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To: Finance, Facilities and Technology Committee

Prepared By: Jason Reid

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Subject: Prospect Lake Elementary Site Planning

Date: January 8, 2020

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## Purpose

The purpose of this briefing note is to advise the committee of site planning work in-progress at Prospect Lake Elementary and to report publically the following two motions that were passed at the December 18, 2019 in-camera meeting of the Board of Education:

1. *“That staff be directed to continue discussions with the District of Saanich regarding construction of a new parking lot on the Prospect Lake Elementary site, including plug-ins for electric vehicles, and agreement for shared use of the parking lot and the District of Saanich’s playfield; and provision of bike lanes.”*
2. *“That staff be directed to consult with the Prospect Lake Elementary school community regarding plans for the site including: school expansion; construction of a new parking lot; shared use of the parking lot and the District of Saanich’s playfield; and environmental alternatives to car transportation.”*

## Parking and Traffic Flow at Prospect Lake Elementary

In January 2018, the school district completed a traffic and parking review at Prospect Lake Elementary. This review was conducted because of existing safety concerns related to traffic flow through the parking lot and on Prospect Lake Road. The report included the following findings:

1. **Pedestrian Access:** Pedestrian access at the school site is not well accommodated from any approach.
2. **Staff Parking:** Staff parking demand exceeds the staff parking supply by five to eight vehicles, requiring that staff park in visitor parking spaces.
3. **Inappropriate On-site Parking:** Inappropriate on-site parking during the morning drop-off and afternoon pick-up period poses a significant issue with school bus circulation and safety.
4. **Off-site Parking along Prospect Lake Road:** Off-site parking along Prospect Lake Road contributes to safety issues.
5. **Vehicle Speeds:** approximately 80% of traffic on Prospect Lake Road exceeds the 30 km/h school zone speed limit.
6. **Pick-Up / Drop-Off Capacity + Site Circulation:** Pick-up / drop-off exceed on-site capacity by up to 60 vehicles during the peak afternoon pick-up period (2:40-2:50pm).

Many of the findings relate to municipal infrastructure including pedestrian access and the impact of the West Saanich Road intersection on site circulation. Following completion of the draft report in February 2018, district staff have met with District of Saanich (“Saanich”) staff on several occasions to discuss the findings and possible solutions. The final traffic and parking review report is included as attachment 3 for reference.

In April 2019, Saanich began working with a design consultant to complete a conceptual design of a full intersection upgrade at West Saanich Road and Prospect Lake/Sparton Road. The objectives of this project include improvements to traffic flow with safe access in all directions by pedestrians, cyclists and motorists to Prospect Lake Elementary School, nearby businesses and the Interurban trail.

Saanich held an open house on November 13, 2019, and presented conceptual design work including installation of sidewalks and two options for the intersection (roundabout or signalized intersection). Design and technical information is available on the current projects page on the [District of Saanich Website](#) (scroll down to *West Saanich Road and Prospect Lake/Sparton Road Intersection - Conceptual Design*). School district staff attended the open house and observed that decreased on-street parking (with the installation of sidewalks) was a concern expressed by many community members in attendance. The decrease in available street parking is also a concern for the school as it is used heavily by parents during peak drop-off and pick-up periods.

Since last spring, district staff have been discussing with Saanich staff the possibility of creating additional shared use parking on either municipal property, or on school district property with the school then having access to the municipal play field during the school day. These discussions have progressed and the plan is discussed further below.

### **Prospect Lake Elementary Site Planning**

The district is looking at several options to manage school capacities in the south zone. In September 2019, the Board passed the following motion: *“That a boundary review, with community consultation, be completed in the near future focusing on south zone elementary catchments, and considering other catchment boundary issues that may exist in the district.”* This boundary review will commence following renewal of the district’s long-range facilities plan in the spring.

Staff are also reviewing options for expansion at Cordova Bay Elementary and Prospect Lake Elementary. This includes portable classrooms in the short term and permanent expansion in the long term.

Fall 2019 enrolment at Prospect Lake Elementary is 259 FTE and exceeded forecasted 2019 enrolment by 8 FTE. The school is currently above its capacity of 210 with the multi-purpose room and a portable being used as classrooms. Regardless of the results of a boundary review,

expansion of the school is needed to meet the needs of the community and to build overall elementary school capacity in the south zone.

A 4-classroom expansion is possible off the west side of the building; and, in the shorter term, a second portable could be placed on the site. A four classroom expansion would increase the capacity of the school to about 294, but is dependent on capital funding from the Ministry of Education. However, expansion of the school (either portable or permanent addition) cannot occur without additional parking and improvements to traffic flow.

To address existing issues with traffic flow and parking and to allow for expansion of the school, district staff and Saanich staff have discussed a number of options to create additional parking to be used by the school and by the community outside of school hours. Saanich staff considered the possibility of creating parking on municipal property and have confirmed it is not possible to use land designated as a municipal park to create parking. The current option being discussed is the creation of a new parking lot on the Prospect Lake Elementary site through a second road access (see attachment 2). Saanich would construct the parking lot in conjunction with the planned intersection/sidewalk upgrades, using the new parking lot as a staging area to complete the road works project over the spring and summer. Saanich would waive permit and development fees and would cover the cost of creating the road access. The school district would reimburse Saanich for the incremental cost of constructing the parking lot. The estimated cost to the school district is \$200,000 (or \$250,000 with 25% contingency), which could be funded by the annual facilities grant.

The new parking lot would create 34 new parking spaces for staff parking during school hours and would be available to the community outside of school hours. The creation of 34 spaces with a separate road access would improve traffic flow in the existing parking lot and provide the option of potentially adding a 3<sup>rd</sup> flow through lane. This parking expansion, in combination with planned improvements to the intersection and roadway, would improve traffic safety and provide sufficient parking and traffic flow capacity to enable school expansion. With expanded parking, the district would likely plan to add a second portable classroom on the site for the 2020/21 school year.

The benefit to Saanich is the creation of community parking (outside of school hours) that will more than replace the parking lost to the sidewalk installation on Prospect Lake Road. To address the loss of school playground, Saanich will in exchange provide the school with access to the municipal playfield at Prospect Lake Park during the school day, except on days when the field needs to be closed due to inclement weather.

### **Next Steps**

District staff will continue discussions with Saanich regarding the design and construction of the new parking lot. As the intersection/roadway project will commence as early as April 2019, we expect this planning work will progress quickly over the next few months.

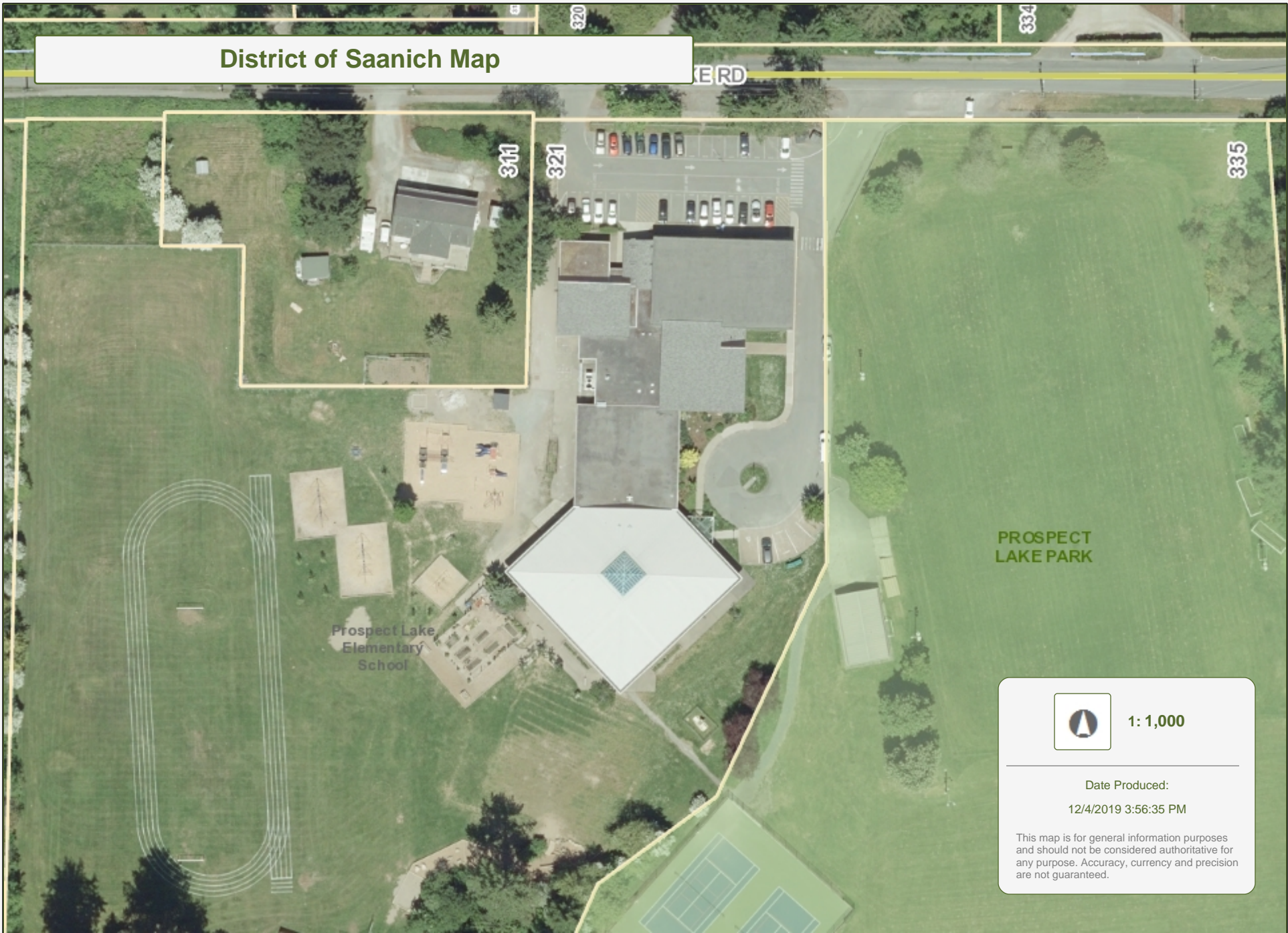
Over the next few weeks, district staff will engage and consult with the Prospect Lake Elementary school community to review the plan, answer questions, and request feedback. This will include meetings with staff and with the school PAC. The district will also contact the immediate neighbours to the school property.

With Respect,

Jason Reid  
Secretary Treasurer

Attachments: 1 – Prospect Lake Elementary Site Image  
2 – Prospect Lake Elementary Preliminary Parking Lot Design  
3 – Prospect Lake Elementary Traffic Study

# District of Saanich Map



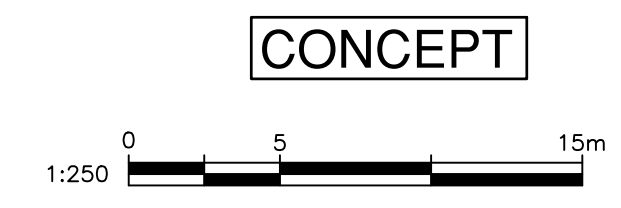
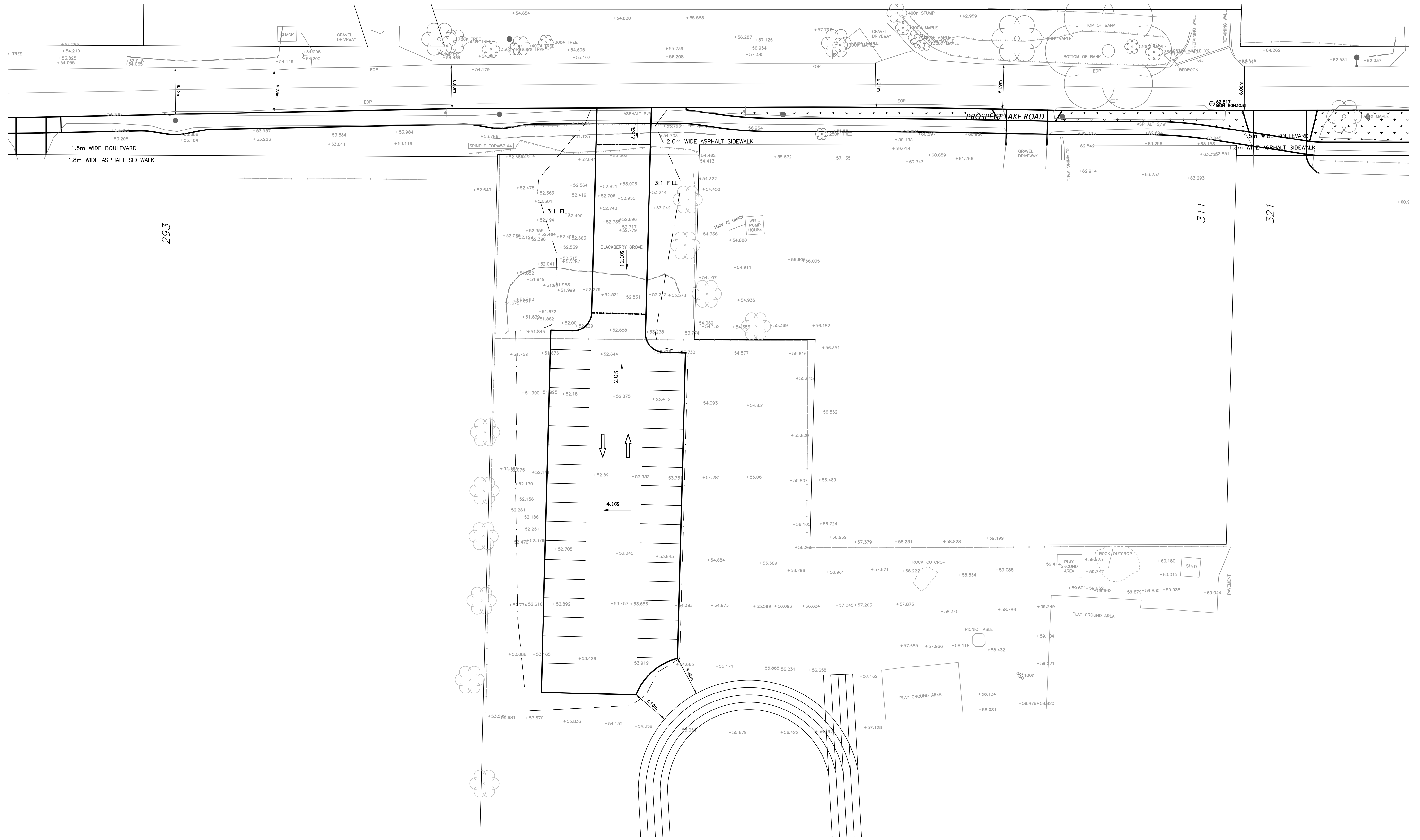
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This map is for general information purposes and should not be considered authoritative for any purpose. Accuracy, currency and precision are not guaranteed.

THE DISTRICT OF SAANICH: January 3, 2020 / G:\Projects\02-19-40 Streets and Roads\20 Major Reconstruction Projects\West Saanich Prospect Lake Sparton 2014\04 Design\Drawings\Concept\074-2019 West Saanich Concept\074-2019 GEOMLINE\_Option 2.dwg



<p><b>CONFIRM UNDERGROUND LOCATIONS WITH UTILITY COMPANIES</b></p> <p>THE LOCATION AND ELEVATION OF THE EXISTING UNDERGROUND INFRASTRUCTURE SHOWN ON THIS DRAWING MAY NOT BE ACCURATE OR COMPLETE. THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS MUST BE CONFIRMED PRIOR TO THE START OF ANY EXCAVATION.</p>	COMMENTS	STAMP	REVISIONS			APPROVED BY	SIGN	DATE	<p>DISTRICT OF SAANICH</p> <p>WEST SAANICH – PROSPECT LAKE / SPARTON</p> <p>273 PROSPECT LAKE TO 355 PROSPECT LAKE</p> <p>B.M. : MON XXXXXX Elev: XX.XXX</p> <p>Design: BJD Drawn: BJD Checked:</p> <p>Scale: Hor: 1:250 Vertical: AS NOTED Date: NOVEMBER 2014</p>	DESIGN No.	074-2019	
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# PROSPECT LAKE ELEMENTARY SCHOOL TRAFFIC + PARKING REVIEW

Prepared for: **School District No. 63 (Saanich)**

Prepared by: **Watt Consulting Group**

Our File: **2329.B01**

Date: **September 24 2018**

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### APPENDIX A.

Summary of Site Access / Driveway Traffic Counts

### APPENDIX B.

Summary of Prospect Lake Road Traffic Counts

### APPENDIX C.

Summary of School Site Parking Counts

### APPENDIX D.

Summary of In-Field Observations



## 1.0 INTRODUCTION

Watt Consulting Group (“WATT”) was retained by School District No. 63 (Saanich) to review traffic circulation, parking utilization and drop-off/pick-up characteristics during the morning drop-off and afternoon pick-up periods at Prospect Lake Elementary School. The specific scope of this review is as follows:

1. Complete multi-modal traffic counts at both driveway locations over two (2) school days. Counts to include vehicles, pedestrians and cyclists. Counts to be completed during the morning drop-off (i.e., 8:00-9:00am) and afternoon pick-up (i.e., 2:30-3:30pm) periods.
2. Complete parking utilization counts over two (2) school days. Counts to be completed during the morning (8:00-8:45am), mid-day (10:00am-1:30pm) and afternoon (2:30-3:15pm) periods.
3. Install automated hose counters on Prospect Lake Road to determine traffic volumes and vehicle speeds during school hours and off-school hours.
4. In-field observations to identify safety issues relating to student drop-off/pick-up, on-site vehicle circulation, school bus loading/unloading, pedestrian and cyclist access, and through traffic on Prospect Lake Road.
5. Prepare summary report describing current conditions and identifying key issues.

## 2.0 BACKGROUND INFORMATION

### 2.1 STUDY AREA

Prospect Lake Elementary School is located at 321 Prospect Lake Road, approximately 200m west of the intersection of Prospect Lake Road and West Saanich Road. See **Figure 1**. The school site is bound by playing fields (owned by the District of Saanich) to the immediate east, and single-family homes to the immediate west and opposite on the north side of Prospect Lake Road. Prospect Lake Road has a posted speed limit of 50 km/h and a 30 km/h School Zone speed limit in the vicinity of the school.

### 2.2 SITE CIRCULATION

All site access is via Prospect Lake Road, with one entry access (west side of building) and one exit-only access (at the east side of the building). There is a one-way eastbound drive aisle between these accesses, with perpendicular staff and visitor parking on the edges of the aisles, and drop-off and school bus lanes between the parking. There is also a north-south drive aisle along the east side of the school with a turn-around at the front doors of the school that serves as an additional drop-off / pick-up location as well as providing access to some parking stalls. Informal drop-off / pick-up parking areas are used along the school side of Prospect Lake Road, despite the presence of “No Parking” signage.

**FIGURE 1. STUDY AREA, PROSPECT LAKE ELEMENTARY SCHOOL**



## 2.3 SCHOOL CHARACTERISTICS

### 2.3.1 POPULATION

Current enrollment is **235 students** between Kindergarten and Grade 5. There are 15 Teachers and 14 Administrative / Support staff<sup>1</sup>.

### 2.3.2 BELL TIMES

The beginning of the school day is **8:40am** and the end of day is **2:46pm**<sup>2</sup>. Playground supervision is provided for the 20 minutes before the morning bell and after the afternoon bell.

## 2.4 RECENT STUDIES

Prospect Lake Elementary School participated in the District of Saanich's Active and Safe Routes to School 2017-2018 program, which included both a survey among student's families<sup>3</sup> and a walking tour<sup>4</sup>. The full summary report is available from the Capital Regional District, the key items for consideration in this review are as follows:

1. 4% of respondents indicated they live within 0.5-km of the school, 13% indicated they live 0.51 – 1.59-km from the school, and 83% indicated they live 1.6-km or further from the school. This demonstrates that the large majority of students live beyond reasonable walking distance of the school.
2. Respondents cited "Distance" and "Traffic Safety" as the most common reasons why their child is driven to/from school, and most commonly indicated "Continuous Sidewalks/Trails", "Lower Vehicle Speeds" and "Lower Vehicle Volumes" as the conditions that would allow them to encourage their children to walk or cycle to school.
3. Concern was expressed that the pathway on the south side of Prospect Lake Road is too narrow and the lack of physical separation from the road leads to vehicles parking over portions of the pathway.
4. Concern was expressed for the volume and speed of vehicles on Prospect Lake Road in the morning (thought to be a "short cut" for commuters from the West Shore).

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<sup>1</sup> Enrollment and staff population figures per Prospect Lake Elementary School website, referenced January 08 2018

<sup>2</sup> Bell times based on information on the Prospect Lake Elementary School website, available online at: <https://prospectlake.sd63.bc.ca/mod/page/view.php?id=168>

<sup>3</sup> Approximately 48 families responded, representing 63 students and approximately 27% of the student population

<sup>4</sup> More information on the Capital Regional District's Active + Safe Routes to School program available on the CRD's website: [www.crd.bc.ca/project/regional-transportation/active-safe-routes-to-school](http://www.crd.bc.ca/project/regional-transportation/active-safe-routes-to-school)

### 3.0 DATA COLLECTION + OBSERVATIONS

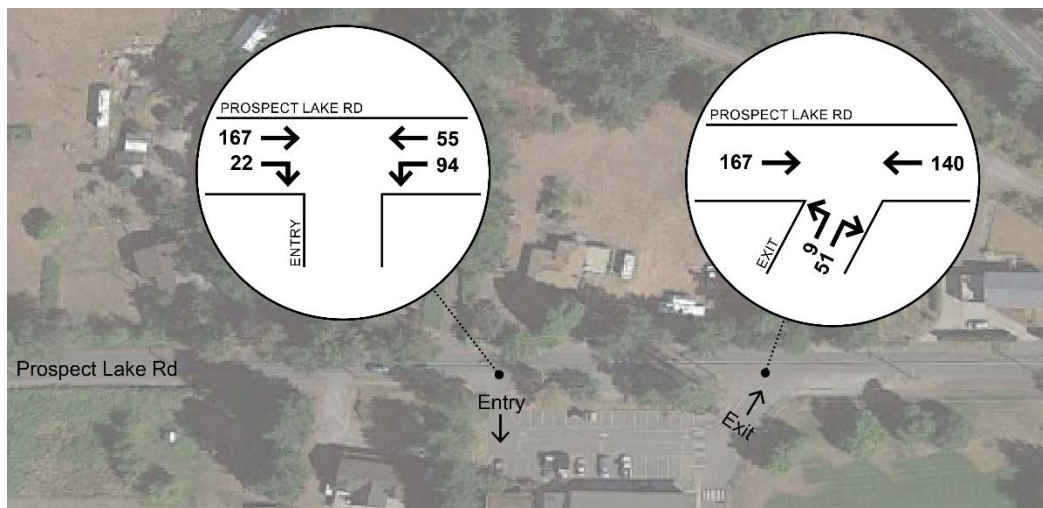
Results from data collection and in-field observations are summarized in the following sections.

#### 3.1 SITE ACCESS / DRIVEWAYS

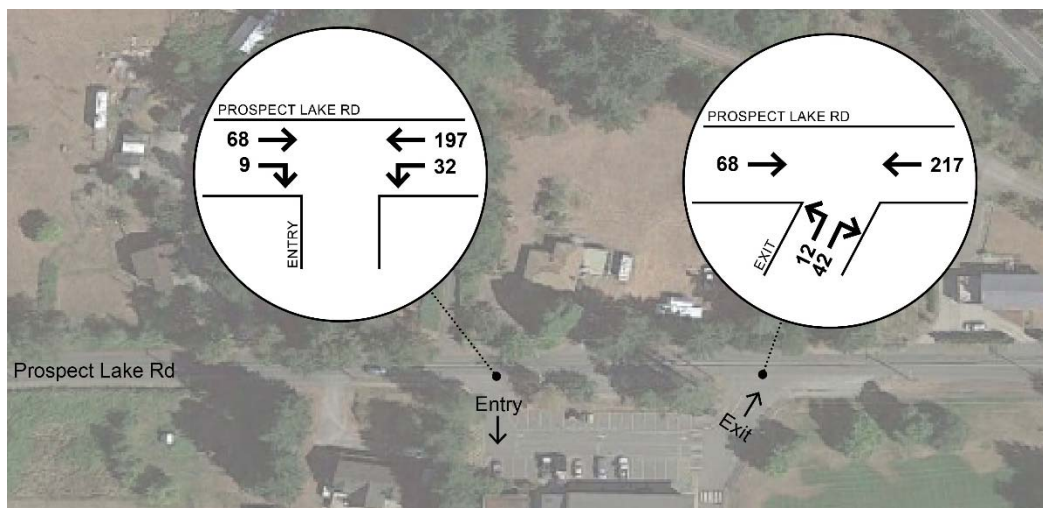
Manual traffic counts were completed at both site access locations. Counts were completed around the school bell schedule (from 8:00-9:00am and 2:30-3:30pm) on both Tuesday, January 16 2018 and Thursday, January 18 2018.

Traffic volumes were highest during the Thursday count for both the AM and PM periods. Thursday AM volumes are summarized in **Figure 2** and Thursday PM volumes are summarized in **Figure 3**. The full count summary is included in **Appendix A**.

**FIGURE 2. TRAFFIC VOLUMES, 8:00-9:00AM**



**FIGURE 3. TRAFFIC VOLUMES, 2:30-3:30PM**



## 3.2 PROSPECT LAKE ROAD

An automated traffic counter was installed on Prospect Lake Road to understand traffic volumes and vehicle speeds adjacent Prospect Lake Elementary School. The traffic count location is immediately west of the exit driveway (within the 30 km/h school zone speed limit area), as shown in **Figure 4**. The counter was deployed for six full weekdays, as follows:

- Wednesday, January 17 2018 to Friday, January 19 2018
- Tuesday, January 23 2018 to Thursday, January 25 2018<sup>5</sup>

**FIGURE 4. LOCATION OF AUTOMATED TRAFFIC COUNTS**

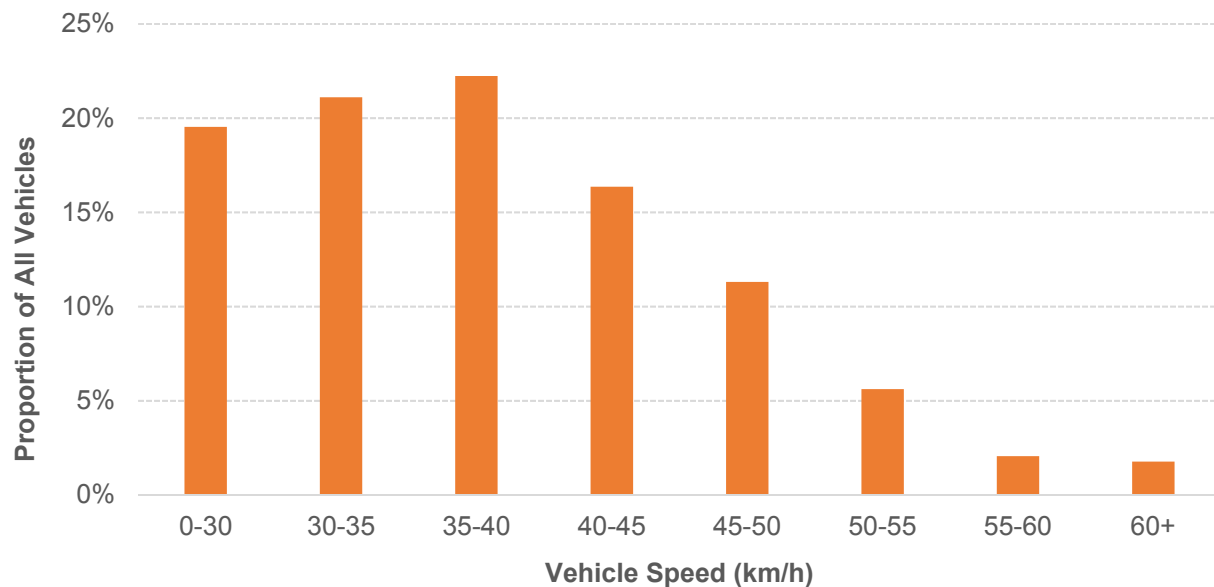


The full Prospect Lake Road count summary is included in **Appendix B**. The following is a summary of key findings:

- Traffic Volume:
  - Average weekday daily traffic (AWDT) volume is 2,691 vehicles (both directions).
  - Heavy vehicles represent 4% of all traffic on Prospect Lake Road (approximately 108 vehicles per day).
  - The automated counts are generally aligned with the manual counts undertaken at the site accesses, giving further confidence to both sets of data.
- Vehicle Speed:
  - For the 30 km/h School Zone times (8:00am to 5:00pm), approximately 20% of vehicles adhere to the 30 km/h school zone speed limit. The 85<sup>th</sup> percentile speed is 46-50 km/h during school hours and approximately 9% of vehicles travel at 50 km/h or greater (i.e., 20 km/h + in excess of the speed limit). See **Figure 5**.
  - During the hour surrounding the school drop-off period (8:00am to 9:00am) the 85<sup>th</sup> percentile is 46-50 km/h, and during the hour surrounding the pick-up period (2:30pm to 3:30pm) the 85<sup>th</sup> percentile is 41-45 km/h.

<sup>5</sup> The three day gap in count data is a result of count equipment damaged while in-field.

**FIGURE 5. VEHICLE SPEEDS ON PROSPECT LAKE ROAD DURING SCHOOL ZONE PERIOD (30 KM/H SPEED LIMIT), 8:00AM TO 5:00PM ONLY**



### 3.3 ON-SITE PARKING

#### 3.3.1 PARKING SUPPLY

The School site consists of a total of 39 on-site parking spaces. Parking supply is assigned or reserved as follows:

- Visitor: 15 spaces, Area A
- Visitor 2 spaces, Area D
- Staff: 13 spaces, Area B
- Unreserved: 5 spaces (in “bulb-outs”), Area C
- Accessible: 2 spaces, Areas B + D
- Reserved: 1 space, Area D
- Small Car: 1 space, Area D

Formal parking areas are identified on **Figure 6**. There are also a number of locations along Prospect Lake Road where unmarked areas are used as parking during drop-off and pick-up periods, despite the presence of “No Parking” signs in these areas.

FIGURE 6. ON-SITE PARKING AREAS



### 3.3.2 PARKING UTILIZATION

Parking observations were undertaken during the morning drop-off (7:50 to 9:00am), mid-day (1:30pm), and afternoon pick-up (2:15 to 3:30pm) periods on Tuesday, January 16 2018 and Thursday, January 18 2018. Observations were completed of parking on the school grounds, as well as on Prospect Lake Road and nearby areas to gain a full understand of School parking demand. The full summary of site parking observations is included in **Appendix C**. The following are key points from the parking utilization data:

- Staff Parking:** The estimated staff parking demand is 18 to 20 vehicles. The site parking supply included 13 parking spaces assigned specifically for staff that were generally observed at or near capacity from 8:15am to 3:20pm. Another six vehicles were observed in Visitor parking spaces during both the AM and PM observation periods, which are assumed to be staff who could not access available Staff parking.

- **Morning Drop-Off:** The parking demand associated with morning drop-off is approximately 40 vehicles. Peak conditions were observed at approximately 8:40am<sup>6</sup>, when approximately 20 to 25 vehicles are parked on-site and 15 to 20 vehicles are parked on Prospect Lake Road.
- **Afternoon Pick-Up:** The parking demand associated with afternoon pick-up is approximately 80 vehicles. This figure is greater than the morning drop-off period due to the accumulation of vehicles waiting for the bell to ring at 2:46pm. Peak conditions were observed at approximately 2:50pm<sup>7</sup>, when approximately 25 vehicles are parked on-site, 40 vehicles are parked on Prospect Lake Road, and an estimated 15 vehicles<sup>8</sup> are parked at the Autobody and Bakery sites at the intersection of West Saanich Road and Sparton Road.
- **Visitors:** The estimated visitor parking demand is five vehicles. These vehicles are assumed to seek parking between the morning drop-off and afternoon pick-up periods, and are able access available parking on-site.

### 3.4 IN-FIELD OBSERVATIONS

In-field observations were completed to identify safety issues relating to student drop-off/pick-up, on-site vehicle circulation, school bus loading/ unloading, pedestrian and cyclist access, and through traffic on Prospect Lake Road. The full summary is included in **Appendix D**, a summary of key findings is provided below:

1. The “crest” in the road on Prospect Lake Road immediately west of the entry driveway creates visibility issues, particularly for eastbound vehicles turning left into the school site conflicting with westbound vehicles. The Transportation Association of Canada’s (“TAC”) criteria are met for stopping sight distance, but not for turning sight distance.
2. Numerous instances of vehicles parked in inappropriate locations, both on the school site and along Prospect Lake Road (i.e., parking over the sidewalk, parked on-site in “no parking” areas). This is particularly prevalent during afternoon pick-up.
  - a. Vehicles parked inappropriately on Prospect Lake Road encroach on the sidewalk and/or impede through vehicle travel. The road is narrow and two large vehicles cannot pass in opposing directions with vehicles parked on the shoulder. Vehicles that are backing out further impede and conflict with Prospect Lake Road traffic.

<sup>6</sup> Peak was observed at 8:43am on Tuesday, January 26 2018 and at 8:37am on Thursday, January 28 2018

<sup>7</sup> Peak was observed at 2:50pm on Tuesday, January 26 2018 and at 2:47pm on Thursday, January 28 2018

<sup>8</sup> Estimated number of vehicles at Autobody / Bakery based on conversation with the crossing guard



- b. Vehicles parked inappropriately on-site block pedestrian access, interfere with bus turning into and out of the site, and/or impede driver sightlines. This is particularly evident at both the school site entry and exit locations.
3. On-site drive aisle and parking geometry is constrained and must accommodate all users (school buses, parking, drop-off/pick-up, and pedestrians), which can lead to conflicts and traffic queues. The ability for general vehicles to park and/or circulate on-site is significantly impacted while school buses load and unload. Vehicles queued in the circulation lane also impedes through vehicles.
4. The lack of curbs and formal elevated sidewalks on Prospect Lake Road – common in a semi-rural setting such as this - enables inappropriate on-street parking despite “No Parking” signage restrictions.
5. The marked pedestrian crossing of the drop-off/pick-up driveway adjacent the soccer fields lacks a curb ramp (west side) and has concrete curb stops placed in the centre of the pedestrian route (east side). Both results in an inaccessible pedestrian route and pose a hazard even to pedestrians without accessibility challenges.
6. Although off-site, traffic queueing, operational issues, and crosswalk compliance issues at the Prospect Lake Road / West Saanich Road intersection impact both vehicle drop-off/pick-up conditions at the school and pedestrian safety on trips to/from the school.

## 4.0 CONCLUSIONS

The following conclusions are made based on the data collection and in-field observations of traffic circulation, parking utilization and drop-off/pick-up characteristics during the morning drop-off and afternoon pick-up periods at Prospect Lake Elementary School:

1. **Pedestrian Access:** Pedestrian access at the school site is not well accommodated from any approach. There is no formal on-site accommodation at the west access or at the mid-location between driveways (where a break in the fence allows pedestrian access and creates a desire line). The pedestrian access from the east is inaccessible on-site. Pedestrian access should be improved as a short-term priority. This may include adding a curb ramp and removing interfering curb stops, improving or formalizing pedestrian facilities between the site and Prospect Lake Road, and preventing parked vehicles on Prospect Lake Road from overhanging the sidewalk.
2. **Staff Parking:** Staff parking demand exceeds the staff parking supply by five to eight vehicles, requiring that staff park in Visitor parking spaces. It was concluded that visitor parking demand is met during the mid-day period, but that the presence of staff vehicles in Visitor parking spaces results in added drop-off and pick-up vehicles seeking parking elsewhere on-site or on Prospect Lake Road. Consideration should be given to whether to re-assign existing on-site parking spaces to address unmet staff parking demand and/or create new parking supply to accommodate staff.

3. **Inappropriate On-site Parking:** Inappropriate on-site parking during the morning drop-off and afternoon pick-up period poses a significant issue with school bus circulation and safety, as well as circulation along the turn around loop at the east side of the school. Further study should be undertaken to identify critical locations and to develop a plan to improve design and/or increase enforcement of inappropriate parking on the school site.
4. **Off-site Parking along Prospect Lake Road:** Off-site parking along Prospect Lake Road contributes to safety issues due to reduced sight lines at the accesses, impacts to school bus swept paths at the accesses (particularly exiting), and to through-traffic along Prospect Lake Road due to parked vehicles extending into the (already narrow) roadway and due to backing-out manoeuvres across both road lanes.
5. **Vehicle Speeds:** The 85<sup>th</sup> percentile vehicle speed on Prospect Lake Road is 46-50km/h during school hours (i.e., 8:00am to 5:00pm), and approximately 80% of traffic on Prospect Lake Road exceeds the 30 km/h school zone speed limit. This represents an issue with speed limit compliance and a safety risk for turn movements at the school driveways that should be addressed.
6. **Pick-Up / Drop-Off Capacity + Site Circulation:** Pick-up / drop-off exceed on-site capacity by up to 60 vehicles during the peak afternoon pick-up period (2:40-2:50pm). On-site areas are at times inefficiently used for drop-off and pick-up, however, even in the peak times. At present the on-site circulation areas must accommodate all users in the same constrained area (buses, parking, drop-off/pick-up traffic), which in addition to creating conflicts may encourage off-site parking (for drivers wishing to avoid the on-site area). While achieving an additional 60 parking spaces on-site to accommodate all vehicle is not feasible without significantly expanding the parking footprint, further study should be undertaken to identify opportunities to increase on- (or off-) site parking supply as well as increase circulation efficiency (e.g. potentially separate bus, parking, and drop-off / pick-up areas).

APPENDIX A.  
**Summary of Site Access / Driveway Traffic Counts**



# Intersection Turning Movement Count Summary

N/S Street: School Driveway  
 E/W Street: Prospect Lake Rd  
 LOCATION: Saanich  
 DATE: JAN 18-2018  
 WEATHER: Cloudy/shower  
 JOB # : 2322

Observer: MJ Oh  
 Notes: **Eastbound Right and WBL are to School Driveway (Enter Only).**  
**NB L/R is from School Driveway (Exit only)**  
**The driveway entrance is in the west and exit is in the east.**

TOTAL HOURS = 1

Speed Limit Major Street:	30 km/h
Speed Limit Minor Street:	30 km/h

## Vehicles

TIME		Northbound (School Driveway Exit)			Southbound			Eastbound			Westbound			Total Volume	Hourly Volume
From	To	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
8:00	8:15	1		0					49	3	11	13		77	
8:15	8:30	2		3					44	7	31	15		102	
8:30	8:45	4		32					36	10	44	18		144	
8:45	9:00	2		16					38	2	8	9		75	398
Peak Hour		<b>9</b>	<b>0</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167</b>	<b>22</b>	<b>94</b>	<b>55</b>	<b>0</b>		
PHF		<b>0.56</b>	<b>0.00</b>	<b>0.40</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.85</b>	<b>0.55</b>	<b>0.53</b>	<b>0.76</b>	<b>0.00</b>		

Pedestrians at the Entry Driveway Location
5
12
16
3
<b>36</b>

## Heavy Vehicles

TIME		Northbound			Southbound			Eastbound			Westbound		
From	To	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT
8:00	8:15	0		0					2	0	0	0	
8:15	8:30	0		1					1	0	3	2	
8:30	8:45	0		0					1	0	0	2	
8:45	9:00	0		2					2	0	1	2	
Peak Hour		<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>0</b>
% Heavy Vehicles		<b>0%</b>	<b>0%</b>	<b>6%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>4%</b>	<b>0%</b>	<b>4%</b>	<b>11%</b>	<b>0%</b>

## Bicycles

TIME		Northbound			Southbound			Eastbound			Westbound		
From	To	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT
8:00	8:15	0		0					1	0	0	0	
8:15	8:30	0		0					0	0	0	0	
8:30	8:45	0		0					0	0	0	0	
8:45	9:00	0		0					0	0	0	0	
Peak Hour		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>





APPENDIX B.  
**Summary of Prospect Lake Road Traffic Counts**



**Road Tube Count Summary Sheet**  
**Prospect Lake Road at School Driveway Exit**  
 January-17-18 to January-25-18

Prospect Lake Road at School Driveway Exit	
Average Weekday Daily Traffic (AWDT)	2691
% Heavy Vehicles	4%

**Data Collection Period: 6 full weekdays (Jan 17 - 19 and Jan 23 - 25, 2018)**

**AWDT Summary**

Day		WB	EB	Total
Wednesday	01/17/2018	1674	1033	2707
Thursday	01/18/2018	1813	1133	2946
Friday	01/19/2018	1743	1072	2815
Tuesday	01/23/2018	1545	951	2496
Wednesday	01/24/2018	1607	985	2592
Thursday	01/25/2018	1585	1003	2588
ADT		1661	1030	2691
%		61.7%	38.3%	
AWDT		1661	1030	2691
%		61.7%	38.3%	

85th Percentile Speed Data Summary	
24 Hour	51-55 km/h
School Hour (8 AM - 5 PM)	46-50 km/h
School AM Peak Hour (8:00-9:00 AM)	46-50 km/h
School PM Peak Hour (2:30-3:30 PM)	41-45 km/h

\*Note: 85th Percentile Speed is 52.1 km/h based on the Road Reporter software result.

**Classification Summary**

	Two Way Total	
	# of Veh	%
Passenger Vehicles	15844	95.2%
Buses	53	0.3%
Single Unit Trucks	483	2.9%
Semi-Trailer Trucks	92	0.6%
Motorcycles	69	0.4%
Unknown Vehicle Type	101	0.6%

**Weekday Peak Hour Summary**

AM Peak Hour				
8:00		to		9:00
Start Time	WB	EB	Total	
8:00	17	42	59	
8:15	20	45	65	
8:30	42	43	85	
8:45	67	36	103	
Total	146	166	312	

**PM Peak Hour (School)**

14:30 to 15:30				
Start Time	WB	EB	Total	
14:30	42	16	58	
17:00	50	15	65	
17:15	46	29	75	
17:30	56	17	73	
Total	194	77	271	

**PM Peak Hour (Typical)**

16:15 to 17:15			
Start Time	WB	EB	Total
16:15	91	14	105
17:00	96	16	112
17:15	87	15	102
17:30	86	16	102
Total	360	61	421

**Speed Summary**

Two Way Total (24 Hour)															
BINS (km/h)															
Lane	0-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	91+	Total
Total Vehicles	2237	2460	2795	2663	2621	1732	948	392	136	50	20	10	3	77	16144
% of Total	13.9%	15.2%	17.3%	16.5%	16.2%	10.7%	5.9%	2.4%	0.8%	0.3%	0.1%	0.1%	0.0%	0.5%	
Cumulative %	13.9%	29.1%	46.4%	62.9%	79.1%	89.9%	95.7%	98.2%	99.0%	99.3%	99.4%	99.5%	99.5%	100.0%	

85th Percentile Speed: 51-55 km/h

**Two Way Total (08:00 AM - 05:00 PM)**

BINS (km/h)															
Lane	0-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	91+	Total
Total Vehicles	2174	2349	2475	1821	1258	625	229	75	32	13	8	5	3	61	11128
% of Total	19.5%	21.1%	22.2%	16.4%	11.3%	5.6%	2.1%	0.7%	0.3%	0.1%	0.1%	0.0%	0.0%	0.5%	
Cumulative %	19.5%	40.6%	62.9%	79.3%	90.6%	96.2%	98.2%	98.9%	99.2%	99.3%	99.4%	99.4%	99.5%	100.0%	

85th Percentile Speed: 46-50 km/h

**Two Way Total (School AM Peak Hour, 08:00-09:00 AM)**

BINS (km/h)															
Lane	0-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	91+	Total
Total Vehicles	576	370	338	237	200	88	30	7	0	1	2	1	2	20	1872
% of Total	30.8%	19.8%	18.1%	12.7%	10.7%	4.7%	1.6%	0.4%	0.0%	0.1%	0.1%	0.1%	0.1%	1.1%	
Cumulative %	30.8%	50.5%	68.6%	81.3%	91.9%	96.6%	98.2%	98.6%	98.6%	98.7%	98.8%	98.8%	98.9%	100.0%	

85th Percentile Speed: 46-50 km/h

**Two Way Total (School PM Peak Hour, 2:30-03:30 PM)**

BINS (km/h)															
Lane	0-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	91+	Total
Total Vehicles	732	394	295	168	75	38	13	5	6	0	4	0	0	14	1744
% of Total	42.0%	22.6%	16.9%	9.6%	4.3%	2.2%	0.7%	0.3%	0.3%	0.0%	0.2%	0.0%	0.0%	0.8%	
Cumulative %	42.0%	64.6%	81.5%	91.1%	95.4%	97.6%	98.3%	98.6%	99.0%	99.0%	99.2%	99.2%	99.2%	100.0%	

85th Percentile Speed: 41-45 km/h



Since 1983

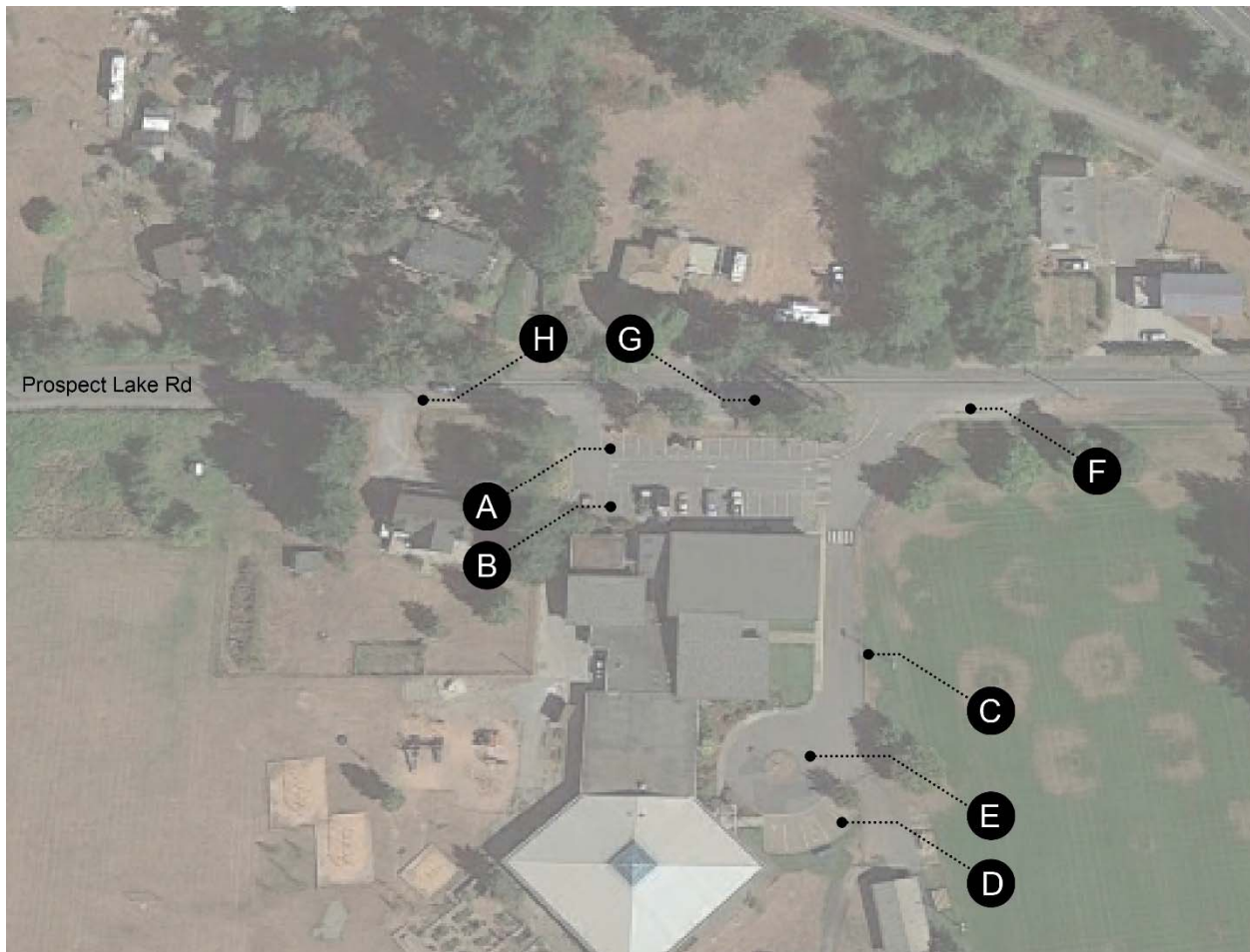
Date: 2/8/2018

APPENDIX C.  
**Summary of School Site Parking Count**

## Parking Supply Index

The following describes the location of parking areas referenced in summary tables on the following pages.

Location		Parking Supply	Description
A	School Property	15	Main front parking area, visitor spaces
B		14	Main front parking area, staff spaces
C		5	Back parking / turnaround area, east side on-street
D		5	Back parking / turnaround area, designated spaces
E		-	Back parking / turnaround area, centre of turnaround
F	Prospect Lake Rd Right-of-Way	-	Prospect Lake Rd, east of School exit
G		-	Prospect Lake Rd, between School entry + exit
H		-	Prospect Lake Rd, west of School entry





Prospect Lake Elementary School Parking + Traffic Study

**Summary of Parking Observations**

Tuesday, January 16 2018

	Observed Vehicles									
	A	B	C	D	E	F	G	H	Drop-Off	Total
7:45 AM	0	2	1	1	0	0	0	0	0	4
7:57	0	3	1	2	0	0	0	0	0	6
8:00	0	5	1	2	0	0	0	0	0	8
8:05	1	5	1	2	0	0	1	0	0	10
8:08	2	6		3		0	1	0	1	13
8:10	3	6		4		0	1	0	0	14
8:13	4	9		4		0	2	0	0	19
8:15	6	10		6		0	2	0	2	26
8:17	7	11		6		0	2	0	2	28
8:19	9	12		7		0	2	0	1	31
8:21	10	12		7		0	1	0	2	32
8:25	10	12		7		1	1	1	2	34
8:28	10	12		8		1	3	0	1	35
8:29	10	12		8		2	3	0	2	37
8:32	11	12		14		3	2	1	3	46
8:35	12	12		12		2	3	0	3	44
8:36	12	12		14		3	3	0	4	48
8:39	12	12		16		5	4	2	5	56
8:43	13	13		15		5	5	3	6	60
8:50	12	12		12		5	2	2	0	45
8:56	11	13		12		2	3	1	1	43
9:00	10	14		8		1	2	0	0	35
1:30 PM	8	13	1	3	0	1	0	0	-	26
2:15 PM	9	13	4	3	1	1	2	1	-	34
2:24	11	12	5	3	4	1	2	3	-	41
2:30	12	12	5	3	6	2	7	3	-	50
2:35	12	12	5	3	4	5	11	4	-	56
2:40	15	14	5	3	6	5	13	11	-	72
2:45	16	14	6	2	5	5	11	14	-	73
2:50	17	13		17		5	12	20	-	84
2:55	15	15		8		3	10	6	-	57
3:00	13	15		9		2	7	5	-	51
3:10	12	15	2	3	2	1	6	1	-	42
3:15	10	14	2	2	2	1	5	1	-	37
3:20	9	14	2	2	1	1	2	1	-	32
3:25	8	13	2	2	1	1	3	1	-	31
3:30	8	13	2	2	2	1	2	1	-	31
3:40	8	13	2	2	2	1	2	0	-	30

Note: "Drop-Off" refers to vehicles parked in un-marked parking areas, typically for short periods of time



Prospect Lake Elementary School Parking + Traffic Study

**Summary of Parking Observations**

Thursday, January 18 2018

	Observed Vehicles									Total	
	A	B	C	D	E	F	G	H	Drop-Off		
7:55 AM	0	2	1	1	0	0	0	0	0	0	4
8:00	0	4	1	2	0	0	0	0	0	0	7
8:05	1	6	1	2	0	0	0	0	0	0	10
8:10	3	8	2	2	0	0	0	0	0	1	16
8:15	3	12	2	2	0	0	0	0	0	0	19
8:20	8	11	2	3	0	0	1	0	2	2	27
8:25	8	13	3	3	0	0	1	0	3	3	31
8:30	12	13		10		0	1	2	8	8	46
8:33	13	13		15		2	2	2	3	7	50
8:35	13	13		16		2	3	1	7	7	55
8:37	14	13		17		1	3	1	9	9	58
8:40	14	13		15		4	4	1	4	4	55
8:46	12	13		12		2	2	2	3	3	46
8:50	11	13		11		0	1	1	0	0	37
8:55	11	13	3	4	0	0	1	0	0	0	32
9:00	10	13	3	5	0	0	1	1	0	0	33
1:30 PM	9	10	3	2	0	1	0	0	-	-	25
2:15 AM	10	10	3	4	0	0	1	0	-	-	28
2:20	11	10		12		0	2	0	-	-	35
2:25	12	11		14		0	4	3	-	-	44
2:32	15	13		14		2	9	5	-	-	58
2:44	15	14		19		7	13	13	-	-	81
2:47	15	14		20		7	14	18	-	-	88
2:51	15	14		14		6	5	14	-	-	68
2:55	13	13		12		3	6	6	-	-	53
3:00	12	12		9		2	5	5	-	-	45
3:05	9	12		8		2	4	4	-	-	39
3:11	5	12		6		1	2	2	-	-	28
3:15	4	12		5		2	2	2	-	-	27
3:20	3	11		5		1	1	2	-	-	23
3:25	3	11		3		0	2	1	-	-	20
3:30	3	10		2		0	3	1	-	-	19
3:35	4	8	0	1	0	0	3	1	-	-	17
3:40	2	6	0	1	0	0	2	0	-	-	11

AM Peak

PM Peak

Note: "Drop-Off" refers to vehicles parked in un-marked parking areas, typically for short periods of time

APPENDIX D.  
**Summary of In-Field Observations**

# In-Field Observations

