



City of Richmond

Report to Committee

To: General Purposes Committee

Date: June 25, 2014

From: John Irving, P.Eng., MPA
Director, Engineering

File: 06-2052-25-FHG1/Vol 01

John McGowan
Fire Chief, Richmond Fire Rescue

Re: **Brighthouse Firehall No. 1 Program Allocation**

Staff Recommendation

That the Brighthouse Firehall No. 1 Program Allocation report from the Director, Engineering and Fire Chief, Richmond Fire Rescue, be endorsed.

John Irving, P.Eng., MPA
Director Engineering
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John McGowan
Fire Chief
(604-303-2734)

Att: 1

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO 	

Staff Report

Origin

On June 24, 2013 Council approved the Major Facilities Phase I projects which included the Minoru Aquatic Centre/Older Adults Centre, Firehall No. 1 and the City Centre Community Centre. On March 10, 2014 Council approved award of Architectural and Engineering Services for Firehall No. 1 to HCMA.

Council approved funding of \$22.3 million to construct a new Firehall No. 1 as part of the 2014 Capital Program.

The purpose of this report is to seek Council endorsement of the proposed Firehall No. 1 program.

Background

Funding of \$22.3 million, plus multi-project contingency, was approved by Council on November 12, 2013 to complete design and construction of a new Firehall No. 1. The new facility is proposed to have an area of approximately 24,900 ft² as previously adopted by Council, to replace the existing 17,000 ft², 4 bay facility with approximate areas as summarized below.

- Administration 6,460 ft²
- Fire Prevention 1,960 ft²
- Fire Rescue/Suppression 16,480 ft²

Award of design and engineering services to HCMA was confirmed by Council at their March 10, 2014 meeting. Design of Firehall No. 1 is being closely coordinated with the new Minoru Aquatic Centre/Older Adults Centre facility which is also being designed by HCMA. Design opportunities and features are being closely coordinated with Firehall No. 3 design.

Confirmation of the proposed program area allocations have been achieved through a series of meetings with Project Development staff, Richmond Fire Rescue staff and the consulting team over the period of March to June 2014. Design will incorporate the lessons learned from the most recently constructed Firehalls No. 2, 4 and 5.

Richmond Fire Rescue, together with Project Development also completed a best practices site review of several facilities as summarized below.

- Firehall No. 1, Saanich
- Firehall No. 14, Surrey
- Firehall No. 15, Vancouver
- North Delta Public Safety Building, Delta
- Firehalls No. 2, 4 and 5, Richmond

In addition, debriefs on Richmond’s newest firehalls (Steveston, Sea Island and Hamilton) were conducted to assist in improving both the design process and facility features of future firehalls. Several meetings were also held with internal stakeholders including Public Art, Engineering, IT, Transportation, Planning and Sustainability to identify needs/requirements.

In 2013 a Fire Rescue Parameters Report was prepared as a basis for Firehall No. 1 programming/space allocation. The Parameters report reflects Firehall No. 1 needs based on maintaining the current level of service, accounting for a future increase in population, development and densification to 2031 and is consistent with previously established City and fire facility best practices design standards for programming and space allocation.

As per the City’s High Performance Building Policy, LEED Gold certification has been set as the desired building performance target for the new Firehall No. 1. The green features will maximize operational efficiency through optimizing energy performance and minimizing water usage and maintenance costs.

Analysis

Programming and space allocation has proceeded based on ensuring the current level of service.

A series of work sessions with Richmond Fire Rescue and Project Development were held to review best practices findings, learn from previous experience with Firehalls No. 2, 4 and 5 and identify project specific needs. The results of these sessions were used to move forward with planning of program space for Firehall No. 1 and identify the functional and operational requirements of the new firehall.

The following proposed program allocation for Firehall No. 1 reflects maintaining the current level of service and future needs. Should Council endorse this report, the next step is to use the area allocation to develop spatial relationships, a site plan and the form and character of the building.

Firehall No. 1 - 6960 Gilbert Road (ensure current level of service)

Facility Program - New Firehall No. 1 24,900 sq.ft	
Building Statistics	
Year to be Constructed	2016
Administration	6,460 ft ²
Senior Administration	✓
Administrative Support	✓
Community Relations	✓
Tech & Communication Systems	✓
Building Support	✓
Fire Prevention	1,960 ft ²
Fire Prevention Offices	✓
Fire Suppression	16,480 ft ²
Apparatus Bays (4)	✓

Apparatus Support	✓
Suppression Office	✓
Health & Recovery	✓
Building Specification	
Sustainable Initiatives	LEED Gold
Floors	Up to four storey
Apparatus Bays	Four bay facility
Hose tower	Up to four storey
Projected Costs	
Construction	\$13.1M
Enabling Work*	\$3.4M
Soft Costs**	\$5.8M
TOTAL	\$22.3M
Multi-Project Contingency	\$3.0M
Lifecycle Costs	
Building Lifespan	50 Years
Energy Dependency	LEED Gold
Functional Space	
Fire Suppression Crews	3
Training	Single Company
Community Relations	Yes
Fire Prevention Office	Yes

**Traffic Management Centre relocation, temporary firefighter alert recovery at Firehall No. 4, relocation of Human Resources and Bylaws staff, temporary relocation of Emergency Vehicle Technicians (EVT), temporary relocation of former Tram shed to City Hall West to house an engine truck, City Hall West reconfigurations for temporary occupancy by Fire staff.*

***Professional fees, Construction Manager fees, Permit/City fees, LEED certification fees, Furniture Fixtures and Equipment (FF&E) and Public Art.*

As the building form and character design proceeds, it may be necessary to make small adjustments to the areas noted.

Alternative – Building Reduction

There is opportunity to construct a lesser quality Firehall No. 1 than the recommended option that maintains the current level of service by eliminating and/or reducing space sizes and through construction materials changes as summarized below.

- *Reduction in Fire Prevention and Administration Space* – The proposed space program was established using standard size spaces common in the industry and supported by previously established City policies. Fire Prevention and Administration space has been allocated based on future demand – this space can be reduced by approximately 25% but

would only accommodate the current need. This reduction will prohibit the ability to accommodate additional staffing requirements.

- *Building Materials* – Firehall No. 1 is planned for construction with standard building materials, similar to other metro Vancouver and firehall projects. Lesser materials may be used as a cost savings opportunity, i.e., exterior building envelope could use less expensive wood siding as opposed to more standard materials such as metal or bricks. This is likely to reduce the facility life expectancy and increase maintenance costs.

Implementation of these changes has the potential to reduce costs in the order of 10%.

Alternative – Building Increase

There is opportunity to construct a higher quality Firehall No. 1 than proposed through expanding/adding spaces as well as using higher quality, non-standard materials as summarized below.

- *Increase in Overall Programmable Space* – The proposed space program was established using standard size spaces common in the industry and supported by previously established City policies. An option is to exceed the current program by making spaces larger in several areas including offices, exercise room, kitchen, eating area, alert recovery and multi-purpose room.
- *Building Materials* – Firehall No. 1 is planned for construction with standard building materials, similar to other Metro Vancouver and firehall projects. Higher quality materials may be used at an increased cost, i.e., building exterior finishes could include architecturally designed metal siding as opposed to standard finishes such as brick and metal.

Implementation of these changes that increase building quality will increase costs somewhere in the order of 20%.

Emergency Vehicle Technician Space

The Emergency Vehicle Technicians (EVT's) currently work out of Firehall No. 1. Staff are continuing to explore options for a permanent location, but at this time EVT's are included in the current Firehall No. 3 program. Opportunities that are also being explored as temporary EVT space solutions include use of existing City firehall space, City owned facilities in general, City wide possibilities including leased space and close proximity municipalities that may have suitable space available.

Staff will report back to Council with other available options.

Form and Character

Following approval of the building program allocation, staff will use the information to develop renderings and schematic floor plans which will be brought to Council for input and

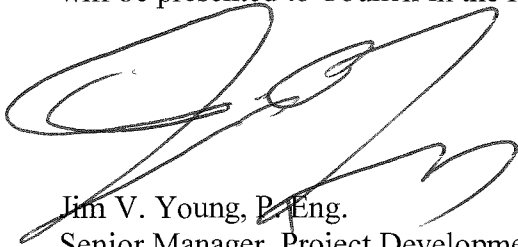
consideration for approval in the fall of 2014. A project schedule has been included as Attachment 1.

Financial Impact

There is no financial impact. Capital budgets have already been approved by Council.

Conclusion

Council approved funding to complete design and construction of a new Firehall No. 1 at the existing site. Architectural and engineering services have been awarded to HCMA and the work has progressed to the point where area allocations are complete. Development of Firehall No. 1 form and character will proceed based on the area allocations included in this report. An update will be presented to Council in the fall of 2014.



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Deputy Fire Chief
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JVY: jvy/tv

Attachment 1: Firehall No. 1 Project Schedule

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Firehall No. 1 - Projected Schedule	Start	Finish
Programming / Space Allocation	Mar 2014	Jun 2014
Council (Programming / Space Allocation)	Jul 2014	Jul 2014
Develop Floor Plans / Form & Character	Jul 2014	Sept 2014
Council (Floor plans / Form & Character)	Oct 2014	Oct 2014
Working Drawings	Nov 2014	Mar 2015
Tender	Apr 2015	May 2015
Construction	May 2015	Nov 2016