

# LATE DISTRIBUTION FOR CS&B - MAY 7, 2009

Supports Item No. 5  
CS&B Committee Agenda  
May 7, 2009



## ADMINISTRATIVE REPORT

Report Date: April 21, 2009  
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VanRIMS No.: 08-2000-20  
Meeting Date: May 7, 2009

TO: Standing Committee of Council

FROM: Director of Facilities Design and Management and the General Manager of Fire & Rescue Services

SUBJECT: Fire Hall No.15 - Restoration, Reuse and Incorporation into a New Fire Facility

### *FOR CONSIDERATION*

- A. THAT, subject to the rezoning of the land as set out in Consideration Item B, Council approve the restoration and reuse of the existing Fire Hall No.15 building (Option 4B) on the current site at 3003 East 22<sup>nd</sup> Avenue for incorporation into a new three-bay fire facility, at a cost of \$10.3 million; source of funding to be:
- \$8.41 million from the Fire Hall No.15 Capital Budget;
  - \$1.89 million from the Inflation Allowance in the 2009 - 2011 Capital Plan subject to approval of the 2009 Capital Budget.
- B. THAT the Director of Planning be instructed to make application to rezone the site of Fire Hall No. 15 at 3003 East 22<sup>nd</sup> Avenue from RS-1 (One-family Dwelling District) to CD-1 (Comprehensive Development District) to enable the proposed expansion of the facility and that staff report back after review of the application for referral to a public hearing;
- C. THAT, subject to the provisions of Consideration Item D, the City seek the professional services of Hughes Condon Marler Architects for the provision of design, tender preparation, and contract administration for Fire Hall No. 15, at a cost not to exceed \$840,000; source of funds to the Fire Hall No. 15 Capital Budget; and

- D. THAT all documents required to implement Consideration Items A and C shall be drawn to the satisfaction of the Director of Legal Services, in consultation with the General Manager of Business Planning and Services; provided that no legal rights are hereby created and none shall arise until the relevant documents are executed by the Director of Legal Services on behalf of the City.

#### ***GENERAL MANAGER'S COMMENTS***

The General Manager of Business Planning and Services and the General Manager of Fire and Rescue Services RECOMMENDS approval of the foregoing.

#### ***FIRE CHIEF'S COMMENTS***

Vancouver Fire & Rescue looks forward to moving ahead to the final design and construction phase as the building in its present state no longer meets the functional requirements of the Fire Department. Strategically, the development of a three-bay hall will enable Vancouver Fire & Rescue to meet the challenges of growth in the southeast sector that over time has brought a daytime population that expands with commuters in excess of one million, additional high-rise residential buildings, commercial developments along Kingsway, and Skytrain service.

In order to maintain effective coverage in the community, a temporary fire hall has been constructed nearby and will be occupied by staff in early April. In the meantime, various measures are being taken to protect the existing Fire Hall from the elements and the building will be secured with a monitored fire and intruder alarm system.

***COUNCIL POLICY*** Council approval is required for projects funded from the Capital Budget.

Council approval is required for the award of any consulting contract with a value over \$30,000.

#### ***PURPOSE***

This report responds to Council's instruction on February 3, 2009 for staff to report back on an updated design and cost estimate for a replacement three-bay fire facility as proposed in the 2006-2008 Capital Plan (Option 4B as per Administrative Report Replacement of Fire Hall No. 15 dated July 2, 2006).

Upon Council's approval to proceed with the development of Fire Hall 15, utilizing the design concept of Option 4B, staff seeks Council approval to enter into a contract with the design consultants to provide architectural and design services for the design development, contract drawings, and contract administration services for this project.

#### ***BACKGROUND***

Fire Hall No. 15 which is located at 3003 East 22nd Avenue is a two-bay, two-storey wood frame building constructed in 1913. The building was extensively renovated in the 1950's; however, it has reached the end of its functional life and is a priority for replacement. Due to the current conditions at the existing fire hall, Vancouver Fire and Rescue Services (VFRS) staff and apparatus will be moving to a temporary site in early April.

To meet the expanded program and operational needs of VFRS, funding of \$4.9 million was provided over two capital plans (2003-2005, 2006-2008) for the replacement of the existing fire hall with a modern, three-bay post-disaster fire facility. An adjacent residential lot at 3015 East 22nd Avenue was purchased and the house demolished to increase the site area in anticipation of accommodating the new three-bay fire hall.

The existing fire hall was not listed on the Vancouver Heritage Register (VHR) at the time but there was considerable community interest in the historic value of the 96-year-old fire hall. A detailed consultant assessment was undertaken and a Statement of Significance (SOS) was subsequently prepared. On May 16, 2005, the Vancouver Heritage Commission supported the SOS evaluation and recommended the existing building's addition to the VHR in the 'B' category.

In March 2005, Council approved (RTS# 04860) an award of contract to Hughes Condon Marler Architects for consultant services to develop the schematic design and cost estimate for the proposed new facility.

On May 18, 2006, staff recommended (RTS#05754) a plan to proceed with the original plan to demolish or relocate the existing building, and to develop a new fire facility on the current site with the incorporation of existing character elements in the new design, similar to other recent fire hall replacement projects. Council decided to postpone this matter to allow public consultation on retention options and a report back from staff on alternate locations and design options for a two-bay fire hall. At that time, the estimated cost to replace the building was \$6.1 million.

As a result of this decision, design work was placed on hold to explore options for retention of the existing building on the current site. At the same time, a search was conducted, unsuccessfully, for an alternative site for the construction of a new fire facility.

On July 20, 2006, staff reported back to Council (RTS# 05999) on the results of the public consultation process and presented several preliminary redevelopment options for Council's consideration. Council approved the following recommendation:

*THAT Council approve retention of the existing Fire Hall No. 15 building on the current site at 3003 East 22nd Avenue for incorporation in a new fire facility; and*

*FURTHER THAT staff to report back on final design and cost estimates for a replacement three-bay fire facility as proposed in the 2006-2008 Capital Plan (see option 4B in Administrative Report Replacement of Fire Hall No. 15 - Public Consultation, Alternate Locations and Options dated July 2, 2006), at an additional cost estimated at \$2.8 million, source of funding to be the Inflation Adjustment allocation in the 2006-2008 Capital Plan with the following to be included:*

- (a) Providing space for fire prevention, accommodating this through height modification to acquire additional space; and*

*(b) Investigation of the potential for heritage bonusing with the intent to acquire funds to reduce capital cost to the City.*

On March 1, 2007, staff reported back to Council (RTS# 06141) addressing the updated cost estimate, on an updated design that incorporated additional space for fire prevention staff. Due to the additional design work and inflationary increases in construction, the estimated cost to construct a new, purpose-built fire hall increased to \$8.41 million, while the cost for the retention option was estimated at \$9.81 million, reflecting a cost premium of approximately \$1.4 million.

Staff also analysed the potential for generating transferable heritage bonusing with the intent to generate funds to reduce the capital cost to the City. However, staff identified a number of issues regarding the viability of using transferable density bonusing for Fire Hall #15 and instead recommended that the shortfall in costs be covered through a reallocation of existing capital within the 2006-2008 Capital Plan.

Due to the degree of intervention into the facility and the cost premium associated with incorporating the existing fire hall into the new facility, staff recommended that Council approve the full replacement option, which would be a purpose-designed and -constructed building that would be respectful of the heritage features of the existing building without compromising operational functionality, design and construction costs, and future maintenance issues.

Following extensive discussion, both the motion to retain the existing fire hall and incorporate it into a new fire hall and the motion to construct a new purpose-built fire hall were defeated, resulting in an impasse over the redevelopment of Fire Hall #15.

On February 3, 2009, Council passed the following motion:

*WHEREAS Fire Hall No. 15 is a two-storey plus basement Edwardian era fire hall, with two truck bays on the front façade and a tall hose tower at the rear;*

*AND WHEREAS a Community Visioning Study (March 23, 2004) identified public buildings such as Fire Hall No. 15 as important historic landmarks that should be retained;*

*AND WHEREAS on May 16, 2006, the Vancouver Heritage Commission supported a Statement of Significance (SOS) evaluation and recommended the existing building's inclusion in the 'B' category of the Vancouver Heritage Registry (VHR);*

*AND WHEREAS on July 20, 2006, Council approved by a 10 to 1 vote the retention of the existing Fire Hall No. 15 building on the current site at 3003 East 22nd Avenue for incorporation in a new fire facility;*

*AND WHEREAS despite Council's approval to retain the existing Fire Hall No. 15 the previous Council failed to provide funding to accomplish the retention;*

*THEREFORE BE IT RESOLVED*

- A. THAT the present Council reaffirm the retention of the existing Fire Hall No. 15 building on the current site at 3003 East 22nd Avenue for incorporation in a new fire facility.*

- B. *THAT staff report back on updated final design and cost estimates for a replacement three-bay fire facility as proposed in the 2006-2008 Capital Plan (see option 4B in Administrative Report Replacement of Fire Hall No. 15 - Public Consultation, Alternate Locations and Options dated July 2, 2006), source of funding to be:*
- *\$0.8 million from the Fire Hall No. 15 Capital Budget;*
  - *\$4.1 million in borrowing authority approved by the electorate as part of the 2006-2008 Capital Plan;*
  - *Current and previous Capital Plans.*
- C. *THAT staff undertake immediate measures to protect the existing structure from further weather erosion in advance of revitalization and development actions.*

## **DISCUSSION**

During the last few months, staff has been working with the Architect and Quantity Surveyor on updating the design and costs for the redevelopment option noted above. In order to quantify the "heritage premium cost" required to retain the building, staff have developed an updated cost for the full replacement option.

### **Option 4B**

The approach contemplated in Option 4B is an adaptive reuse and restoration of the existing fire hall and the construction of a new three-bay addition to the facility. The existing facility will be upgraded to meet Vancouver Fire and Rescue Services functional needs and comply with post-disaster, building code requirements.

### **Design**

The design of this option would take into consideration the complex relationship between the existing building and the new addition to achieve a compatible fit.

The new three-apparatus bays would be located to the east side of the existing fire hall, adjacent to the neighbouring properties, with the office space and dormitory located in the existing upgraded fire hall. The eastern wall of the new fire facility would require sensitive treatment to mediate the impact on the residential neighbour.

A new functional concrete hose tower will be constructed between the existing fire hall and the new apparatus bays to replace the outdated, less functional tower while incorporating new stairs for exiting.

The ground floor footprint of the existing structure will house the fire prevention offices, washrooms, the battalion chief's office, fire hall kitchen/recreation area, and a small multi-purpose training/community room of approximately 300 sq ft. The upper floor footprint of the existing building will house the dormitory, shower facilities and officer sleeping quarters.

The basement level will house staff parking (9 parking stalls), mechanical and electrical rooms, a staff training room and a room for a mandated fitness program.

The entire facility will be designed to maximize energy efficiency requirements and meet LEED Gold standards.

### **Construction**

In order to achieve the required functional programming requirements and to upgrade the structure to meet all the building code and post-disaster requirements, major intervention into the existing facility would have to be undertaken. This would include the following additional works:

- Removal of the deteriorated roof structure, decking and roof membrane
- Removal of the exterior stucco cladding and removal or reuse of original cedar siding
- Demolition of the interior walls for the new functional design
- Removal of environmental contaminants in existing materials that may contain lead, asbestos, PCB, or mould
- Installation of a new roof structure on the existing framing structure
- Installation of new interior and/or exterior sheathing diaphragm for lateral resistance
- Installation of new steel structure to reinforce the wood frame structure
- Installation of new interior walls to suit functional program
- Installation of new exterior walls
- Raising the entire structure for the demolition and removal of the existing structural foundation and construction of a new foundation
- Excavation and construction of underground parking area
- Salvage and restoration of potential heritage character elements such as siding, triangular eave brackets, pressed tin ceiling, brass pole, wooden windows, and finished wood treatments where possible; and
- Construction of a new addition to provide three(3) vehicle bays.

### **Restoration**

Restoration activities will include the following where possible:

- Retention or replication of original exterior cedar;
- Re-use of original heritage elements such as eave brackets, tin ceiling, fire pole, etc;
- Restoration of original balcony design on the front elevation;
- Replacing the main apparatus doors;
- Rebuilding of the steel roofs over the apparatus doors;
- Repair or replication of the original wood trims; and
- Retention and repair of existing granite walls on south and west elevations.

The original exterior framing elements will be retained where possible and any surplus original dimensional lumber can be re-milled for re-use. All new materials used will respect the original materials and will be of heritage grade.

Pressed tin ceiling tiles in the apparatus bay will be removed, stripped of lead paint and reused, and the existing brass fire pole will be incorporated into the design.

### **Benefits to this Approach**

By adopting the approach outlined above, the fire hall retains its prominent corner location and the historic architectural style of the current fire hall. The building massing of the existing building will be retained and the vehicle bay addition will be constructed to complement the existing facility. Staff will investigate best practices with respect to building restoration, building envelope requirements, and post-disaster code requirements while trying to achieve the most economical approach in order to preserve the life of the building for future generations.

Although still conceptual in nature, the attached renderings provide an indication of what this new fire hall could look like.

### Zoning

Staff have analyzed the program requirements for the fire hall and determined that in order to accommodate a building of this size, the site will require rezoning to accommodate the density and setback relaxations required. A rezoning process would be required regardless of the approach taken with respect to re-use and restoration of the historic structure or building of a wholly new fire hall. An approach has been discussed whereby a shortened rezoning process would be overlaid onto the Development Permit process and run in a parallel manner, thereby creating efficiencies in timing and staff resourcing.

### Heritage Comments

Staff notes that Fire Hall No.15 is a significant landmark building in the Renfrew Collingwood Community. This view was the consensus of approximately 60 local residents who attended an open house on Fire Hall #15 on 10 June 2006. Information on the heritage significance has been previously submitted to Council in a report dated July 2, 2006 (RTS 05999).

The proposed Option 4B was presented to the Vancouver Heritage Commission on March 16, 2009. The Commission indicated support for Option 4B noting that this option involves a restoration and continuing use of the original building and with the understanding that they would be able to comment on the specifics of the design at a later date during the Development Permit process.

The following was resolved and carried unanimously by the Heritage Commission at the March 16<sup>th</sup> meeting:

- A. THAT, regarding Fire Hall 15 and notwithstanding the motion from April 16, 2007, which discussed replication as the only alternative to a new contemporary Fire Hall, the Vancouver Heritage Commission (VHC) supports Option 4B as presented at its meeting on March 16, 2009, noting that this option involves a restoration and continuing use of the original building which serves as a landmark for Renfrew-Collingwood, including additional structural supports to meet code requirements of a Fire Hall. Efforts should be made to salvage as much original character defining elements as possible including brackets, tin ceiling, brass pole, etc.
- B. FURTHER THAT the Vancouver Heritage Commission understands they will be consulted at the Development Permit stage where they can comment on construction details, salvaged material colours and a possible commemorative package for the public areas of the restored fire hall.

### Protection Measures

The building will continue to be heated while unoccupied to prevent moisture and mould proliferation. A security alarm system with motion detectors and a siren have been installed. Any intrusion alarm triggered will be relayed by City Hall Physical Security to Concord Security who will attend the site. If there are signs of a break-and-enter the security company will call the police. There is also a smoke detector on each floor that will be monitored by an external alarm monitoring company and, if activated, a call will be relayed through direct patch to 911 (Fire) for immediate response.

Staff from the existing Fire Hall No. 15, which is stationed in the temporary facilities approximately one kilometre away from the existing fire hall, will conduct regular inspections when out in their district on regular "drive-by" routes. Their duties will include a periodic inspection of the exterior and interior of the building for any sign of leaks or other maintenance issues that need to be addressed on a priority basis.

### Scheduling

Upon approval to proceed with the detailed design, the project would proceed as follows:

- Parallel Rezoning and Development Permit Process - approximately five to seven months.
- Completion of detailed design and tender documents to be done concurrently with the Rezoning and Development Permit process
- Building Permit Process - approximately two to six weeks
- Tendering and award of construction - approximately two months, and
- Construction - approximately sixteen months.

In consideration of the above, the target dates for this project would be as follows:

- |                             |                |
|-----------------------------|----------------|
| • Approval of Option 4B     | May 2009       |
| • Design Completion         | January 2010   |
| • Contract Tender and Award | March 2010     |
| • Construction Start        | May 2010       |
| • Construction Completion   | August 2011    |
| • Fit-out and Move          | September 2011 |
| • Occupancy                 | October 2011   |

### Provision of Architectural Design Services

Hughes Condon Marler Architects have been integrally involved in the planning, design, and cost estimating activities that have enabled staff to present the recommendations in this report. Based on the Architect's familiarity with the construction issues involved in this project and the functional programming needs of the Fire Department, it would be very beneficial to award the remaining design, tender preparation, and contract administration to complete this project to them. The value of these services is estimated at \$840,000.

## *FINANCIAL IMPLICATIONS*

### Estimated Project Costs

Cost estimates were developed for the adaptive reuse and restoration (Option 4B) of the existing building and for the full replacement option. These estimates reflect anticipated inflationary cost adjustments to Spring 2010, and are summarized in the following table:



<b>Cost component</b>	<b>Restoration Option 4B</b>	<b>Full Replacement Option</b>
Land	\$365,000	\$365,000
Construction	\$7,930,000	\$6,953,000
Design	\$1,010,000	\$818,000
Soft Costs	\$360,000	\$358,000
Temporary Fire Hall	\$600,000	\$600,000
<b>Total</b>	<b>\$10,265,000</b>	<b>\$9,094,000</b>
	<b>\$10.3 m</b>	<b>\$9.1m</b>

The table above shows that the cost differential assignable to the heritage restoration option is approximately \$1.2 million. This additional cost arises from the requirement to deal with hazardous materials abatement, more carefully executed demolition, upgrading of the retained building to post-disaster standards, and associated additional soft costs.

### Funding

Capital funding available for the replacement of Fire Hall #15 is \$8.41 million:

- i. \$50,000 from the 2004 Capital Budget for conceptual design development;
- ii. \$250,000 from the 2005 Capital Budget for continued design development;
- iii. \$500,000 from the 2006 Capital Budget, for expanded design development in response to heritage commentary and to make provisions for a temporary facility;
- iv. \$7.61 million from the 2007 Capital Budget, including \$3.51 million from the 2006-08 Inflation Adjustment Fund, for construction of a new three-bay facility.

Adoption of Restoration Option 4B will require additional funding of \$1.89 million. This project is included in the City's submission for the Federal Infrastructure Funding Initiative. As well, staff will be investigating additional funding through a submission for FCM's Green Municipal Fund support. Failing the receipt of contributions from these programs, the source of this funding will be the Inflation Allowance in the 2009-2011 Capital Plan subject to approval of the 2009 Capital Budget.

### Budget Risk Management

The three primary risks that impact the budget are:

- The budget being based on conceptual design level of detail;
- The potential for adjustments to the concept scope of work arising from unanticipated functional program requirements, or unforeseen sub-surface environmental contamination; and
- A change in the construction market.

While based on conceptual design only, the budget for Fire Hall #15 was prepared with the assistance of an external, professional Quantity Surveyor (QS) and is based on industry costs per square foot projections. The estimates have been adjusted to consider a spring 2010 construction start and the heritage restoration component of the project. As well, design, construction and heritage contingencies have been factored in to the budget to further mitigate the risk of budget overruns.

To mitigate the risk of changes to the scope of work, staff of Vancouver Fire and Rescue Services has worked closely with the Architect to ensure that all the functional program requirements have been addressed. Preliminary floor plans have been prepared to confirm the viability of the concept design. Any deviations from the concept scope of work will be controlled by closely evaluating the value and the impact on the budget. A full second phase environmental assessment has not been completed; however, staff is aware of an existing underground fuel tank and has carried an allowance in the project to address its removal.

There are a number of checks and balances built into the capital project process to mitigate changes in the construction market and, to a large extent, the other two risk factors as well. The next step is to engage the Architect to complete the detailed design of the facility. Throughout the detailed design process, staff and the Architect will be implementing a value engineering process to ensure that all the functional and programming needs are met at the most economical cost possible. An additional cost estimate will be prepared by the QS based on this level of detail. If this cost estimate is within the approved budget, the project will continue to the tender call phase. If the new cost estimate exceeds the budget, staff will report back to Council for further direction. The results of the tender process will provide the greatest degree of confidence in the budget and provide the next budget checkpoint. Tender results will be reported back to Council along with a request to award the construction contract or, alternatively, seek further direction from Council. Even at the tender stage, the City is not committed to proceed. The City reserves that right not to award any tender that is considered unreasonable or that exceeds the approved budget.

The construction approach being used for this project is Design-Bid-Build. This is the most common approach used by the City to construct facilities. The construction contract will be in a stipulated sum (fixed fee) format and the City will provide project management of the project.

### *CONCLUSION*

Fire Hall No. 15 is now 96 years old and has far exceeded its life expectancy. The existing building does not meet code requirements for a post disaster facility. The Vancouver Fire and Rescue Service have reiterated that the existing fire hall no longer meets their functional requirements. This facility is a high priority for replacement.

Option 4B provides for the adaptive reuse and restoration of the existing fire hall as the key element of a new post-disaster rated facility that meets the operational requirements of Vancouver Fire and Rescue Services. This option also satisfies the community's desire to maintain the landmark feature at its present location.

Based on their familiarity and involvement to date on the Fire Hall No. 15 redevelopment plans, the firm of Hughes Condon Marler Architects should be engaged to provide the remaining architectural services to see this project through to complete.

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