



838 / 839 – 842 Admirals Road

Parking Study

Prepared for: **GT Mann Contracting**

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Our File: **2258**

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1.0 INTRODUCTION

Watt Consulting Group was retained by GT Mann Contracting to conduct a parking study for the proposed development at 638/640 Constance Avenue and 637 Nelson Street in the Township of Esquimalt. The purpose of this study is to assess the adequacy of the proposed parking supply by considering parking demand at representative sites and to identify transportation demand management (TDM) options.

1.1 SUBJECT SITE

The proposed redevelopment site is 638/640 Constance Avenue and 637 Nelson Street in the Township of Esquimalt. The site is zoned RD-3 | Two Family/Single Family Residential + CD-75 | Comprehensive Development District No.75 . See **Figure 1**.

FIGURE 1. SUBJECT SITE



1.2 SITE CHARACTERISTICS

The following provides information regarding services and transportation options in close proximity to the subject site.



SERVICES

The site is located just over 1km from Admirals Walk that has various retail, restaurant, office and medical services. Esquimat Village is located 2km from the site and has similar services as Admirals Walk.



TRANSIT

The closest bus stop is 100m from the site on Colville Road and serves Route 24 | Cedar Hill/Admirals Walk. The closest bus stop on Admirals Road is 120m from the site and serves Route 25 | Maplewood/Admirals Walk. These routes are classified as local routes with a service frequency of 20 to 120 minutes, depending on the time of day and day of week.

BC Transit's Victoria Transit Future Plan¹ identifies Admirals Road as a "Frequent Transit Corridor"² that will provide frequent service (15 minutes or better between 7am and 10pm, 7 days per week) with improved transit travel times achieved by fewer stops, transit priority measures and enhanced bus stop infrastructure. The subject site will benefit from frequent, reliable and convenient transit service.



WALKING

There are sidewalks on both sides of Admirals Road, and adequate crosswalks at major intersections. Admirals Road underwent an extensive street improvement project in 2015 that included installing two-way left-turns, median islands, street lighting upgrades, and sidewalk improvements.



CYCLING

There are bike lanes on both sides of Admirals Road between Lyall Street and Maplebank Road, which was a part of the improvement project in 2015. The site is directly adjacent the Esquimalt and Nanaimo (E+N) Rail Trail, which provides a direct off-road cycling route to View Royal and the Western Communities.

¹ Transit Future Plan, Victoria Region, May 2011. Available online at: <https://bctransit.com/servlet/documents/1403641054473>

² More information on the Victoria Transit Future Plan is available online at: <http://bctransit.com/victoria/transit-future/victoria-transit-future-plan>

2.0 PROPOSED DEVELOPMENT

The proposal is for 30 Multi-family Residential units. This will be a rental apartment building with units offered at market rates (i.e., no subsidy) consisting of a combination of one- and two-bedroom units. See **Table 1**.

TABLE 1. PROPOSED UNIT COMPOSITION³

Number of Bedrooms	Quantity
One-Bedroom	12
One-Bedroom + Den	6
Two-Bedroom	10
Two-Bedroom + Den	2
Total	30

2.1 PROPOSED PARKING SUPPLY

The proposed parking supply is 30 spaces - a parking supply rate of 1.0 spaces per unit.

The proposal also includes provision of 45 long-term bike parking spaces (1.5 bike parking spaces per unit) and a six-space bike rack at the building entrance.

3.0 PARKING REQUIREMENT

The Township of Esquimalt Parking Bylaw No. 2011⁴ identifies a minimum parking supply rate of 1.3 spaces per unit for Medium and High Density Apartment uses (assumes RM-4 zoning). Applied to the subject site, this results in a requirement for 39 parking spaces. The Bylaw requires that 10 of the required spaces are reserved for visitors, and one space is designed and designated as Disabled Persons' parking (28 resident, 10 visitor, 1 disabled).

4.0 EXPECTED PARKING DEMAND

Expected parking demand is estimated in the following sections based on observations and research.

4.1 RESIDENT PARKING, OBSERVATIONS

Observations of parked vehicles were completed for eight representative sites within Esquimalt to determine an appropriate parking demand rate for the subject site. Study sites are generally located in the western portion of the Township with similar access to public transit and cycling routes as the proposed site. All study sites are market rental apartment buildings.

³ Unit composition information per email correspondence from Praxis Architects, received September 18 2017

⁴ The Township's Zoning Bylaw is available online at:
www.esquimalt.ca/sites/default/files/docs/municipal-hall/bylaws/parking_bylaw_2011_july.pdf

Observations were conducted on Thursday October 5 and Wednesday October 11 between 9:00pm and 10:00pm (representing peak period for residential land uses). All representative sites have surface parking, which allowed access to complete counts of parked vehicles.

Results suggest an average peak parking demand of 0.61 vehicles per unit and an 85th percentile of 0.72 vehicles per unit, with rates ranging from 0.45 to 0.72 vehicles per unit. See **Table 2**. The 85th percentile parking demand rate applied to the subject site suggests a total parking demand of 22 vehicles.

Study sites that are in close proximity to the subject site were assessed in more detail to calculate an accurate representation of parking demand at the subject site. Average peak demand of those sites (850 Admirals Road and 841 Kindersley Road) is 0.69 vehicles per unit; higher than the average among all sites. This is likely a result of these sites being located farther from services and transportation options. The majority of these sites are in close proximity to CFB Esquimalt and it is assumed that a portion of residents are CFB employees and do not require a vehicle.

TABLE 2. SUMMARY OF OBSERVATIONS AT REPRESENTATIVE SITES

Location	Number of Units	Thursday October 5, 9:00pm		Wednesday October 11, 9:00pm	
		Vehicles Observed	Demand Rate (vehicles per unit)	Vehicles Observed	Demand Rate (vehicles per unit)
850 Admirals Rd	20	13	0.65	13	0.65
841 Kindersley Rd	11	8	0.73	7	0.64
625 Constance Ave	29	15	0.52	13	0.45
639 Constance Ave	19	8	0.42	10	0.53
1337 Saunders St	28	16	0.57	15	0.54
1340 Sussex St	39	21	0.54	24	0.62
1357 Esquimalt Rd	50	32	0.64	36	0.72
611 Admirals Rd	25	16	0.64	18	0.72
Average			0.59		0.61
85th Percentile			0.65		0.72

Research suggests that parking demand varies based on the size of unit - the higher the number of bedrooms, the higher the parking demand. For the two sites closest to the subject site, the total parking demand has been redistributed based on number of bedrooms.

Overall vehicle ownership at the study sites closest to the subject site have been factored to account for unit configuration (i.e., number of bedrooms) as follows (see **Table 3**):

1. Overall adjusted peak vehicle ownership data for each site⁵;
2. The breakdown of unit type (i.e., number of bedrooms) at each site⁶; and
3. The assumed “ratio differences” between each unit type based on the King County Metro⁷ study which recommends one-bedroom units have a 20% higher parking demand than bachelor units, two-bedroom units have a 60% higher parking demand than one-bedroom units, and three-bedroom units have a 15% higher parking demand than two-bedroom units.

Results suggest that average parking demand when factored for unit configuration is as follows:

- One-Bedroom Units (18) = 0.65 vehicles per unit, 12 vehicles
- Two-Bedroom Units (12) = 1.04 vehicles per unit, 12 vehicles
- Total Vehicles = 24 vehicles

TABLE 3. PARKING DEMAND BY UNIT TYPE AT SELECT REPRESENTATIVE SITES

Location	Adjusted Demand Rate	Assumed Vehicle Ownership Distribution (vehicles per unit)	
		1-Bedroom	2-Bedroom
850 Admirals Rd	0.72	0.62	0.99
841 Kindersley Rd	0.80	0.68	1.09
Average	0.76	0.65	1.04

4.2 VISITOR PARKING

Observations were conducted as part of a study by Metro Vancouver⁸ that concluded typical visitor parking demand is less than 0.1 vehicles per unit. This is similar to observations that were conducted for parking studies in the City of Langford and the City of Victoria, and suggests that visitor parking demand is not strongly influenced by location.

As such, it is estimated that visitor parking demand will be no more than 0.1 vehicles per unit.

⁵ The peak parking demand rates were also factored up to account for any residents that may not have been home during observations. A conservative factor of 10% is applied to each site (this is based on known ratio differences between results from observations and vehicle ownership information at similar sites)

⁶ Actual breakdown by unit type was unknown at each site, and thus an assumed breakdown was used for each site of 10% bachelor, 60% one-bedroom, 30% two-bedroom (based on averages of multiple representative sites)

⁷ King County Metro. (2013). Right Size Parking Model Code. Table 2, page 21.
Available online at: <http://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/140110-rsp-model-code.pdf>

⁸ Metro Vancouver Apartment Parking Study, Technical Report, 2012.
Available online at: www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf

4.3 SUMMARY OF EXPECTED PARKING DEMAND

Expected parking demand is approximately 27 vehicles, 3 less than the proposed parking supply. See **Table 5**.

TABLE 5. SUMMARY OF EXPECTED PARKING DEMAND

		Units	Expected Parking Demand	
			Rate	Total
Resident	One Bedroom	18	0.65 / unit	12
	Two Bedroom	12	1.04 / unit	12
Visitor		30	0.1 / unit	3
Total Expected Parking Demand				27

5.0 ON-STREET PARKING CONDITIONS

On-street parking conditions were observed surrounding the site on Naden Street (from Kindersley Road to the cul-de-sac), Kindersley Road (from Naden Street to Coles Street), and Colville Road (from Admirals Road to Harman Avenue). Parking restrictions on these road segments are unrestricted, 3 Hour, Residential Only, or there is no parking available. See **Table 6** and **Figure 2**.

Observations were completed during a weekday afternoon and evening to reflect the anticipated "peak" periods. Observations were conducted during the following time periods:

- Tuesday September 19 at 10:30pm
- Friday September 22 at 2:30pm

Results from both observation periods were fairly consistent; weekday evening was observed at 29% occupied (with 34 spaces unoccupied) and weekday afternoon was observed at 31% occupied (with 33 spaces unoccupied). This suggests there is sufficient availability of on-street parking resources in case of spillover.

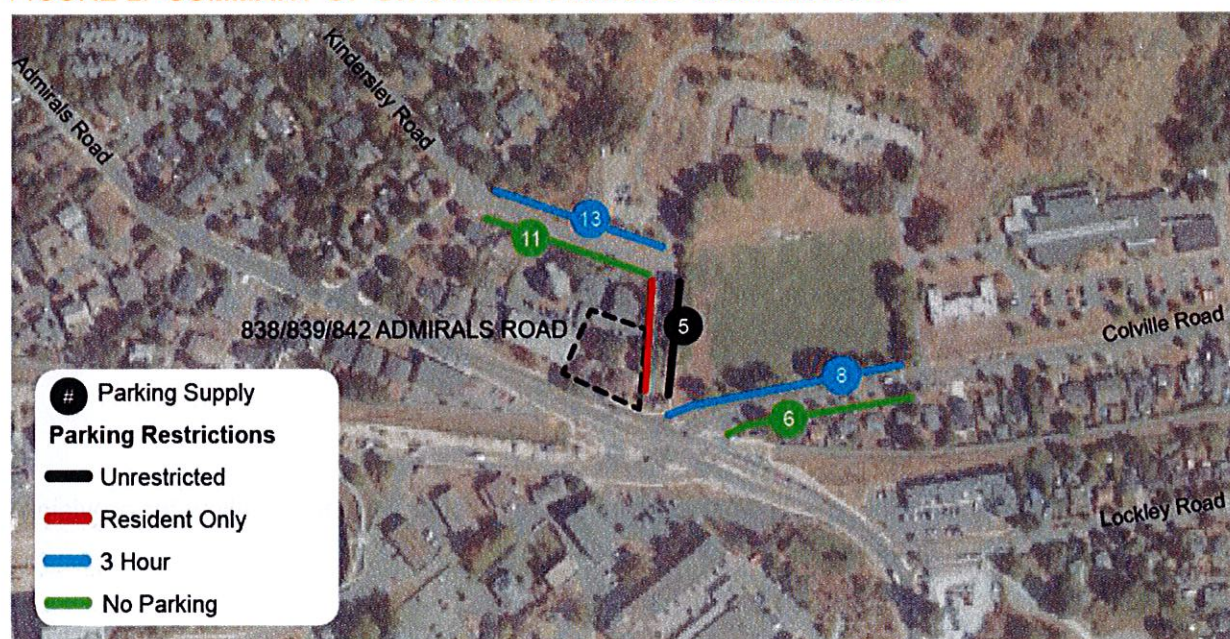
When considering on-street parking conditions by restrictions, the following is noted:

- Unrestricted parking was 80% occupied during the weekday afternoon observations with only two spaces available. This is likely attributed to activity at the DND;
- Resident only parking was 65% occupied during the weekday evening observation with six spaces available. This suggests this parking is well utilized, with sufficient space available to accommodate additional vehicles;
- The 3 hour parking is not well utilized with a peak total occupancy of 14%.

TABLE 6. SUMMARY OF ON-STREET PARKING CONDITIONS

Street		Side	Restrictions	Parking Supply (spaces)	Vehicles Observed	
					Tues. 09/19/17 @ 10:30pm	Fri. 09/22/17 @ 2:30pm
Naden Street	Kindersley Rd – cul de sac	W	No Parking	-	-	-
		E	--	10	0	8
Kindersley Rd	Naden St – Coles St	N	3 Hour	13	2	0
		S	Resident Only	11	7	2
Colville Rd	Admirals Rd – Harman Ave	N	3 Hour	8	1	2
		S	Resident Only	6	4	3
				48	14 29%	15 31%

FIGURE 2. SUMMARY OF ON-STREET PARKING RESTRICTIONS



6.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) is the application of strategies and policies to influence individual travel choice, most commonly to reduce single-occupant vehicle travel. TDM measures can be pursued to encourage sustainable travel, enhance travel options and decrease parking demand. The following are identified for the applicant's consideration.

6.1 BIKE PARKING

Bike parking is not currently required in the Township's Parking Bylaw. However, the Township of Esquimalt Official Community Plan includes policy that states:

In new multi-unit residential developments, secure bicycle storage for residents should be provided in the ratio of 1.5 storage spaces per dwelling unit. In addition to the residents' parking, each multi-unit building should have six (6) bicycle lock-up spaces for the use of visitors.

The applicant is providing bike parking as per the policy in the OCP, which is higher than typical bike parking requirements in other communities.

7.0 SUMMARY

The proposed development is for 30 units and 30 off-street parking spaces – a parking supply rate of 1.0 spaces per unit. The Township's Parking Bylaw identifies a required minimum parking supply of 39 parking spaces; nine more than is proposed.

Expected parking demand was calculated for the site based on vehicle ownership data and observations of representative study sites. Results suggest an expected parking demand of 24 resident vehicles and 3 visitor vehicles – a total site parking demand of 27 vehicles. Site parking demand is expected to be accommodated within the proposed off-street parking supply and without impacting the surrounding neighbourhood.

Long- and short-term bicycle parking will be provided, consistent with the policy in the Township's OCP (1.5 long-term bike parking spaces per unit and a six-space rack at the building entrance).

7.1 RECOMMENDATION

1. It is recommended that the Township grant the requested variance to allow for provision of 30 parking spaces (1.0 spaces per unit)