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N45 ARCHITECTURE INC.

January 20, 2021

Mr. David Lacelle
Ottawa Carleton District School Board
Supervisor, Design and Construction
Ottawa Carleton District School Board
1224 Stittsville Main Street
Ottawa, Ontario
K2S 0E2

Re: OCDSB Portable Classrooms Construction

Dear Mr. Lacelle,

The environmental quality and sustainability of the Portable Classrooms that are being constructed for the OCDSB is at the forefront of the design and construction of today's standards. As you are aware, we are the Architects on the Standing Offer that provide services for construction and placement of Portable Classrooms for several years. In the past we were also involved with four (4) other School Boards in the Eastern Ontario region in providing them with similar services. Being able to see what other Boards are providing, the OCDSB portables are amongst the highest standard and quality.

In addressing the quality of Portable Classrooms, I would like to outline multiple characteristics that affect the construction and relocation of the same:

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.1 Sustainability

Wood Construction: Wood is considered to be a renewable resource. By using wood, the consumption of non-renewable materials can be reduced and/or completely avoided. This is particularly significant in construction, where the quantities of material used are great and the replacement of other materials with wood is comparatively easy. Wood is a great Canadian resource and available regionally. Therefore, shipping and handling is vastly reduced and so is the environmental footprint of this activity.

SB-10 Compliance: This is Provincial standard which is part of the Ontario Building Code. Supplementary Standard SB-10 ("SB-10") helps stakeholders meet energy efficiency requirements in the Building Code and came into force on January 1, 2017. Compliance path for the design and construction of OCDSB portable classrooms follows ANSI/ASHRAE/IES Standard 90.1-2013, "Energy Standard for Buildings

Except Low-Rise Residential Buildings”, and additional requirements introduced through Chapter 2 of SB-10. Some of the characteristics of this compliance are high insulation values, continuation of vapour barriers, no cold bridges, windows, and doors with high thermal value, etc.

Heating and Cooling: Heating and cooling for the portables is 100% electric and is a zero-carbon source of energy. Both heating elements and A/C is in compliance with SB-10 and ASHRAE standard including fresh air rates), providing healthy environment for students.

Storm Water Management (SWM): Portable classrooms are built on wooden crib foundations. This approach allows us to avoid water run-off (area under portables is permeable and free for unobstructed water flow and absorption) and allow portable structure to move freely with thaw and freeze cycles without being damaged.

.2 Accessibility:

The interior of each portable classroom is designed to comply with accessibility requirements of the OBC and AODA (Accessibility for Ontarians with Disabilities Act). Each classroom receives custom stairs when they are placed on site. However, depending on the needs of the particular school (Site) an accessible ramp is constructed as well.

.3 Maintenance:

Construction of Portable Classrooms is pragmatic and simple. This was one of the major objectives when we initially designed them. Because of their simplicity, OCDSB is able to maintain them without any special tools or specialized knowledge. This means that most repairs and maintenance can be done in-house.

4. Relocation and Flexibility:

The design of the portables is such that portables can be oriented in any direction. This is very important because they must fit a wide variety of sites. They can be placed on sloped sites, and the location of the “front entrance” is interchangeable from back to front of the portable. Access stairs and/or ramps are manufactured separately and are site specific. The construction of the portable classrooms is such that they can be transported by road without special permit. This is very important for last minute decisions on which sites to place portables (once the full enrolment figures are known for the site).

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The construction of portables is also robust. This is important since during their useful life they will be relocated multiple times. Therefore, their construction must withstand the handling without damage.

Enrolment pressures are unpredictable and are constantly changing. The Board can project preliminary numbers in May and Finalized in June when full enrollment is known. This only gives us a short period of time to apply for building permit, place the portable and connect it to school's infrastructure (electricity, PA, Fire Alarm). Given the tight schedule these portable classrooms must be flexible and relocatable.

I hope this letter is to your satisfaction. Please let me know if you have any questions or comments.

Regards,

Vladimir Popovic, FRAIC, OAA
partner

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