



Creston Fire Station Report

Final Report

Background

- Running a fire department is a complex undertaking, building a fire station is equally complex
- Fire stations must support all aspects of Councils assigned service level policy
- We understand the impacts of the profession on volunteer and career staff
- Planning cycle on a fire station is measured in decades

Background

- Serves a regional footprint and user groups
- Could include multiple response partners, including BC EMS
- Project has been complicated by a combination of factors including complex issues and conflicting story lines
- This report and presentation provide a clearly articulated overview of the project, requirements for a fire station, discretionary and non-discretionary matters and an exploration of fire station construction costs

Fire Station Functions

- Storage of response vehicles and equipment
- Training
- Recruitment and retention
- Accommodations for on duty crews
- Decontamination
- Emergency Operations Centre
- Fire Prevention and Inspection business
- Town roles and functions
- Regional service delivery and support

Interim Measures Report

- 19 recommendations related to the current facility
- Risk management plan to bridge into a new facility
- Addresses through alternative practices things that can be done to reduce the harm that the current facility cannot manage
- Is a core part of the planning undertakings for a new station
- Clearly articulates the linkages between WorkSafe BC regulations and facility design and construction

Choices

- There are two streams of considerations in planning a fire station
 - Non-discretionary
 - Discretionary
- ASC was put in place to look at discretionary aspects of the project
 - Learn about the project
 - Learn about fire operations and needs
 - Advise Council on options to move forward
 - Help communicate facts to the rest of the Town and Region

Non-discretionary Considerations

- Council directives on contents of the station and service levels, including WEP firefighters, long term planning, EOC inclusion, cost recovery for partners, regional inclusion
- Architects Act of British Columbia
- WorkSafeBC regulations
- British Columbia Building and Plumbing Codes
- Town of Creston Zoning and Land Use regulations
- BC Fire Service Minimum Training Standards

Discretionary

- Siting to a degree
- Construction standards:
 - LEEDS versus energy efficient
 - Materials
 - Presence
- Funding options
- Compliance with 10 minute response times

Discretionary Elements

- Co-location options:
 - Search and Rescue
 - Others

Construction Costs

- Much of the discussion has revolved around facility costs
- Fire stations are expensive
- Requirements include:
 - Mandatory professional design
 - Post disaster construction
 - Size
 - Multiple occupancy types including Groups C, D and F-3
- Limited locations for station locations means more expensive land costs

Cost Comparisons

- Difficult to do cost comparisons between Canadian jurisdictions
- Huge differences in costs due to:
 - Availability of materials,
 - Code requirements
 - Requirements for professional design
 - Building loading issues such as seismic, wind and snow loads
 - Economy
- Extremely variable even on a year to year basis
- Altus Group publishes an annual Construction Cost Guide for all regions of Canada

Fire and EMS Station Construction Costs per Square Foot

	Vancouver	Calgary	Edmonton	Winnipeg
2017	315-450	170-230	170-240	175-235
2018	315-450	250-360	255-370	260-360

Source: 2017 and 2018 Altus Canadian Construction Cost Guide

Comparisons with others

- No linear cost relationship with other jurisdictions,
- Cost of construction varies widely between jurisdictions with BC topping the charts
- Costs vary significantly from year to year, let alone decade to decade
- Code changes
- Economy, local, provincial and national

City of Brooks

- City of Brooks, Alberta
 - Excellent project that certainly bears a look
 - Unique approach that built on local realities
 - \$2.9 million project cost in 2007-2008
- Areas to emulate:
 - Project planning,
 - Project management
 - Facility utilization
- Different Codes, requirements, community and staffing model

Recommendations

Path Forward

Recommendation 1

- The functional design of the fire station, including allocation of space for the various functions of the department, should be left to the professional design team led by the Town of Creston's Architects and Administration due to the complex regulatory and practical considerations involved in fire station design. Evaluative and consultative processes should focus on the discretionary aspects of the project identified in this report.

Recommendation 2

- Decision making processes should be focussed on selection of one of the two downtown locations for the construction of a new fire station for the Town of Creston. These sites are Extra Foods Site 2 and Bunker Site 4. No other sites offer the combination of space, functionality and response time support that these sites provide.

Recommendation 3

- Deadlines should be established for the inclusion of other occupants in the design of the fire station, including BC Ambulance and Search and Rescue. If those agencies are unable to make the necessary commitments, the project should focus on the development of a fire station that meets the needs of the Town and its regional partners and may include opportunities for expansion at some future time.

Recommendation 4

- The design of the fire station should include considerations that allow for a reasonable amount of flexibility to permit adjustments necessary to safely and effectively support fire department operations over the anticipated life cycle of the facility. Facility design should articulate how additional space can be added specifically in terms of service, accommodation and fleet spaces.

Recommendation 5

- Consideration should be given to the development of a long term strategic plan that provides planning guidance to future decision makers on the fire protection principles upon which the station has been developed. The plan should provide guidance on how future development of fire protection and other emergency services will be managed and how they will be accommodated, including satellite stations. This will have a bearing on the development and design consideration for the current project.

Recommendation 6

- Creston Town Council's direction that the decisions made by the Select Committee will have no impact on current service levels should be clarified to specify no negative impacts on fire department response times. While site selection remains a discretionary function of the project, there are critical design limits, including overall response time that must be applied to that choice.

Recommendation 7

- The Creston Fire Department Interim Measures Plan be utilized as a resource to inform the design of a new fire station for the Town of Creston as it pertains to essential systems required to meet WorkSafeBC and other regulatory requirements.

Recommendation 8

- Design considerations for a replacement fire station should include amenity areas that include fitness and wellness facilities supporting physical and mental health of volunteer and career staff.

Recommendation 9

- Clarification of Council's cost recovery directive may be required depending upon the nature of the partner agency. While inclusion of community agencies like Search and Rescue may be of value to the overall project, these agencies may not have the financial means to cover the additional spatial requirements their occupancy may require.

Recommendation 10

- Design guidance for the fire station functional requirements including spatial requirements should reflect industry best practices as provided by Architectural design professionals.

Conclusion

- Design and building of a new fire station is a challenging and technically demanding project
- Town of Creston has followed a proper process to develop the recommended course of action adopted by Council in 2017
- Understanding the legal framework governing the design and construction of a fire station is essential
- The detailed spatial analysis and orientation of the various uses within the buildings should be left to professionals
- This ensures that the building will meet all regulatory requirements and reflect the needs of the customer\
- Much has been said about “affordable”. That needs to be defined and linked to “effectiveness” of project deliverables

QUESTIONS?