



**VAUGHAN**

C	16
Item #	26
Report No.	41 (cw)
Council - December 9/14	

memorandum

**DATE:** December 3, 2014

**TO:** HONOURABLE MAYOR & MEMBERS OF COUNCIL

**FROM:** MICHAEL SHATIL, DIRECTOR, BUILDING & FACILITIES  
JOSEPH PITTARI, COMMISSIONER, STRATEGIC & CORPORATE SERVICE

**RE:** COMMUNICATION

**ITEM #26 – COUNCIL MEETING – DEC 9, 2014**  
**FITNESS EXPANSION AT FATHER ERMANNO BULFON COMMUNITY**  
**CENTRE (WARD 2)**  
**ADWARD ADJUSTMENT & PROJECT UPDATE**

---

**Purpose**

The purpose of this memorandum is to provide additional information regarding the award increase to the contingency allowance of capital project BF-8285-11.

**Background – Analysis & Options**

Since the inception of the construction phase of this project, numerous changes were required due to unforeseen site conditions and non-discretionary design changes. Before discussing the specifics of these changes, it is important to note that all construction projects, and especially renovations and additions, contain inherent risks that cannot be identified and eliminated during the design phase.

This project is forecasted to be completed within the overall allocated funding and at this time, no additional funding is required. The additional \$246,100 contingency request will bring the total project contingency from 10% to 18.6%, which is within the medium to high contingency range as stipulated in the City's Capital Project Financial Administration and Reporting Policy (section 6). In addition, increasing the contingency by the recommended amount is based on a conservative projection to completion, and it is possible that some of the contingency will remain unspent at the end of the project. From a risk based methodology, it is prudent to increase the contingency by the amount requested, so as to prevent any further delays to the project. This risk mitigation course of action is also recommended by MHPM, the City's Project Management Consultant.

Staff, with assistance from MHPM, has been monitoring the project's change order situation closely throughout the construction phase of this project. The deficit in project contingency was identified during the Council summer hiatus. In following the principles of accountability and transparency, Staff elected not to increase the contingency budget through the authorization delegated to the City Manager during the hiatus. Instead, Staff elected to bring the matter in the form of a Report before Committee and Council.

As of December 3, 2014, nine (9) Change Orders with a total amount of \$316,885 (11.4% of the construction tender) have been negotiated and issued. All nine (9) Change Orders were non-

discretionary, which means that they must be done to complete the project. There are no discretionary (user request) Change Orders on this project, nor are any contemplated. The nine (9) Change Orders are summarized in Table 1:

Table 1 – Change Order Summary

<b>Change Order Summary</b>		
<b>BF-8285-11 Fitness Expansion at Father Ermanno Bulfon Community Centre</b>		
<b>CO #</b>	<b>Brief Description</b>	<b>Amount</b>
1	Remove & replace existing sub-grade material.	\$110,343.83
2	Extend structural foundation walls & footings to suitable depths.	\$123,337.69
3	Supply & install new isolating valves to limit down-time to facilities for hot & cold water.	\$1,339.75
4	Supply & install temporary power to restore hot water service.	\$5,277.38
5	Replace permanent electrical feeders.	\$24,487.03
6	Supply & install receptacles for roof top units.	\$4,797.16
7	Supply & install hair & hand dryer units.	\$21,444.54
8	Change manufacturer of mechanical roof top units.	\$11,730.00
9	Supply & install new under-slab vapour retarder.	\$14,127.75
<b>Total</b>		<b>\$316,885.13</b>

Approximately 55% of the aforementioned Change Orders (CO# 2, 6, 7, 8 & 9) were results of the non-discretionary design changes and approximately 45% of these Change Orders (CO# 1, 3, 4 & 5) were results of unforeseen site conditions. The following is a detailed description of each of the 9 change orders:

**Change Order 1 - Remove & replace existing sub-grade material.**

Reason for change: Unforeseen site condition. Requirement to purchase an additional quantity of suitable backfill material resulted in an additional cost to this contract. This was an unforeseen site conditions and is a common construction risk when working with sub-grade material.

**Change Order 2 – Extend structural foundation walls & footings to suitable depth**

Reason for change: Non-discretionary design change. Foundation depth needed to be more than 2m below grade (not 1.2m as originally estimated), resulting in an additional cost to this contract.

**Change Order 3 – Supply & install new isolating valves to limit down-time to facilities for hot & cold water**

Reason for change: Unforeseen site condition. The existing mechanical piping was not visible during design phase, after the piping was exposed during construction, a set of new isolating valves was proposed to limit the shut-down period to the facilities. This set of valves resulted in additional cost to the contract.

**Change Order 4 – Supply & install temporary power to restore hot water service**

Reason for change: Unforeseen site condition. The existing electrical feeders were buried within the existing slab-on-grade, which was constructed as part of the previous expansion. The existing electrical feeders were placed much higher than common construction practice, and their location was not identified on the available drawings. As a result of being placed too high, the existing electrical feeders were cut during the slab removal. A temporary feeder was required to keep the facilities operational, which resulted in additional cost to the contract.

#### **Change Order 5 – Replace permanent electrical feeders**

Reason for change: Unforeseen site condition. After Change Order 4 was in place temporarily, permanent feeders were required to replace the existing feeders that were cut during existing slab removal, which resulted in additional cost to the contract.

#### **Change Order 6 – Supply & install receptacles for roof top units**

Reason for change: Non-discretionary design change. The receptacles are required to meet Ontario Building Code (OBC) requirements. Their addition to the contract resulted in an additional cost.

#### **Change Order 7 – Supply & install hair and hand dryers**

Reason for change: Non-discretionary design change. Hair & hand dryers are required for the day to day operations of the change rooms in this facility. Their addition to the contract resulted in additional costs.

#### **Change Order 8 – Change in roof top HVAC units/cooling capacity**

Reason for change: Non-discretionary design change. The building requires roof top units with a higher cooling capacity than originally estimated; such units will cost more than the units originally thought required. Accordingly, contract costs will increase.

#### **Change Order 9 – Supply & install new under-slab vapour retarder**

Reason for change: Non-discretionary design change. The geotechnical report stated that if a moisture sensitive floor finish is to be provided, polyethylene sheeting should be used as a vapour retarder (to prevent moisture from infiltrating through the concrete slab and damaging the finishes). The addition of a vapour retarder to the contract resulted in additional cost to the contract.

### **Conclusion**

Due to unforeseen site conditions and non-discretionary design changes, this project requires an additional contingency allowance to bring it to completion (from 10% to 18.6%). This is consistent with current contingency policy guidelines and it is therefore recommended that the remaining funding in capital project BF-8285-11 be assigned as contingency allowance.

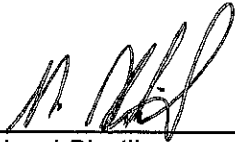
### **Attachments**

N/A

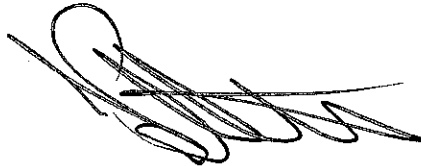
**Memorandum prepared by**

Gabriel Wong, Manager of Building Construction, Building & Facilities, Ext. 8101

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M. Shatil', written over a horizontal line.

Michael Shatil  
Director of Building & Facilities

A handwritten signature in black ink, appearing to read 'Joseph Pittari', written over a horizontal line.

Joseph Pittari  
Commissioner of Strategic & Corporate Services