

MEMORANDUM

Date: | October 30, 2018
To: | Joe Chipman, New Commons Development
From: | Niraj Sunuwar, P.Eng.
File: | 4475.0002.01
Subject: | Charman Creek Traffic and Parking Review

1. Background

Urban Systems was retained by New Commons Development to conduct a Traffic and Parking Review for a new affordable housing development in the Town of Gibsons. The goal of this development is aimed at addressing the affordability gaps and the homeless challenges within the Town. New Commons, in partnership with Urban Matters, the Town of Gibsons, and Sunshine Coast Affordable Housing Society, is planning to develop these affordable housing units on Charman Creek Lands (at the south end of Shaw Road), which is under the ownership of the Town. **Figure 1** shows the location of the development within the Town of Gibsons. The proposed development will consist of 40 mixed-size (bachelor to 3-bedroom) units distributed into four 10-plex, mid-rise constructions.

Under the Town's Official Community Plan, the parcel of Charman Creek Lands on which the housing units will be built is currently designated for Public/Community Uses and is zoned as Parks, Recreation and Open Space Zone (PRO) under the zoning bylaw. The parcel is largely comprised of undeveloped tree-covered park space with trails provided for public recreational use.

2. Existing Conditions

The proposed development area is situated in the northwest corner of the Charman Creek Lands, just south of Shaw Road. This area is currently covered by existing trees and vegetation and does not allow vehicle access. **Figure 2** illustrates the existing pedestrian, cycling, and transit facilities and connections in the vicinity of the proposed site.

Road Network

According to the concept drawings of the development, Shaw Road is the only existing vehicle connection that will provide access to the proposed site. This will involve extending Shaw Road to provide access to the proposed housing units. Currently, this segment of Shaw Road terminates just before Charman Creek Lands (south of Inglis Road) by the means of concrete barriers and becomes Inglis Trail, a multi-use path leading into the Charman Creek Lands. It should be noted that another segment of Shaw Road exists to the south of the Charman Creek Lands, however for the purpose of this study, the memo will be solely referencing the northern segment. Under existing conditions, Shaw Road has a 2-lane cross-section with rolled curbs on both sides and provides access to residential communities in the O'Shea Neighbourhood. In addition, Shaw Road currently allows parking on both sides and is designated as a Collector 1 under the Town's future road network plan. On the north end, Shaw Road connects to Gibsons Way (Sunshine Coast Highway), which is a major arterial roadway that provides east-west connection within the Town and to regional destinations. The intersection is fully signalized with left turn storage lanes on Gibsons Way in both directions.

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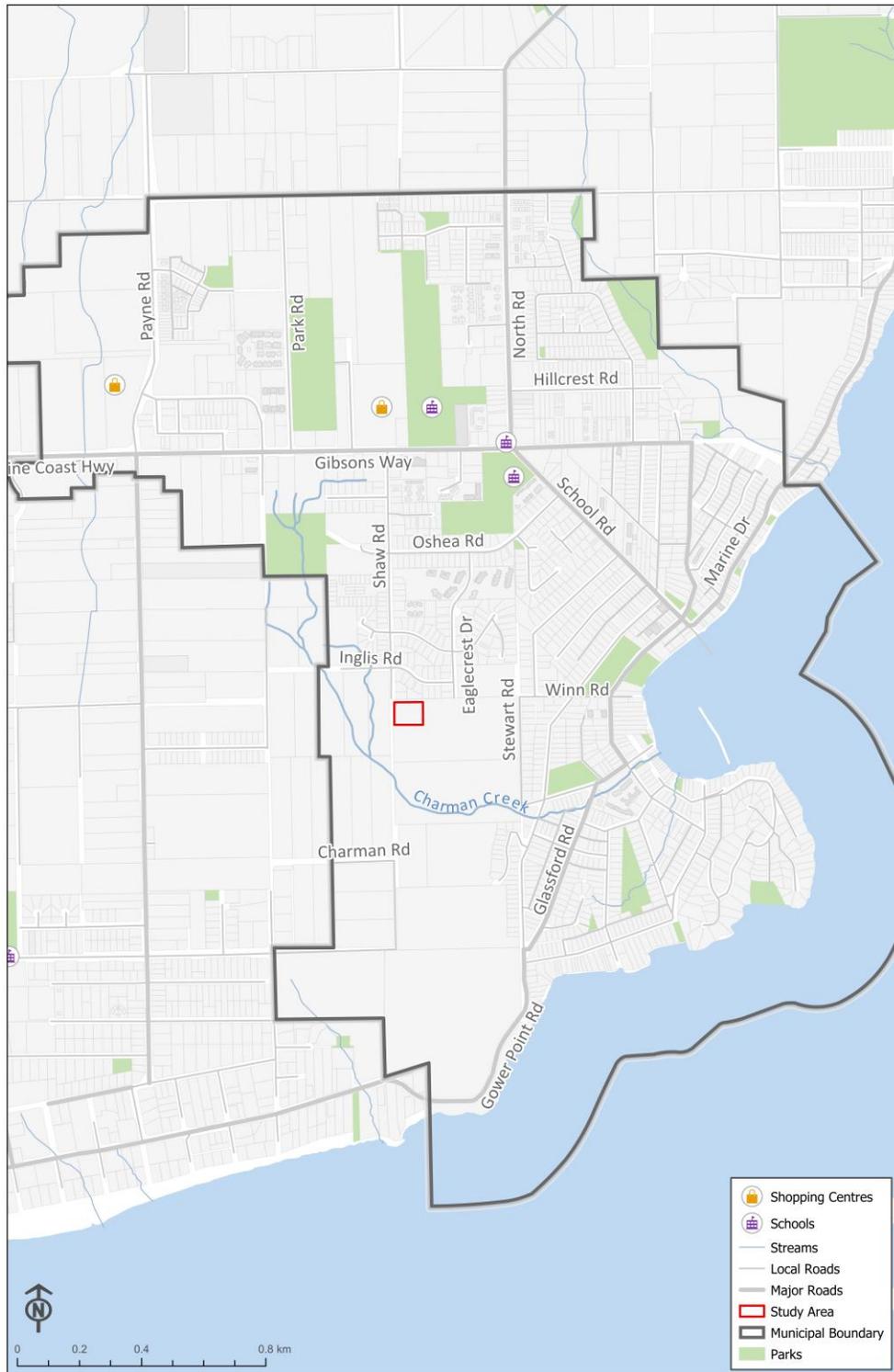


Figure 1: Study Area

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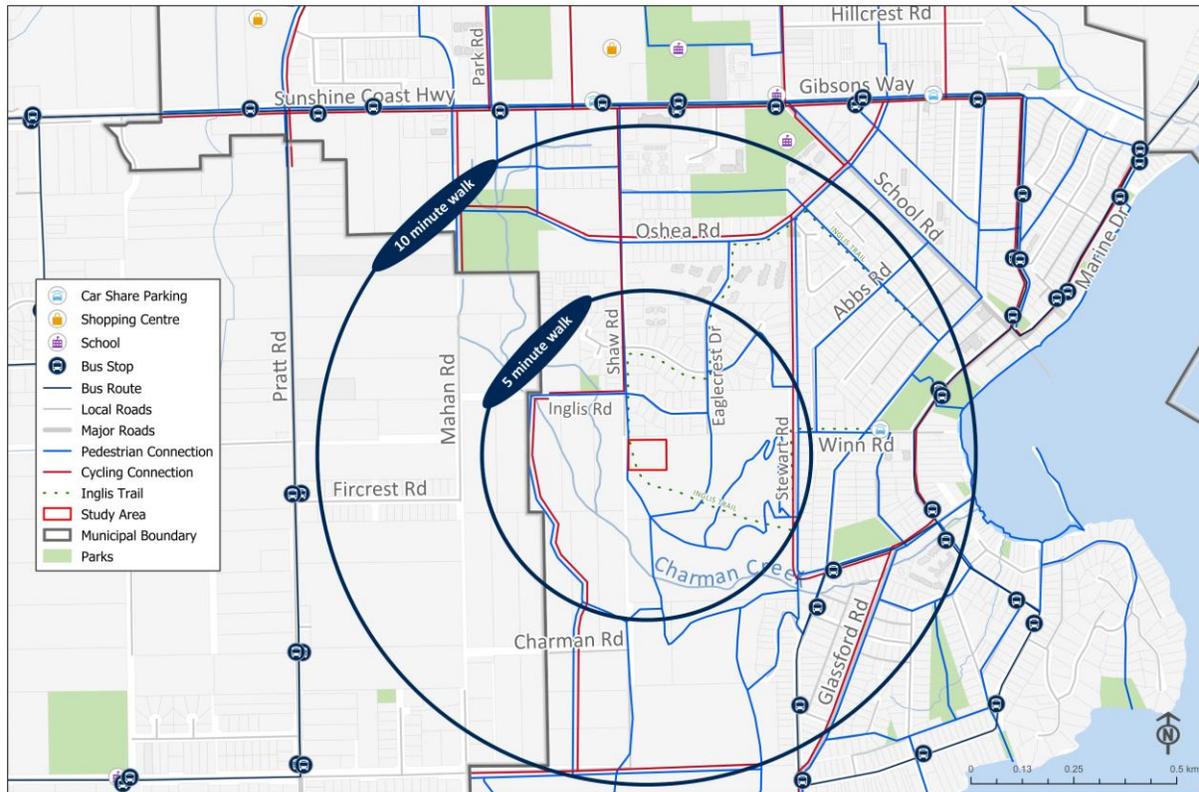


Figure 2: Pedestrian, Cycling, and Transit Facilities

Transit Service

Bus routes servicing the Town of Gibsons are within the Sunshine Coast Regional Transit System operated by BC Transit. Currently, there are two routes that operates through the Town. Route 1 originates from the Langdale Ferry Terminal and services the coastal neighbourhoods of Gibsons in the form of a loop before continuing west on Gibsons Way towards the municipality of Sechelt. As shown in Figure 2, the proposed development site is approximately 10-minute walking distance to the nearest bus stops, both to the north of the site on Gibsons Way and to the east on Gower Point Road. The alternative bus route, Route 90, is an express line that connects the same destinations as Route 1 but only runs on Gibsons Way and does not make a loop through the Town. Hence, the nearest bus stop on this route is a 10-minute walking distance north of the proposed site.

Pedestrian Facilities and Connections

Sidewalks are present on both sides of Shaw Road from Gibsons Way to Inglis Road. South of Inglis Road, sidewalks are only provided on the east side given that the west side is currently not fully developed. Marked pedestrian crossings are also provided along the east side of Shaw Road at intersections with cross roads. At the signalized intersection of Shaw Road and Gibsons Way to the north of the site, pedestrian activated signals are provided on every approach to facilitate crossing.

Inglis Trail is a pedestrian trail within Charman Creek Lands that runs along the north side of Charman Creek, connecting from Shaw Road on the east to Stewarts Road on the west. There are several branched

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paths along this trail that leads to other areas such as a northward connection to Eaglecrest Drive, a southward connection across the creek, and an alternative path to Stewart Road.

3. Future Traffic Conditions

In order to assess the potential traffic impact from the future development, the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) was referenced to estimate the number of trips that will generated by the site. Table 1 summarizes the trip generation rates and expected number of vehicle trips from the proposed housing units during the morning and evening peak hours.

Table 1: Trip Generation Summary

Table with 8 columns: Land Use, Peak Period, Trip Rate (per dwelling unit), IN %, OUT %, Total Trips, IN, OUT. Row 1: Mid-Rise Multifamily (40 Dwelling Units), AM, 0.36, 26%, 74%, 14, 3, 11. Row 2: Mid-Rise Multifamily (40 Dwelling Units), PM, 0.44, 61%, 39%, 18, 11, 7.

The table suggests that the proposed development will generate less than 20 trips during the morning and afternoon peak hours of the day, or an average of one trip every three minutes. In addition, this estimation can potentially be even lower given the nature of affordable housing developments having a relatively lower level of car ownership than the average household.

Based on the existing road connections and the land uses near the proposed development, it is reasonable to assume all of the exiting trips will travel northbound on Shaw Road and turn onto Gibsons Way, and vice versa for inbound trips. Furthermore, given the existing characteristics of Shaw Road and the typical capacity of a 2-lane roadway, the low magnitude of vehicle trips generated from the development is not expected to cause significant impact on the current traffic conditions along the corridor. At the intersection of Shaw Road and Gibsons Way, the traffic impact will also be minimal since these trips will be distributed between the eastbound and westbound directions, provided that the signalization at the intersection will be able to clear any northbound queues that potentially form on Shaw Road.

4. Pedestrian and Cycling Connections

Based on the proposed site plan, the sidewalk on the east side of Shaw Road south of Inglis Road is expected to continue south and maintain future connection to the Inglis Trail. Due to the low traffic volumes on Shaw Road, cyclists can share the road with vehicles along this segment. The advisory bike lanes installed in 2016 on Shaw Road between Inglis Road and Gibsons Way along with the low gradient trail to the south (Helen's Way) provide a significant cycling connection between the Upper and Lower Gibsons.

5. Parking Requirements

5.1 Vehicular Parking Requirement

The Town of Gibsons parking bylaw provides requirements for a variety of residential land uses, however it does not contain special provisions for rental housing. Under the bylaw, the minimum required number of off-street parking stalls for an apartment building is 1.5 stalls per dwelling unit, regardless of the size of the dwelling unit. For a townhouse building, the minimum requirement is 2.0 parking stalls per dwelling unit. These requirements are summarized in Table 2.

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Table 2: Town of Gibsons Parking Bylaw Requirement

Class of Use	Required Parking Spaces	Required Spaces for Proposed Development
Townhouse	2 spaces per dwelling unit	80 stalls
Apartment	1.5 spaces per dwelling unit	60 stalls

Assuming the minimum requirement for an apartment building, the proposed development with 40 mixed-size units (with 700m² gross floor area) would require **60 parking stalls** to satisfy the bylaw.

A summary of parking requirements of other municipalities in the Lower Mainland that have specific parking bylaws for multi-family rental housing and affordable housing are shown in **Table 3**. As can be seen from the table below, the required parking spaces in the other municipalities are all significantly lower than the requirement in the Town of Gibson.

Table 3: Parking Requirement based on other municipalities' Parking Bylaw Requirement

Municipality	Class of Use	Required Parking Spaces	Required Spaces for Proposed Development
City of Vancouver	Market Rental Housing	1 space per 125m ² gross floor area 0.075 visitor spaces per dwelling unit	9
City of New Westminster	Downtown Rental Apartment	0.6 spaces per 1-bedroom unit 0.8 spaces per 2+ bedroom units 0.1 visitor spaces per dwelling unit	32
City of North Vancouver	Rental Apartment	0.6 spaces per dwelling unit	27
City of Richmond	Affordable Housing Unit	0.9 spaces per dwelling unit plus 0.2 visitor spaces per dwelling unit	44

A previous parking supply and demand review by Bunt & Associates in 2015 for similar rental housing developments in the Town of Gibsons provides further understanding on parking utilization in the Town. Bunt collected ICBC vehicle ownership and parking supply data for three rental apartments in Gibsons, which are summarized in **Table 4**. Furthermore, Bunt also conducted the same study for housing units in comparable Vancouver Island locations, which is also summarized in **Table 5**.

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Table 4: Parking Demand in Town of Gibsons

Location	Number of Units	Provided Parking Supply	Provided Parking Rate	Registered Vehicles (ICBC)	Parking Rate based on Vehicle Ownership
725 Gibsons Way, Gibsons	37	32 stalls**	0.85 stalls per unit	18	0.49 stalls per unit
Park Rise, 689 Park Road, Gibsons	48	72 stalls*	1.5 stalls per unit	40	0.83 stalls per unit
Oceanview Classic 622 Farnham Road, Gibsons	47	71 stalls*	1.5 stalls per unit	35	0.74 stalls per unit
Average	44			37	0.69 stalls per unit

* estimated based on aerial photography and bylaw requirements

** recommended parking supply from 2013 Bunt Study

Table 5: Parking Demand in Vancouver Island

Location	Number of Units	Provided Parking Supply	Provided Parking Rate	Registered Vehicles (ICBC)	Parking Rate based on Vehicle Ownership
380 Belmont Avenue	18	14 stalls	0.78 stalls per unit	10	0.56 stalls per unit
314 Goldstream Avenue	24	27 stalls	1.0 stalls per unit	16	0.7 stalls per unit
344 Goldstream Avenue	30	32 stalls	1.0 stall per unit	19	0.63 stalls per unit
2653 Sooke Road, Langford	12	18 stalls	1.5 stalls per unit	7	0.58 stalls per unit
345 Island Highway, View Royal	32	32 stalls	1.0 stall per unit	9	0.28 stalls per unit
Average	23			12	0.52 stalls per unit

The findings in the tables above indicate that the parking utilization of existing rental housing developments in the Town nearby municipalities is lower than the provided supply and Town's bylaw requirement.

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5.2 Bicycle Parking Requirements

The Town of Gibsons parking bylaw also provides requirements for bicycle parking spaces for apartments. Under the bylaw, the minimum required number of Class 1 off-street parking spaces is 1.25 stalls per dwelling unit and 0.2 Class 2 bicycle parking spaces per dwelling unit for an apartment. These requirements are summarized in **Table 6**.

Table 6: Town of Gibsons Bicycle Parking Bylaw Requirement

Class of Use	Required Parking Spaces	Required Spaces for Proposed Development
Class 1	1.25 spaces per dwelling unit	75 spaces
Class 2	0.2 spaces per dwelling unit	12 spaces

As shown in Table 6, the proposed development would require 75 Class 1 bicycle parking spaces and 12 Class 2 bicycle parking spaces.

Car-Share Considerations

There currently is a car-share program operating in the Sunshine Coast region named Coast Car Co-op, which provides services in the Town of Gibsons. The program has a total fleet of five vehicles with three currently located in the Town. The closest vehicle to the proposed site is a Toyota Prius located on Winn Road about a 10-minute walking distance away.

There have been discussions with the Coast Car Co-op to add a new car-share vehicle for this project given the concentration of new residents and the neighbouring development on Eaglecrest Drive. A car-share vehicle could especially benefit lower-income residents who may not be able to afford the costs of car ownership. Stationing a car-share vehicle at or near the development could also reduce parking demand, while mitigating some of the traffic and environmental impacts associated with the development. A reduction of 3 parking spaces per car share vehicle is provided in some municipalities across Metro Vancouver.

Proposed Parking Supply

The preliminary development concept provided by New Commons Development propose a total of 40 parking stalls for the site, which correlates to an average parking rate of 1.0 stall per dwelling unit. Although this parking supply is below the Town’s parking bylaw requirement, it exceeds the requirements of other local municipalities and the observed parking demands in the local area for similar developments.

As such, the proposed supply is expected to meet the parking demands of the proposed affordable housing units. It is recommended that the parking supply be in the range of 34 to 40 stalls, or 0.85 - 1.00 stalls per dwelling unit, to better align with observed parking demand in the local area for similar developments.

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6. Conclusion

Based on the traffic and parking review completed in this study, the proposed development is expected to have minimal traffic impacts while the proposed parking supply of 40 stalls (1.0 stalls per unit) exceeds the future parking demand of this development. It is recommended that the proposed parking supply be reduced to be between 34 and 40 stalls (0.85 – 1.00 stalls per unit) to better align with anticipated demand. Additionally, the bicycle parking requirement for the development includes 75 Class 1 bicycle spaces and 12 Class 2 bicycle spaces.

Sincerely,

URBAN SYSTEMS LTD.



Niraj Sunuwar, P.Eng.
Transportation Engineer

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