



March 30th, 2022
UEM No. 21-800

Township of Wainfleet
31940 Highway #3
Wainfleet, Ontario
L0S 1V0

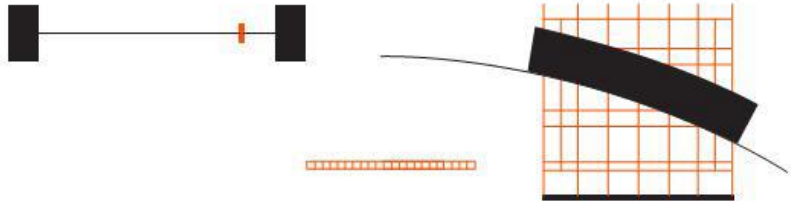
TRANSMITTAL

Re: Wainfleet Central Fire Station Tender

On March 22, 2022, the tender call for the Wainfleet Fire Station closed. The project team has since reviewed the bids, analyzed them for completeness, and prepared a recommendation for the Township of Wainfleet to proceed with. To support Township staff in presenting the tender results and recommendation to council on April 8, 2022, the project team has prepared the following documentation:

- Tender Summary and Recommendations Letter dated March 28, 2022
- Wainfleet Fire Station Bid Summary Table dated March 28, 2022
- HVAC System Memo – Base Tender Option & AP2 dated March 29, 2022
- Wainfleet Fire Station Tender Price – Altus Group Cost Estimate Memo dated March 29, 2022
- Table 1 - Project Budget Wainfleet Central Fire Station dated March 30, 2022

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March 28, 2022

File: 20-163

Mr. Morgan Alcock
Fire Chief/CEMC
Wainfleet Fire & Emergency Services
31940 Highway 3, P.O. Box 40
Wainfleet, On L0S 1V0

Via Email: malcock@wainfleet.ca

**RE: TENDER SUMMARY AND RECOMMENDATIONS, NEW WAINFLEET FIRE & EMERGENCY
CENTRAL STATION, 42143 HIGHWAY 3, WAINFLEET, ON.**

Prequalified General Contractors, were selected to bid the project; a site visit was conducted with all General Contractors on February 11, 2022.

A total of seven (7) general contractors pre-qualified to bid the project of which five (5) closed their bid on the project. A total of six (6) addenda were issued.

The project closed on Thursday, March 22, 2022, with base bid closing at 2:00pm and bid appendices with "Alternate Prices" closing at 3:00pm.

Upon close review, there were no informal bids declared.

Bid results varied from the bidding contractors with a \$22,200.00 difference between the low bidder, TRP Construction and second low bidder, Bromac Construction and a \$285,000.00 difference between the low and fourth low bidder, Niacon Limited.

Three alternate prices were asked of the General Contractors under Appendix D.

The Township of Wainfleet has the choice to either select or decline acceptance of any of the three alternate prices which comprised of; Barn alteration, HVAC design alternative and Cistern design.

No cost saving alternates were received from any of the bidders.

See the attached bid summary sheet outlining the tender results.

Industry practise is to accept the low bidder based on their "Base Bid", in this case TRP Construction General Contractors would be deemed the Low Bidder with a bid of six million, three hundred and eight thousand even (\$6,308,000.00) net of HST.

The TRP tender form under Appendix D noted their three alternate prices that included:

- | | |
|--|---------------|
| 1. Barn Alterations and Renovations | +\$200,000.00 |
| 2. Alternative HVAC Design, See Mantecon Engineering Memo. | -\$41,000.00 |
| 3. Fire Cisterns | -\$33,000.00 |

When factoring in the alternate price costs provided by TRP, they remain the low bidder.

Our recommendation would be to accept the credit offered at \$33,000.00 for the Fire Cisterns, but not the credit for the "Alternate HVAC Design", due to added costs related to maintenance and utility usage, see Mantecon Memo. Further not accept the Barn Alteration and Renovation due to the considerable added cost. Factoring in the Alternate Price recommendation; the TRP low bid would be \$6,275,000.00.

The original project cost estimate of \$4,563,420 dated August 21, 2021 was prepared by Ingersoll & Associates. The project bid result is approximately 38% higher than their estimate.

We are of the opinion the results are indicative of increased construction costs due to high demand, supply chain issues, a volatility in commodity prices and labour shortages.

Based on the present budget allocation, the project remains \$1,711,580.00 over budget.

We recommend that The Township of Wainfleet award the project to TRP based on their Bid received.

We are of the opinion lower costs in the construction industry may not be realized given the current market conditions.

We await the directive established by the Township with respect to these tender results.

Should you have any questions with respect to the above, please do not hesitate to contact the undersigned.

We Remain,

At Your Service,

RAIMONDO + ASSOCIATES ARCHITECTS Inc.

A handwritten signature in black ink, appearing to read "Emilio R.", with a stylized flourish at the end.

Emilio Raimondo, *Architect*
OAA, ANY, FRAIC, NCARB, B.E.S., B.Arch.
President

Er/er
CC: Client, UEM, Consultants, File
Encl: Tender Summary, Mantecon HVAC Memo

WAINFLEET FIRE STATION

Tender Closing - March 22, 2022 @ 2:00pm				Alternative Prices @ 3:00pm					
Contractor	Bid Security/ 10% Const. Value	Base Bid	Agr. To Bond	Alternative Price		Accepted (TBD)	TOTAL BID	Qualifications/ Comments	
BROMAC CONSTRUCTION	YES	\$6,330,200.00	YES	1.0	Barn Renovations	\$227,354.00	YES	\$6,500,254.00	
				2.0	Alternative HVAC Design	-\$41,000.00	YES		
				3.0	Fire Cisterns	-\$16,300.00	YES		
				Alternative Price Total		\$170,054.00			
GS WARK LTD	YES	\$6,636,000.00	YES	1.0	Barn Renovations	\$492,000.00	YES	\$7,155,000.00	
				2.0	Alternative HVAC Design	-\$41,000.00	YES		
				3.0	Fire Cisterns	\$68,000.00	YES		
				Alternative Price Total		\$519,000.00			
NIACON CONSTRUCTION	YES	\$6,593,000.00	YES	1.0	Barn Renovations	\$378,000.00	YES	\$7,248,500.00	
				2.0	Alternative HVAC Design	\$145,000.00	YES		
				3.0	Fire Cisterns	\$132,500.00	YES		
				Alternative Price Total		\$655,500.00			
T.R. HINAN CONTRACTORS	YES	\$7,349,000.00	YES	1.0	Barn Renovations	\$375,000.00	YES	\$7,869,000.00	
				2.0	Alternative HVAC Design	-\$30,000.00	YES		
				3.0	Fire Cisterns	\$175,000.00	YES		
				Alternative Price Total		\$520,000.00			
TRP CONSTRUCTION	YES	\$6,308,000.00	YES	1.0	Barn Renovations	\$200,000.00	YES	\$6,434,000.00	
				2.0	Alternative HVAC Design	-\$41,000.00	YES		
				3.0	Fire Cisterns	-\$33,000.00	YES		
				Alternative Price Total		\$126,000.00			

HVAC System Memo – Base Tender Option & AP2

Wainfleet Fire Station

42143 Highway #3, Wainfleet, ON

To Whom it may concern,

The base-tender HVAC system for the entire building consists of radiant-floor heating as the primary source of heat, with a VRF (variable refrigerant flow) system as the sole source of cooling. This VRF system will also provide backup heat only in the event of boiler system failure or maintenance downtime, the limitation with the VRF is that the heating performance gets progressively worse once the outdoor air temperature drops below -15C, losing a majority of its heating output once the outdoor temperature approaches -25 degrees C. The hot water for the radiant floor heating is distributed by a gas-fired hydronic boiler system which will provide full heating capacity at any outdoor air temperature.

In drawing AP2-M2 (Alternate Price 2), the radiant floor heating system was greatly reduced in size and scope to only provide heating for the apparatus bay. Thus, the boiler, pumps, and related accessories are reduced in size and quantity, including an elimination of most of the piping and slab work which will greatly reduce cost. The remainder of the building is to be heated and cooled solely by the VRF system as mentioned above. To eliminate the problem of poor heating performance in very cold conditions, electric duct heaters were added in this alternate price to be automatically turned on if the VRF system cannot keep up with the heating load at colder temperatures. This will ensure that full heating performance will be maintained regardless of outdoor conditions.

Both systems will heat adequately as per the performed heat-loss calculations, with a comfort advantage to the radiant-floor heat option due to uniform heat distribution from floor to ceiling. Regarding cost, the AP2 option will have a lower upfront cost, with a higher energy usage & operating cost over time due to electricity being used for both heating and cooling. The base tender option is more economical long-term due to employing natural gas as its heating energy source instead of electricity. Also, since the VRF unit is only used for cooling in the base-tender design, it will have an extended service life as it will only need to operate during warmer months. Maintenance will be similar for both systems, as a boiler system is still present in AP2 for the apparatus bay, and the backup electric coils included in this alternate price do not require maintenance.

During design, another alternate solution was proposed for our review which included the provision of a dedicated split cooling unit for each space instead of the VRF system. This would require a separate outdoor condensing unit for each individual room zone instead of one common condensing unit as indicated in the base-tender design. The fresh air distribution ductwork is unaffected as fresh air is required in any case. This design is not recommended due to: increased upfront cost, would require many outdoor condensing units (one per thermostat zone) which are a problem to locate and conceal, increased maintenance due to the amount of units, increased electrical requirements & costs (multiple small units are less efficient than one common unit), and capacity limitations of these units which would require large spaces such as the training room to have multiple units to satisfy cooling requirements.

It is recommended to review both options' bid price and proceed with the base-tender design if the upfront cost is acceptable, as this design has the best performance and lowest operational cost. It is anticipated the base-tender design will be 15% to 30% more expensive up front. However, this option will see significant cost savings over time compared to the AP2 option and will be the overall less expensive option assuming a standard 25 year equipment life. It is recommended to proceed with AP2 if the upfront cost of the base-tender design is not acceptable and the increased operational costs (estimated to be twice that of the base-tender option) can be undertaken.

Please do not hesitate to contact the undersigned should you have any questions.

Kind Regards,

Cameron McIntyre, EIT
O: (905) 648-0373 ext. 240
E: mcintyre@manteconpartners.com



MEMO

TO: FILE

FROM: UEM

DATE: MARCH 29, 2022

RE: WAINFLEET FIRE STATION TENDER PRICE – ALTUS GROUP COST ESTIMATE

On March 22, 2022, the Township of Wainfleet (Township) received five tenders to construct the Wainfleet Central Fire Station located at 42143 Highway 3, Wainfleet, Ontario. The tenders submitted were in the range of \$5,983,000 - \$7,024,000, excluding the contract cash allowances in the amount of \$325,000. These cash allowances are controlled by the project team and will be awarded by competitive bid. The low tender base-bid amount of \$5,938,000 is 30% higher than the tender estimate of \$4,563,420 provided to Township staff by the independent cost consultant Ingersoll & Associates Inc. dated August 21, 2021. The increase in tender cost is consistent with the increase in construction costs of fire stations as reported by Altus Group Limited in their 2022 Canadian Cost Guide.

Altus Group is an international organization that provides software, data solutions, and advisory services to the commercial real estate industry. Annually, Altus Group produces their Canadian Cost Guide to estimate construction costs for real estate development, and infrastructure projects based on thousands of past projects and future cost projections. The price per square foot of above grade construction for Fire/EMS Stations in the Greater Toronto Area (GTA) has risen by approximately 90% since 2019. Some of the reasons for the increase in construction costs include high demand, supply chain issues, volatile commodity prices, and labour shortages. The estimated prices per year are as follows:

<u>Year</u>	<u>Price Per Square Foot</u>
2019	\$250 - \$350
2020	\$350 - \$500
2021	\$450 - \$650
2022	\$475 - \$685

Based on the 2022 Altus Canadian Cost Guide price per square foot values for a Fire/EMS Station, and a gross floor area of 13,336 ft² (1,239m²), the estimated tender cost is in the range of \$6,334,600 - \$9,135,160. While TRP Construction General Contractors base-bid tender cost of \$5,983,000.00 is greater than the tender estimate by Ingersoll & Associates Inc. dated August 21, 2021, the lowest base-bid is consistent with the projected construction costs for a Fire/EMS Station in 2022 as per the Altus Group Canadian Cost Guide. Four of the five submitted tenders were within \$351,600 (5.6%) of the low end of the price range as determined by the Altus Group Canadian Cost Guide, with the lowest base-bid being \$351,600 less than the Altus Group Canadian Cost Guide estimated low tender cost of \$6,334,600.

**Table 1: Project Budget -
Wainfleet Central Fire Station (Excluding HST)**

ACTIVITY	BUDGET	STATUS TO DATE
A1. Construction Cost (Tender Cost from TRP Construction)	\$5,950,000	\$0
A2. Construction Allowances (By Competitive Bid)	\$325,000	\$0
Construction Contingency	\$315,000	\$0
A3. Pre-Construction Township Activities	\$8,100	\$7,979
B. Owners Allowances	\$686,100	\$450,850
C. Advisory Services	\$374,700	\$114,534
TOTAL PROJECT BUDGET	\$7,658,900	\$573,363

Note: Tendered construction cost includes Alternative Price 3 for a credit \$33,000