

# White Rock Elementary School Addition

## Development Variance Application Design Rationale

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On behalf of School District 36 (SD36), Thinkspace Architecture is pleased to submit the application for a Development Variance Permit for a height variance for the addition to the White Rock Elementary School located at 1273 Fir Street.

The proposed development meets the objectives and aspirations of SD36 currently and as established in 2007 when the current building was constructed. It also complies with the OCP requirements for the Lower Town Centre area in that new developments are to be compatible with adjacent buildings.

School buildings are long term elements in the urban fabric. Unlike commercial buildings, they tend to be in existence for 60 years or more. As a result, the character of these facilities should be respectful of the character and scale of the community. When the original building from 1914-1967 was identified for demolition and reconstruction, the City of White Rock originally asked SD36 to save the 1914 building and display it somewhere on the existing site. As this was not possible, the City then requested/encouraged



1914 Original Building



3 storey addition 1920's



SD36 to create a design that maintained the form and character of the original 1914 school, respectful of the seaside community aspect of White Rock while paying homage to the history of the site as the long-time home of the White Rock School.

The current design of school respects the character of the neighbourhood and the City of White Rock by incorporating a residential design language and aesthetic typical in seaside communities. Further, the design of the building was specifically conceptualized to respond to the design of the original 1914 building.

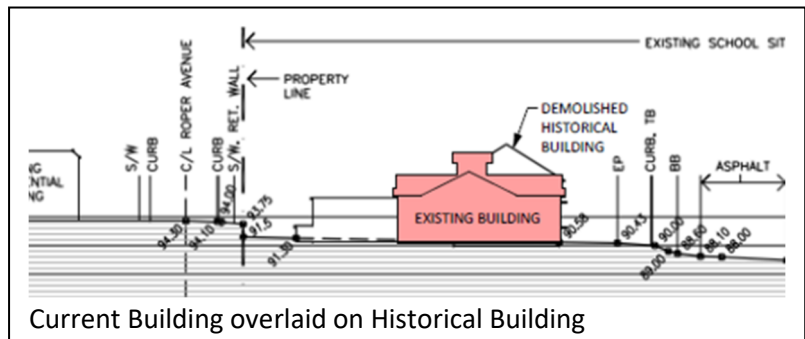
The intent of the addition design is to respect the original wishes of the City of White Rock in 2007 and the strong identity created by the current school design for not only the school community, but the Lower Town Centre community. This



Existing Building (2007)

school design is in keeping with the seaside village aesthetic that embodied the original 1914 school building and we propose maintaining that aesthetic in the design, form and character of the new addition. This is best achieved with a seamless addition to the existing building, matching the existing ridge line.

Notwithstanding that the bylaw in 2007 did not limit building height on this site, the current 2 storey building was constructed to be substantially lower (12.4m to ridge) than the original 3 storey buildings (approx. 16m to the ridge). Unfortunately, today's new bylaw established an even lower maximum height of 10.7m. This means that the existing building is non-conforming with respect to height. As a result, to create a design that seamlessly connects and respects the original design, a variance of 1.7m to the existing zoning bylaw height is required.



### Proposed Development

As established above, SD36 proposes to respect the original direction of the City of White Rock in 2007 and provide an addition that seamlessly extends the original building. The location of this addition was selected in 2007 and the existing floor plan and servicing was structured to support this future addition. BC Ministry of Education would not support an addition to this building in another location on the site as they have already supported the “rough-in” work to prepare for this addition that was completed in 2007. Further, the current approved funding for this addition does not include any renovations of the existing building as the work to support this addition was completed in 2007.

The new addition is a wood frame, eight classroom, 1,046 m<sup>2</sup> addition to the original school. The design intent of the new addition is to mimic the design of the existing building such that the addition appears as if it was part of the original construction. To that end, the design uses the existing building heights – extending the existing building ridge, matching the existing window configuration and using the same exterior materials as the existing building.



### Natural Ventilation System

Similar to the existing building, the proposed addition includes a cupola to provide natural ventilation. The cupolas are deemed a “dome” under the definition of the bylaw, and therefore not included in the overall height calculation. The louvers at the high level of cupola relieve excess air out of the building, this prevents the building from being over-pressurized. Because this is a 2-storey school, the cupola works very well by taking advantage of thermal buoyancy (stack effect), which is a strategy also typically used

for naturally ventilating buildings. The high level of the cupola is a good location for the large louvers, away from building occupants.

## Alternative Compliant Designs

### Height Compliance

In order to construct an addition within the height limits of the bylaw, the building may have to be a flat roof building at 10.7m plus roof top mechanical units to replace the natural ventilation of the cupolas. These roof top mechanical units are deemed “chimneys” under the bylaw, and therefore not included in the overall height calculation. These units could not be screened as the screens would exceed the height bylaw. The images below generally show the shape of this potential addition (red) as well as the roof top mechanical units that may be required (yellow).



We acknowledge that an addition located on the east side will impact properties that currently have a view through this empty space, however, as demonstrated above, the view impact of the flat roof version with mechanical units is very similar to the proposed version that matches the existing form and character of the school. Currently, the approval from the Ministry of Education requires that the addition be located on the east end.

### Educational Spaces

We do not deny that the building could be built to comply with the height limits of the bylaw, however, we do not believe that is in the best interests of the White Rock community for this addition on this site. We refer you to the history of the design process for the current school. It was the City of White Rock and the Community that originally requested the direction of the current design. While we have not done the design work for the alternative solutions, if the building does become a flat roof structure, the form and

character of the existing building would not be maintained, as the pitched roof is a significant architectural element in the design of the existing building and a primary characteristic in creating the seaside village motif.

In addition to form and character, the existing building has the pitched roofs that create large, vaulted ceilings in the upper floor classrooms, thus increasing their openness and achieving better acoustics. These classrooms are character defining features for the White Rock School, sought after by students and teachers alike. We anticipate that a flat roof design that meets the bylaw height will have flat ceilings for the 2<sup>nd</sup> floor spaces. While not an insurmountable deficit, it will likely make the addition, the poor cousin to the original building.

### Accessibility

The current layout of the school is based on inclusivity and accessibility requirements for elementary schools. It is impractical and dangerous to provide ramps and stairs within the floor plate of an elementary school. The design reflects a need to not only provide access within the school but also from the exterior to the main floor classrooms at several locations. The access to these locations is provided with sloped surfaces for ease of access for all students and parents. Should we consider adding stairs and ramps inside the building, our issues on the site would only be aggravated as the north part of the floorplate needs to go up to the street from the existing main floor, but the south part of the floorplate would need to do down to Fir Street.

### Project Timeline

Should this variance not be accepted, the project will be forced into redesign which means that the critical summer construction season will be lost. We estimate that the project delay could be as much as a year which would have substantial impacts on costs due to escalation in the market. The redesign and escalation costs are not included within the current budget approval and may result in a need to go back to the Ministry of Education for additional funding. If additional funding is not granted, there is a real threat that the project could be cancelled entirely resulting in the addition of more portables to the site, to address the projected growth in the community.

### Conclusion

We strongly believe that the design as proposed represents the best option for the community as it respects the original request of the City of White Rock for a form and character that acknowledges this as the site for the past century as White Rock School. The White Rock School is a long term asset for the City of White Rock and SD36, therefore, we believe that respect to form and character of the building should be paramount.

We acknowledge that the addition will impact properties that currently have a view, however, whether the addition is bylaw compliant or not, the difference in view impact is insignificant and should be offset by the continuity of form and character of this long term asset of the community.

In order to maintain the form and character of the addition relative to the existing building, we request a Development Variance Permit to allow for the increased height of the new addition to match the existing ridge height of the existing building. The variance requested is 1.7m.