



**Subject:** Fire Services Headquarters Station 4-5 – Update No. 2

**Prepared by:** Allan D. Downey, Director of Operations

**Department:** Operational Services

**Date:** November 3, 2020

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## **Recommendation**

- 1. That Report No. OPS19-017 be received for information.**

## **Background**

From update No. 1:

On November 10, 2015, four (4) acres of land were purchased at the corner of Earl Stewart Drive and Isaacson Crescent in Aurora.

On February 14, 2017, Joint Council Committee (JCC) approved a budget of \$11,000,000 for the design and construction of the facility.

On March 28, 2017, JCC approved the engagement of Thomas Brown Architects to design the new facility, under the guidance of a Steering Committee comprised of staff from Aurora, Newmarket and CYFS.

Several reports and updates were presented to JCC culminating in the approval of design on June 12, 2018.

Staff received approval to proceed to detailed design, preparation of specifications and tender documents and proceed to public tender based on information provided in staff report OPS18-011.

The project was released for public tender on April 12, 2019 and closed on May 22, 2019. Nine (9) bids were received; however, all bids were over the approved budget.

Following the tender results, the facility was redesigned to provide cost savings that would bring the facility closer to the approved budget. Building Modifications included:

- Deletion of one (1) bay in the Apparatus Bay
- Remaining bays shortened by 20' from 90' to 70'

- Reduction of second floor office area by the width of the deleted bay below
- Deletion of one (1) classroom on the second floor
- Adjustment of the northwest entrance and hose tower by moving both elements east to infill area of deleted classroom

The above-noted revisions achieved a reduction in gross floor area of 4,331 square feet from the original tender gross floor area of 28,099 square feet representing a 15.5% reduction.

The scope of the modifications realized cost reduction in the following categories:

- Bonding
- Retaining walls
- Concrete forming
- Cast in place concrete
- Concrete finishing
- Concrete reinforcing
- Architectural precast
- Masonry
- Vehicle Exhaust Extraction Systems
- Excavation
- Structural Steel
- Steel Deck
- Waterproofing – Below Grade
- Aluminum Cladding Systems
- Roofing
- Apparatus Bay Doors
- Gypsum Board Systems
- Acoustical Partitions (folding)
- Flooring
- Mechanical Systems
- Electrical Systems

As a result of the proposed revisions to the facility design, a reduction in the amount of \$1,147,000. Cost savings in the amount of \$1,147,000 have been realized, culminating in an adjusted tender bid of \$10,836,817. Fire Hall 4-5 Revised Project Budget was approved, as follows:

**Non-Construction Costs:**

Architect	\$600,000
Furniture, Fixtures, Signage etc.	506,500
Prefab shed for training	250,000
Allowance for props	100,000
	<u>1,456,500</u>

**Construction Costs:**

Tender Revised Bid	10,836,817
Non-Recoverable HST (1.76%)	190,728
Contingency (10%)	1,083,682
	<u>12,111,227</u>

**Total Revised Project Budget** **\$13,567,727**

In addition to this budget, the Town of Aurora has also included \$87,300 for project management fees and public art from its own reserves.

Remo General Contracting Ltd. was awarded the contract for the construction of Station 4-5 in the amount of \$10,836,817.

Site work commenced on May 20, 2020.

## Budget

	Approved Budget	Change Orders Approved to Date	Payments to Date
<b>Non-Construction Costs:</b>			
Architect	\$600,000		\$454,147.00
Furniture, Fixtures, Signage etc.	506,500		0
Prefab shed for training	250,000		0
Allowance for props	100,000		0
	1,456,500		
<b>Construction Costs:</b>			
Tender Revised Bid	10,836,817		1,539,475.55
Non-Recoverable HST (1.76%)	190,728		
Contingency (10%)	1,083,682	759,778.14	\$69,268.00
	12,111,227		
<b>Total Revised Project Budget</b>	<b>\$13,567,727</b>		<b>\$2,062,890.55</b>

## Schedule

Thomas Brown Architects has provided their confirmation regarding the change to the original schedule in consultation with Remo General Contractors. Staff have received a memo from Thomas Brown Architects on October 23<sup>rd</sup>, 2020 regarding this matter in which the Architect states the following:

“As the team is aware, we have encountered a site condition that has impacted the progress of the work. The attached revised Construction Schedule and associated letter of Schedule of Impact describe the impact of this work on the original timeframe to deliver the Project. The scheduled date of Substantial Performance has been changed to Q1 of 2022 with Total Performance in Q2 of 2022. The revised Construction Schedule has effectively inserted the Helical Pier scope as a “finish-to-start” task with subsequent tasks pushed forward accordingly. This does not account for mitigation strategies (i.e. the potential to ‘stack’ trades) in order to minimize duration where it is reasonable. To date, we acknowledge that the Contractor’s approach to the issue has been proactive and have no reason to expect that this will change over the duration of the Project. As Consultants for the project we will continue efforts to minimize the impact of

the issue and maintain our commitment to deliver the project in the shortest timeframe possible.”

The Contractor has identified three (3) key milestone dates:

1. Occupancy – February 28, 2022
2. Substantial Performance – March 8, 2022
3. Total Completion – May 25, 2022

### **Progress to Date**

Filling and rough grading of site complete to footing level. Storm, sanitary and water servicing to the site are complete.

Helical Pier installation commenced on October 14, 2020 and as of October 22<sup>nd</sup>, 12% has been completed.

### **Communications**

Staff have been in contact with our Communications Division to produce a dedicated webpage for Station 4-5 on both Aurora and Newmarket’s website. Virtual site meetings have taken place on a bi-weekly basis since the commencement of construction. At present, eleven (11) virtual site meetings have been conducted.

### **Risks and Issues**

Staff have approved a Change Order with an upset limit of \$750,000 for the installation of helical piers. The Architect has revised foundation design drawings and modifications to the steel support system to accommodate the installation of helical piers. Shop drawings submission review and approvals for the facility continue.

Following the installation of the helical piers, the installation of the foundation and steel structure progress may be impacted by winter weather.



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**Allan D. Downey**  
**Director of Operations**  
**Operational Services Department**  
**Town of Aurora**

October 23, 2020

Town of Aurora – Joint Operations Centre  
229 Industrial Parkway North  
Aurora, Ontario L4G 4C4  
www.aurora.ca

Attn: Allan D. Downey  
Director of Operations

Re: Central York Fire Service HQ Station 4-5

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Dear Al,

We have reviewed the Project Schedule and the letter regarding Schedule Impacts prepared by Remo General Contracting. Our comments regarding each are listed below for your review and information.

Project Schedule:

- The schedule appears to be well organized and contain sufficient detail related to Project tasks.
- The schedule does indicate the Project baseline and critical path. We expect that this information will be retained on subsequent schedule updates.
- Lines 1 through 37 show the overall schedule for the project. Subsequent lines break down the sequence of tasks in a more detailed fashion.
- Lines 38 through 68 capture the scope of work associated with the poor soils conditions (ITS = Impact to Schedule). The incorporation of the time associated with these lines has caused the baseline shift that appears in the Gantt Chart. By our estimation, the shift represents a day for day adjustment caused by the helical pier work currently underway. These Items are highlighted in yellow. We note that Line 16 is a provisional Item only that has been added to capture winter heat for a second season which will likely occur.
- Line 1 indicates that the originally scheduled duration of the work was between the dates of 12/17/19 and 12/20/21 with mobilization on site commencing on 5/7/20. As a result of the Helical Pier work described on lines 38 through 68, the revised schedule duration of the work is now between the dates of 12/17/19 and 5/22/22 with the date of mobilization remaining at 5/7/20. This results in an additional 108 days added to the duration of the work.
- We note that the duration of 108 additional days includes days associated with the originally scheduled Substantial Performance date of 10/4/21 which was in fact earlier than the Contractual obligation of 10/31/21. In theory, this reduces the number of additional days to 89.

Letter regarding Schedule Impacts

- The letter provides a narrative of events from April 30 to October 14, 2020. Our review indicates that the points listed provides a reasonable description of the issue.
- The rationale for The Requirement for Additional Time also appears to be reasonable although it is anticipated that all parties will continue efforts to deliver the project in the shortest possible timeframe.
- It should be noted that the letter, notes a date of Substantial Performance occurring in the Winter of 2022. This should understood as Q1 of 2022, not Q4 of 2022.

## Discussion

As the team is aware, we have encountered a site condition that has impacted the progress of the work. The attached Revised Construction Schedule and associated letter of Schedule of Impact describe the impact of this work on the original timeframe to deliver the Project. The scheduled date of Substantial Performance has been changed to Q1 of 2022 with Total Performance in Q2 of 2022. The revised Construction Schedule has effectively inserted the Helical Pier scope as a 'finish-to-start' task with subsequent tasks pushed forward accordingly. This does not account for mitigation strategies (i.e the potential to 'stack' trades) in order to minimize duration where it is reasonable. To date, we acknowledge that the Contractor's approach to the issue has been proactive and have no reason to expect that this will change over the duration of the Project. As Consultants for the project we will continue efforts to minimize the impact of the issue and maintain our commitment to deliver the project in the shortest timeframe possible.

If you have any questions or require further clarification, please do not hesitate to call.

Yours truly,



Chris Kubbinga  
M.Arch, OAA

**Thomas Brown Architects Inc.**