3040 KILPATRICK AVENUE

Parking Study

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TABLE OF CONTENTS

1.0 INTRODUCTION

Watt Consulting Group was retained by Dulex to conduct a parking study for the proposed development at 3040 Kilpatrick Avenue in the City of Courtenay. The purpose of this study is to assess the adequacy of the proposed parking supply by considering parking demand at representative sites.

1.1 SUBJECT SITE

The proposed development is located at 3040 Kilpatrick Avenue in the City of Courtenay (see Figure 1). It is currently zoned as CD-26 (Comprehensive Development, 3040 & 3070 Kilpatrick Ave). The applicant has already constructed two multi-family residential buildings at this site as part of the larger Newport Village development.

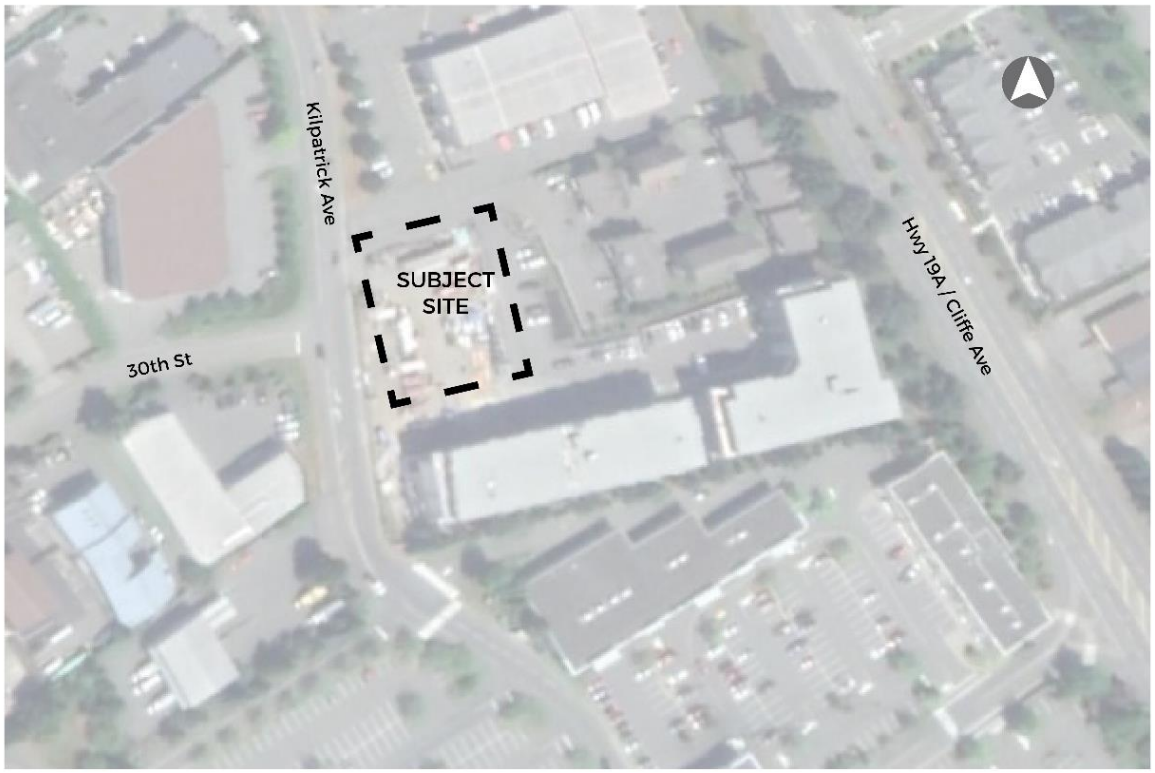

Figure 1. Subject Site

1.2 SITE CHARACTERISTICS AND POLICY CONTEXT

The following provides information regarding services and transportation options in proximity to the development. In addition, the City of Courtenay's planning policies pertaining to sustainable transportation and parking management are summarized.

POLICY & PLANNING CONTEXT

The City of Courtenay is in the process of updating its Official Community Plan (OCP), which will contain policy direction on several topics pertaining to parking including transportation and mobility, land use, and design of the built environment, among others. The City's existing OCP includes several goals and policies pertaining to transportation including goal #2, which is stated as follows:

"Development of a transportation system that provides choices for different modes of travel including vehicle, transit, pedestrian, cycling and people with mobility impairments".

The City's OCP also contains policies relating to sustainable transportation and transportation demand management as outlined in multiple sections including: 4.4.3, 4.6.5, 5.2, and 10.3.

4.4.3. Land Use Designations (Residential Policies):

- Increasing densities can reduce urban sprawl and benefit the environment and transportation system, while promoting healthy community and fiscal responsibility through the provision of services. This may be achieved by creating neighbourhoods that offer a variety of transportation choices.

4.6.5. Parks and Open Space (Greenway Strategy):

- The city requires safe, continuous, and convenient pedestrian routes from residences to public walkways, transit, and facilities.

5.2 Transportation (Goals):

- Integrating land use changes with transportation planning to coordinate changes and increases in traffic patterns.
- Developing transportation systems that provide choices for different modes of travel including vehicle, transit, pedestrian, cycling, and people with mobility impairments.
- Supporting integration of transportation systems that reduce travel distances and congestion.

10.3. Planning for Climate Change (Objectives and Policies):
Aligning developments within the following transportation mode hierarchy:

1. Walking
2. Cycling
3. Transit
4. Commercial delivery of goods and services
5. SOV

SERVICES

Anfield Centre is immediately south of the subject site, offering a variety of large-scale commercial-retail services within a 5-minute walk (300m). The site is also a 7-minute walk (500-600m) from Driftwood Mall where several other amenities / personal services are available including a grocery store, financial services, pharmacy, and restaurants.

TRANSIT

The subject site has access to excellent transit service. It is within a 5-minute walk of the Anfield Exchange where four different bus routes are available including:

- Route 1 | Comox Mall / Anfield Centre via N.I.C
- Route 2 | Cumberland / Anfield Centre
- Route 8 | Downtown / Anfield Centre

- Route 20 | Cumberland via Royston

These routes provide access to various destinations within the region including downtown Courtenay, east Courtenay, and Cumberland. While most of the routes offer limited service during the weekday, the Route 1 operates as the Frequent Transit Network (FTN) route offering 20-minute service at peak hours between the municipalities of Courtenay and Comox. It provides service to several employment destinations including downtown Courtenay, North Island College, North Island Hospital Comox Valley, and downtown Comox, among other destinations.

WALKING

The subject site can be described as somewhat walkable with a walk score of 50, suggesting that some errands can be accomplished on foot. Sidewalks are located on one side of Kilpatrick Avenue and serve to connect residents to the Anfield Exchange, the Anfield Centre, and other destinations along Kilpatrick Avenue.

The recommended pedestrian network plan identified in the City's Transportation Master Plan (TMP)[1] shows sidewalk improvements on Kilpatrick Avenue from 26th Street to 29th Street. The specific sidewalk improvements identified in the TMP are part of the City's medium-term (10 year) pedestrian network, which is intended to improve the walkability of areas around schools, commercial areas, and connections to transit.

[1] City of Courtenay & Urban Systems Ltd. (2019). Connecting Courtenay: Transportation Master Plan. Figure 5-3 Recommended Pedestrian Network Plan, pg. 43, available online at: https://tinyurl.com/y2xwcffo

CYCLING

Kilpatrick Avenue does not currently have any bike facilities. According to the City's TMP and Cycling Network Plan, there are no plans for a bike facility on Kilpatrick Avenue over the next 10 years. However, the medium-term cycling network does identify a buffered / painted bike facility on 26th Street, which is about a 3-minute bike ride from the site (measured using Google Maps). This bike facility would make it easier for residents of the subject site to travel more directly to destinations such as downtown Courtenay and to further destinations such as North Island College using other proposed bike facilities along Fitzgerald Avenue and Old Island Highway.

2.0 PROPOSED DEVELOPMENT

2.1 LAND USE

The proposal for the development is for 41 strata-owned condominium units including a mix of unit types (studio, one-bedroom, and two-bedroom). See Table 1.

TABLE 1. SUMMARY OF PROPOSED DEVELOPMENT

Land Use	Unit Type	Units
Multi-family Residential (Strata)	Studio Unit	3
	One Bedroom Unit	28
	Two Bedroom	10
	Total	**41**

2.2 PROPOSED PARKING SUPPLY

2.2.1 VEHICLE PARKING

A total of 51 parking spaces are proposed for this development, which results in a rate of 1.24 spaces per unit (inclusive of visitor parking). All of the residential parking spaces

will be electric vehicle-ready, which means that they will feature an energized outlet capable of providing Level 2 charging or higher to the parking space.

2.2.2 BICYCLE PARKING

The applicant is proposing at total of 41 Class I (indoor, secured) bicycle parking spaces (1 space per unit) and 6 Class II (short-term, visitor) bicycle spaces.

3.0 PARKING REQUIREMENT

The City of Courtenay Zoning Bylaw No. 2500, 2007 determines the minimum parking supply requirement. The site has a parking requirement of 1.5 spaces per dwelling unit with 10% of required spaces to be provided and retained as visitor parking. This results in a total site parking requirement of 62 parking spaces, six (6) of which would be retained for visitors. This is 11 parking spaces more than proposed. See Table 2.

TABLE 2. PARKING REQUIREMENT

Land Use	Requirement	Required Spaces
Multi residential dwellings	1.5 per dwelling unit with 10% of the required spaces being provided and retained for visitor parking.	56 resident 6 visitor
	Total	**62**

4.0 EXPECTED PARKING DEMAND

Expected parking demand for the site is estimated in the following sections to determine if the proposed supply will adequately accommodate demand. Expected parking demand is based on [a] parking observations of representative sites in the City of Courtenay and [b] parking demand data from the subject site.

4.1 RESIDENTIAL PARKING

4.1.1 SITE SELECTION

Observations of parked vehicles were completed at 9 condominium buildings in the City of Courtenay representing a total of 344 units. All of the representative sites were selected based on having comparable characteristics to the subject site including access to transportation options, proximity to amenities / services, and whether there was surface parking to allow the data collector to count parked vehicles.

4.1.2 OBSERVATIONS

Observations of parking utilization were conducted over two nights at representative sites during the typical weekday peak hour period for residential land uses. Observations were conducted from 9:00-10:30pm on February 2 and February 3, 2021. The greater number of observed vehicles between the two data collection periods were used for the representative peak demand at each location. The demand ranged from 0.8 to 1.1 vehicles per unit, with an average parking demand of 0.95 vehicles per unit.

TABLE 3. PARKING DEMAND AT REPRESENTATIVE SITES

Address	Number of Units	Peak Observed Vehicles	Parking Demand (Vehicles/Unit)
1440 13th Street	16	15	0.94
1720 13th Street	24	24	1.00
1111 Edgett Road	24	21	0.88
1095 Edgett Road	21	23	1.10
205 1st Street	54	57	1.06
1050 Braidwood Road	61	51	0.84
200 Back Road	60	53	0.88
1045 Cumberland Road	45	36	0.80
1355 Cumberland Road	39	41	1.05
		Average	**0.95**

4.1.3 ADJUSTMENT FACTORS

Observations are a useful method of assessing parking demand rates; however, there are limitations. One such limitation is the fact that an observation may not "catch" all residents while they are home with their parked car on-site. On a typical weeknight in times prior to public health measures put in place due to COVID-19, it would be expected that some residents return home very late at night or in the next morning or have driven out of town for business or vacation.

For instance, a large scale apartment parking study commissioned by Metro Vancouver reported that observations of parking occupancy (percent of stalls occupied by a car or truck) increased later in the night. The study also suggested that occupancy surveys that start between 9:00pm–10:30pm should have a 10% adjustment factor. Based on the available research, a conservative 10% adjustment factor is considered appropriate for the observations. Retaining the adjustment factor helps ensure that the parking demand estimates reflect a conservative (i.e., higher) estimation of demand.

Table 4 shows the difference between the observed parking demand and the adjusted parking demand rate, reflecting the 10% increase for "missed vehicles". The average observed demand rate increased from 0.95 to 1.04 vehicles per unit.

TABLE 4. ADJUSTED PARKING DEMAND AT REPRESENTATIVE SITES

Address	Number of Units	Parking Demand (Vehicles/Unit)	Adjusted Parking Demand (Vehicles/Unit)
1440 13th Street	16	0.94	1.03
1720 13th Street	24	1.00	1.10
1111 Edgett Road	24	0.88	0.96
1095 Edgett Road	21	1.10	1.20
205 1st Street	54	1.06	1.16
1050 Braidwood Road	61	0.84	0.92
200 Back Road	60	0.88	0.97
1045 Cumberland Road	45	0.80	0.88
1355 Cumberland Road	39	1.05	1.16
		Average	**1.04**

4.1.4 PARKING DEMAND BY UNIT TYPE

Unit size type refers to the number of bedrooms provided within a residential unit. Research has shown that larger units will generally have more occupants or a family, therefore increasing the likelihood that additional vehicles will be owned by occupants and growing the parking demand.[2] Parking data collected for this study was assessed to reflect unit type using the following steps:

- Parking demand was calculated and adjusted by 10%;
- Parking Demand by unit type was calculated based on the demand ratios of bedrooms per unit at each site acquired from the Metro Vancouver Parking Study from 2018; and

[2] Potoglou, D., & Kanaroglou, P.S. (2008). Modelling car ownership in urban areas: a case study of Hamilton, Canada. *Journal of Transport Geography*, 16(1): 42–54.

- The assumed "ratio differences" (from 2018 Metro Vancouver Parking study) for parking demand between each site was applied to unit data and vehicle observations. These "ratio differences" are as follows.[3]
    - 1-Bedroom units' parking demand rates will be 19% higher than studio units rates;
    - 2-Bedroom units' parking demand rates will be 30% higher than 1-Bedroom rates; and
    - 3-Bedroom units' parking demand rates will be 23% higher than 2-Bedroom rates.

There was not a single studio unit in the 344-unit parking survey sample. As such, the studio ratio from the Metro Vancouver study was applied to the one-bedroom parking demand rate (0.83 vehicles per unit). With one-bedroom units having 19% higher demand than studio units, the studio rate is 0.7 vehicles per unit.

In summary, based on the analysis above, the following are the recommended demand rates for the units:

- Studio | 0.7 spaces per unit X 3 units = 2 spaces
- One-bedroom | 0.83 spaces per unit X 28 units = 23 spaces
- Two-bedroom | 1.08 space per unit X 10 units = 11 spaces
- **Total residential parking demand = 36 spaces**

4.1.5 PRECEDENT SITE

The proposed development is part of the larger Newport Village development, where two multi-family residential buildings have already been constructed. This provided an opportunity to collect local parking demand data from the subject site directly. Observation counts were conducted at Building 1 (also a condominium building) from 9:00-10:30pm on Tuesday February 2, 2021. A total of 73 resident vehicles were

[3] Metro Vancouver. (2018). Regional Parking Study – Technical Report, pg. 18. Available online at: https://tinyurl.com/y2vejdba

observed. Building 1 has 70 units, which results in a parking demand of 1.04 spaces per unit, or 1.14 residential spaces per unit when adjusted by 10%. The parking demand rate from Building 1 is slightly higher than what was reported from the representative sites (1.04 spaces per unit). However, it does indicate that demand rate from the representative sites is generally in line with the data from Building 1.

4.2 VISITOR PARKING

Watt Consulting Group conducted a parking study for a proposed multi-family residential building in Courtenay in 2019.[4] That study included data on visitor parking demand from 8 multi-family residential building sites in Courtenay. The average visitor parking demand was 0.08 spaces per unit. Other studies from Metro Vancouver and Greater Victoria have reported similar rates ranging from 0.05 to 0.1 spaces per unit. Based on the local data from Courtenay, the expected visitor parking demand is 0.1 spaces per unit (0.08, rounded), which results in 4 visitor spaces.

4.3 SUMMARY OF EXPECTED PARKING DEMAND

Based on the analysis, the total expected parking demand for the site is 40 spaces (see **Table 5**). Therefore, the expected parking demand is lower than the proposed supply (51) by 11 spaces.

[4] WATT Consulting Group. (2019). 574 Cumberland Road Parking Study.

TABLE 5. SUMMARY OF PARKING DEMAND

Land Use		Units	Expected Parking Demand	
			Rate	Total
Multi-Family Residential (Strata)	Studio	3	0. 7	2
	One-bedroom	28	0.83	23
	Two-bedroom	10	1.08	11
Visitor		41	0.10	4
			Total Expected Parking Demand	**40**

5.0 CONCLUSIONS

The proposed development at 3040 Kilpatrick Avenue includes a 41-unit multi-family residential (strata) building. A total of 51 vehicle parking spaces are proposed. In addition, the applicant is proposing 41 long-term bicycle parking spaces and 6 short-term spaces.

Expected parking demand for this development was estimated based on observational data collected from representative sites in the City of Courtenay. Based on these observations, the peak parking demand is 40 spaces (36 resident, 4 visitor), which is lower than the proposed supply by 11 spaces. Based on these data, the proposed parking supply of 51 spaces is considered appropriate.