

MEMORANDUM

Project: District 99

Particulars:

Application: LAND DEVELOPMENT PERMIT

Location: District of Squamish

Date: 22nd May 2015

Prepared by: Tom Kenny

Attention Tom Kenny
Matt Gunn

TK
MG

Select Contracts
District of Squamish

Distribution: (all of the above plus)

District 99 - Phase 1 and future use

This application is for a land development permit of an indoor bike park building facility forming part of a broader Business Park development project by the Owner. As such the drawings demonstrate the context of the building's relationship with a broader proposal (not forming part of this application) and also protection for the Owner with regards to the future occupancy of the building in the event of changes to occupancy of the building in the future.

With regards to the latter, it is proposed that the building will be designed in such a way to accommodate this future-use (whilst its intended occupancy will form a part of a separate future Phase 2 application). Therefore steps have been taken to demonstrate how this will affect the proposed re-design of the future building in such an event and how this translates to the proposed construction.

In particular (and perhaps deemed mandatory for this land development application), it is proposed that the entire building foundation will be raised to 8" above FCL in order to accommodate several (4 no.) concrete slab bays in future occupancy. In this event it is proposed that the building would be divided into 4 bays of separate occupancy. Phase 2 will see the exterior grade raised in balance with the broader project and thus providing suitable access and additional parking to further accommodate the new occupancy. The framing of the building will be designed in such a way that the building will be able to easily accommodate new doors and windows as demonstrated on the provided building elevations and plans.

Flood Level Covenant

All building services; mechanical/electrical rooms; WC facilities; and reception areas will be designed in accordance to the FCL. However, it is proposed and expected that the Phase 1 (Indoor

Bike Park occupancy) will require a separate covenant that exempts its park features from the Flood Level Covenant allowing for these features to be built off of the existing average grade elevation.

District 99 Expected Building Occupancy

Our research to date has yielded little in terms of a useful precedent in local code regarding anticipated occupancy for the project. An indoor bike park is a unique business that cannot easily be categorized under the existing system. We therefore propose an occupancy calculation based on our professional experience of indoor bike parks (an international benchmark study was completed as part of our market research) and our design for the building internals.

Building Size (Square Feet):	30,000
Space Per Person Under Normal Operation (Square Feet):	500
Total Building Occupancy Under Normal Operation (Persons):	60

An allowance of 500 square feet per person takes into account the jump features, trail etiquette and safety considerations necessary for normal operation of the facility. It should not be considered a limit but provides a good basis for other design parameters.

District 99 Proposed Parking Allowance

Table 3 of Section 40.7 of the Zoning Bylaw No. 2200, 2011 stipulates that a building of Assembly Use (unless listed) requires a minimum vehicular parking allowance of 1 space per 5 seats or 11 spaces per 100sqm (1,076 sqft) of floor area used by the public, whichever is greater.

With a proposed occupancy of 60 people one could determine an allowance of 12 parking spaces by means of the following calculation:

$$60 \text{ persons} / 5 \text{ seats} = 12 \text{ spaces}$$

In contrast, with an expected occupancy of 60 persons at any given time, one could also determine an allowance of 11 parking spaces by means of the following calculation:

$$30'000\text{sqft} / 60 \text{ persons} = 500\text{sqft of floor area used by the public.}$$

As a minimum, we therefore propose to allocate the greater amount of 12 spaces.

We will also allocate 1 designated parking space for persons with disabilities.

Furthermore, given the nature of the proposed Phase 2 development as indicated on drawing 10.01, we have conducted the following study in order to demonstrate an aid in the request for the arrangement of shared parking during peak periods if required.

Vehicle Traffic Summary

The number of vehicles travelling to and from District 99 in a single day will vary according to time of year, weather conditions, school holidays and special events. Consequently, the parking requirements on site will also vary. For the purpose of this summary, we will demonstrate two scenarios:

- Peak Day – the busiest day of the year, based on venue capacity.
- Average Day – the mean average day based on an anticipated 36,255 visits per year.

The proportion of visitors arriving by bike is likely to be high because the facility is an indoor bike park. Equally, there are a number of good transit connections nearby. We assume, therefore, that 60% of all visitors and employees will arrive by car.

Peak Day Scenario

Despite the size of the building (30,000 square feet) the capacity is not linked to the area per person but rather is limited by the nature of the use of the building. As such, we reach our conclusion about the peak day of 300 visits and assume an even distribution of arrival and departure times throughout the day.

Vehicle Arrivals:	156
Vehicle Departures:	156
Vehicles Requiring Nearby Parking At One Time:	34

A detailed breakdown, including distribution across the day is provided in the Appendix A.

Average Day Scenario

An average day is taken from the mean daily visits and assumes a distribution reflective of a winter school day. This produces peaks in arrivals that would not be present in a uniform distribution but is considered to be more realistic and best serves the interests of the project and the local community.

Vehicle Arrivals:	53
Vehicle Departures:	53
Vehicles Requiring Nearby Parking At One Time:	10

A detailed breakdown, including distribution across the day is provided in the Appendix B.

At One Time				
Time Period	Guest Vehicles	Employee Vehicles	Transit Vehicles	Total Vehicles
1-2 pm	0	0	0	0
2-3 pm	0	0	0	0
3-4 pm	0	0	0	0
4-5 pm	0	0	0	0
5-6 pm	0	0	0	0
6-7 pm	0	0	0	0
7-8 pm	0	0	0	0
8-9 pm	0	0	0	0
9-10 pm	0	2	0	2
10-11 am	23	2	0	25
11 am-12 pm	90	2	0	92
12-1 pm	90	2	0	92
1-2 pm	90	2	0	92
2-3 pm	90	2	0	92
3-4 pm	90	2	0	92
4-5 pm	90	4	0	94
5-6 pm	90	4	0	94
6-7 pm	90	4	0	94
7-8 pm	90	1	0	91
8-9 pm	23	1	0	24
9-10 pm	0	0	0	0
10-11 pm	0	0	0	0
11-12 pm	0	0	0	0
12 pm-1 am	0	0	0	0
Total	36	4	0	40

District 99 - Distribution						
Time Period	Actual			Capeters		
	Guest Vehicles	Employee Vehicles	Transit Vehicles	Guest Vehicles	Employee Vehicles	Transit Vehicles
1-2 am	0%	0%	0%	0%	0%	0%
2-3 am	0%	0%	0%	0%	0%	0%
3-4 am	0%	0%	0%	0%	0%	0%
4-5 am	0%	0%	0%	0%	0%	0%
5-6 am	0%	0%	0%	0%	0%	0%
6-7 am	0%	0%	0%	0%	0%	0%
7-8 am	0%	0%	0%	0%	0%	0%
8-9 am	0%	0%	0%	0%	0%	0%
9-10 am	0%	40%	0%	0%	0%	0%
10-11 am	60%	5%	5%	5%	5%	5%
11 am-12 pm	60%	5%	5%	5%	5%	5%
12-1 pm	60%	5%	5%	60%	5%	5%
1-2 pm	60%	5%	5%	60%	5%	5%
2-3 pm	60%	40%	5%	60%	40%	5%
3-4 pm	60%	5%	5%	60%	5%	5%
4-5 pm	60%	20%	5%	60%	5%	5%
5-6 pm	60%	5%	5%	60%	5%	5%
6-7 pm	60%	5%	5%	60%	5%	5%
7-8 pm	60%	5%	5%	60%	40%	5%
8-9 pm	5%	5%	5%	60%	5%	5%
9-10 pm	5%	5%	5%	60%	20%	5%
10-11 pm	0%	0%	0%	0%	0%	0%
11-12 pm	0%	0%	0%	0%	0%	0%
12 pm-1 am	0%	0%	0%	0%	0%	0%
TOTALS	60%	100%	0%	60%	60%	0%

Appendix B

District 99 - Hourly Profile										
Time Period	District 99 Arrival					District 99 Departure				
	Guest Vehicles	Employee Vehicles	Traffic Vehicles	Total Vehicles	Percentage	Guest Vehicles	Employee Vehicles	Traffic Vehicles	Total Vehicles	Percentage
12pm	0	0	0	0	0%	0	0	0	0	0%
23pm	0	0	0	0	0%	0	0	0	0	0%
34pm	0	0	0	0	0%	0	0	0	0	0%
45pm	0	0	0	0	0%	0	0	0	0	0%
56pm	0	0	0	0	0%	0	0	0	0	0%
67pm	0	0	0	0	0%	0	0	0	0	0%
78pm	0	0	0	0	0%	0	0	0	0	0%
89pm	0	0	0	0	0%	0	0	0	0	0%
910am	0	1	0	1	3%	0	0	0	0	0%
1011am	2	0	0	2	3%	0	0	0	0	0%
11am-12pm	2	0	0	2	3%	2	0	0	2	3%
12-1pm	2	0	0	2	3%	2	0	0	2	3%
12pm	2	0	0	2	3%	2	0	0	2	3%
23pm	2	1	0	4	7%	2	1	0	4	7%
34pm	7	0	0	7	13%	7	0	0	7	13%
45pm	7	1	0	8	15%	7	0	0	7	13%
56pm	5	0	0	5	9%	5	0	0	5	9%
67pm	7	0	0	7	13%	7	0	0	7	13%
78pm	7	0	0	7	13%	7	1	0	8	15%
89pm	2	0	0	2	3%	2	0	0	2	3%
910am	0	0	0	0	0%	2	1	0	3	5%
1011am	0	0	0	0	0%	0	0	0	0	0%
1112am	0	0	0	0	0%	0	0	0	0	0%
12pm-1am	0	0	0	0	0%	0	0	0	0	0%
TOTALS	36	4	0	33	100%	0	33	4	33	100%
Guest	Company allocation									29
	Percentage arriving by passenger car									26
	Vehicle company use									2
	Total daily guest vehicles									36
Employee	Company allocation									4
	Percentage arriving by passenger car									26
	Vehicle company use									1
	Total daily employee vehicles									4
Traffic	Company allocation									0
	Percentage arriving by public transportation									0
	Vehicle company use									0
	Total daily traffic vehicles									0
Total	Total vehicles									33

At One Time				
Time Period	Guest Vehicles	Employee Vehicles	Transit Vehicles	Total Vehicles
1-2 pm	0	0	0	0
2-3 pm	0	0	0	0
3-4 pm	0	0	0	0
4-5 pm	0	0	0	0
5-6 pm	0	0	0	0
6-7 pm	0	0	0	0
7-8 pm	0	0	0	0
8-9 pm	0	0	0	0
9-10 pm	0	1	0	1
10-11 pm	2	1	0	4
11am-12pm	2	1	0	4
12-1 pm	2	1	0	4
1-2 pm	2	1	0	4
2-3 pm	2	1	0	4
3-4 pm	7	1	0	8
4-5 pm	7	2	0	20
5-6 pm	5	2	0	7
6-7 pm	7	2	0	20
7-8 pm	7	1	0	8
8-9 pm	2	1	0	3
9-10 pm	0	0	0	0
10-11 pm	0	0	0	0
11-12 pm	0	0	0	0
12pm-1am	0	0	0	0
Total	7	2	0	16

District 99 - Distribution						
Time Period	Arrival			Departure		
	Guest Vehicles	Employee Vehicles	Transit Vehicles	Guest Vehicles	Employee Vehicles	Transit Vehicles
1-2 am	0%	0%	0%	0%	0%	0%
2-3 am	0%	0%	0%	0%	0%	0%
3-4 am	0%	0%	0%	0%	0%	0%
4-5 am	0%	0%	0%	0%	0%	0%
5-6 am	0%	0%	0%	0%	0%	0%
6-7 am	0%	0%	0%	0%	0%	0%
7-8 am	0%	0%	0%	0%	0%	0%
8-9 am	0%	0%	0%	0%	0%	0%
9-10 am	0%	40%	0%	0%	0%	0%
10-11 am	5%	0%	0%	0%	0%	0%
11am-12pm	5%	0%	0%	5%	0%	0%
12-1 pm	5%	0%	0%	5%	0%	0%
1-2 pm	5%	0%	0%	5%	0%	0%
2-3 pm	5%	40%	0%	5%	40%	0%
3-4 pm	15%	0%	0%	5%	0%	0%
4-5 pm	15%	20%	0%	15%	0%	0%
5-6 pm	40%	0%	0%	15%	0%	0%
6-7 pm	15%	0%	0%	40%	0%	0%
7-8 pm	15%	0%	0%	15%	40%	0%
8-9 pm	5%	0%	0%	15%	0%	0%
9-10 pm	0%	0%	0%	5%	20%	0%
10-11 pm	0%	0%	0%	0%	0%	0%
11-12 pm	0%	0%	0%	0%	0%	0%
12pm-1am	0%	0%	0%	0%	0%	0%
TOTALS	100%	100%	0%	100%	100%	0%