

MEMORANDUM

Date: November 17, 2023
To: Town of Sidney
Cc: Brian Pearson, AtLRG Architecture Inc
From: Andy Kading, P.Eng., WATT Consulting Group
Our File No: 3627.B01
Subject: 2060 White Birch Road - Traffic

1.0 INTRODUCTION

WATT Consulting Group was retained by AtLRG Architecture Inc. to examine traffic concerns regarding the proposed development at 2060 White Birch Road in Sidney, BC.

2.0 BACKGROUND

The proposed 2060 White Birch Road development is a four storey, 60 residential unit building. The building will replace a large portion of the existing Marina Park Marina asphalt parking lot. The remaining parking lot will be reconfigured to accommodate 51 surface parking stalls. The terminus of White Birch Road will be widened and redeveloped to a cul de sac to facilitate a turnaround area. Concerns have arisen for sight lines, speed, traffic levels, road widths, and the potential lack of parking for residents and marina users.

3.0 VEHICLE TRAFFIC

3.1 Vehicle Volumes

Results from a *Vehicle Summary Report* of White Birch Road conducted in March of 2022 show that the Average Daily Traffic (ADT) was 361 vehicles (see Attachment 1). The AM Peak hour was found to be between 9:45 and 10:45, and had a total of 29 vehicles, which is about one vehicle every two minutes. The PM Peak Hour was between 12:00 and 13:00 with 37 vehicles.

The Institute of Transportation Engineers (ITE) *Trip Generation Manual 11th Ed.* was consulted to determine a reasonable estimate of the expected site traffic for the

proposed development; the AM/PM peak will add 25 and 35 trips respectively. The added trips will have an insignificant impact on the traffic volume of White Birch Road.

White Birch Road is classified as an Urban Local Road by the Transportation Association of Canada (TAC). These types of roads typically handle up to an ADT of 1000 vehicles, much higher than the weekday ADT of 374 vehicles from the 2022 Vehicle Summary Report.¹ Even with the added traffic from the proposed development, White Birch Road will continue to function without any notable traffic congestion.

3.2 Speed

The statutory speed on White Birch Road is 50km/h. The Vehicle Summary Report also states that the average speed was 27 km/h, while the 85th percentile speed was 34 km/h. The report's findings demonstrate that vehicle speeds are well within safe operating ranges and speeding is not a concern.

4.0 PARKING

The current Marina parking is in the form of a large asphalt lot with around 90 parking spaces, with delineation of individual spots for about half of those. The remaining spots are park-at-will. There are rentable reserved parking spots for Marina clients. The marina itself has a dock with moorage for around 60 boats, and well as a small office building situated in the parking lot.

The proposed development will provide a total of 100 parking spots for the marina and residential building:

- 67 residential stalls including:
 - 45 stalls in the underground parkade
 - 4 parallel stalls on the western frontage of the building
 - 18 stalls in the reconfigured asphalt parking lot.
- 33 marina stalls including:
 - 32 marina berth stalls in the reconfigured asphalt parking lot
 - 1 marina office stall in the reconfigured asphalt parking lot

¹ Transportation Association of Canada. 2017. "Geometric Design Guide for Canadian Roads", pp. 54

Additionally, there is a limited amount of additional on-street parking on White Birch Road.

The Town of Sidney *Off-Street Parking & Loading Bylaw No. 2140* states that marinas must have 0.5 parking spots available per berth, and 1 parking spot per 40 m² of office space. The bylaw also requires that apartments have 1 parking spot per dwelling. When tabulated, the parking plans for the development and the marina conform to this bylaw.

Additionally, there is some flexibility in the shared parking lot because marina peak usage is highly seasonal and marina users generally do not arrive all at once. The marina could opt to share some additional spaces with the more consistently used residential building without serious disruption to its parking situation.

5.0 ROAD WIDTH & SIGHT LINES

The current width of the Private Road is approximately 6 metres and is delineated by a yellow centre line. This width is acceptable for vehicles to pass each other without conflict.

The current width of White Birch Road varies and has two distinct widths;

- Just under 8m in width from McDonald Park Road to just east of Seawind Way.
- 8.5m in width from just east of Seawind Way to just after 2049 White Birch.

On-street parking is allowed on both sides of the road up to 2049 White Birch Road, east of 2049 White Birch Road parking is not allowed. Driveways, utilities, and yellow curb breaks the parking up such that it is not continuous for the street. This creates the effect that even if both sides of the road have vehicles parked, they are rarely both parked across from each other such a manner that the remaining road width is overly constrained. These widths are acceptable and meet standards that allow for opposing vehicles to safely pass each other.

If on-street parking has proven to be an issue along White Birch Road, parking restriction signs can be installed to prevent parking on the north side of the road. On-street parking currently terminates before the White Birch Road / Private Road intersection.

As per the *White Birch Frontage Works Plan* (see Attachment 3), the proposed development will widen the eastern terminus portion of White Birch Rd including the Private Road intersection. This widening will also involve constructing a cul de sac turnaround area. This will allow room for vehicles to enter Private Road without encroaching (i.e. taking a shallow-angle turn into the Private Road) into the paths of

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exiting vehicles. The larger turning radius will decrease potential collisions and will make the roadway more predictable for drivers. The redevelopment of the eastern terminus of White Birch Road will also include the installation of a stop bar and stop sign (R-001) at the southbound leg of the White Birch Road / Private Road intersection.

The current shrubbery (see Figure 1) on the north side of White Birch Road minorly intrudes on the sight lines for exiting vehicles from Private Road; however, with roadway widening, stop sign implementation, and vehicle conflicts only occurring from vehicle approaching from the right, the site lines are acceptable. If sight lines prove to be a problem, the impeding shrubbery should be trimmed/removed.

Figure 1 – Westbound View of White Birch Road at Private Road



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6.0 CONCLUSION

The proposed residential development of 2060 White Birch Road in Sidney, BC will include 60 residential units. Analysis of ITE trip estimates and a 2022 roadway study demonstrate that the additional development-related vehicle traffic can be added to White Birch Road without increasing congestion, and that speeding was not an issue on White Birch Road. Parking demand (and Bylaw compliance) will be fully met by both the residential and marina uses. Widths of both Private Road and White Birch Road are acceptable, and the additional changes to White Birch Road will address present collision risks, and safety will be further improved assuming the installation of a stop sign and stop bar on Private Road. In short, the development does not significantly change the traffic situation on White Birch Road.

7.0 RECOMMENDATIONS

No recommendations for the proposed development.

Sincerely,

WATT Consulting Group



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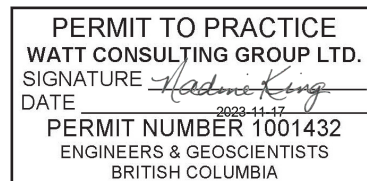
Andy Kading, P.Eng., P.E.

Senior Transportation Engineer

C 236-464-3263

E akading@wattconsultinggroup.com

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Attachment 1 – 2022 White Birch Road Per-Vehicle Summary Report

Per-Vehicle Summary Report: RD400492

Station ID : RD400492

Info Line 1 : White Birch (Seawind-end)

Info Line 2 : A west B east

GPS Lat/Lon :

Source File : RD400492 (PerVeh, 1511-032922 To 1355-040622)

Last Connected Device Type : RoadRunner3

Version Number : 1.34

Serial Number : 19543

Number of Lanes : 1

Posted Speed Limit : 0.0 kph

Lane Configuration

#	Dir.	Information	Vehicle Sensors	Sensor Spacing	Loop Length
1.	East		Axle-Axle	122 cm	
2.	West		Axle-Axle	122 cm	

Average Daily Traffic (ADT)

Weekday		Weekend		Total ADT	
Cars :	364 (97%)	Cars :	317 (98%)	Cars :	352 (97%)
Trucks :	10 (3%)	Trucks :	4 (2%)	Trucks :	8 (3%)
Total :	374	Total :	321	Total :	361

Speed Totals

50 % :	27.0 kph	Top Speed :	70.3 kph	Average Truck Speed :	24.5 kph
85 % :	34.2 kph	Low Speed :	6.7 kph	Average Car Speed :	27.1 kph
Avg :	27.0 kph	20kph Pace Speed:	16.5 - 36.4 (85.2%)		

Peak Hour Totals

AM Peak Hour (Volume)

Weekday : 09:45 - 10:45 (Avg 28)

Weekend : 10:45 - 11:45 (Avg 29)

PM Peak Hour (Volume)

Weekday : 12:00 - 13:00 (Avg 34)

Weekend : 14:15 - 15:15 (Avg 37)

AM Peak Hour (Speed)

02:30 - 03:30 (40.8 kph)

01:45 - 02:45 (46.0 kph)

PM Peak Hour (Speed)

23:00 - 24:00 (37.0 kph)

17:15 - 18:15 (29.8 kph)

Grand Totals

Total Cars :	2808 (352 ADT)	Average Length :	302 cm	Average Headway :	211.3 sec
Total Trucks :	69 (8 ADT)	Average Axles :	2.1	Average Gap :	210.9 sec
Total Volume :	2877 (361 ADT)				

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Attachment 2 – Proposed Residential Development 2060 White Birch Road

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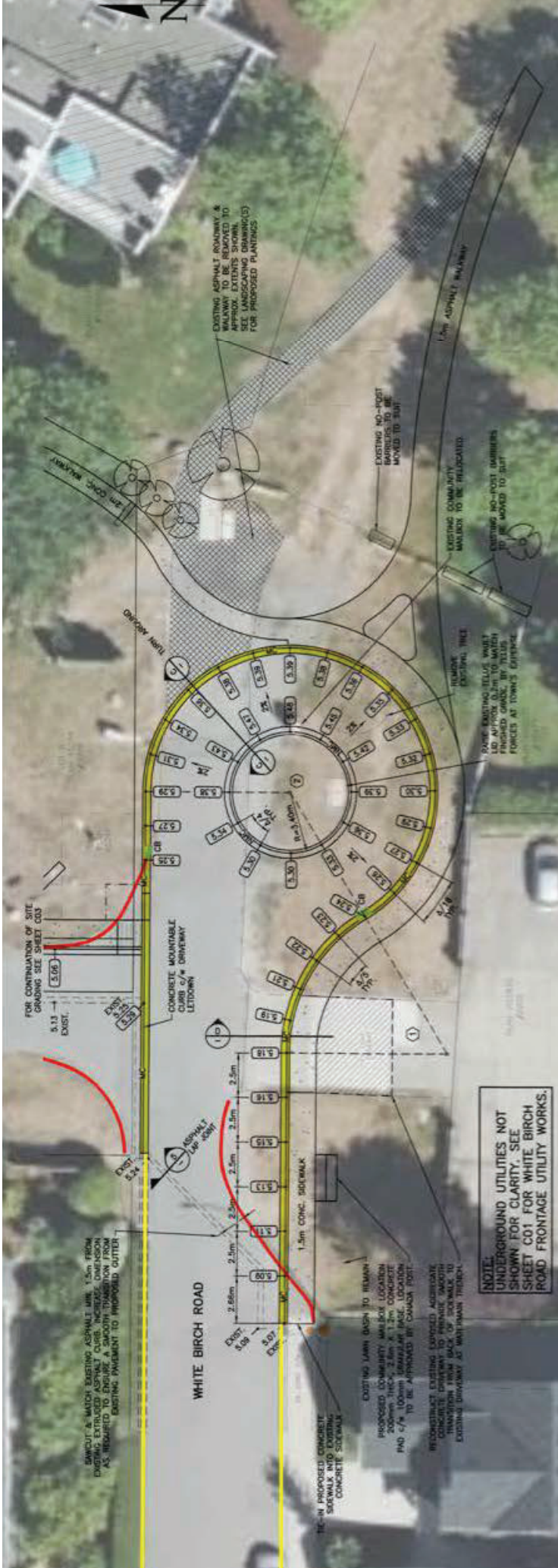
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Attachment 3 – White Birch Frontage Works Plan



WHITE BIRCH ROAD FRONTAGE WORKS PLAN
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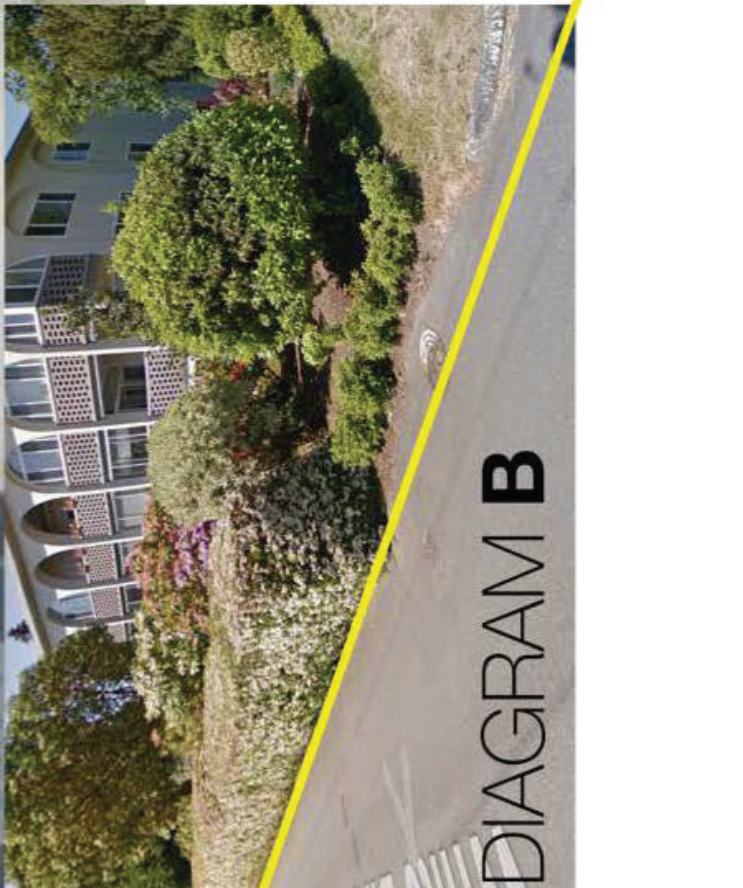


DIAGRAM B