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**TO:** Electoral Area Services Committee      **MEETING:** June 12, 2018

**FROM:** Daniel Pearce      **FILE:** 0810-03-DAFD  
Director of Transportation and  
Emergency Services

**SUBJECT:** Standardization of Fire Halls

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### **RECOMMENDATION**

That the Standardization of Fire Halls Project be endorsed.

### **SUMMARY**

The Regional District of Nanaimo (RDN) has issued a Request for Proposal to hire a consultant to provide a conceptual fire hall design for the Dashwood Fire Department for eventual replacement of their main fire hall located at 230 Hobbs Road near Qualicum Beach in Electoral Area 'G'. This design project is an approved budgeted item within the 2018 RDN Financial Plan. This process provides an opportunity to develop a functional and cost efficient fire hall built to post-disaster requirements. The plans for which can be re-used in other fire protection areas as new halls are built in years to come. The Dashwood Fire Department and the other RDN fire departments support the project, through the goals of reducing design costs for future halls and improving construction cost estimates for more accurate budget preparation, which will benefit resident taxpayers by lowering overall costs to build future halls.

### **BACKGROUND**

Over the next 5 to 10 years, the Regional District of Nanaimo (RDN) may build as many as 6 new fire halls in fire protection areas including Dashwood, Coombs Hilliers, Errington, Bow Horne Bay, and Extension. Of these new fire halls, some will be smaller satellite halls consisting of 2 drive-thru truck bays for up to 4 trucks and adjacent rooms for firefighters turn-out gear, while other halls will replace main fire halls which are larger and include administration offices, training rooms, food preparation areas, public use space, etc.

In the past, when designing and building a fire hall, the RDN has traditionally hired consulting firms to create a building design and plans, the cost of which usually equates to about 10% of the overall construction cost. The overall cost can also vary greatly, depending on building materials used, design standards used (such as building to post-disaster requirements) and other features of the building. One of the most affordable material options is pre-fabricated engineered steel construction. The fire halls are critical infrastructure during emergencies or disaster and most new halls are built to post-disaster requirements which increase the cost of construction but provide a greater likelihood of the structure surviving an earthquake. The estimated cost for pre-fabricated steel construction of a satellite fire hall is around \$1.5 million, while a larger main hall would be \$2.5 million or greater. The architectural design

and engineering costs at 10% of construction costs will range between \$150,000 to \$250,000 or more for each fire hall if designed individually. The use of a consistent design and set of plans is expected to reduce those architectural and engineering costs by at least 50% per project.

The concept of standardized fire halls design has been discussed with local fire chiefs during regional fire chief meetings and all chiefs indicated interest and support for the project. With a shared design for fire halls and as many as 6 new buildings to build in the next 5 – 10 years, the design costs may well exceed \$500,000. A design with cost effective pre-engineered steel construction will provide substantial additional savings through lowering overall construction and material costs as well.

The RDN is able to initiate the standardization of fire halls project this year because the Dashwood Fire Department has begun planning the eventual replacement of the main fire hall. To determine construction costs and to develop a business case for public consideration, Dashwood budgeted \$100,000 for conceptual design and drawings in 2018. With their support, the RDN is working with Dashwood to use this conceptual planning process to create the template for a standard design of fire halls.

The structure will have a modular layout to enable growth of the building over time within the space available upon the lands. This growth could be adding additional apparatus bays or additional administrative, meeting or training space. The proposed building materials are likely to be steel frame construction with metal cladding as a more cost effective solution, but the exterior cladding can be modified to reflect the budget and aesthetic desire of the community and fire department.

The conceptual plans and drawings are anticipated to be completed by September 2018. At completion, the design and engineered plans will remain the property of the RDN and can be used for future fire hall projects. As other new halls are built with the RDN owned plans, a contribution can be provided from the particular fire protection service area back to Dashwood in order for Dashwood to recoup its costs incurred in developing the plans.

## **ALTERNATIVES**

1. That the Standardization of Fire Halls Project be endorsed.
2. That alternate direction be provided.

## **FINANCIAL IMPLICATIONS**

The estimated costs to develop conceptual plans are \$100,000 and are budgeted within the approved 2018 RDN Financial Plan, and specifically within the Dashwood Fire Protection Service area budget. These costs do not include eventual engineering / construction monitoring costs which will be incurred when and if a fire hall is built.

Design and engineering costs for new fire halls are estimated to be 10% of overall construction costs and may range between \$150,000 to \$250,000 or more depending on the type and size of fire hall being built. By using a standard design for future fire halls based on the plans developed out of this project, it is expected that each fire protection service area using the RDN's standard design plans will save approximately \$75,000 to \$125,000 by not having to incur individual design costs.

## STRATEGIC PLAN IMPLICATIONS

The Standard Design for Fire Halls project supports the RDN strategic priority of “Focus on Economic Health” by working on long term solutions to reduce costs of constructing new fire halls that can benefit all fire protection areas in the region. The project also supports “Service and Organizational Excellence” by delivering efficient, effective and economically viable services, as cost efficiently as possible, while maintaining functionality for the current and future needs of the fire department.



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Daniel Pearce

[dpearce@rdn.bc.ca](mailto:dpearce@rdn.bc.ca)

May 30, 2018

Reviewed by:

- P. Carlyle, Chief Administrative Officer