dcdean associates

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Jeremy Martens

DELIVERED ELECTRONICALLY

Dear Sir:

Re: John A. Hutton Elementary School
Traffic and Parking Study

John A. Hutton Elementary School in Grand Forks, BC is situated on the north side 75 Avenue between 25 Street and 27 Street as shown in Exhibit 1. The school has been experiencing some safety issues due to congestion and roadway activities that occur during the peak morning drop-off and afternoon pick-up periods.

Exhibit 1 – School Location

Consideration is being given to relocate property lines and utilize land to the east of the school site as a means to mitigate the parking and pick-up / drop-off congestion that is occurring. Approval is required from the Agricultural Land Commission for this to occur, and a requirement of their conditional approval is for a traffic and parking study be undertaken in order to confirm that safety issues exist that need mitigation and that a parking plan be developed that minimizes in terms of size and configuration.

D.C. Dean Associates Inc. was retained to undertake the study, and this letter report documents the findings and presents a recommended site plan for the parking, pick-up and drop-off activities.

Scope of Study

In the 200+ school road safety reviews undertaken by D.C. Dean Associates, a standard process is followed to determine the specific safety issues that are occurring at the school and the mitigation measures that would best address those issues. This process includes the following steps:

- Meeting with School Principal and staff to listen to their concerns regarding the school road safety;
- Collection of data including of students, staff, buses, bus usage, pedestrian usage, and any school or parent safety initiatives;
- Site survey of existing parking spaces, pedestrian facilities, pick-up and drop-off facilities, and lighting;
- Peak pick-up and/or drop-off observations (afternoon pick-up activities are typically the worst case scenario due to need for parents to wait until school is released.

This process allows for a good understanding of the safety issues, identifies the key functional requirements for an effective pick-up / drop-off facility, and yields a road safety plan that minimizes conflicts around the school.

John A Hutton Elementary Numbers

The following data was obtained from staff at the school:

School grades:	Kindergarten to 7 with Strong Start
Number of students:	230
Number of Strong Start:	10
Number of staff:	36
Number of buses:	6
On-site staff parking:	12 in east parking lot / 10 in west parking lot

A survey of vehicles at the school at 1:30 pm (with no parent volunteers in school) counted a total of 33 cars at the school – 12 in the east parking lot, 10 in the west parking lot, and 11 on-street.

Site Observations

A site visit was undertaken during the afternoon peak pick-up period on Wednesday, December 12.

Observation	Picture
At the time of the Termination Bell (3:20 pm) a total of 38 additional vehicles were parked on the street waiting for students. Additional vehicles subsequently arrived, and others left as students were picked up.	
Parking occurs on both sides of 75 Avenue.	

Parking on south side of 75 Avenue requires parents and students to jaywalk across busy roadway.	
No sidewalk on the south side of 75 Avenue necessitates pedestrians to walk on road, and out into the travel lane to get around parked vehicles.	
Parking also occurs within west parking lot expanding out onto street in a haphazard manner.	
Numerous unsafe maneuvers made by drivers including driving on wrong side of road, U-turns, picking-up in middle of road, etc.	

Identified Issues

Discussions with staff and observations of the peak pick-up activities identified a number of key safety issues that are contributing to potential conflicts between students and vehicles. These include:

- **Lack of formalized parking spaces** – It is estimated that approximately ___ students are driven to school on a typical winter day. Parents of younger students desire to leave their vehicle and pick up their child at the school entrance or classroom, and therefore need to park. On-street parking is not formalized with curb and gutter, and vehicles are parked within the pedestrian walking area. Parking in the west parking lot expands beyond the parking lot into the roadway, resulting in cars parked in the travel lane facing the wrong direction.
- **Lack of formalized pick-up / drop-off area** – Many of the parents arriving to drop-off or pick-up their children have no need to get out of their vehicle, but

there is no dedicated pick-up / drop-off area. Students searching for their parents' vehicle walk through areas of vehicle conflict and/or cross the busy roadway to the south side.

- **Unsafe driving behaviour** – Numerous examples of parents making unsafe movements were observed including U-turns, driving on wrong side of road, picking up in middle of road, inappropriate parking choices. This is quite likely influenced by the lack of proper facilities, and formalized areas of road user space.
- **Inadequate street lighting** – Lease light luminaires were located on every second utility pole creating inadequate lighting on-street. Specifically, there was no luminaire at the crosswalk location in front of the school. Similarly, no luminaires were located within either parking lot, or in the bus parking lot.

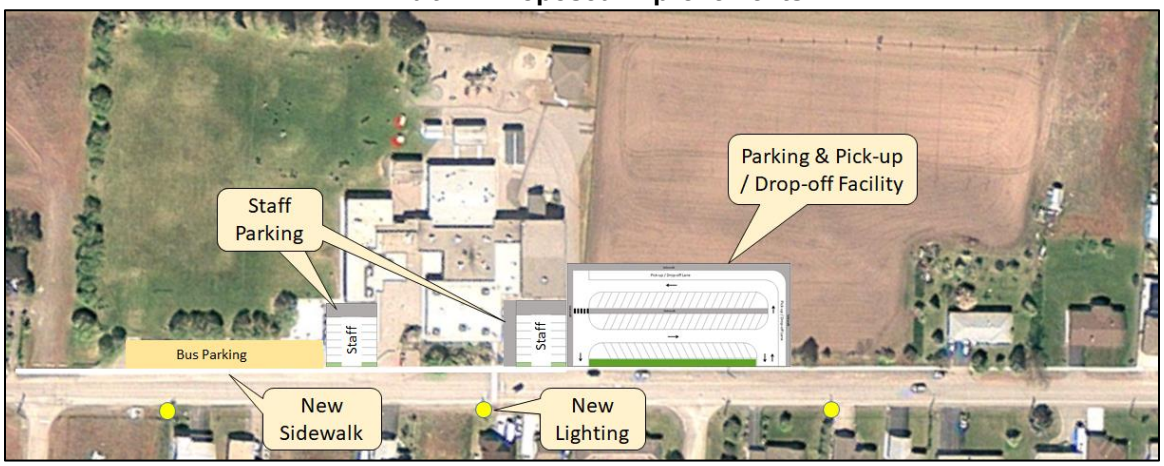
Specific to the purpose of the traffic and parking study, it is easily concluded that safety issues exist at John A Hutton Elementary School due to the lack of parking and pick-up / drop-off facilities. Recommendations will be made on improving the street space and existing parking lots, but the extent of the issues can only be fully met by creating more off-street facilities.

Proposed Improvements

A suite of improvements are proposed in order to address the safety concerns relating to the peak period parking and pick-up / drop-off requirements of the school. Reference is made to Exhibit 2 for a schematic of each of the components:

- **New sidewalk** – A new sidewalk on the north side of 75 Avenue in front of the school will provide formalize space for pedestrian activity, in addition to formally providing a boundary for the existing parking lots.
- **Staff parking lots** – Both the existing east and west parking lot should be curbed to formally create 12 parking stalls in each lot, with a wide pedestrian area between the parking lots and the school. These parking lots should be designated for staff only. This will not accommodate the staff demand of 36 spaces; an additional 12 spaces need to be designated in the new lot.
- **Improved lighting** – At a minimum, additional lease lights should be placed on the utility poles along 75 Avenue adjacent the school grounds. This would include the pole located at the crosswalk location. In addition, the School District should consider lighting the existing parking lots and school bus parking lot.
- **New parking and pick-up / drop-off facility** – In the area to the east of the school, a new parking and pick-up / drop-off facility should be built that meets both the parking and pick-up / drop-off activities in a manner that minimizes conflicts between students and vehicles. This is described in greater detail below.

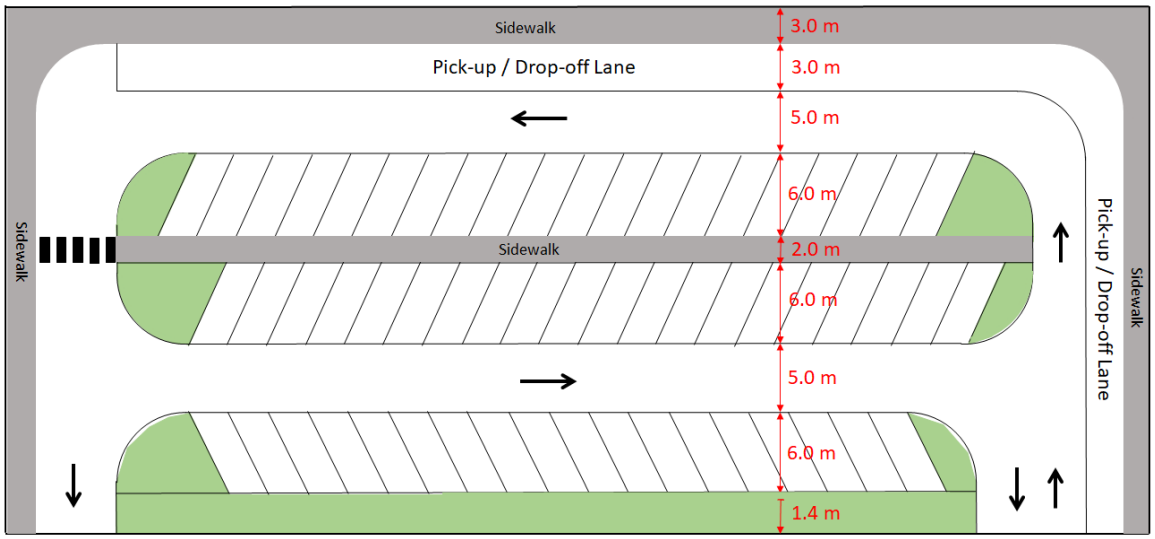
Exhibit 2 – Proposed Improvements



Parking / Pick-up and Drop-off facilities

The parking and pick-up / drop-off facility proposed for the area east of the school is shown in Exhibit 3. The facility has an approximate 180 metre long pick-up and drop-off lane (typical for a 230 student school) and 58 parking spaces. A total of 12 spaces will be utilized by staff parking, resulting in 46 spaces available for visitors (1 parking spot for every 5 students).

Exhibit 3 – Parking and Pick-Up / Drop-Off Facility



Visitors would enter the facility from the east access and if picking up or dropping off would get in the pick-up / drop-off lane moving forward until stopped. If picking up, motorists would stay in the vehicle continuing to move forward as space becomes available or until their passenger gets picked up. They then would pull into the travel lane to exit by the west access. Visitors wanting to park would travel counter-clockwise until a parking space is available.

A key attribute of a parking and pick-up / drop-off facility is the ability to separate the pedestrian activity from the vehicle movements as much as possible. Pick-up / drop-off lanes are typically on the outside of a counter-clockwise rotation, thereby having all

students exit from the passenger side directly onto a sidewalk that leads to the school entrance without encountering any traffic.

Parking facilities also should have dedicated pedestrian facilities. The proposed design has a sidewalk between the northern two parking rows leading to a crosswalk across the access aisle. Users of the southern row of parking may use the existing City sidewalk. Pedestrians therefore have no need to walk in the traffic aisle, and would not be susceptible to motorists backing up.

The facility utilizes the full width of available space (approximately 79 metres) and is 37.4 metres in depth, utilizing a total area of approximately 2,955 m^2, or approximately 0.3 hectares. This is less than the maximum allowed in the ALR approval (0.5 ha). The facility sketch is not drawn to scale but does indicate the key dimensions needed for proper circulation and turning movements.

The sketch is also drawn assuming a paved parking lot with pavement markings, curb & gutter, and raised sidewalks. While this would be preferred and provide the safest facility due to formalizing all movements, costs could be saved by using curb stops on a gravel parking lot. Greater education on how to use of the pick-up and drop-off lane may be required in this case as markings on the ground would not be possible.

It is my opinion that the opportunity for this parking and pick-up / drop-off facility allows for a vast improvement in the level of safety that currently exists at John A. Hutton Elementary School. If you have any questions on the report please contact me at your convenience.

Yours truly,

D.C. DEAN ASSOCIATES INC.

David Dean, P.Eng.