



**To:** Public Works and Transportation Committee      **Date:** February 14, 2005  
**From:** Robert Gonzalez, P.Eng.      **File:** 2052-25-F4/F5  
Director, Engineering  
**Re:** Sea Island and Hamilton Fire Halls - Award of Construction Contract

**Staff Recommendation**

It is recommended that:

1. Additional funding of \$400,000 as proposed in Option 3 of the "Sea Island and Hamilton Fire Halls, Award of Construction Contract" staff report be approved for Sea Island Fire Hall from the Community Safety Building Replacement fund and that;
2. The 5 year Capital Plan 2005-2009 be amended accordingly and that;
3. The contract for the construction of the two replacement fire halls at Sea Island and Hamilton be awarded to Mi-Dan Construction Ltd. for a total tendered price of \$5,606,384 plus GST.

Robert Gonzalez, P.Eng.  
Director, Engineering  
(4150)

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<b>ROUTED TO:</b>	<b>CONCURRENCE</b>		<b>CONCURRENCE OF GENERAL MANAGER</b>		
Fire Rescue .....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		 for Jeff Day.		
Budgets .....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
Building Approvals .....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
<b>REVIEWED BY TAG</b>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	<b>REVIEWED BY CAO</b>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

## Staff Report

### Origin

Construction of the two replacement fire halls located on Sea Island and in Hamilton was approved in the 2003 and 2005 capital budgets.

### Background

Following presentation of a Community Safety Master Plan, Council adopted a strategy in June 2000 that considered the phased replacement and seismic upgrading of the 6 community fire halls located throughout the City.

This program identified funding and constructing Sea Island Fire Hall during 2003 and Hamilton Fire Hall in 2004 as priorities. Following acquisition and pre loading of the two locations, the Hamilton project was deferred until this year, with staff recommending that both projects then be tendered together.

In October 2004 drawings and specifications were being finalized and staff issued a notice of contractor pre qualification that attracted 21 responses. Seven contractors were ultimately selected after evaluation, interview and reference checks.

### Analysis

Tender T1571 was issued by Purchasing to the 7 pre-qualified contractors on December 1, 2004. The Manager Purchasing, Insurance and Risk Management, received bids at 2 pm, January 13, 2005 with the following results (excluding GST):

Contractor	Option A – Sea Island	Option B – Hamilton	Option C – Sea Island and Hamilton
Britco Construction Ltd.	\$3,288,052	declined	declined
Double V Construction Ltd.	declined	\$3,500,251	declined
Ledcor Special Projects	\$3,368,000	\$3,569,159	\$6,900,617
Makam Construction Ltd.	declined	declined	declined
Mi –Dan Construction Ltd.	\$3,110,641	\$3,152,150	\$6,262,791
PAX Construction Ltd.	\$3,367,293	\$3,515,515	\$6,883,368
Smith Bros. & Wilson (BC) Ltd	\$3,551,402	\$3,584,112	\$7,135,514

Tenders were then each reviewed by staff for overall compliance and project understanding.

Based upon the above results the lowest qualified bid prepared by Mi-Dan Construction Ltd. is \$6,262,791 and is \$1,006,407 over the allocated construction budgets. The following options have been considered by staff:

## Discussion

Analysis of the tenders and negotiations with Mi-Dan Construction Ltd. has indicated a number of key factors that resulted in the project's higher than anticipated costs including:

- Higher than usual soils densification costs at the two sites due to extremely poor soil conditions and the "post disaster" requirements of the buildings.
- Mechanical sub contract costs double the estimated costs.
- Construction costs in the Vancouver region are reputedly increasing 5% - 8% per year due to material demand, a hot market and skilled labour shortage.

The project duration based now on a March 2005 start up is estimated at 36 weeks with a project completion date of December 2005.

### Option 1: Cancel tender, redesign and re-tender the projects (not recommended)

Since the two fire halls when combined are over budget, the City could request the consultants undertake the necessary redesign that will reduce the scope and quality to meet our existing funding to re-tender. However, this process would delay the projects potentially a further 6 months and it is staff's experience that re-tendering does not typically realize the expected cost savings as construction prices increase from marketplace conditions.

### Option 2: Increase Funding \$1,006,407 and award contract as tendered (not recommended)

Increasing the construction budget for Sea Island would allow the two projects to proceed as designed with the full benefit of the Green Municipal Enabling Fund (GMF) grant funding presently approved. Although this would be a desirable outcome staff believe that economies in the design can be achieved without substantial reductions in quality.

### Option 3: reduce the scope of work by \$656,407 and increase the required funding by \$400,000

#### (Recommended)

Staff have negotiated savings of \$400,000 through a redesign of the mechanical system and by implementing select changes to the construction budget, including changing the training tower from concrete to metal cladding, a further \$256,000 will be saved. This option would retain the most desirable functions of the buildings as well as possibly 50% of the approved GMF grant.

### Option 4: Reduce the scope of work by \$1,006,407 to award within the approved budgets (not recommended)

To reduce the quality and scope of work to this level will likely require redesigning and downsizing the buildings beyond levels acceptable to Richmond Fire Rescue and potentially eliminate many of the desirable features of the fire halls energy efficient systems, quality construction, landscaping and other features.

Option 5: Proceed with Hamilton (within budget), and Tender Sea Island in 2006 along with the proposed Fire Hall No. 3 at Bridgeport subject to available funding (not recommended)

This option would allow only the Hamilton Fire Hall to proceed (within budget) thereby maximising the availability of the GMF grant. Sea Island would then be considered for additional funding in the 2006 Capital program along with the proposed Fire Hall No. 3 replacement at Bridgeport. However based upon current market conditions both the budgets for Bridgeport and Sea Island will require an upward revision to reflect 2006 construction costs and the experience gained from the current tender.

**Financial Impact**

Recommended Funding (Option 3)

Tendered Price Mi-Dan Construction Ltd	\$ 6,262,791
Proposed revisions to Scope	<u>-\$ 656,407</u>
Revised Contract price Mi-Dan Construction Ltd.	<b>\$ 5,606,384</b>
Consultant Fees and Disbursements	\$ 202,000
Land Acquisition, Site Pre loading and Public Art	\$ 950,600
Permits, City Costs and Administration Overheads	\$ 659,244
Furnishings and Equipment	\$ 181,000
Contingency Allocation	<u>\$ 300,000</u>
<b>Project Total Cost</b>	<b>\$ 7,899,228</b>

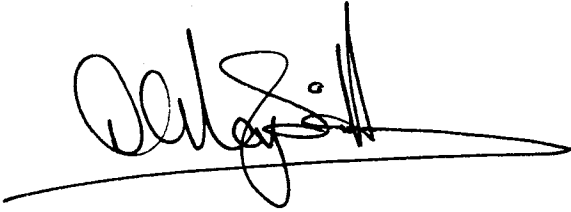
Source of Funding

Bylaw 03 - 7524 (account # 40917) Sea Island Fire Hall	\$ 3,441,929
Bylaw 05 – 0000 (account # 40927) Hamilton Fire Hall	\$ 3,837,299
Community Safety Building Replacement Fund (new)	<b>\$ 400,000</b>
Grant Funding (GMF) Estimated	<u>\$ 220,000</u>
<b>Funding Total</b>	<b>\$ 7,899,228</b>

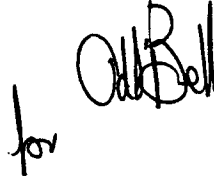
Approval of additional funding required to finalize the recommended contract with Mi Dan Construction Ltd. will necessitate a minor amendment to the 2005–2009 Five Year Plan as previously presented to the Finance Select committee.

**Conclusion**

Staff is satisfied that Mi-Dan Construction Ltd. have the skills and ability to successfully complete the proposed projects in a timely manner and have completed similar projects in the Lower Mainland. In order to proceed with construction it is recommended that option 3 be endorsed and that the combined Sea Island and Hamilton Fire Hall replacements be awarded to Mi-Dan Construction Ltd. for the contract sum of \$5,606,384 plus GST.



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DN:cmm