



638 / 640 Constance Avenue + 637 Nelson Street
Parking Study



Prepared for: **GT Mann Contracting**

Prepared by: **Watt Consulting Group**

Our File: **2258**

Date: **December 6, 2017**

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Subject Site.....	1
1.2	Site Characteristics.....	2
2.0	PROPOSED DEVELOPMENT.....	3
2.1	Proposed Parking Supply.....	3
3.0	PARKING REQUIREMENT.....	3
4.0	EXPECTED PARKING DEMAND.....	4
4.1	Resident Parking, Observations.....	4
4.2	Visitor Parking.....	6
4.3	Summary of Expected Parking Demand.....	6
5.0	ON-STREET PARKING CONDITIONS.....	7
6.0	TRANSPORTATION DEMAND MANAGEMENT.....	8
6.1	Bike Parking.....	8
7.0	SUMMARY.....	9
7.1	Recommendation.....	9

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 approximately 285m from the intersection of Admirals Road and Esquimalt Road that has a grocery store, liquor store, and a few small-scale restaurants and retail shops. Esquimalt Village is less than 1km from the site and has a library, medical services, postal services, and various commercial uses that will accommodate the daily needs of site residents.



TRANSIT

The closest bus stop to the site is 200m away (westbound service) on Esquimalt Road and just under 300m from the site (eastbound service) on Esquimalt Road that serves Route 15 | Uvic/Esquimalt and Route 26 | Dockyard/Uvic. There are also bus stops on Admirals Road 300m from the site that serves Route 25 | Maplewood/Admirals Walk/Colwood. These routes provide service and/or connection to the majority of destinations in Greater Victoria including the University of Victoria, Camosun College, Downtown Victoria, and the Western Communities. Route 15 is a Regional Route with a service frequency of 15 to 60 minutes with limited stops; Routes 25 and 26 are local routes with service frequency of 20 to 120 minutes.

BC Transit's Transit Future Plan has identified Esquimalt Road as a "Frequent Transit Corridor"¹ 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. With the Frequent Transit Network projected to carry a large share of the future transit system's total ridership, the subject site will benefit from frequent, reliable and convenient transit service.



WALKING

There are no sidewalks on Constance Avenue or Nelson Street that provide a connection to Esquimalt Road. There are adequate sidewalks on both sides of Esquimalt Road with marked crossings at major intersections and crosswalks at various locations along Esquimalt Road, most notably at Constance Avenue and Esquimalt Road. Admirals Road also has sidewalks on both sides of the road. The site has a Walkscore² of 72 that suggests most errands can be accomplished on foot.

¹ More information on the Victoria Transit Future Plan is available online at: <http://bctransit.com/victoria/transit-future/victoria-transit-future-plan>

² Walkscore. <https://www.walkscore.com/score/638-constance-ave-victoria-bc-canada>



CYCLING

There are bike lanes on both sides of Esquimalt Road, beginning at Park Place (approximately 400m from the site) which provides service to Downtown Victoria. There are also bike lanes on both sides of Admirals Road between Lyall Street and Maplebank Road, which was a part of the Admirals Road improvement project in 2015. This provides direct service to the Esquimalt and Nanaimo (E+N) Rail Trail (approximately 1km from the site), which provides an off-road cycling route to View Royal and the Western Communities.

2.0 PROPOSED DEVELOPMENT

The proposal is for 77 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 studio, one- and two-bedroom units. See **Table 1**.

TABLE 1. PROPOSED UNIT COMPOSITION³

Number of Bedrooms	Quantity
Studio	12
One-Bedroom	40
One-Bedroom + Den	13
Two-Bedroom	6
Two-Bedroom + Den	6
Total	77

2.1 PROPOSED PARKING SUPPLY

The proposed parking supply is 61 spaces - a parking supply rate of 0.79 spaces per unit.

The proposal also includes the provision of 116 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 100 parking spaces. The Bylaw requires that 25 of the required spaces are reserved for visitors, and one space is designed and designated as Disabled Persons' parking (74 resident, 25 visitor, 1 disabled).

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

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 proposal site. All study sites are market rental apartment buildings.

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 for 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 parking demand rate applied to the subject site suggests a total parking demand of 55 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 (625 Constance Avenue, 639 Constance Avenue, 1337 Saunders Street, 1340 Sussex Street) is 0.56 vehicles per unit; lower than the average among all sites. 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)
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
850 Admirals Rd	20	13	0.65	13	0.65
841 Kindersley Rd	11	8	0.73	7	0.64
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 four 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.

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>

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

- Bachelor Units (12) = 0.44 vehicles per unit, 5 vehicles
- One-Bedroom Units (53) = 0.53 vehicles per unit, 28 vehicles
- Two-Bedroom Units (12) = 0.85 vehicles per unit, 10 vehicles
- Total Vehicles = 43 vehicles

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

Location	Adjusted Demand Rate	Assumed Vehicle Ownership Distribution (vehicles per unit)		
		Bachelor	1-Bedroom	2-Bedroom
625 Constance Ave	0.57	0.41	0.49	0.78
639 Constance Ave	0.58	0.42	0.50	0.80
1337 Saunders St	0.63	0.45	0.54	0.86
1340 Sussex St	0.68	0.49	0.59	0.94
		0.44	0.53	0.85

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.

4.3 SUMMARY OF EXPECTED PARKING DEMAND

Expected parking demand is approximately 51 vehicles, 10 less than the proposed parking supply. See **Table 5**.

TABLE 5. SUMMARY OF EXPECTED PARKING DEMAND

		Units	Expected Parking Demand	
			Rate	Total
Resident	Bachelor	12	0.44 / unit	5
	One Bedroom	53	0.53 / unit	28
	Two Bedroom	12	0.85 / unit	10
Visitor		77	0.1 / unit	8
Total Expected Parking Demand				51

⁸ Metro Vancouver Apartment Parking Study, Technical Report, 2012.

Available online at: www.metrovancouver.org/services/regional-planning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf

5.0 ON-STREET PARKING CONDITIONS

On-street parking conditions were observed surrounding the site on Constance Avenue, Astle Street, Nelson Street, and Saunders Street. Parking restrictions on these road segments are either unrestricted 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:

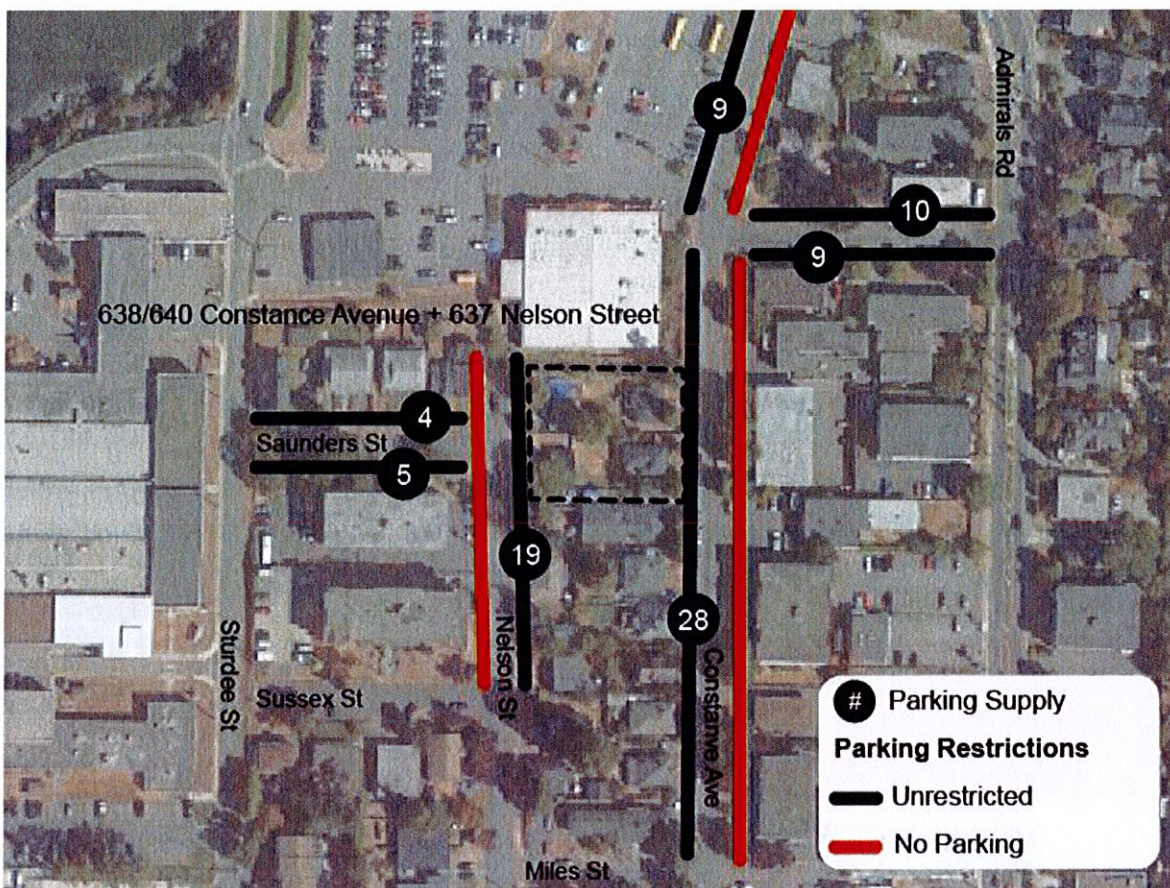
- Tuesday September 19, 2017 at 9:30pm
- Friday September 22, 2017 at 3:30pm

Peak occupancy was observed during the weekday evening observation (Tuesday at 9:30pm) when available parking was 48% occupied, with 44 parking spaces unoccupied. Parking directly adjacent the site on Constance Avenue (Miles Street to Astle Street) had a peak occupancy of 68% with 9 spaces still available. Parking adjacent the site on unoccupied. This demonstrates sufficient availability of on-street parking in case of spillover.

TABLE 6. SUMMARY OF ON-STREET PARKING CONDITIONS

Street		Side	Restrictions	Parking Supply (spaces)	Vehicles Observed	
					Tues. 09/19/17 @ 9:30pm	Fri. 09/22/17 @ 2:45pm
Constance Ave	Miles St – Astle St	W	--	28	19	12
		E	No Parking	-	-	-
	Astle St – Cul-de-sac	W	--	9	2	2
		E	No Parking	-	-	-
Astle St	Constance Ave – Admirals Rd	N	--	10	6	2
		S	--	9	2	2
Nelson St	Sussex St – cul-de-sac	W	No Parking			
		E	--	19	9	5
Saunders St	Nelson St – cul-de-sac	N	--	4	1	0
		S	--	5	1	0
				84	40 48%	23 27%

FIGURE 2. SUMMARY OF ON-STREET PARKING CONDITIONS



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 a 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 77 units and 61 off-street parking spaces – a parking supply rate of 0.79 space per unit. The Township's Parking Bylaw identifies a required minimum parking supply of 100 parking spaces; 39 more than is proposed.

Expected parking demand was calculated for the site based on observations. Results suggest an expected parking demand of 43 resident vehicles and eight visitor vehicles – a total site parking demand of 51 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 61 parking spaces (0.79 spaces per unit)

