

FAIRWINDS REAL ESTATE MANAGEMENT INC.

Schooner Cove Neighbourhood Plan – Parking Study

EYH Consultants Ltd.

In Association with

Synectics Road Safety Research Corporation

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EYH Consultants Ltd.

per: Eanson Ho, MBA, President
Al Popoff, P.Eng., Senior Consultant
e: eanson@EYHconsultants.ca
t: 604 817 7798

In Association with

Synectics Road Safety Research Corporation

per: Francis P.D. Navin, P.Eng., Ph.D., D.Sc. (Hon)
President
e: fnavin@synectics.ca
t: 604 683 4714

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EXECUTIVE SUMMARY

Background

A Neighbourhood Plan for the redevelopment of Schooner Cove has been prepared. Acknowledging the overarching objectives of the Regional District of Nanaimo's (RDN) Regional Growth Strategy and Official Community Plan, the proposed Neighbourhood Plan articulates the vision, future land uses & densities for Schooner Cove: intended to provide local residents of Nanoose Bay with a vibrant waterfront community heart.

The Schooner Cove Neighbourhood Plan, encompassing twelve acres, proposes an extensive system of pedestrian-oriented open spaces, parkettes & public waterfront, medium density residential development and a commercial village & marina, centred on the immediate needs of the local community and their daily needs. It should be noted that, for the purposes of this study, residential land uses were not analysed, as it is assumed that residential parking shall be accommodated within structured underground parking and designated guest parking areas outside the Village area.

The purpose of this study is to analyse the proposed Schooner Cove Neighbourhood Plan with respect to:

- The parking demand characteristics and requirements of the proposed commercial uses (limited to “the Village” area);
- The parking demand characteristics and requirements of the proposed marina uses; and,
- A Comprehensive parking supply strategy.

Central to this study was a comprehensive, analytical approach using first principles: empirical data collected from observations of current uses, as well as both Ministry and RDN parking generation rates were analysed, evaluated and measured against a functional understanding of the proposed multi-use program (including land use, adjacencies, and pedestrian-orientation) and its associated parking requirement as per the *Institute of Transportation Engineers* (ITE) standards. Finally, opportunities for sharing of parking were identified and built in to a parking strategy for both commercial and marina uses, including the identification of contingency parking options.

The recommended parking requirement for the Schooner Cove Village totals 160 spaces, composed of: 74 spaces for Schooner Cove commercial uses and 86 spaces for the Marina.

The analysis and the formulation of parking supply strategy contained herein are to provide an appropriate, but not excessive level of parking supply to support the viability of local businesses without an over-allocation of space to parking. The study concludes that the above parking supply will be sufficient to support the planned commercial and marina activities within the Schooner Cove Neighbourhood Plan.

1.0 INTRODUCTION

1.1 Background

A Neighbourhood Plan for the redevelopment of the 12-acre Schooner Cove Neighbourhood has been prepared. The proposed mix of land uses within the Schooner Cove Neighbourhood Plan is intended to establish a vibrant waterfront community heart for the residents of Nanoose Bay, with access to commercial, marina services and other amenities to satisfy their day-to-day needs.

Through consultation with RDN Staff, their Technical Advisory Committee, public and the local residents' Community Advisory Group, the Schooner Cove Neighbourhood Plan has been developed to reflect the balance of policy directives and local interests to best serve the community. The proposed Schooner Cove Neighbourhood Plan represents a pedestrian-oriented, mixed-use village, with residential, commercial, and marina-associated (support) land uses.

This report addresses parking requirements associated with the commercial and marina-support uses. Since this development site lies in an unincorporated area, approvals are required from RDN and the Ministry of Transportation and Infrastructure (Ministry).

1.2 Purpose of This Study

A bench mark parking study *Fairwinds – Schooner Cove Parking Review, Final Report* was conducted by Opus International Consultants (Canada) Limited, in March 2009 (Opus). The report reviewed parking requirements of various jurisdictions and analysed comparable parking requirements. A more detailed analysis of the parking characteristics and demands is required to properly understand the parking requirements of the commercial and Marina components of the Schooner Cove Village Neighbourhood Plan.

The objective of this parking study is to analyse parking demand characteristics and requirements for the planned commercial and Marina uses proposed within the Schooner Cove and to develop a comprehensive parking supply strategy.

1.3 Study Scope and Terms of Reference

The study takes a systematic approach to analyse parking for the proposed land uses, the development plan, available documents, resource materials and reports. The parking study reviews RDN and Ministry requirements, parking characteristics of the Schooner Cove Neighbourhood Plan, shared parking opportunities, and supply strategy. The terms of reference for the study include:

- The review of planning reports and materials;
- The review of the Opus Schooner Cove Parking Review report;
- A site visit by study team members;
- The review of the 2008 and 2009 Schooner Cove Marina parking records;
- The determination of parking requirements specified by RDN and the Ministry;
- The review of parking characteristics of Schooner Cove Village Neighbourhood Plan;
- The review of shared parking requirements;
- The establishment of parking requirements for Schooner Cove Village;
- The establishment of parking requirements for Schooner Cove Marina;
- The establishment of parking supply strategies and options; and
- The preparation of a report documenting the findings.

1.4 Terminology

Below are the descriptions of some of the terms used in this report.

Aggregate Sum/Aggregate Total – It is the sum total of all individual parking requirements for various land uses as set out in local zoning bylaws or in the Ministry’s requirements. The parking requirements are assumed to be independent of each other. This will give an over estimate of the required parking.

Average Peak Parking Demand Rate – This is the average peak parking rate based on actual surveys at different sites. It represents the average PEAK parking demand.

Institute of Transportation Engineers (ITE) - This is an United States based international organization of more than 11,000 transportation engineers and planners in over 70 countries who are responsible for the safe and efficient movement of people and goods. The organization provides leadership and resources to help meet those responsibilities. ITE publishes many handbooks and manuals, including the *Parking Generation* report that is a comprehensive compilation of parking characteristics and requirements for a wide variety of land uses in North America. This and other ITE publications are widely accepted and used in Canada by both practicing professionals and approving jurisdictions. The Ministry uses *Parking Generation* for its parking requirements.

Nominal Parking Reduction Factors – The parking requirements can be reduced because of certain factors such as parking durations and modes of travel. When those factors are unavailable for a particular development site, comparative nominal parking reduction factors are used to account for the parking reductions.

Parking Demand – Parking Demand describes the parking needs for a specific land use or by a specific user group on a specific day at a specific time.

Shared Parking – The Ministry of Transportation and Infrastructure’s *Traffic Impact Study Manual* defines shared parking as a parking space that can be used to serve two or more land uses over the course of a day, week or month. It is a method of maximizing the use of available parking space by sharing it among a group of users who have different parking characteristics. Another benefit of shared parking is that it can reduce the number of access points (and parking) required to service a mixed use development area. Shared parking takes advantage of the fact that most parking spaces are only used part time by a particular motorist or group. Efficient sharing of spaces can allow parking requirements to be reduced significantly. (Source: Institute of Transportation Engineers.)

Temporal Variations – It describes the hourly variations of parking demands or requirements throughout the day. This analysis is useful because different land uses attract patrons at different times. If the individual peak parking demands do not occur at the same time, then parking space can be shared.

1.5 Study Approach and Methodology

This study first established RDN’s and Ministry’s parking requirements and parking characteristics for individual land uses. Whenever data was available, parking requirements for a typical weekday and a Saturday were analyzed based on historical site observation.

The study used the ITE time-of-day for the weekday and Saturday distributions of parking demand for each land use. Where distributions were unavailable, the hourly arrival and departure rates, the average parking durations of the land use and the accumulation distributions were established based on field observations and experience elsewhere. By analyzing parking for each land use and then superimposing them on an hourly basis, the combined peak requirements can be more accurately established.

RDN’s and Ministry’s parking requirements are for individual land uses and do not account for the combined effect of different peak hours and will result in over estimating parking requirements. Municipal parking standards are usually based on the experience of each land use in isolation. For

comparison purposes, the temporal sharing criteria published in the City of Ottawa bylaws and the Victoria Transport Policy Institute were used.

In addition to the temporal variation in demands, further adjustments are needed to account for the multi-purpose trips to Schooner Cove Village. Observed parking reduction factors in other locations range from 20 to 30 percent. Experience from other commercial centres with residential units within walking or cycling distance shows reductions in the use of motor vehicles and thus parking requirements. The parking reduction factor estimated for Schooner Cove Village commercial is in the 5 percent range.

Further to the above, parking adjustment factors related to the sharing of high-turnover parking spaces need to be considered. For example, an average coffee shop stay was observed by the study team to be about 20 minutes. For small commercial centres, the observed percentage of parking duration of 30 minutes or less is about 30 percent, and for 30 to 60 minutes it is 30 percent. High turnover retail businesses usually require fewer parking spaces than low turnover business for the same number of customers.

For further consideration and comparison, the commercial component of Schooner Cove Neighbourhood Plan can also be considered as a neighbourhood shopping centre (classified as “strip mall” according to ITE terminology). The findings of the aggregate approach with and without applicable adjustment factors were then compared to the shopping centre category parking requirements. Shopping centre parking requirements have accounted for the imputed adjustment factors. It should be noted that shopping centres adjacent to and having direct access to a major highway or freeway usually require more parking per square foot or space, whereas Neighbourhood shopping centres away from the major highways, surrounded by residential developments require relatively fewer spaces. Also, shopping centres adjacent to a major highway are usually larger in size than those located in the neighbourhood.

Finally, the comprehensive parking supply strategy was formulated based on three parking durations, being: short term (1 to 3 hours), daily (4 or more hours) and long term (multi-day) parking. Experience has shown that retail businesses in a neighbourhood shopping centre usually require less than one hour parking; office and medical components (visits) tend to require one to three hours; office staff would require daily parking; and boaters require multi-day (long-term) parking.

2.0 THE PROPOSED DEVELOPMENT

2.1 The Lakes District and Schooner Cove Neighbourhood Plans

The Lakes District and Schooner Cove neighbourhoods together comprise 748 acres of land within the larger communities of Fairwinds and Nanoose Bay respectively. The proposed Village area lies within the Schooner Cove Neighbourhood Plan and is designed to provide residents of Nanoose Bay with a vibrant waterfront community heart where they can access the Marina, commercial services and other amenities to satisfy their daily needs. The planning details of the Lakes District and Schooner Cove are contained in various reports and documents and are, therefore, excluded from further description here.

In the fall of 2009, Schooner Cove operations consisted of a 360-slip marina, a 54-seat cafe with a small lounge area, and a 21-square metre beer and wine store. The hotel and the pub restaurant have not been operating for some time. The existing Schooner House residential building is not part of this study. This section discusses the parking requirements of the commercial components of Schooner Cove Neighbourhood Plan (located in the Village area).

2.2 The Schooner Cove Neighbourhood Plan

The proposed Schooner Cove Neighbourhood Plan has four zones, as shown in FIGURE 2.1:

- The Village – A commercial hub for the neighbourhood, including an extensive public realm and accessible waterfront;
- The Marina – The continuous use of the existing berths and space for associated program;
- The Commons – Residential use and focal open space areas (commons); and
- The Waterfront – Residential use.

The commercial component of the Village comprises 24,800 square feet (approximately 2,300 square metres) of shops and services; a community grocer, a bakery/café, a beer and wine merchant and a variety of personal and professional services, as well as marina support space (office, washrooms), totalling approximately 2,300 square feet). This study focuses on the parking requirements for commercial uses in Schooner Cove Village and the Marina.

For the residential development components of the Neighbourhood Plan, underground parking with some surface parking for visitors will be provided for all the units. All residential and associated guests parking will meet bylaw and Ministry requirements and are therefore excluded from this report.

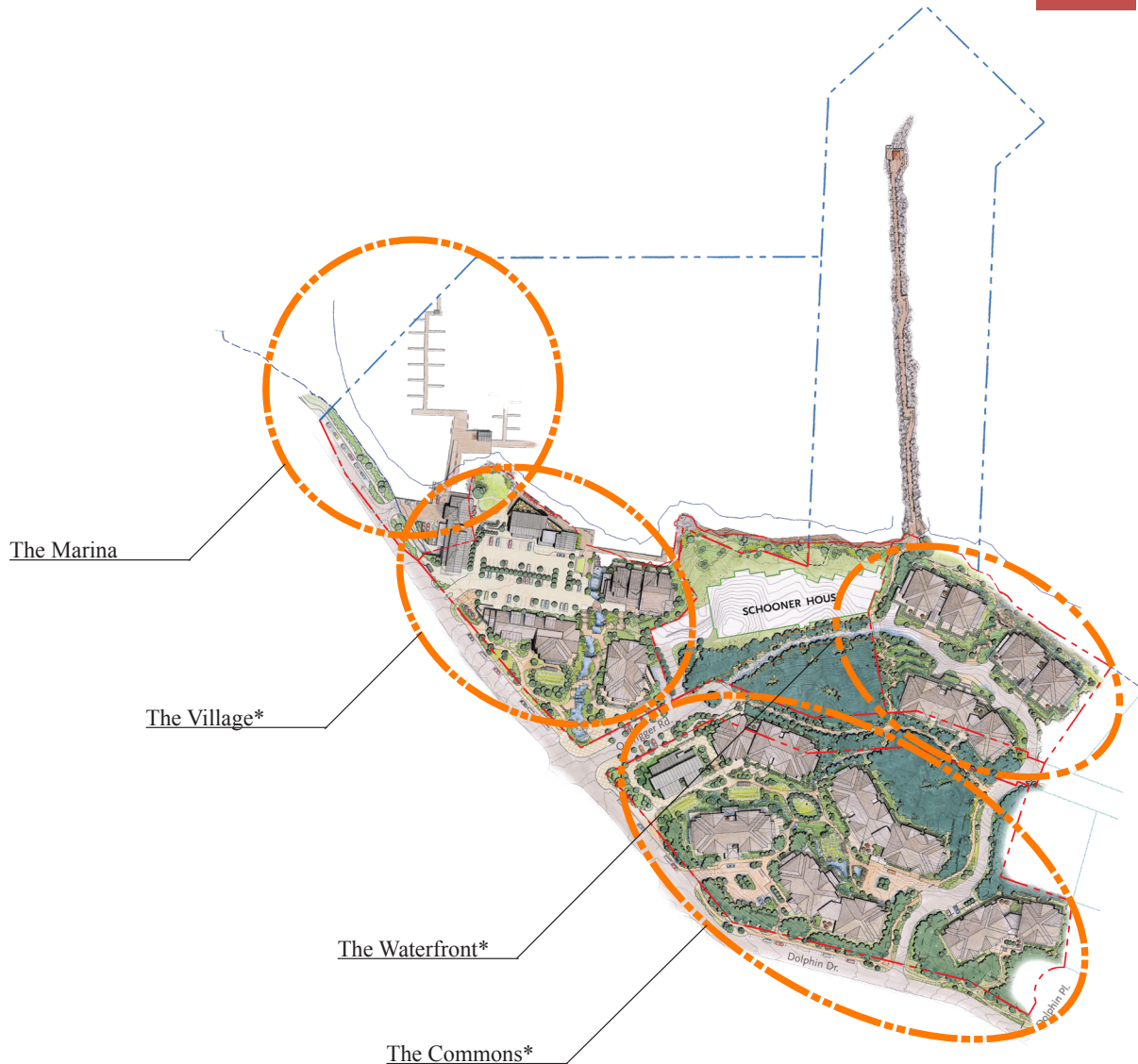


FIGURE 2.1 SCHOONER COVE VILLAGE NEIGHBOURHOOD CONCEPT PLAN

The commercial component of the Village comprises 24,800 square feet (approximately 2,300 square metres) of shops and services; a community grocer, a bakery/café, a beer and wine merchant and a variety of personal and professional services, as well as marina support space (office, washrooms), totalling approximately 2,300 square feet). ***This study focuses on the parking requirements for commercial uses in Schooner Cove Village and the Marina.***

** For the residential development components of the Neighbourhood Plan, underground parking with some surface parking for visitors will be provided for all the units. All residential and associated guests parking will meet bylaw and Ministry requirements and are therefore excluded from this report.*

2.3 Schooner Cove Village

Schooner Cove Village is planned to be a commercial hub for the Schooner Cove neighbourhood and surrounding community. It will provide a convenient location for day-to-day shopping and social needs within walking distance for many residents. The planned uses are shown in TABLE 2.1. The marina operation is briefly discussed in Section 2.4 below and in detail in Section 4.0.

TABLE 2.1 PROPOSED COMMERCIAL LAND USES IN SCHOONER COVE VILLAGE, (AREA IN m² AND sf)

PLANNED LAND USES	PLANNED AREA, (m2)	PLANNED AREA, (sf)
Market	700 m ²	7,534 sf
Business Centre	156 m ²	1,679 sf
Beer and Wine Store	145 m ²	1,560 sf
Bakery Cafe	145 m ²	1,560 sf
Restaurant and Pub, 100 seats	394 m ²	4,241 sf
Take Away Restaurant	78 m ²	840 sf
Multi-Purpose Room	172 m ²	1,851 sf
Discovery Centre	167 m ²	1,798 sf
Boutique Spa & Salon	244 m ²	2,626 sf
Professional & Medical Offices	102 m ²	1,098 sf
TOTAL	2,303 m²	24,787 sf

Note: m² denotes square metres and sf denotes square feet.

The planned land uses are typical of a neighbourhood commercial shopping centre (strip mall in ITE terminology). For clarification: the Business Centre use is anticipated to include printing and copying, courier such as UPS or FedEx; the Multi-Purpose Room (“Quarter Deck”) is intended to provide flexible meeting space for community groups (that is: Schooner Yacht Club, etc.); and the Discovery Centre is a real estate sales centre for Schooner Cove and the Lakes District neighbourhoods.

2.4 Schooner Cove Marina

2.4.1 Current Operation

In the fall of 2009, Schooner Cove operation consisted of a 360-slip marina with four to six employees. Parking counts were conducted between March and September in 2008 and 2009. The parking count results are discussed in Section 4.0 of this report.

2.4.2 Planned Operation

The Schooner Cove Village Neighbourhood Plan will provide a dedicated access, circulation and drop off area for the Marina at the west end of the Cove. The Marina will continue to provide a capacity for 360 slips, administrative office and store for boaters. In lieu of the current boat ramp, a jib crane will be used to launch small boats. With this change, boat trailer parking and storage is anticipated to decrease.

A new restaurant, pub and the beer and wine store will be part of Schooner Cove Village commercial outlets, separate from the Marina operation. Within the Schooner Cove Village Neighbourhood Plan, the Marina operation will include:

- 360-slips with related administration office, marine store, washrooms, and showers of approximately 2,325 square feet (216 square metres).
- Number of employees on site will remain unchanged.

3.0 SCHOONER COVE VILLAGE - COMMERCIAL PARKING REQUIREMENTS

This section provides in-depth analysis of parking requirements using the RDN bylaws and the Ministry requirements. It also studies the parking characteristics of the proposed land uses, including temporal, spatial and trip purpose sharing.

Every vehicle trip requires parking at its destination and parking facilities are therefore an integral component of the roadway system. Because parking is one of the first experiences that users have when arriving at a destination, convenient parking is considered a sign of welcome. Parking that is difficult to find, inadequate, inconvenient or expensive will frustrate users, discourage customers and can result in traffic operation problems. As such, the goal of the analysis is to determine an appropriate level of parking supply to support the viability of proposed commercial operation.

There are three approaches in determining parking requirements:

- Calculate parking requirements for each individual land use and then aggregate them (aggregate total);
- Calculate parking requirements based on temporal sharing; and account for the time of peak demand, alternate modes of transportation and trips for multiple purposes;
- Calculate the parking requirements collectively as a shopping centre, to treat the project as a single entity and implicitly consider temporal & modal factors.

The aggregate approach will usually result in overestimating the parking requirements as it does not account for peak parking usages occurring at different hours of the day (temporal sharing). Furthermore, the aggregate approach does not allow for multi-purpose trips, walk and cycling modes, and high turnover spaces (nominal reduction factors). The use of the ITE shopping centre parking rate accounts for these reduction effects. This study analysed all three approaches to compare the parking requirements.

3.1 Field Observation Data

On Thursday, October 8, 2009, the study team conducted field observations of parking conditions and peaking characteristics of pubs, restaurants, a grocery store, a Starbucks cafe, a beer and wine store and medical offices. The survey was conducted in Kelowna and at isolated locations (not at a shopping centre) away from the major highway such as Highway 97. The surveyed land uses and locations are considered to have very similar parking demand characteristics to those in the Schooner Cove Village Neighbourhood Plan. The survey results, summarized in TABLE 3.1, are comparable to the parking rates used in the ITE rates described in Section 3.2 below.

TABLE 3.1 SURVEYED PARKING RATES IN KELOWNA

LOCATION & LAND USE	AREA m ² /sf	PEAK PARKING	PEAK HOUR	ESTIMATED per 1,000 sf	ITE RATES per 1,000 sf
Creekside Pub - Pub/Restaurant+Beer/Wine Store	700/7,500	55	1600 - 1900	7.3	Pub = 11.4 Beer&Wine = 3.4
Pheasant & Quail Pub - Pub+Beer and Wine Store	600/6,500	36	1700 - 1900	5.5*	Pub = 11.4 Beer&Wine = 3.4
Sunshine Market - Deli/Grocery+Beer and Wine Store+Doctors Office	560/6,000	18	1600 -1700	3.0	Market = 4.36 Beer+Wine = 3.4 Medical = 3.53
Starbucks in a Strip Mall on Lakeshore Drive	140/1,500	13	1700 -1800	8.6	Bakery Cafe = 8.2

Note: *Should be a higher rate since the parking lot was at capacity; m² denotes square metres and sf denotes square feet.

3.2 Ministry of Transportation and Infrastructure - Parking Generation Rates

Since the Schooner Cove Village Neighbourhood Plan is located in an unincorporated area, it will require Ministry approval (in addition to RDN approval). In March 2009, the Ministry adopted the ITE parking generation rates as their standard requirements. The following analysis is based on the 3rd Edition of the *Parking Generation* report published by ITE. The ITE report provides weekday and Saturday “Average Peak Period Parking Demands” (Peak Rates) for various land uses.

3.2.1 Aggregate Parking Requirements

Some of the planned commercial land uses at Schooner Cove Village did not match any of those published in the *Parking Generation* report and in such cases; other land uses considered to have the most similar characteristics were chosen. For example, ITE does not have a category for business centre so the Average Peak Period Parking Demand rate (Peak Rate) of the Convenience Market (Land Use 851) was used.¹

The aggregate parking requirements based on ITE data, for a weekday and a Saturday are summarized in TABLE 3.2 and TABLE 3.3 respectively: 143 spaces for the weekday and 152 spaces for Saturday.

¹ The ITE's Liquor Store (Land Use 859) Peak Rate is for a 47,000-square foot outlet as compared to the proposed 1,560-square foot beer and wine store. Again the Convenience Market (Land Use 851) was used. For the Multi-Purpose Room and the Discovery Centre, the Recreation Community Centre (Land Use 495) Peak Rates were considered appropriate.

TABLE 3.2 ITE WEEKDAY PARKING GENERATION SUMMARY

LAND USE	AREA sf	INSTITUTE OF TRANSPORTATION (ITE) ENGINEERS LAND USES	RATES per 1,000 sf	REQUIRED SPACES
The Market	7,534	Land Use 850 - Supermarket	4.36	32.8
Business Centre	1,679	Land Use 851 - Convenience Market	3.40	5.7
Beer and Wine Store	1,560	Land Use 851 - Convenience Market	3.40	5.3
Bakery Cafe	1,560	Land Use 933 - Fast Food w/o Drive T	8.20	12.8
Pub/Restaurant, 100 seats	4,241	Land Use 932 - High Turn Over w Bar	0.48*	48.0
Take Away Restaurant	840	Land Use 933 - Fast Food w/o Drive T	8.20	6.9
Multi Purpose Room	1,851	Land Use 495 - Recreational CC	3.83	7.1
Discovery Centre	1,798	Land Use 495 - Recreational CC	3.83	6.9
Boutique Spa and Salon	2,626	Land Use 492 - Health/Fitness	5.19	13.6
Professional Office	549	Land Use 701 - Office Suburban	2.84	1.6
Medical Offices	549	Land Use 720 - Medical Dental Office	3.53	1.9
Total	24,787			143

Notes: * denotes per seat; sf denotes square feet; Ministry of Transportation and Infrastructure use:

TABLE 3.3 ITE SATURDAY PARKING GENERATION SUMMARY

LAND USE	AREA sf	INSTITUTE OF TRANSPORTATION (ITE) ENGINEERS LAND USES	RATES per 1,000 sf	REQUIRED SPACES
The Market	7,534	Land Use 850 - Supermarket	4.75	35.8
Business Centre	1,679	Land Use 851 - Convenience Market	4.00	6.7
Beer and Wine Store	1,560	Land Use 851 - Convenience Market	4.00	6.2
Bakery Cafe	1,560	Land Use 933 - Fast Food w/o Drive T	10.90	17.0
Pub/Restaurant, 100 seats	4,241	Land Use 932 - High Turn Over w Bar	0.47*	47.0
Take Away Restaurant	840	Land Use 933 - Fast Food w/o Drive T	10.90	9.2
Multi Purpose Room	1,851	Land Use 495 - Recreational CC	4.00	7.4
Discovery Centre	1,798	Land Use 495 - Recreational CC	4.00	7.2
Boutique Spa and Salon	2,626	Land Use 492 - Health/Fitness	5.19	13.6
Professional Office	549	Land Use 701 - Office Suburban	1.42	0.8
Medical Offices	549	Land Use 720 - Medical Dental Office	2.84	1.6
Total	24,787			152

Notes: * per seat; sf denotes square feet; Ministry of Transportation and Infrastructure uses ITE rate Bakery Cafe Saturday proportion to High Turnover Sit-down Restaurant.

3.2.2 Temporal Shared Parking

The second approach is to analyse shared parking of all the land uses by reviewing the peak parking periods unique to each land use. The ITE report provides weekday and Saturday hourly peak rates and hourly demand distributions for many typical land uses. These rates were applied to estimate the individual hourly parking requirements. The combined weekday and Saturday demands represent the temporal shared parking requirements. The hourly distributions and the temporal shared parking analysis results are shown in APPENDIX A, and the weekday and weekend combined peak temporal shared requirements are summarized in TABLE 3.4.

TABLE 3.4 SUMMARY - ITE PARKING REQUIREMENTS

PARKING REQUIREMENTS	ITE WEEKDAY	ITE SATURDAY	CITY OF OTTAWA* WEEKDAY	VICTORIA TPI* WEEKDAY
Aggregate Total	143 spaces	152 spaces	143 spaces	143 spaces
Temporal Shared Total (% of Aggregate Total)	113 spaces (79%)	111 spaces (78%)	120 spaces (85%)	126 spaces (88%)
Shared Peak Hour	1800 Hours	1800 Hours	1200 and 1800 Hours	1800 Hours

Note: *Based on ITE Parking Generation Rates

TABLE 3.4 also demonstrates the potential parking reductions by comparing this to agreed parking requirements under a range of parking ratios. The ITE weekday results provide a good example of this, with the Aggregate Total parking demand estimated to be 143 spaces whereas the maximum Temporal Shared parking demand is 113 spaces, (a reduction of 30 spaces or 79%).

For additional comparisons, further shared parking analysis was conducted using procedures from the City of Ottawa and Victoria Transport Policy Institute (VTPI). These rates were applied to the individual land use parking requirements and the combined peak identified for comparison purposes:

- The City of Ottawa Zoning Bylaw 2008-250 includes Shared Parking Provisions (Section 104). The Bylaw provides a percentage of sharing for the morning, noon, afternoon and evening periods and these percentages are applied to the ITE parking requirements for each individual land use. The combined peak hour temporal shared parking requirement is shown in TABLE 3.4. The combined peak hours occur during noon hour and during 1800 Hours. It should be noted that the land use categories within the Shared Parking Provisions are less extensive than those of ITE. As well, City of Ottawa's temporal distributions are for four periods in a day as compared to ITE's hourly distributions. As such, the more detailed ITE distribution is chosen for the analysis and hourly distribution and the results are shown in APPENDIX A.

- The Victoria Transport Policy Institute paper, *Shared Parking* (part of their Travel Demand Management Encyclopaedia), identifies parking occupancy rates for various land uses during the day (8 am to 5 pm), evening (6 pm to 12 am) and overnight (12 am – 6 am) periods. The hourly distribution and the resulting parking requirements are shown in APPENDIX A. The combined peak temporal sharing requirement is shown in TABLE 3.4.

3.3 Regional District of Nanaimo – Parking Generation Rates

3.3.1 Aggregate Requirements

RDN Bylaw No. 500, SCHEDULE '3B' stipulates the number of off-street parking spaces required for various land uses. Some of the bylaw's land uses planned for Schooner Cove Village do not match those described in TABLE 2.1. For example, the grocery market, the bakery-cafe, the business centre, etc. are not specified in the bylaw. In such cases, other land uses considered to have the most similar characteristics were chosen. TABLE 3.5 shows the aggregate parking requirements using RDN's bylaw land use designations as being 150 spaces.

TABLE 3.5 RDN AGGREGATE PARKING GENERATION SUMMARY

LAND USE	AREA m ²	RDN BYLAW 500 SCHEDULE '3B', TABLE 1	RATES 1 space/x m ²	REQUIRED SPACES
The Market	700	Commercial - Retail, m2	15	46.7
Business Centre	156	Commercial - Retail, m2	15	10.4
Beer and Wine Store	145	Commercial - Retail, m2	15	9.7
Bakery Cafe	145	Commercial - Restaurant, m2	10	14.5
Pub and Restaurant	394	Commercial - Restaurant, m2	10	39.4
Take Away Restaurant	78	Commercial - Restaurant, m2	10	7.8
Multi Purpose Room	172	Public- Lodge Hall, m2	20	8.6
Discovery Centre	167	Public- Cultural Facility, m2	50	3.3
Boutique Spa and Salon	244	Personal Services, m2	50	4.9
Professional Office	51	Commercial - Office Single Tenant, m2	32	1.6
Medical Offices	51	Commercial - Medical, m2	15	3.4
Total	2,303			150

Notes: m2 denotes square metres

3.3.2 Temporal Shared Parking

Similar to the previous analysis, the RDN rates were applied to the ITE weekday and Saturday hourly parking demand distributions for the various land uses. These hourly distributions and the temporal shared parking analysis results are shown in APPENDIX B. The combined weekday and Saturday parking requirements were examined with the combined peak hour parking requirement summarized in TABLE 3.6. Further shared parking analysis comparison was conducted using procedures from the City of Ottawa and Victoria Transport Policy Institute (VTPI):

- The City of Ottawa Zoning Bylaw 2008-250 includes Shared Parking Provisions (Section 104). The Bylaw provides a percentage of sharing for the morning, noon, afternoon and evening periods and these percentages are applied to the RDN individual parking requirements and the combined peak hour temporal shared parking requirement is shown in TABLE 3.6. The hourly distributions and the resulting requirement of 126 spaces are shown in APPENDIX B. It should be noted that the land use categories in the Shared Parking Provisions are less extensive than those of ITE. As well, City of Ottawa’s temporal distributions are for four periods in a day as compared to ITE’s hourly. The more detailed ITE analysis is therefore preferred.
- The Victoria Transport Policy Institute has published a paper *Shared Parking* as part of their TDM Encyclopaedia. The paper identified parking occupancy rates for various land uses during the day (8 am to 5 pm), evening (6 pm to 12 am) and overnight (12 am to 6 am) periods. These rates were applied to the individual land use parking requirements and the combined peak identified for comparison purposes. The combined peak temporal requirement of 130 spaces is shown in TABLE 3.6. The hourly distribution and the results are shown in APPENDIX B.

TABLE 3.6 SUMMARY OF RDN PARKING REQUIREMENTS

PARKING REQUIREMENTS	RDN WEEKDAY	RDN SATURDAY	CITY OF OTTAWA* WEEKDAY	VICTORIA TPI* WEEKDAY
Aggregate Total	150 spaces	150 spaces	150 spaces	150 spaces
Temporal Shared Total (% of Aggregate Total)	113 spaces (75%)	116 spaces (77%)	126 spaces (86%)	130 spaces (88%)
Shared Peak Hour	1900 Hours	1300 Hours	1200 and 1800 Hours	1800 Hours

Note: *Based on RDN Parking Generation Rates

3.4 Other Shared Parking Considerations

The analysis in Section 3.3 applied the temporal shared parking principle and demonstrated the resulting reduction in parking requirements. In considering shared parking, the following factors are also relevant:

- Increase of walking and cycling modes because of proximity of residents.
- Multi-purpose trips – a vehicle parked while visiting multiple commercial outlets.
- High turnover parking spaces – short parking durations generally reduce requirements.

Observations elsewhere provided a 10 percent reduction factor for the walk and bicycle mode. Without any site specific observations at Schooner Cove Village, a 5 percent reduction is assumed. Future observations are recommended to confirm the reduction rates when Schooner Cove Village and surrounding residential units are fully developed and occupied.

This Village is planned to serve as a neighbourhood centre to meet local residents' day-to-day shopping needs. Its location, being away from any regional highway, would generally limit the business customers to local residents. The amount of multi-purpose trips depends on the walking distance and the trip purposes to Schooner Cove Village. A study in the United Kingdom reports that "...linked trips may reduce parking demand by up to 50 percent and 25 percent appears readily attainable." In this study, a nominal parking reduction of 10 percent was used.

More than one-third of the parking duration in Schooner Cove Village is estimated to be less than 30 minutes, and another third less than 60 minutes. The high turnover volume will increase the utilization of the parking spaces. Again, without a specific site survey at Schooner Cove Village, a nominal 5 percent reduction is recommended.

In sum, a total nominal parking reduction of 20 percent applied to the temporal shared parking requirements is recommended to be used in the parking analysis for the Schooner Cove Village.

3.5 Shopping Centre Parking Requirements

The third approach was to group together the commercial components of Schooner Cove Village and analyses the group as a small shopping centre (classified as “strip mall” according to ITE terminology). There are two reasons to conduct such an analysis:

- The ITE shopping centre parking rates are based on field surveys and therefore implicitly include all the adjustments due to temporal sharing, multi-purpose trips, increase in walk and cycling modes and short term parking turnover; and
- This estimate is independent of the previous detailed analysis and, therefore, serves as an objective comparison.

Both the ITE and the RDN provide parking requirements for shopping centre land use. Their rates, however, vary significantly. The ITE’s 30,000 square feet shopping centre description generally matches the proposed land uses at Schooner Cove Village. The parking requirements for ITE’s Non-December average peak period parking demand for weekdays, Friday and Saturday are shown in TABLE 3.7.

The RDN’s rate for shopping centres up to 5,000 square metres (53,821 square feet) is 6.5 spaces for 100 square metres (1 space for 15.38 square metres or 6.4 spaces for 1,000 square feet). The parking requirement using this rate is shown in TABLE 3.7. Based on this rate, Schooner Cove Village would require double the parking as compared to the ITE’s rates. The parking requirement using this rate is similar to the RDN’s aggregate demand. RDN bylaw does not specify rates for weekdays, Friday or Saturday. When compared to the ITE rates, the RDN rate is equivalent to regional shopping centre rates (400,000 to 800,000 square feet; or 37,160 to 74,320 square metres) and is therefore considered more suitable for large shopping centres adjacent to major regional highways such as the Island Highway with a high component of longer vehicle trips. The ITE rate is considered most appropriate for Schooner Cove Village development because of its appropriate scale and the fact that the rate was based on surveyed peak demands.

TABLE 3.7 VILLAGE AS A SHOPPING CENTRE LAND USE

SOURCE	RATE	PARKING REQUIREMENT
ITE (Non December)		
Weekdays	2.65 spaces per 1,000 sf	66 spaces
Friday	3.02 spaces per 1,000 sf	75 spaces
Saturday	2.97 spaces per 1,000 sf	74 spaces
RDN, for 2,303 m ² For Everyday of the Week	6.5 spaces per 100 m ²	150 spaces

Note: m² denotes square metres; sf denotes square feet.

3.6 Summary - Commercial Parking Requirements

The preceding analysis of parking requirements considered various approaches for weekdays and Saturdays and is summarised in TABLE 3.8. As shown in the table, parking requirements for Schooner Cove commercial uses range between 66 and 150 spaces, assuming distinct baseline generation rates and the application of reduction factors as discussed in previous sections.

Given the allowance for higher-volume generation inherent in Saturday rates and long-term flexibility for total parking supply (based on potential “off-site” supply for specific uses – refer to Section 5), it is recommend that Schooner Cove commercial parking requirements should be based on the ITE shopping centre Saturday requirement of 74 spaces.

**TABLE 3.8 ANALYSIS SUMMARY –
VILLAGE COMMERCIAL PARKING REQUIREMENT**

ANALYTICAL APPROACH	ITE WEEKDAY REQUIREMENT	ITE SATURDAY REQUIREMENT	RDN (EVERYDAY) REQUIREMENT
Aggregate Total	143 spaces	152 spaces	150 spaces
Temporal Shared Parking Requirement	113 spaces	111 spaces	113 spaces
With 20% Reduction for all sharing factors	91 space	89 spaces	91 spaces
Shopping Centre Requirement	66 spaces	74 spaces	150 spaces

4.0 SCHOONER COVE MARINA PARKING REQUIREMENTS

4.1 Schooner Cove Marina

The Schooner Cove Marina (Marina) currently provides 360 slips, an administrative office and washrooms, showers, and laundry facilities. There is a staff of four to six on site at any one time during peak season. The marina building has a 54-seat cafe and a beer and wine store. The cafe also provides a section for “convenience” goods such as water and snack foods.

The Schooner Cove Neighbourhood Plan does not contemplate changes to the Marina berthing capacity. However, the boat ramp would be replaced with a jib crane hoist to accommodate ongoing launch and retrieval of watercraft. Based on feedback during the Neighbourhood Planning public consultations, it is anticipated that boat trailer traffic may reduce. The site plan concept for the Schooner Cove Neighbourhood Plan – and its associated Marina configuration – is shown in FIGURE 2.1 in Section 2.0.

4.2 2008/2009 Schooner Cove Marina Parking Survey

During the months between March and September 2008 and between March and August 2009, Marina staff recorded actual parking counts for operations associated with the Marina site, including the Marina, Dockside Cafe, and the Beer and Wine store. Data was collected at 0930 Hours, 1215 Hours and 1600 Hours. The survey also recorded the number of vehicles and boat trailers parked on-site. Peak numbers of vehicles parked are summarized in TABLE 4.1.

TABLE 4.1 2008/2009 SURVEY SUMMARY – PEAK MARINA PARKING

PARKING USE	WEEKDAY	SATURDAY	SUNDAY
Peak Parked Vehicles (Excluding Boat Trailers)	97/78 spaces (1600 Hours, Jul 18, 08/ 1600 Hours Aug 7, 09)	105/91 spaces (0930 Hours, Aug 16, 08/ 1600 Hours, Aug 1, 09)	95/102 spaces (0930 Hours, Aug 3, 08/ 1200 Hours, Jul 26, 09)
Parked Trailers 2008/2009 Surveys (Average)	11/12 spaces (12 spaces)	14/25 spaces (20 spaces)	17/15 spaces (16 spaces)
Net Peak Marina Parking (Excluding Boat Trailers) 2008/2009 Surveys	89/71 spaces	89/84 spaces	79/95 spaces
2008 & 2009 Average Peak Marina Parking Rate (Excluding Boat Trailers)	0.22 spaces per slip or 1 space per 4.55 berths	0.24 spaces per slip or 1 space per 4.17 berths	0.24 spaces per slip or 1 space per 4.17 berths

Note: Numbers shown as xxx/yyy represent 2008 and 2009 survey respectively.

It should be noted that the peak numbers of parked vehicles for a weekday, a Saturday and a Sunday are similar. Since the café and cold beer and wine store were open for business, its parking was estimated and subtracted from the survey numbers (at ITE’s rate of 0.48 per seat and 25 percent occupied during weekday peak and 56 percent occupied during weekend peak). One parking space was subtracted from the weekday and Sunday peak parking counts for the beer and wine store.

4.3 Marina Parking Rates

4.3.1. ITE Parking Requirements

The ITE marina parking generation rate was based on one sample site in Seattle consisting of 1,753 berths with 36,000 square feet of restaurant and retail spaces. The weekday and Saturday parking demands for the Seattle sample site are shown in TABLE 4.2. It should be noted that one of the two surveys was conducted during the Memorial Day (last Monday of May) weekend and this may have resulted in an unusually high Sunday parking count. The Sunday parking rate was therefore excluded from the analysis. Parking for the shopping component was subtracted from the rate (using ITE’s shopping centre rate) to estimate the marina parking rate. The ITE’s inferred weekday and Saturday marina rates are similar to the Schooner Cove Marina survey conducted in 2008 and 2009 (see TABLE 4.1 above).

**TABLE 4.2 ITE MARINA PARKING RATES
FROM SAMPLE SITE (SEATTLE, WA.)**

PARKING	WEEKDAY	SATURDAY
Rate with 36,000 sf of Shopping Centre	0.27 spaces per berth	0.35 spaces per berth
Total Parking spaces for 1,753 berths	473 spaces	613 spaces
Shopping Centre Rate at spaces/1,000 sf	At 3.02 108 spaces	At 2.97 167 spaces
Net Marina Parking	365 spaces	446 spaces
Inferred ITE Marina Parking Rate	0.21 spaces per berth or 1 space per 4.76 berths	0.25 spaces per berth or 1 space per 4 berths

4.3.2 RDN Parking Requirement

The RDN parking requirement for a marina is 1 parking space per 2 mooring berths plus 1 space per 2 employees. The Opus parking review report identified marina parking requirements of other jurisdictions to be between 1.0 spaces per 2 or 3 berths, that is equivalent to a rate of 0.3 to 0.5 spaces per berth. Many of these locations also include other facilities such as restaurants, bars/lounges, shops, etc., and, therefore implicitly, the parking demands of these additional uses as well. The RDN's requirement is shown in TABLE 4.3, and is considered high for marina-only operations.

TABLE 4.3 RDN MARINA PARKING RATE

RDN BYLAW RATE	EQUIVALENT RATE (ITE RATIO)
1 space per 2 berths plus 1 per 2 employees	0.5 spaces per berth plus 1 per 2 employees

4.4 Summary - Marina Parking Requirements

Parking requirements for the Schooner Cove Marina using different parking generation rates are summarized in TABLE 4.4.

TABLE 4.4 ANALYSIS SUMMARY - MARINA PARKING REQUIREMENT

PARKING RATES	WEEKDAY	SATURDAY	SUNDAY
ITE Inferred Rates	76 spaces	90 spaces	198 spaces
RDN Rate	183 spaces	183 spaces	183 spaces
Schooner Cove Survey Rate	79 spaces	86 spaces	86 spaces

Note: Provision of parking for boat trailers is considered separately.

In summary, it is recommended that 86 parking spaces be provided for the Marina based on the 2008 and 2009 on-site survey and the inferred ITE rates for Saturdays and 360 slips.

Furthermore, based on surveyed use, additional parking for 20 boat trailers should be provided with the long-term requirement for such provision to be considered/confirmed based on empirical parking data gathered from the future Schooner Cove Village and Marina operations (that is after the first phase of development of the Schooner Cove Neighbourhood Plan).

5.0 PARKING SUPPLY REQUIREMENTS

The purpose of this parking study is to determine an appropriate level of parking supply to provide for the needs of a viable commercial centre while meeting a host of “sustainability” objectives.

Whereas the previous sections of this report have established parking requirements for Schooner Cove Village commercial and the Marina, this section details a strategy for parking implementation, considering: duration of parking; appropriate location(s) of parking; phasing of parking development; and flexibility to meet any future variances in demand.

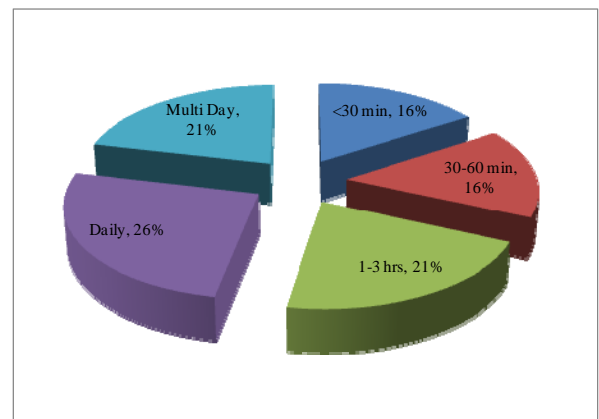
5.1 Duration of Parking

The efficient supply of parking requires the consideration of parking durations. The supply of short term parking for durations less than 3 hours should be located close to commercial land uses to encourage parking turnover. This section discusses the parking duration of the estimated parking requirements and the supply strategy.

For Schooner Cove Village and the Marina these are categorized as follows:

- < 30 minutes;
- 30 to 60 minutes;
- 1 to 3 hours;
- Daily; and
- Multi-day.

The parking durations of each land use were estimated and analysed based on experience of parking operations elsewhere and a field survey. As shown in FIGURE 5.1, 32 percent of patrons are anticipated to park less than 1 hour, and 21 percent less than 3 hours at Schooner Cove Village commercial and Marina. This is typical of commercial centres. Short duration parking should be located in one area to utilize their high turnovers and, therefore, increase the level of service.



**FIGURE 5.1 PARKING DURATIONS
AT THE VILLAGE AND MARINA**

Because of low turnover rates, daily and multi-day parking for employees and boaters can be located further away than short term parking in convenient “off-site” areas, within walking distance to the commercial village. The number of parking spaces for various durations is shown in TABLE 5.1 and details are shown in APPENDIX C. The percentage distributions of the durations are shown in FIGURE 5.1.

**TABLE 5.1 PARKING DURATION
AT SCHOONER COVE VILLAGE AND SCHOONER COVE MARINA**

PARKING FOR	PARKING REQUIREMENT
Village Commercial Short Term (< 30 Minutes)	21 spaces
Village Commercial Short Term (30 - 60 Minutes)	21 spaces
Village Commercial Short Term (< 3 hours)	21 spaces
Village Commercial (Daily)	11 spaces
Total Village	74 spaces
Marina Short Term (< 30 Minutes)	4
Marina Short Term (30 - 60 Minutes)	5
Marina Short Term (< 3 hours)	13
Marina Daily	30
Marina Multi-day	34
Total Marina	86 spaces
Total Village and Marina	160 spaces

5.2 Parking Supply Strategy

For Schooner Cove Village and the Marina parking durations are categorized as: < 30 minutes; 30 to 60 minutes; 1 to 3 hours; Daily; and Multi-day. The parking duration estimated that 53 percent will be less than 3 hours. The daily parking, at 26 percent, is mostly for employees and boaters. The multi-day parking is about 21 percent, mainly to be used by boaters. The supply of short term parking for durations less than 3 hours should be located close to the commercial uses to encourage parking turnover.

It is recommended that commercial and short term marina parking be provided with Schooner Cove Village. The long term parking for boaters should be provided in a dedicated area close to the Schooner Cove Marina in two stages with the second stage to be based on surveys of actual use. The recommended parking supply strategy is summarized in TABLE 5.2.

TABLE 5.2 PARKING SUPPLY STRATEGY – VILLAGE & MARINA

PARKING REQUIREMENTS	PARKING AT SCHOONER COVE VILLAGE	PARKING NEARBY OR ADJACENT TO SCHOONER COVE NEIGHBOURHOOD
Commercial Parking	74 spaces	Not Applicable
Marina Short Term Dedicated Parking	22 spaces	Not Applicable
Marina Long Term dedicated Parking (2 stages)	Not Applicable	40 spaces (Phase 1) plus 24 spaces (Phase 2) following confirmation by actual use surveys.
Total (160 Spaces)	96 Spaces	64 Spaces

Based on surveyed historical use, additional parking for 20 boat trailers should be provided with the long-term requirement for such provision to be considered/confirmed based on empirical parking data gathered from the future Schooner Cove Village and Marina operations (that is: after the first phase of development of the Schooner Cove Neighbourhood Plan).

In order to encourage cycling, provisions should be made for convenient and secure bicycle parking in Schooner Cove Village, for both patrons and employees. Similarly for walking, provisions should also be made for convenient and attractive walkways to Schooner Cove Village, linking external walkways to the shops.

5.3 Conclusion

The parking analysis for the Schooner Cove Neighbourhood Plan used a number of established methodologies to determine the most appropriate parking requirement and supply strategy for the Schooner Cove Village & Marina. Furthermore, the Study illustrates that the aggregate parking total of individual land uses would result in an oversupply of parking spaces. Excess parking results in unnecessary costs to project implementation, detracts from visual and programmatic amenities, and has the potential to compromise the Neighbourhood Plan's overarching goals with respect to sustainability.

The Schooner Cove Village commercial uses require 74 parking spaces to meet the average peak hour demands for the proposed commercial mix. The Marina will require 22 short term parking spaces which can be accommodated in Schooner Cove Village commercial parking area. Total commercial parking supply for the Schooner Cove Neighbourhood is therefore 96 spaces. The Schooner Cove Marina will require an additional 64 spaces for long term parking and it can be provided in a nearby dedicated parking area that is within walking distance of the Marina. In sum, a total of 160 parking spaces would meet the parking needs for the commercial Village and the Marina.

Based on surveyed historical use, additional parking for 20 boat trailers should be provided with the long-term requirement for such provision to be considered/confirmed based on empirical parking data gathered from the future Schooner Cove Village and Marina operations (that is: after the first phase of development of the Schooner Cove Neighbourhood Plan).

Furthermore, if surveys demonstrate the Schooner Cove Village commercial parking demand exceeds the supply, adjustments could be made by providing for additional off-site parking for all the Marina users, thereby freeing up an additional 22 parking spaces for Schooner Cove Village commercial patrons. This strategy allows for flexibility and ensures that the parking supply can be adjusted if and when the need arises, based on intended performance/level of service.

In conclusion, the purpose of this comprehensive analysis and formulation of parking supply strategy is to provide an appropriate level of parking supply in support of commercial viability without over investing in infrastructure. This study concludes that Schooner Cove Village Neighbourhood Plan and the recommended allocation of parking spaces, as summarized above, will be sufficient to support the planned commercial and marina activities at Schooner Cove Village.

APPENDIX A**WEEKDAY AND SATURDAY
ITE TEMPORAL PARKING ANALYSIS SUMMARY**

TABLE A.1 ITE WEEKDAY HOURLY PARKING DISTRIBUTION

ITE Hourly Occupancy, % of Peak Hour (Note: 0% denotes no data point)											
Hour Beginning	Market p205	Buz Centre p182 (Assumed)	Beer/Wine p216 Estimated	Bakery p268	pub/res p272	Take Away p268	Multi P. p119 Estimated	Discovery p119	Spa/Salon p111	Office p170	Medical p173
12-4 am	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0
600	0	0	0	24	0	24	0	0	0	6	0
700	0	39	5	42	0	42	0	0	0	56	15
800	0	81	5	54	0	54	0	0	0	86	49
900	0	100	5	73	6	73	50	25	0	97	84
1000	58	76	5	81	8	81	50	25	86	100	100
1100	66	60	25	100	26	100	50	50	71	98	100
1200	93	60	50	100	50	100	75	50	53	87	88
1300	100	54	80	100	35	100	75	75	49	75	79
1400	90	63	100	51	31	51	25	75	42	84	86
1500	94	68	80	40	22	40	25	50	49	87	96
1600	97	53	50	40	25	40	25	50	76	75	91
1700	82	43	50	79	73	79	25	50	88	43	72
1800	62	37	75	81	100	81	100	25	100	18	0
1900	47	0	75	62	100	62	100	25	77	0	0
2000	0	0	50	63	80	63	25	0	62	0	0
2100	0	0	25	60	58	60	25	0	0	0	0
2200	0	0	25	46	0	46	25	0	0	0	0
2300	0	0	0	42	0	42	25	0	0	0	0

TABLE A.2 ITE SATURDAY HOURLY PARKING DISTRIBUTION

ITE Saturday Hourly Occupancy, % of Peak Hour (Note: 0% denotes no data point)											
Hour Beginning	Market p205	Buz Centre p182 =Friday	Beer/Wine p216 Estimated	Bakery p268	pub/res p272	Take Away p268	Multi P. p119 =Friday	Discovery p119 =Friday	Spa/Salon p111 =Friday	Office p170 =50% Friday	Medical p173 =Friday
12-4 am	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0
600	0	0	0	15	0	15	0	0	0	3	0
700	0	39	5	23	0	23	0	0	0	28	15
800	0	81	5	39	0	39	0	0	0	43	49
900	0	100	5	56	4	56	50	25	0	48	84
1000	0	76	5	100	6	100	50	25	86	50	100
1100	0	60	25	100	17	100	50	50	71	49	100
1200	91	60	50	100	36	100	75	50	53	43	88
1300	100	54	80	100	46	100	75	75	49	38	79
1400	95	63	100	53	41	53	25	75	42	42	86
1500	98	68	80	29	34	29	25	50	49	44	96
1600	89	53	50	36	55	36	25	50	76	36	91
1700	72	43	50	42	67	42	25	50	88	43	72
1800	72	37	75	53	100	53	100	25	100	9	0
1900	0	0	75	100	100	100	100	25	77	0	0
2000	0	0	50	42	100	42	25	0	62	0	0
2100	0	0	25	29	29	29	25	0	0	0	0
2200	0	0	25	30	8	30	25	0	0	0	0
2300	0	0	0	40	0	40	25	0	0	0	0

TABLE A.3 ITE RATES AND WEEKDAY TEMPORAL SHARED PARKING SUMMARY, PARKING SPACES

ITE Hourly Parking												
Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical	Total ITE	% of
Individual Parking Requirements											Temporal Shared	Aggregate Total
32.85	5.71	5.30	12.79	48.00	6.89	7.09	6.89	13.63	1.56	1.94		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
0.00	0.00	0.00	3.07	0.00	1.65	0.00	0.00	0.00	0.09	0.00	5	3%
0.00	2.23	0.27	5.37	0.00	2.89	0.00	0.00	0.00	0.87	0.29	12	8%
0.00	4.62	0.27	6.91	0.00	3.72	0.00	0.00	0.00	1.34	0.95	18	12%
0.00	5.71	0.27	9.34	2.88	5.03	3.54	1.72	0.00	1.51	1.63	32	22%
19.05	4.34	0.27	10.36	3.84	5.58	3.54	1.72	11.72	1.56	1.94	64	45%
21.68	3.43	1.33	12.79	12.48	6.89	3.54	3.44	9.68	1.53	1.94	79	55%
30.55	3.43	2.65	12.79	24.00	6.89	5.32	3.44	7.22	1.36	1.71	99	70%
32.85	3.08	4.24	12.79	16.80	6.89	5.32	5.16	6.68	1.17	1.53	97	68%
29.56	3.60	5.30	6.52	14.88	3.51	1.77	5.16	5.72	1.31	1.67	79	55%
30.88	3.88	4.24	5.12	10.56	2.76	1.77	3.44	6.68	1.36	1.86	73	51%
31.86	3.03	2.65	5.12	12.00	2.76	1.77	3.44	10.36	1.17	1.76	76	53%
26.94	2.45	2.65	10.11	35.04	5.44	1.77	3.44	11.99	0.67	1.40	102	71%
20.37	2.11	3.98	10.36	48.00	5.58	7.09	1.72	13.63	0.28	0.00	113	79%
15.44	0.00	3.98	7.93	48.00	4.27	7.09	1.72	10.49	0.00	0.00	99	69%
0.00	0.00	2.65	8.06	38.40	4.34	1.77	0.00	8.45	0.00	0.00	64	45%
0.00	0.00	1.33	7.68	27.84	4.13	1.77	0.00	0.00	0.00	0.00	43	30%
0.00	0.00	1.33	5.88	0.00	3.17	1.77	0.00	0.00	0.00	0.00	12	9%
0.00	0.00	0.00	5.37	0.00	2.89	1.77	0.00	0.00	0.00	0.00	10	7%

TABLE A.4 ITE RATES AND SATURDAY TEMPORAL SHARED PARKING SUMMARY, PARKING SPACES

ITE Hourly Parking													
Hour	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical	Total ITE	% of
Beginning	Individual Parking Requirements											Temporal Shared	Aggregate Total
	35.79	6.72	6.24	17.00	47.00	9.16	7.40	7.19	13.63	0.78	1.56		
12-4 am	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	
600	0.00	0.00	0.00	1.92	0.00	1.03	0.00	0.00	0.00	0.05	0.00	3	2%
700	0.00	2.23	0.27	2.94	0.00	1.58	0.00	0.00	0.00	0.44	0.29	8	5%
800	0.00	4.62	0.27	4.99	0.00	2.69	0.00	0.00	0.00	0.67	0.95	14	10%
900	0.00	5.71	0.27	7.16	1.92	3.86	3.54	1.72	0.00	0.75	1.63	27	19%
1000	0.00	4.34	0.27	12.79	2.88	6.89	3.54	1.72	11.72	0.78	1.94	47	33%
1100	0.00	3.43	1.33	12.79	8.16	6.89	3.54	3.44	9.68	0.76	1.94	52	36%
1200	29.89	3.43	2.65	12.79	17.28	6.89	5.32	3.44	7.22	0.67	1.71	91	64%
1300	32.85	3.08	4.24	12.79	22.08	6.89	5.32	5.16	6.68	0.59	1.53	101	71%
1400	31.21	3.60	5.30	6.78	19.68	3.65	1.77	5.16	5.72	0.65	1.67	85	60%
1500	32.19	3.88	4.24	3.71	16.32	2.00	1.77	3.44	6.68	0.69	1.86	77	54%
1600	29.23	3.03	2.65	4.61	26.40	2.48	1.77	3.44	10.36	0.56	1.76	86	60%
1700	23.65	2.45	2.65	5.37	32.16	2.89	1.77	3.44	11.99	0.67	1.40	88	62%
1800	23.65	2.11	3.98	6.78	48.00	3.65	7.09	1.72	13.63	0.14	0.00	111	78%
1900	0.00	0.00	3.98	12.79	48.00	6.89	7.09	1.72	10.49	0.00	0.00	91	64%
2000	0.00	0.00	2.65	5.37	48.00	2.89	1.77	0.00	8.45	0.00	0.00	69	48%
2100	0.00	0.00	1.33	3.71	13.92	2.00	1.77	0.00	0.00	0.00	0.00	23	16%
2200	0.00	0.00	1.33	3.84	3.84	2.07	1.77	0.00	0.00	0.00	0.00	13	9%
2300	0.00	0.00	0.00	5.12	0.00	2.76	1.77	0.00	0.00	0.00	0.00	10	7%

TABLE A.5 CITY OF OTTAWA DISTRIBUTION FOR WEEKDAY TEMPORAL SHARED PARKING

Ottawa Bylaw 2008-250, Shared Parking Provisions, % to share. 0% denotes no data point.											
Hour Beginning	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical
12-4 am	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0
600	0	0	0	30	0	0	0	0	0	0	0
700	0	0	0	30	0	0	0	0	0	100	100
800	0	0	0	30	0	0	0	0	0	100	100
900	75	75	75	30	0	0	50	25	75	100	100
1000	75	75	75	30	30	30	50	25	75	100	100
1100	75	75	75	30	30	30	50	50	75	100	100
1200	80	80	80	90	90	90	75	50	80	90	90
1300	85	85	85	60	60	60	75	75	85	100	100
1400	85	85	85	60	60	60	25	75	85	100	100
1500	85	85	85	60	60	60	25	50	85	100	100
1600	85	85	85	60	60	60	25	50	85	100	100
1700	85	85	85	60	60	60	25	50	85	100	100
1800	75	75	75	100	100	100	100	25	75	15	15
1900	75	75	75	100	100	100	100	25	75	15	15
2000	75	75	75	100	100	100	25	0	0	15	15
2100	75	75	75	100	100	100	25	0	0	15	15
2200	0	0	0	0	100	100	25	0	0	0	0
2300	0	0	0	0	100	0	25	0	0	0	0

TABLE A.6 ITE RATES AND CITY OF OTTAWA WEEKDAY TEMPORAL SHARED PARKING SUMMARY, PARKING SPACES

ITE Hourly Parking with Ottawa Bylaw Distribution													Total ITE Temporal Shared	% of Aggregate Total
Hour Beginning	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical			
	Individual Parking Requirements													
	32.85	5.71	5.30	12.79	48.00	6.89	7.09	6.89	13.63	1.56	1.94			
12-4 am	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	
600	0.00	0.00	0.00	3.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	3%	
700	0.00	0.00	0.00	3.84	0.00	0.00	0.00	0.00	0.00	1.56	1.94	7	5%	
800	0.00	0.00	0.00	3.84	0.00	0.00	0.00	0.00	0.00	1.56	1.94	7	5%	
900	24.64	4.28	3.98	3.84	0.00	0.00	3.54	1.72	10.22	1.56	1.94	56	39%	
1000	24.64	4.28	3.98	3.84	14.40	2.07	3.54	1.72	10.22	1.56	1.94	72	51%	
1100	24.64	4.28	3.98	3.84	14.40	2.07	3.54	3.44	10.22	1.56	1.94	74	52%	
1200	26.28	4.57	4.24	11.51	43.20	6.20	5.32	3.44	10.90	1.40	1.74	119	83%	
1300	27.92	4.85	4.51	7.68	28.80	4.13	5.32	5.16	11.58	1.56	1.94	103	73%	
1400	27.92	4.85	4.51	7.68	28.80	4.13	1.77	5.16	11.58	1.56	1.94	100	70%	
1500	27.92	4.85	4.51	7.68	28.80	4.13	1.77	3.44	11.58	1.56	1.94	98	69%	
1600	27.92	4.85	4.51	7.68	28.80	4.13	1.77	3.44	11.58	1.56	1.94	98	69%	
1700	27.92	4.85	4.51	7.68	28.80	4.13	1.77	3.44	11.58	1.56	1.94	98	69%	
1800	24.64	4.28	3.98	12.79	48.00	6.89	7.09	1.72	10.22	0.23	0.29	120	84%	
1900	24.64	4.28	3.98	12.79	48.00	6.89	7.09	1.72	10.22	0.23	0.29	120	84%	
2000	24.64	4.28	3.98	12.79	48.00	6.89	1.77	0.00	0.00	0.23	0.29	103	72%	
2100	24.64	4.28	3.98	12.79	48.00	6.89	1.77	0.00	0.00	0.23	0.29	103	72%	
2200	0.00	0.00	0.00	0.00	48.00	6.89	1.77	0.00	0.00	0.00	0.00	57	40%	
2300	0.00	0.00	0.00	0.00	48.00	0.00	1.77	0.00	0.00	0.00	0.00	50	35%	

TABLE A.7 VTPI DISTRIBUTION FOR TEMPORAL SHARED PARKING

Victoria Transport Policy Institute parking occupancy, % of Peak Hour (Note: 0% denotes no data point)											
Hour Beginning	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P. (Commerc)	Discovery (Commerc)	Spa/Salon	Office	Medical
12-4 am	5	5	5	10	10	10	0	0	0	5	5
500	5	5	5	10	10	10	0	0	0	5	5
600	5	5	5	10	10	10	0	0	0	5	5
700	5	5	5	10	10	10	0	0	0	5	5
800	90	90	90	70	70	70	90	90	90	100	100
900	90	90	90	70	70	70	90	90	90	100	100
1000	90	90	90	70	70	70	90	90	90	100	100
1100	90	90	90	70	70	70	90	90	90	100	100
1200	90	90	90	70	70	70	90	90	90	100	100
1300	90	90	90	70	70	70	90	90	90	100	100
1400	90	90	90	70	70	70	90	90	90	100	100
1500	90	90	90	70	70	70	90	90	90	100	100
1600	90	90	90	70	70	70	90	90	90	100	100
1700	90	90	90	70	70	70	90	90	90	100	100
1800	80	80	80	100	100	100	80	80	80	20	20
1900	80	80	80	100	100	100	80	80	80	20	20
2000	80	80	80	100	100	100	80	80	80	20	20
2100	80	80	80	100	100	100	80	80	80	20	20
2200	80	80	80	100	100	100	80	80	80	20	20
2300	80	80	80	100	100	100	80	80	80	20	20

TABLE A.8 ITE RATES AND VTPI TEMPORAL SHARED PARKING SUMMARY PARKING SPACES

ITE Hourly Parking with Victoria Transport Policy Institute Distribution													Total ITE Temporal Shared	% of Aggregate Total
Hour Beginning	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical			
	Individual Parking Requirements													
	32.85	5.71	5.30	12.79	48.00	6.89	7.09	6.89	13.63	1.56	1.94			
12-4 am	1.64	0.29	0.27	1.28	4.80	0.69	0.00	0.00	0.00	0.08	0.10	9		
500	1.64	0.29	0.27	1.28	4.80	0.69	0.00	0.00	0.00	0.08	0.10	9		
600	1.64	0.29	0.27	1.28	4.80	0.69	0.00	0.00	0.00	0.08	0.10	9	6%	
700	1.64	0.29	0.27	1.28	4.80	0.69	0.00	0.00	0.00	0.08	0.10	9	6%	
800	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
900	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1000	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1100	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1200	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1300	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1400	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1500	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1600	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1700	29.56	5.14	4.77	8.95	33.60	4.82	6.38	6.20	12.27	1.56	1.94	115	81%	
1800	26.28	4.57	4.24	12.79	48.00	6.89	5.67	5.51	10.90	0.31	0.39	126	88%	
1900	26.28	4.57	4.24	12.79	48.00	6.89	5.67	5.51	10.90	0.31	0.39	126	88%	
2000	26.28	4.57	4.24	12.79	48.00	6.89	5.67	5.51	10.90	0.31	0.39	126	88%	
2100	26.28	4.57	4.24	12.79	48.00	6.89	5.67	5.51	10.90	0.31	0.39	126	88%	
2200	26.28	4.57	4.24	12.79	48.00	6.89	5.67	5.51	10.90	0.31	0.39	126	88%	
2300	26.28	4.57	4.24	12.79	48.00	6.89	5.67	5.51	10.90	0.31	0.39	126	88%	

APPENDIX B
WEEKDAY AND SATURDAY
RDN TEMPORAL PARKING ANALYSIS SUMMARY

**TABLE B.1 RDN RATES AND ITE WEEKDAY
TEMPORAL SHARED PARKING SUMMARY, PARKING SPACES**

NRD Hourly Parking with ITE Distribution													
Hour Beginning	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical	Total RND	% of
	Individual Parking Requirements											Temporal Shared	Aggregate Total
	46.67	10.40	9.67	14.50	39.40	7.80	8.60	3.34	4.88	1.59	3.40		
12-4 am	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
600	0.00	0.00	0.00	3.48	0.00	1.87	0.00	0.00	0.00	0.10	0.00	5	4%
700	0.00	4.06	0.52	6.09	0.00	3.28	0.00	0.00	0.00	0.89	0.51	15	10%
800	0.00	8.42	0.52	7.83	0.00	4.21	0.00	0.00	0.00	1.37	1.67	24	16%
900	0.00	10.40	0.52	10.59	2.36	5.69	4.30	0.84	0.00	1.55	2.86	39	26%
1000	27.07	7.90	0.52	11.75	3.15	6.32	4.30	0.84	4.20	1.59	3.40	71	47%
1100	30.80	6.24	2.60	14.50	10.24	7.80	4.30	1.67	3.46	1.56	3.40	87	58%
1200	43.40	6.24	5.20	14.50	19.70	7.80	6.45	1.67	2.59	1.39	2.99	112	74%
1300	46.67	5.62	8.32	14.50	13.79	7.80	6.45	2.51	2.39	1.20	2.69	112	74%
1400	42.00	6.55	10.40	7.40	12.21	3.98	2.15	2.51	2.05	1.34	2.92	94	62%
1500	43.87	7.07	8.32	5.80	8.67	3.12	2.15	1.67	2.39	1.39	3.26	88	58%
1600	45.27	5.51	5.20	5.80	9.85	3.12	2.15	1.67	3.71	1.20	3.09	87	58%
1700	38.27	4.47	5.20	11.46	28.76	6.16	2.15	1.67	4.29	0.69	2.45	106	70%
1800	28.93	3.85	7.80	11.75	39.40	6.32	8.60	0.84	4.88	0.29	0.00	113	75%
1900	21.93	0.00	7.80	8.99	39.40	4.84	8.60	0.84	3.76	0.00	0.00	96	64%
2000	0.00	0.00	5.20	9.14	31.52	4.91	2.15	0.00	3.03	0.00	0.00	56	37%
2100	0.00	0.00	2.60	8.70	22.85	4.68	2.15	0.00	0.00	0.00	0.00	41	27%
2200	0.00	0.00	2.60	6.67	0.00	3.59	2.15	0.00	0.00	0.00	0.00	15	10%
2300	0.00	0.00	0.00	6.09	0.00	3.28	2.15	0.00	0.00	0.00	0.00	12	8%

See TABLE A.1 for ITE weekday hourly distribution.

**TABLE B.2 RDN RATES AND ITE SATURDAY
TEMPORAL SHARED PARKING SUMMARY, PARKING SPACES**

NRD Hourly Parking with ITE Distribution													
Hour Beginning	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical	Total RND	% of
	Individual Parking Requirements											Temporal Shared	Aggregate Total
	46.67	10.40	9.67	14.50	39.40	7.80	8.60	3.34	4.88	1.59	3.40		
12-4 am	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
600	0.00	0.00	0.00	2.18	0.00	1.17	0.00	0.00	0.00	0.05	0.00	3	2%
700	0.00	4.06	0.52	3.34	0.00	1.79	0.00	0.00	0.00	0.45	0.51	11	7%
800	0.00	8.42	0.52	5.66	0.00	3.04	0.00	0.00	0.00	0.69	1.67	20	13%
900	0.00	10.40	0.52	8.12	1.58	4.37	4.30	0.84	0.00	0.77	2.86	34	22%
1000	0.00	7.90	0.52	14.50	2.36	7.80	4.30	0.84	4.20	0.80	3.40	47	31%
1100	0.00	6.24	2.60	14.50	6.70	7.80	4.30	1.67	3.46	0.78	3.40	51	34%
1200	43.87	6.24	5.20	14.50	14.18	7.80	6.45	1.67	2.59	0.69	2.99	106	71%
1300	46.67	5.62	8.32	14.50	18.12	7.80	6.45	2.51	2.39	0.61	2.69	116	77%
1400	39.67	6.55	10.40	7.69	16.15	4.13	2.15	2.51	2.05	0.67	2.92	95	63%
1500	45.73	7.07	8.32	4.21	13.40	2.26	2.15	1.67	2.39	0.70	3.26	91	61%
1600	41.53	5.51	5.20	5.22	21.67	2.81	2.15	1.67	3.71	0.40	3.09	93	62%
1700	33.60	4.47	5.20	6.09	26.40	3.28	2.15	1.67	4.29	0.69	2.45	90	60%
1800	33.60	3.85	7.80	7.69	39.40	4.13	8.60	0.84	4.88	0.29	0.00	111	74%
1900	0.00	0.00	7.80	14.50	39.40	7.80	8.60	0.84	3.76	0.00	0.00	83	55%
2000	0.00	0.00	5.20	6.09	39.40	3.28	2.15	0.00	3.03	0.00	0.00	59	39%
2100	0.00	0.00	2.60	4.21	11.43	2.26	2.15	0.00	0.00	0.00	0.00	23	15%
2200	0.00	0.00	2.60	4.35	3.15	2.34	2.15	0.00	0.00	0.00	0.00	15	10%
2300	0.00	0.00	0.00	6.09	0.00	3.12	2.15	0.00	0.00	0.00	0.00	11	8%

See TABLE A.1 for ITE Saturday hourly distribution.

TABLE B.3 RDN RATES AND OTTAWA WEEKDAY TEMPORAL SHARED PARKING SUMMARY, PARKING SPACES

NRD Hourly Parking with Ottawa Bylaw Distribution													
Hour	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical	Total RND	% of
Beginning	Individual Parking Requirements											Temporal	Aggregate
	46.67	10.40	9.67	14.50	39.40	7.80	8.60	3.34	4.88	1.59	3.40	Shared	Total
12-4 am	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
600	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4	3%
700	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	0.00	1.59	3.40	9	6%
800	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00	0.00	1.59	3.40	9	6%
900	35.00	7.80	7.25	4.35	0.00	0.00	4.30	0.84	3.66	1.59	3.40	68	45%
1000	35.00	7.80	7.25	4.35	11.82	2.34	4.30	0.84	3.66	1.59	3.40	82	55%
1100	35.00	7.80	7.25	4.35	11.82	2.34	4.30	1.67	3.66	1.59	3.40	83	55%
1200	37.33	8.32	7.73	13.05	35.46	7.02	6.45	1.67	3.90	1.43	3.06	125	83%
1300	39.67	8.84	8.22	8.70	23.64	4.68	6.45	2.51	4.15	1.59	3.40	112	74%
1400	39.67	8.84	8.22	8.70	23.64	4.68	2.15	2.51	4.15	1.59	3.40	108	72%
1500	39.67	8.84	8.22	8.70	23.64	4.68	2.15	1.67	4.15	1.59	3.40	107	71%
1600	39.67	8.84	8.22	8.70	23.64	4.68	2.15	1.67	4.15	1.59	3.40	107	71%
1700	39.67	8.84	8.22	8.70	23.64	4.68	2.15	1.67	4.15	1.59	3.40	107	71%
1800	35.00	7.80	7.25	14.50	39.40	7.80	8.60	0.84	3.66	0.24	0.51	126	84%
1900	35.00	7.80	7.25	14.50	39.40	7.80	8.60	0.84	3.66	0.24	0.51	126	84%
2000	35.00	7.80	7.25	14.50	39.40	7.80	2.15	0.00	0.00	0.24	0.51	115	76%
2100	35.00	7.80	7.25	14.50	39.40	7.80	2.15	0.00	0.00	0.24	0.51	115	76%
2200	0.00	0.00	0.00	0.00	39.40	7.80	2.15	0.00	0.00	0.00	0.00	49	33%
2300	0.00	0.00	0.00	0.00	39.40	0.00	2.15	0.00	0.00	0.00	0.00	42	28%

TABLE B.4 RDN RATES AND VTPI WEEKDAY TEMPORAL SHARED PARKING SUMMARY

RDN Hourly Parking with VTPI Distribution													
Hour	Market	Buz Centre	Beer/Wine	Bakery	pub/res	Take Away	Multi P.	Discovery	Spa/Salon	Office	Medical	Total RND	% of
Beginning	Individual Parking Requirements											Temporal	Aggregate
	46.67	10.40	9.67	14.50	39.40	7.80	8.60	3.34	4.88	1.59	3.40	Shared	Total
12-4 am	2.33	0.52	0.48	1.45	3.94	0.78	0.00	0.00	0.00	0.08	0.17	10	0
500	2.33	0.52	0.48	1.45	3.94	0.78	0.00	0.00	0.00	0.08	0.17	10	0
600	2.33	0.52	0.48	1.45	3.94	0.78	0.00	0.00	0.00	0.08	0.17	10	6%
700	2.33	0.52	0.48	1.45	3.94	0.78	0.00	0.00	0.00	0.08	0.17	10	6%
800	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
900	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1000	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1100	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1200	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1300	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1400	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1500	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1600	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1700	42.00	9.36	8.70	10.15	27.58	5.46	7.74	3.01	4.39	1.59	3.40	123	82%
1800	37.33	8.32	7.73	14.50	39.40	7.80	6.88	2.67	3.90	0.32	0.68	130	86%
1900	37.33	8.32	7.73	14.50	39.40	7.80	6.88	2.67	3.90	0.32	0.68	130	86%
2000	37.33	8.32	7.73	14.50	39.40	7.80	6.88	2.67	3.90	0.32	0.68	130	86%
2100	37.33	8.32	7.73	14.50	39.40	7.80	6.88	2.67	3.90	0.32	0.68	130	86%
2200	37.33	8.32	7.73	14.50	39.40	7.80	6.88	2.67	3.90	0.32	0.68	130	86%
2300	37.33	8.32	7.73	14.50	39.40	7.80	6.88	2.67	3.90	0.32	0.68	130	86%

APPENDIX C
PARKING DURATION SUMMARY

TABLE C.1 PARKING DURATION DISTRIBUTIONS

LAND USES	PARKING DURATIONS, % OF TOTAL					
	<30 min	30-60 min	1-3 hrs	Daily	Multi Day	Total
Market	30%	30%	25%	15%	0%	100%
Post Office/UPS	10%	15%	50%	25%	0%	100%
Beer and Wine Store	90%	0%	0%	10%	0%	100%
Bakery Cafe	50%	30%	5%	15%	0%	100%
Restaurant and Pub	15%	30%	40%	15%	0%	100%
Take Away Restaruant	90%	0%	0%	10%	0%	100%
Multi-Purpose Room	25%	40%	25%	10%	0%	100%
Discovery Centre	35%	50%	5%	10%	0%	100%
Boutique Spa & Salon	10%	20%	50%	20%	0%	100%
Profession Building	0%	15%	15%	70%	0%	100%
Medical Office	15%	30%	40%	15%	0%	100%
Marina	10%	15%	20%	30%	25%	100%

**TABLE C.2 PARKING DURATION ESTIMATES
PARKING SPACES**

LAND USES	PARKING DURATIONS					
	<30 min	30-60 min	1-3 hrs	Daily	Multi Day	Total
Market	5.0	5.0	4.2	2.5	0.0	17
Business Centre	0.3	0.3	1.5	0.7	0.0	3
Beer and Wine Store	2.5	2.5	0.0	0.3	0.0	5
Bakery Cafe	3.3	3.3	0.3	1.0	0.0	8
Restaurant and Pub	3.7	3.7	10.0	3.7	0.0	21
Take Away Restaruant	3.2	3.2	0.0	0.4	0.0	7
Multi-Purpose Room	0.9	0.9	0.9	0.4	0.0	3
Discovery Centre	1.3	1.3	0.2	0.4	0.0	3
Boutique Spa & Salon	0.7	0.7	3.5	1.4	0.0	6
Profession Building	0.0	0.0	0.1	0.6	0.0	1
Medical Office	0.1	0.1	0.4	0.1	0.0	1
Marina	4.3	4.3	13.0	30.0	34.0	86
Total Without Marina, spaces	20	21	21	11	0	74
% of Total	27%	29%	29%	15%	0%	
Total With Marina, Spaces	25	25	34	41	34	160
% of Total	16%	16%	21%	26%	21%	

EYH Consultants Ltd.

3425 West 31st Avenue

Vancouver, BC

Canada V6S 1X6

E: Eanson@EYHConsultnants.ca

T: 604 817 7798