights Plan Area. Before the initiation of the South Campbell Heights Plan, most of the Plan Area was located outside of the Urban Containment Boundary (UCB) and the Fraser Sewerage Area (FSA). A prerequisite for sanitary sewer servicing is that all lands contributing sewerage to Metro Vancouver be included in the both the UCB and FSA. As a result, existing lots are serviced by individual private septic tanks and septic fields.

As part of the South Campbell Heights planning process Metro Vancouver granted a Sewerage Area Amendment. The Plan Area is now in the FSA and can be serviced by municipal sanitary sewers.

To the north of the Plan Area, an existing sanitary sewer system was constructed to service the Campbell Heights Local Area Plan. Approximately 75% of this sanitary sewer system conveys wastewater to the Metro Vancouver interceptor sewer at 184 Street and 52 Avenue while 25% discharges to 192 Street and 52 Avenue.

7.2.2 PROPOSED SANITARY SYSTEM

A new sanitary sewer system is required to service South Campbell Heights Plan. The proposed sanitary sewer servicing plan was developed based on the City's Design Criteria Manual (DCM).

The proposed sanitary sewer system connects to the Metro Vancouver sewerage system through the 1200 mm-diameter South Surrey Interceptor Sewer at 52 Avenue, via 184 Street. Other servicing options were contemplated in developing the proposed sanitary sewer system, including directing sewage to the existing Campbell Heights Pump Station at 192 Street and 21 Avenue. The proposed sanitary sewer system was determined to be the most cost effective, least disruptive, and best able to mitigate odours.

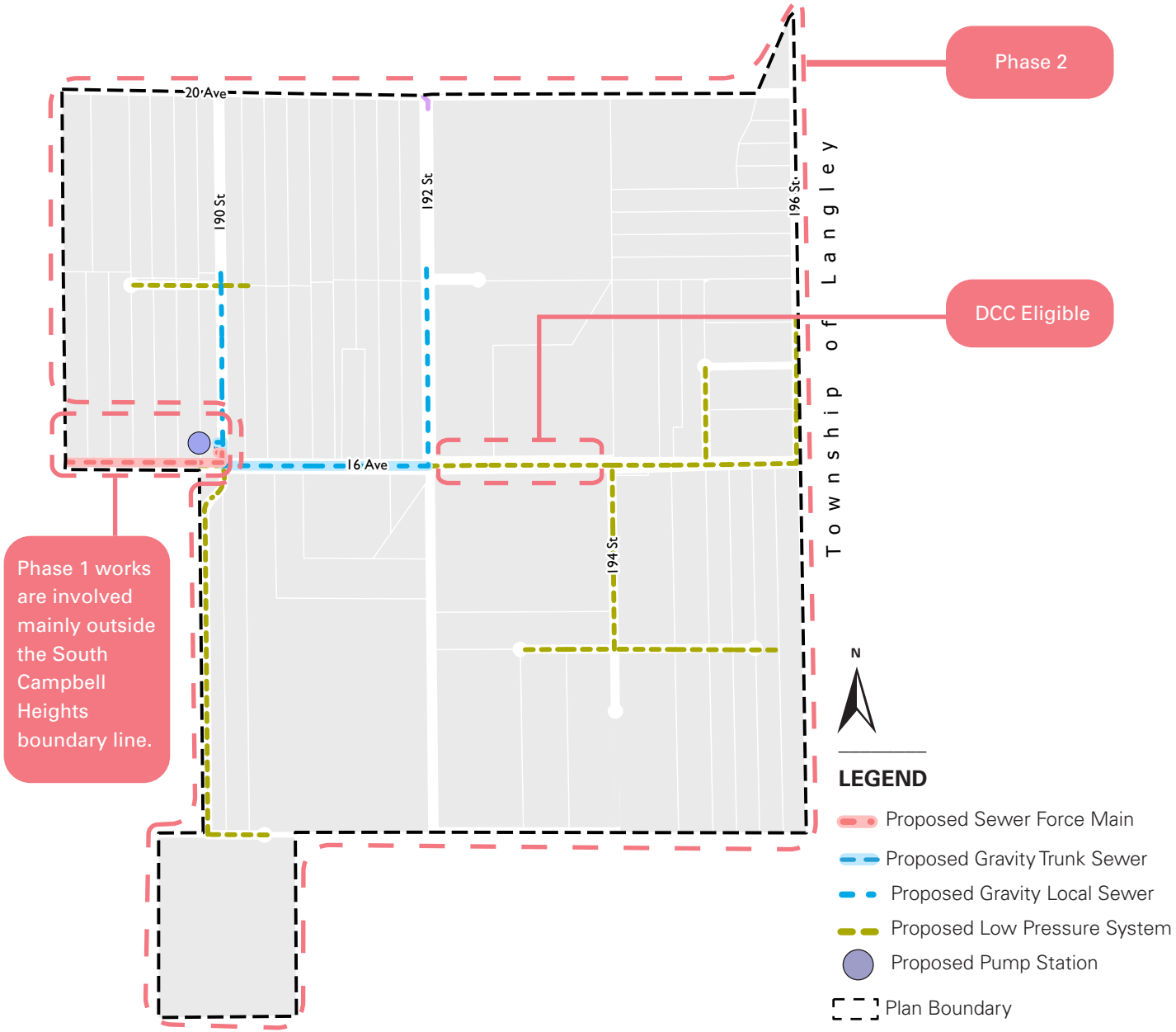
The sanitary sewer system will be serviced by approximately 1.7 km of gravity mains ranging from 250 mm to 375 mm-diameter and 3.5 km of low-pressure forcemains ranging from 75 mm to 200 mm-diameter that will direct sanitary sewage to a pump station proposed at the intersection of 16 Avenue and 190 Street. This pump station, accompanied by an odour management facility by 184 Street and 24 Avenue, will pump sewage via a forcemain along 184 Street to 24 Avenue, where it will discharge into a new siphon system.

This new siphon will convey the flow into the existing 500 mm-diameter siphon on 40 Avenue that services Campbell Heights and connects to the South Surrey Interceptor Sewer. The final length and location of the local low-pressure system are subject to change based on final lot consolidations and environmental constraints.

As per Surrey's DCM, all new industrial developments are required to provide fronting sewers with a minimum diameter of 250 mm as gravity mains. Trunk sanitary sewers conveying flows of 40 L/s or more are Development Cost Charge (DCC) eligible projects. Where there is a requirement for development to contribute a fronting trunk sewer, the cost of upsizing sewers is DCC Eligible.`

The proposed sanitary system will be developed in two phases. The portion of the system located to the west of the Little Campbell River will be constructed in the first phase, including the 184 Street siphon sewers, odour management facility and the 16 Avenue pump station. All areas to the east of the Little Campbell River will be constructed in the second phase.

Figure 7.5: Proposed South Campbell Heights LAP Sanitary System



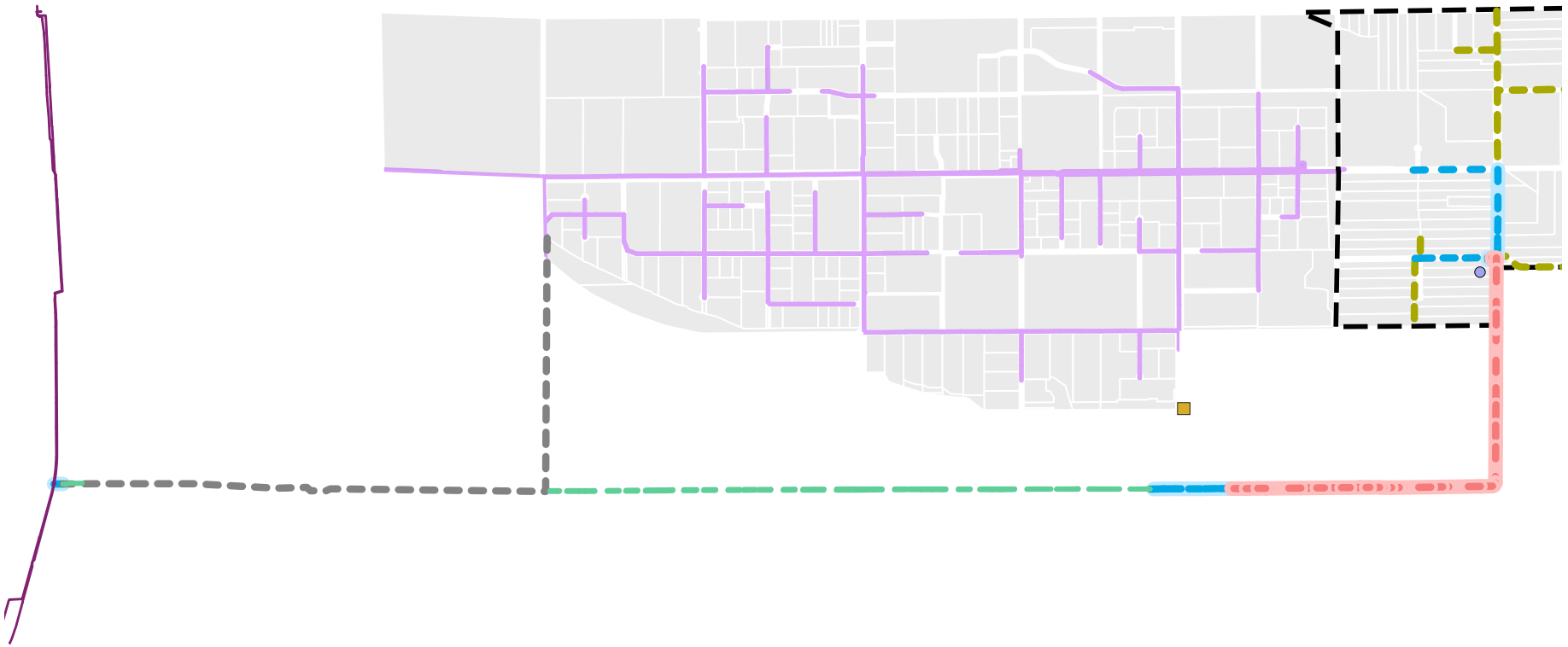
Phase 1 Sanitary Servicing

- 16 Ave pump station by 190 St
- Forcemain along 184 St (from 16 Ave pump station to 22 Ave alignment)
- Gravity main along 184 St (from 22 Ave to 25 Ave alignment)
- Dual Siphon System along 184 St (from 25 Ave alignment to 40 Ave)
- Odour Control Facility by 184 St and 24 Ave

Phase 2 Sanitary Servicing:

- 16 Ave Gravity Main (from 190 St to 192 St)
- 190 St, 191 St, and 192 St Gravity Mains
- 18 Ave, 16 Ave, 14 Ave, 12 Ave, and 189A St Low Pressure Mains

Figure 7.6: Campbell Heights LAP Sanitary System



N

LEGEND

- Metro Vancouver Sewer Mains
- Existing Sewer Mains
- Existing Siphon System
- Proposed Dual Siphon System
- Proposed Sewer Force Main
- Proposed Gravity Trunk Sewer
- Proposed Gravity Local Sewer
- Proposed Low Pressure System
- Proposed Pump Station
- Odour Control Facility
- Plan Boundary

Image of Little Campbell River in a close proximity to the 192 street.

7.3 Water

7.3.1 EXISTING WATER SYSTEM

The South Campbell Heights Plan Area is within the 80m Campbell Heights pressure zone which is supplied directly by Metro Vancouver's supply main through PVR Stations at: 184 Street and 24 Avenue; and 192 Street and 28 Avenue.

Currently, the Plan Area is serviced by a limited network of 150 and 200 mm water mains. Many properties in the Plan Area are not connected to the municipal water system and rely on private wells that source water from the Brookswood Aquifer. The current infrastructure is inadequate to meet the domestic and fire flow requirements of the land uses proposed by the Plan.

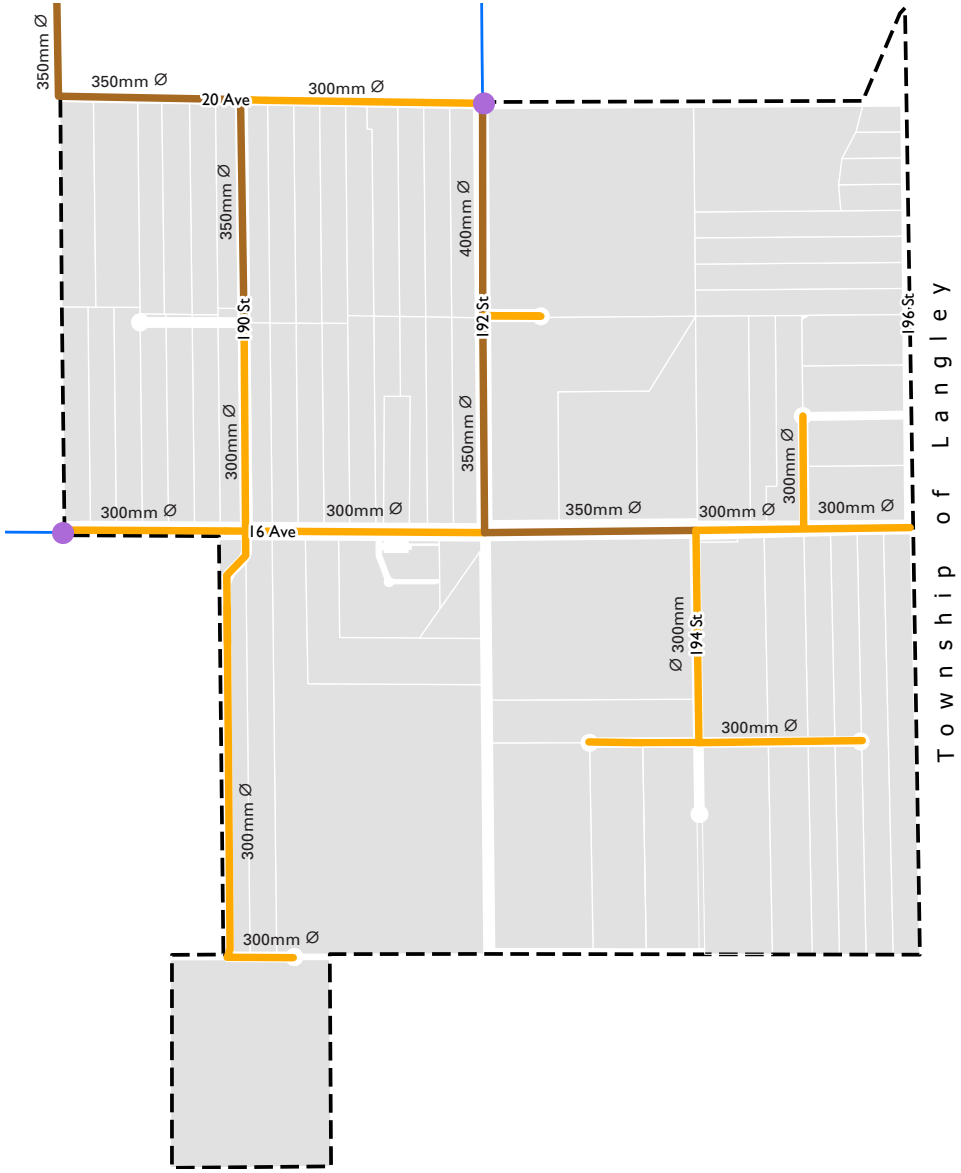
7.3.2 PROPOSED WATER SYSTEM

The water servicing plan was developed in accordance with the City's DCM. The proposed water system features a new distribution network that will supply domestic and fire water flow requirements of the designated Business Employment lands. The distribution network will connect to the existing water system in two locations: 20 Avenue and 192 Street (20 Ave Connection); and 24 Avenue and 184 Street (24 Ave Connection).

The water servicing plan will follow a two-phased build-out. The first phase will primarily cover the water infrastructure west of the Little Campbell River, except for the 24 Avenue connection, which will occur in the second phase. The second phase will address the water infrastructure east of the river. Based on the projected water demands, the 20 Avenue connection can adequately service development on the west side of the Little Campbell River. The 24 Ave connection will be required once the east side of the Little Campbell River is under development. Additionally, the 24 Ave connection will provide water supply redundancy to the Plan Area.

Through the development application process, the city may identify that larger distribution mains are required to service the Plan Area. In such cases, the cost of upsizing will be DCC reimbursable.

Figure 7.7: Existing Water System and Upgrades



Phase 1 Water Servicing:

- 20 Ave Connection
- 20 Ave Watermain (between 190 St and 192 St)
- 16 Ave Watermain (west of 192 St)
- 190 St and 192 St Watermains

Phase 2 Water Servicing:

- 24 Ave Connection
- 188 St Watermain (between 24 Ave and 20 Ave)
- 20 Ave Watermain (between 188 St and 190 St)
- 16 Ave Watermain (east of 192 St)
- 14 Ave, 194 St, and 196 St Watermains

08

Implementation
| Achieving the Plan

Achieving the vision outlined in the Plan is a responsibility shared between the City, senior levels of government, other public agencies, third-party utilities, community organizations, and developers. In the coming years, change will occur in the area, which will be delivered through private development and civic infrastructure projects. This section addresses how the growth and change envisioned in the Plan will be implemented, focusing primarily on the role of private development.

8.1 Development Policies

8.1 Development Policies

Development Approvals

A Council endorsed plan does not rezone a property. Instead, the Plan assigns a land use designation that identifies the type of development that is supported. When a property develops, a development application is required that outlines the specific details of the proposal. Typically, such applications include rezoning and a development permit.

Development proposals must also be consistent with the property's RGS and OCP general land use designation as well as any applicable policies. Where a site falls within a Development Permit Area (DPA), as identified in the OCP, development must respond to any relevant design guidelines.

Where projects fall within a Sensitive Ecosystem DPA, a Qualified Environmental Professionals shall assess all identified and potential watercourses, wetlands to determine appropriate setbacks and mitigation measures. Provincial approval under the Water Sustainability is required for any changes to or within a watercourse.

Archaeological Sites

The Little Campbell River, also known as the Ta'talu, is a place of traditional and ongoing significance to the se'mya'me. Given the traditional practices and travel routes that have taken place throughout the watershed, the Plan Area has been identified as having potential to host protected heritage sites or objects as defined by the provincial *Heritage Conservation Act*. Private development are strongly encouraged to retain a Registered Professional Consulting Archaeologist (RPCA) and contact the Provincial Archaeology Branch to determine the archaeological potential of a site and if further archaeological assessment and permitting is required. If suspected archaeological materials or features (either intact or disturbed) are encountered during construction, the following actions should be taken:

- Cease all activities in the immediate vicinity.
- Leave all potential archaeological material in place and do not further touch or disturb the area.
- Contact the Provincial Archaeological Branch immediately at 250-953-3334 for further instructions.

Temporary Use Permits

Temporary Use Permit (TUP) applications may be considered by Council on a case-by-case basis, subject to comprehensive engineering and planning review as part of the application process. Temporary truck parking and storage facilities should expect the following requirements as part of their application:

- Implementation of on-site drainage infrastructure to appropriately manage stormwater run-off and mitigate pollution impacts to the Brookswood Aquifer;
- Upgrades to transportation infrastructure to support the movement of truck traffic on the existing road network;
- Installation of appropriate buffers to screen parking and storage facilities from the street and abutting properties that have not developed under the South Campbell Heights Plan; and
- Other requirements as determined by the General Manager of Planning & Development and the General Manager of Engineering through the application process.

Lot Consolidation Strategy

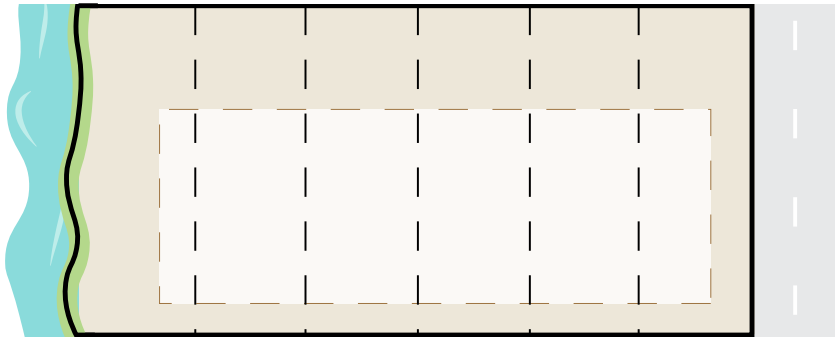
Lot consolidation may be required to properly facilitate business employment development and implement the Plan's transportation and utility strategies. Incomplete consolidation patterns can result in remnant parcels being challenged to redevelop under the Business Employment land use designation, the inefficient delivery of infrastructure, and undesirable changes to the road network. The following policies should be followed to determine whether appropriate lot consolidation has been achieved, to the satisfaction of the City:

- Avoid the creation of remnant parcels that cannot be redeveloped for business employment uses due to parcel size or environmental encumbrances.
- Ensure that road dedications and setbacks for environmental features are equitably distributed between consolidation areas.
- Ensure that proposed consolidation areas maintain safe and appropriate access for future development sites.
- Ensure consolidation patterns maintain the integrity and intent of special interface buffers.
- Upon request from the General Manager of Planning and Development, provide a conceptual site plan of neighbouring properties and/or an assessment of off-site environmental features, to demonstrate that remnant parcels may still feasibly develop under their intended land use designation.

Figure 8.1: Lot Consolidation Examples

Preferred Consolidation Pattern

Consolidation uses land effectively and does not leave any remnant parcels.



Undesirable Consolidation Pattern

Remnant lots do not have sufficient area for future consolidation.