Monthly Summary Report No. 09 – Wainfleet Central Fire Station

Project:	Wainfleet Fire Station – 42143 Highway #3, Wainfleet ON, L0S 1V0	
Owner:	Township of Wainfleet	
Contract:	General Construction (GC) – Stipulated Price Contract (CCDC2) with Amendments	
Contractor:	TRP Construction General Contractors – 3050 Harvester Rd Unit 107, Burlington, ON L7N 3J1	
Reporting Period:	January 1st, 2023, to January 31st, 2023	
Prepared By:	Urban & Environmental Management Inc. – 4701 St. Clair Ave. Suite 301, Niagara Falls	
Report Date:	February 10th, 2023	UEM Project #21-800
Circulation:	Township of Wainfleet Morgan Alcock Mallory Luey Shawn Shutten William Kolasa Richard Nan	Revision: Final

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1.0 PROJECT BUDGET

The project budget (excluding HST) for the Wainfleet Central Fire Station includes:

Construction (TRP Contract)	$5,950,000
Contract Allowances	$325,000
Contract Award	**$6,275,000**
Construction Contingency	$311,000
Pre-Construction Township Activities	$8,100
Owners Allowances	$686,100
Advisory Services	$378,700
Project Budget	**$7,658,900**

2.0 PROJECT SCHEDULE

2.1. MONTHLY SCHEDULE

The contract requires that an updated schedule be submitted by the contractor monthly.

TRP Construction provided a baseline project schedule on May 18th, 2022. And provided an updated schedule on November 25th, 2022, which revises the completion date of the load bearing masonry task and shortens the duration for roof truss and roofing tasks. The revisions do not change the anticipated substantial completion date of June 14th, 2023.

An updated schedule was submitted by the contractor on January 10th, 2023, which reflects recent construction progress and sequencing changes of non-critical path items. This schedule update does not change substantial completion date.

2.2. SUBSTANTIAL COMPLETION AND OCCUPANCY

Substantial Completion as defined by the Ontario Architects Association, Ontario General Contractors Association, and the Construction Lien Act (as amended April 19th, 2021) state a project is substantially complete if: (1) the building must be completed for its intended use, and (2) it meets the financial requirements of the Act (uncompleted and deficient work shall be less than 3% for the contract's first $1,000,000, 2% for the second $1,000,000, and 1% of the remainder).

Based on the approved contract cost of $6.3M, the amount remaining to achieve Substantial Completion would need to be less than $93,000 ($30,000, $20,000, $43,000).

Occupancy is a separate decision/process from the substantial completions process. Occupancy is granted by the host municipality (Wainfleet) and could involve full or partial occupancy before or after substantial completion is certified.

The owner must have insurances in place for both partial and full occupancy or when substantial completion is certified.

2.3. TOWNSHIP RESPONSIBILITIES

The TRP construction contract includes the building, all infrastructure, and finishes; however, excludes several operational items/tasks that the Township is responsible for completing or procuring:

- Office and Administration Furniture
- Office Equipment
- Communication Radios & Public Address Systems
- Maintenance Tools & Equipment
- SCBA Compressor & Fill Station
- PPE Extractor
- IT Servers, Racking, Active Network Equipment & Setup
- Security Cameras
- Appliances
- IT drops and IP addresses for required mechanical & electrical equipment

The Township must prepare a Fire & Life Safety Plan for the new Central Fire Station to satisfy the conditions of the occupancy permit

To assist the Township in its preparations for occupation and building operations, UEM prepared an Owners Moving & Occupancy Schedule on December 15th, 2022.

2.4. MONITORING CONSTRUCTION PROGRESS

UEM works closely with the contractor administrator to monitor the construction progress against the project schedule on an ongoing basis, reviewing milestones, deliveries, commencing work, completed work, outstanding issues, deficiencies, and project risks.

When there is a suspected or actual variance in the project schedule, we evaluate the cause of the variance, impact on the budget and the owners needs and where necessary prepare a corrective action plan.

2.5. SUMMARY OF KEY DATES

CONSTRUCTION ACTIVITY	ESTIMATED DATE COMPLETE
Construction Tender Issued	February 10th, 2022
Construction Tender Public Opening	March 22nd, 2022
Contractor Mobilization	May 3rd, 2022
Demolition of Barn and House	June 3rd, 2022
Strip & Grade Building Pad	July 7th, 2022
Footings & Foundation Walls	July 18th, 2022
Parking Lot Prep & Granular	August 5th, 2022
In-Floor Heating Rough-in	October 19th, 2022
Slab on Grade	October 24th, 2022
Structural Masonry Block	December 1st, 2022
Roof Trusses	December 16th, 2022
Mechanical Rough ins	January 19th, 2022
Electrical Rough ins	January 19th, 2022
Aluminum Windows	February 13th, 2023
Overhead Doors	February 21st, 2022
Permanent Power	March 6th, 2023
Drywall	April 14th, 2023
Concrete Floor Polishing	April 20th, 2023
Electrical Devices & Fixtures	May 19th, 2022
Plumbing Fixtures	May 25th, 2022
Concrete Curbs and Sidewalks	April 26th, 2023
Asphalt Paving	May 1st, 2023
Millwork	May 9th, 2023
Planting, Seed, Sod	May 12th, 2023
Fire Alarm Verification	June 8th, 2023
Occupancy	June 8th, 2023
Substantial Completion	June 14th, 2023

On January 4th, 2023, the contractor advised twenty one (21) working days lost due to inclement weather and difficult working conditions in the inclement weather since the beginning of the project. The Project Manager reviews lost weather days with the contractor weekly and reports to the Township every other week. The number of lost weather days recorded from windy, wet, and hot weather is confirmed and the potential effect is considered in the contractor's updated schedule. To date there has not been a material impact on the project schedule.

Construction Site meetings are held every other Wednesday starting May 25th, 2022.

3.0 FRONT END DOCUMENTATION AND RESPONSIBILITIES

New and renovated construction projects can require several pre-approvals and documentation prior to and during construction. Following is a brief checklist of the more common project front end responsibilities required as part of the contract at the provincial and regional/municipal levels.

3.1. BUILDING PERMIT & SITE PLAN APPROVAL

Township of Wainfleet Plan Agreement

- **Completed**

Township of Wainfleet Building Permit

- **Completed** (May 26th, 2022)

Ministry of Transportation Ontario (MTO) Land Use Permit

- **Completed** (May 16th, 2022)

3.2. GENERAL REQUIREMENTS

The contractor is required to prepare a project specific "health and safety" plan for review by the Township and posted at the project site. The contractor is to provide safety training to trades and representatives that intend to access the project site.

- ✓ **Completed**

The contractor will engage the municipal building inspector and Fire Department at the beginning of the project to review building exits, fire access and other code matters.

- ✓ **Completed**

The contractor will provide prior to construction, a Gantt chart in sufficient detail to track (and update) progress and a cash flow forecast.

- ✓ **Completed** – Ongoing Updates

The Township is responsible to prepare the Facilities' Fire & Life Safety plan prior to occupancy.

- **Outstanding**

3.3. ENVIRONMENTAL REQUIREMENTS & APPROVALS

Ontario Regulation 102/94 – "Waste Audits and Waste Reduction Work Plans" mandates that a project consisting of the construction of one or more buildings with a total floor area of at least 2,000 square meters requires the contractor to:

- Conduct a pre-construction waste audit
- Prepare a written waste reduction plan based on the waste audit to reduce, reuse and recycle waste to be generated at the construction project
- Implement the waste reduction plan
  - **Not Required** – Project less than 2,000 square meters

Renovation or demolition of buildings constructed prior to approximately 1979 require a project specific designated substance survey prior to construction. If hazardous or designated substances are identified, then remediation must be undertaken prior to the construction/renovation.

- ✓ **Completed** – Designated Substance & Hazardous Material Evaluation report issued by Ontario Environmental & Safety Network Ltd. On March 5th, 2020. Asbestos contain materials were found and abated in the structures to be demolished.

3.4. SERVICES FROM OTHER AGENCIES

Electrical Connections – Hydro One

- **In Process** – Application forms for temporary service submitted to Hydro One on June 6th, 2022

TSSA Certification – The contractor, subcontractor(s) and manufacture(s) are contractually obligated to complete required certification forms. Owner signature required for submission to TSSA.

- **Incomplete** - Schedule TBD

Supply natural gas to the Wainfleet Fire Station – Enbridge Gas

- **In Process** - Application approved. Service installation schedule TBD

Internet Services Provider

- **Incomplete** - Schedule TBD – by Township

4.0 MAJOR ACTIVITIES COMPLETED/ONGOING

April 1st to May 31st, 2022

- Contractor mobilized (May 2nd, 2022)
- Permits issued
- Demolition of existing structures commenced

June 1st to June 30th, 2022

- Strip and stockpile topsoil
- Removal of trees, stumps, fencing
- Excavation for footings
- Commence forming of footings

July 1st to July 31st, 2022

- Footings and foundation walls complete
- Damp proofing complete
- Slab backfill complete
- Pond infill complete
- Septic bed constructed, and tank installed

August 1st to August 31st, 2022

- Electrical underground complete
- Mechanical underground complete
- Road and parking lot granular complete

September 1st to September 30th, 2022

- Apparatus bay trench drains complete
- Roof trusses delivered
- Under slab insulation complete
- Floor slab reinforcing complete

October 1st to October 31st, 2022

- In-floor radiant heat piping complete
- Floor slab complete
- Structural steel columns completed
- Load bearing masonry commenced

November 1st to November 30th, 2022

- Load bearing masonry ongoing
- Electrical rough-ins within masonry
- Mechanical rough-ins within masonry

December 1st to December 31st, 2022

- Load bearing masonry complete
- Roof trusses and sheathing complete
- Mezzanine stair and metal decking installed
- Attic space electrical conduit installed
- Roof membrane commenced

January 1st to January 31st, 2023

- Roof fascia framing complete
- Mezzanine concrete poured
- Roof membrane complete on Administration side
- Attic fire block complete on Administration side
- Underside of truss drywall complete on Administration side
- Mechanical and electrical rough-ins on going

5.0 FORECASTED CASH FLOW

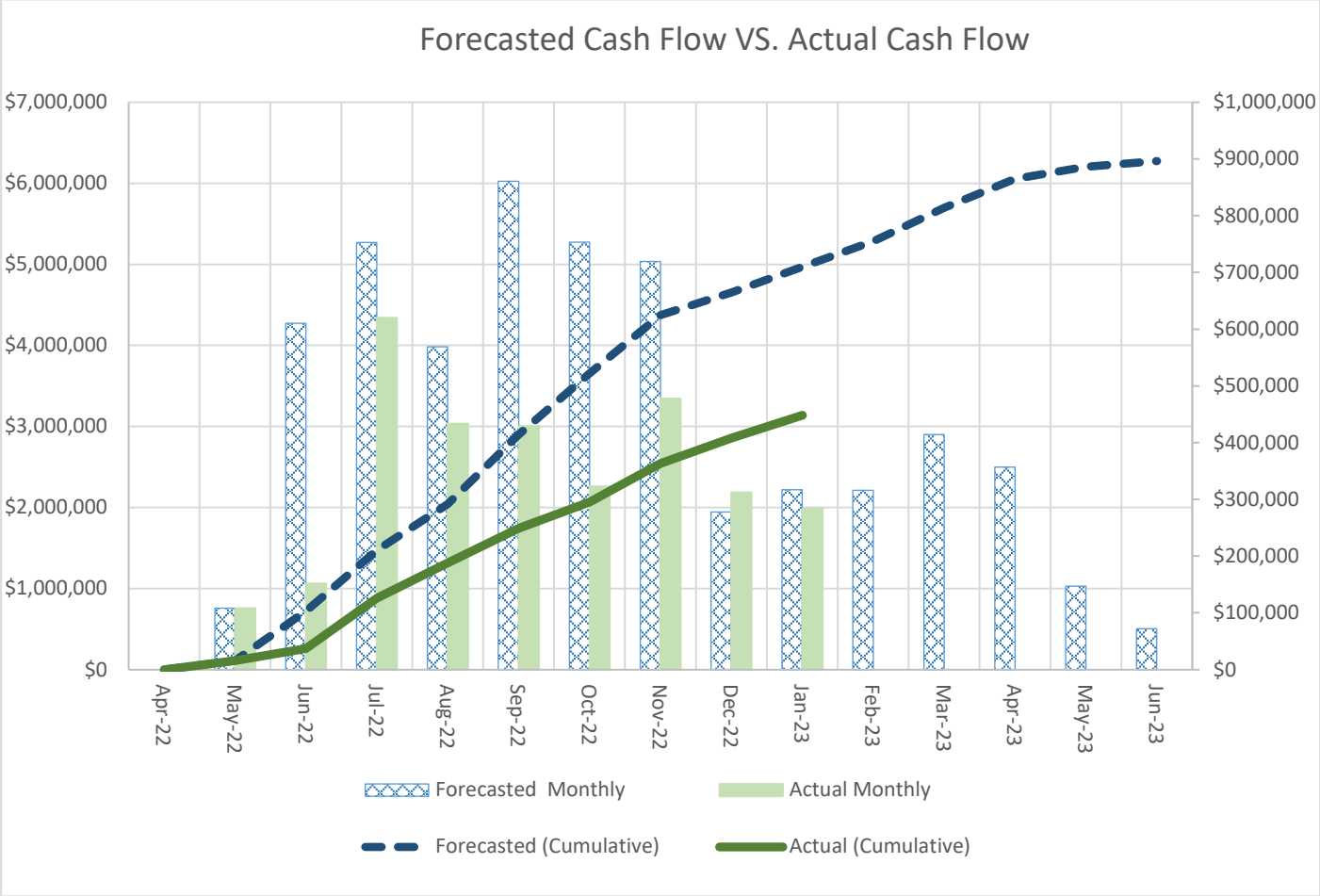
The TRP Construction contract includes the Wainfleet Central Fire Station construction ($5,950,000) and allowances ($325,000) for Testing and Inspection, Door Hardware, Interior Signage, Hydro & Gas Services, Security, Construction Rubble, Window Covers, Project Sign Board, and Commissioning for a total project budget of $6,275,000. Projected cash flow (excluding HST) for monthly TRP Construction contract draws follows.

Projected and Actual Cumulative cash flow includes the total monthly amount Certified. The "actual monthly" and "actual cumulative" is before 10% of the certified amount is deducted for statutory holdback. It is also exclusive of HST. The cash flow forecast was issued by TRP Construction on May 31st, 2022. The forecasted cashflow include the contract allowances and does not include change orders.

Also included is a month by month (non-cumulative) actual and forecasted cashflow.

Construction Period Ending	Forecasted Cumulative – May 31st, 2022 (Exc. HST)	Actual Monthly (Exc. HST & Inc. 10% Holdback)	Actual Cumulative (Exc. HST & Inc. 10% Holdback)
2022			
May	$107,900	$107,900	$107,900
June	$718,400	$151,984	$259,884
July	$1,471,300	$619,803	$879,687
August	$2,040,300	$433,571	$1,313,257
September	$2,900,950	$429,263	$1,742,520
October	$3,654,350	$322,973	$2,065,493
November	$4,373,750	$477,447	$2,542,940
December	$4,651,550	$321,219	$2,855,160
2023			
January	$4,968,550	$283,731	$3,138,890
February	$5,284,550		
March	$5,698,717		
April	$6,055,800		
May	$6,203,000		
June	$6,275,000		

Note: The forcasted cashflow includes the upset limit for contract allowances.



Cashflow Commentary: UEM raised concerns to the contractor in November about the lagging actual cashflow against the forecasted cashflow. This is a concern as it is an indicator that the project may be behind schedule. The contractor provided background information explaining the trailing trend. This project has several large cost items, anticipated by the contractor to be procured or completed earlier in the project. The fire cisterns and associated work is valued at approximately two hundred thousand dollars and scheduled to be complete in Summer of 2022. This work is delayed until Spring 2023. The delays in underground mechanical rough-ins pushed the entire schedule back, impacting several high cost tasks such as the masonry, and roofing. The contractor anticipates future draws to reflect forecasted as the masonry and roofing tasks are completed. The contractor advised that the project is on schedule and changes to occupancy and substantial performance are not anticipated.

6.0 Proposed Change Orders (PC)

Proposed Change	Date Issued	SI /RFI	Description of PCO	Status
PC 1.0	May 18/22	-	Add Hot Water line and Power to Future Washer	CO-3.0
PC 2.0	May 19/22	-	Remove Lights for SB-10	CO-6.0
PC 3.0	Jun. 8/22	-	Add ATS Bypass Switch and Power to Extractors	CO-5.0
PC 4.0	Jun. 23/22	-	Revised Light Fixture Type	CO-4.0
PC 5.0	Jul. 14/22	-	Extractor Discharge Tank, Duct Bank Relocation, SP-D Power	CO-11.0
PC 6.0	Jul. 25/22	-	Revised Sewer & Water Pipe Sizing	CO- 7.0 & 7.1
PC 7.0	Jul. 26/22	-	Roof Gable End	CO-9.0
PC 8.0	Jul. 28/22	-	Add Services Chase in Bunker Gear Room	CO-12.0
PC 9.0	Aug. 3/22	-	Remove Electronic Plumbing Fixtures	CO-15.0
PC 10.0	Sept. 7/22	-	Structural Steel Revisions	CO-18
PC 11.0	Sept. 15/22	-	Kitchen Grease Interceptor	CO 19.0
PC 12.0	Oct. 11/22	-	New Concrete Pad and Splash Pad	N/A
PC 12.1	Nov. 7/22	-	New Concrete Pad and Splash Pad & Cistern Revisions	CO-22.0
PC 13.0	Oct. 11/22	-	Electrical Pull Vault	-
PC 14.0	Nov. 21/22	-	Truss Anchorage	CO-21.0
PC 15.0	Nov.23/22	-	Controls & High-Water Alarm	-
PC 16.0	Jan. 3/23	-	Thermostat Wiring	-
PC 17.0	Jan. 17/23	-	Exterior Lighting Controls	CO-23.0
PC 18.0	Jan. 24/23	-	Soft Starter for pump SP-02 and Controller	-
PC 19.0	Feb. 3/23	-	Exterior Lighting, Signage, Network Cabling, Conduit, and Mezzanine Floor Finish	-

7.0 Request For Changes (RFCO) – Contractor

Proposed Change	Date Issued	Description of PCO	Status
RFCO-01	May 30/22	Upsize Septic Tank from 6,800L to 18,000L	CO-2.0
RFCO-02	May 30/22	ATS Single Bypass Switch	Cancelled for PC 3.0
RFCO-03	Jun. 3/22	Credit for Hydro One Application Fees Paid by Town	CO-1.0
RFCO-04	Jun. 13/22	Proposed Alternative Ceramic Floor Tile	Cancelled
RFCO-05	Jun. 13/22	Revised Light Fixture Type	Cancelled for PC 4.0
RFCO-06	Jul. 6/22	Light Fixture Revisions	-
RFCO-07	Aug. 10/22	Delete Base Cabinet	CO-8.0
RFCO-08	Aug. 11/22	Siding Foam Closure	CO-10.0
RFCO-09	Aug. 22/22	Revise Solid Surface to Laminate	CO-13.0
RFCO-10	Aug. 24/22	Delete Roll-up Door in Kitchen	CO-14.0
RFCO-11	Nov. 9/22	Floor Drain Change	CO-20.0
RFCO-12	Jan. 20/23	Hydro cost Credit to Township	CO-24.0
RFCO-13	Jan. 26/23	Revise Door to Mechanical Room (SI-9.0)	CO-25.0
RFCO-14	Feb. 1/23	New Electrical Outlets (SI-8.0)	CO-26.0

8.0 POTENTIAL CHANGES OF SIGNIFICANCE

The proposed change order (PC), request for change order (RFCO), and change directive (CD) process often involves multiple quote submissions, requests for further detail, clarifications and negotiations before costing is finalized as a change order or the request is rejected.

Electrical Duct Bank/Transformer Relocation (PC-13): The main electrical ductbank as designed and installed does no meet the minimum Electrical Safety Authority (ESA) standards. Significant revisions are required to bring the as-built non-conformity into code compliance. Two options have been proposed and are in cost negotiations. (1) install a new in-ground vault/pull-box in the ductbank to satisfy the electrical code. (2) relocate the transformer closer to the service entry to mitigate the as-built contravention. This potential change is estimated to be in the $20,000 range.

Building Automation System and Controls (PC-16): The contractor and design team are working through the details of how the buildings HVAC and radiant in-floor systems are controlled and work together. The issued for construction drawings omitted key details on the integration and control of the systems. This potential change is estimated to be in the $10,000 to $20,000 range.

Fire Cistern Controls (PC-18): The fire cistern requires a pump soft start and control unit integrated into the level sensors, both of which were omitted in the issued for construction drawings. This potential change is estimated to be in the $15,000 to $20,000 range.

9.0 APPROVED CHANGE ORDERS (CO)

The total cost of approved Change Orders and Change Directives is a credit of $27,031.46 which is approximately 0.5% of the awarded contract cost ($6,275,000). Changes required because of design team issues is 1.2% of the Total Contract Cost.

To assist in reviewing the scope and nature of change orders, each are summarized as follows:

Type of Change Order	Cost of Changes to Date	Percent of Total Change Orders	Percent of Contract Cost ($6,275,000)
Soil Conditions	$0.00	0.0%	0.0%
Design Team: Errors, Omissions, Changes	$76,916.29	97.7%	1.2%
Owner Requested	$1,774.50	2.3%	0.03%
Address Existing Conditions	$0.00	0.0%	0.0%
Other	$0.00	0.0%	0.0%
Credits	($51,659.33)	N/A	N/A
Total Change Orders to Date	**$27,031.46**		

9.1. SOIL CONDITIONS

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
Sub-Total Soil Conditions Change Orders					**$0.00**
Percentage of Total Change Orders					**0%**

9.2. DESIGN TEAM ERRORS, OMISSIONS, DESIGN CHANGE

The following lists the approved change orders described as errors, omissions, and changes to the design by the architectural/engineering team. The percentage by discipline/division is as follows:

Discipline	Cost of Error/ Omission, Design Change to Date	Percent of Error/Omission, Design Changes	Percent of Contract Cost ($85,580,225)
Architectural (A)	$5,084.39	6.6%	0.08%
Structural (S)	$2,841.85	3.7%	0.05%
Electrical (E)	$33,301.46	43.3%	0.53%
Mechanical (M)	$2,303.18	3.0%	0.04%
Civil (C)	$26,109.17	33.9%	0.42%
Other (O)	$7,276.24	9.5%	0.12%

CO #	Change Orders to Original Contract	Discipline	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
CO-2.0	Upsize Septic Tank from 6,800L to 18,000L	O	RFCO-01	Jun. 9/22	Jun. 10/22	$7,276.24
CO-3.0	Add Hot Water Line and Power to Future Washer	E	PC 1.0	Jun. 10/22	Jun. 15/22	$2,085.59
CO-5.0	Add ATS Bypass Switch and Power to Extractors	E	PC 3.0	Jun. 29/22	Jul. 13/22	$8,330.58
CO-9.0	Gable End Framing	S	PC 7.0	Aug. 15/22	Aug. 15/22	$979.15

CO-10.0	Siding Foam Closure	A	RFCO-08	Aug. 15/22	Aug. 15/22	$1,470.00
CO-12.0	Add Services Chase in Bunker Gear Room	A	PC-8.0	Aug. 16/22	Aug. 25/22	$884.39
CO-16.0	Add Power for SP-D	E	PC-5.0	Sept. 14/22	Sept. 21/22	$8,084.56
CO-17.0	Duct Bank Relocation	E	PC-5.0	Sept. 14/22	Sept. 21/22	$13,995.19
CO-19.0	Grease Interceptor	M	PC-11.0	Nov. 4/22	Nov. 7/22	$2,303.18
CO-21.0	Girder Truss Anchor	S	PC-14.0	Nov. 25/22	Dec. 7/22	$1,862.70
CO-22.0	Fire Cistern and Storm Outlet	C	PC-12.2	Dec. 22/22	Jan. 1/22	$26,109.17
CO-23.0	Exterior Lighting Control	E	PC-17.0	Jan. 20/23	Jan. 23/23	$805.54
CO-25.0	Mechanical Room Door	A	RFCO-13	Jan. 26/23	Jan. 27/23	$2,730.00
	Sub-Total Errors, Omissions, Design Changes Change Orders					**$76,916.29**
	Percentage of Total Change Orders					**97.7%**

9.3. TOWNSHIP REQUESTED CHANGE

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
CO-11.0	Extractor Tank Size	PC-5.0	Aug. 15/22	Aug. 25/22	1,774.50
Sub-Total Owner Requested Change Orders					**$1,774.50**
Percentage of Total Change Orders					**2.3%**

9.4. ADDRESS EXISTING CONDITIONS

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
				Sub-Total Existing Conditions Change Orders	**$0.00**
				Percentage of Total Change Orders	**0%**

9.5. CREDITS

CO #	Change Orders to Original Contract	PC Reference	Date CO Issued	Date Approved	Cost/(Credit)
CO-1.0	Credit for Hydro One Application Fees Paid by Town	RFCO-03	Jun. 3/22	Jun. 15/22	($1,043.18)
CO-4.0	Revised Light Fixture Type	PC 4.0	Jun. 24/22	Jun. 29/22	($2,235.50)
CO-6.0	Remove Lights for SB-10	PC 2.0	Jun. 29/22	Jul. 13/22	($708.55)
CO-7.0 & 7.1	Site Services Pipe Size	PC-6.0	Sept. 26/22	Sept. 28/22	($2,312.68)
CO-8.0	Delete Base Cabinet	RFCO-07	Aug. 10/22	Aug. 15/22	($546.00)
CO-13.0	Revise Solid Surface to Laminate	RFCO-09	Aug. 23/22	Aug. 25/22	($13,410.00)
CO-14.0	Delete Roll-up Door - Kitchen	RFCO-10.0	Aug. 24/22	Aug. 25/22	($2,781.00)
CO-15.0	Eyewash Alarm and Fixture Electrical	PC-9.0	Sept. 12/22	Sept. 13/22	($582.84)
CO-18.0	Steel Deletions	PC-10.0	Oct. 17/22	Oct. 17/22	($7,182.62)
CO-20.0	Floor Drain Revisions	RFCO-11	Nov. 14/22	Nov. 23/22	($18,735.50)
CO-24.0	Hydro Credit	RFCO-12	Jan. 20/23	Jan. 23/23	($2,121.46)
				Sub-Total Credit Change Orders	**($51,659.33)**

10.0 Change Directives (CD)

CD #	Change Directives to Original Contract	Date CD Issued	CO Reference	Cost/(Credit)
			Total Change Directives	**$0.00**

11.0 Allowance Dispersal (AD)

Section 12.0 is a summary of awarded contracts, billing progress and budget status for the cash allowances.

CAA #	Description	Date CAA Issued	Date CAA Approved	Cost/(Credit)
AD-01	**Door Hardware** – Supply & Installation by William Knell & Company Limited. This allowance includes all specified door hardware, operators, sweeps, closures, and electronic components for the new Fire Station. The scope was competitively priced by three bidders, with William Knell & Company being the low bid.	May 11/22	May 12/22	$46,350.00
AD-02	**Door Hardware** – Supply & Installation by William Knell & Company Limited. This allowance is for a new electric strike for door D11-01. This strike was omitted on the hardware schedule and is required for the operation of the specified automatic door operator.	Jun. 13/22	Jun. 14/22	$250.00
AD-03	**Hydro and Gas** – Additional engineering required by Schneider Electric for modifications to the main electrical switchboard and transformer cabinet to accommodate the Hydro One supplied cabinet transformer (CT). The specified Schneider cabinet is designed to accommodate several types of CT but was not designed for the CT Hydro One has in stock.	Jun. 22/22	Jun. 29/22	$1,571.06
AD-04	**Construction Rubble** – Removal and disposal of concrete foundations found buried on site (RFI-08). These foundations were not part of the demolished house or barn structures.	Jul. 4/22	Jul. 5/22	$572.00

AD-05	**Testing & Inspection** – Retain GHD to compete all testing and inspection services listed in their proposal dated June 10th, 2022. This allowance includes costs for the following: footing & subgrade inspections, compaction testing, concrete/mortar/grout testing, steel inspections, spray foam & air barrier inspection, and laboratory testing.	Jul. 20/22	Jul. 27/22	$12,366.00
AD-06	**Construction Rubble** – sub-excavation of unsuitable soils and place lean mix concrete (RFI-09). An old well was found when excavating for the new foundations. The geotechnical engineer reviewed with the structural consultant and determined the extent of sub-excavation & lean mix concrete required to mitigate the problem.	Jul. 22/22	Jul. 27/22	$8,430.60
AD-07	**Hydro and Gas** – The Hydro One connection fee for the new permanent service to the Fire Station.	Aug. 22/22	Aug. 22/22	$20,074.08
AD-08	**Security Control** – Retain Pasword to supply and install the access control and security system for the project. This includes door access modules, card readers, wiring, keypads, sensors, controllers/control panels, installation, and programming.	Sept. 30/22	Oct. 3/22	$25,780.00
AD-09	**Commissioning** – Retain CFMS-West as the commissioning agent for this project.	Dec. 20/22	Jan. 1/23	$14,700.00
AD-10	**Surveying** – work completed by Lanthier & Gilmore Surveying Ltd. for the construction layout prior to construction.	Dec. 21/22	Jan. 1/23	$1,729.80
AD-11	**Testing & Inspection** – Extension of Allowance disbursal 05 (approved on Jul. 27/22) for GHD to compete all testing and inspection services listed in their proposal dated June 10th, 2022. This allowance has been extended due to the increased number of visits and test required to complete the project. The total for the testing an inspection allowance is now $22,000.	Jan. 4/23		$9,634.00
AD-12	**Signage** – Retain Harrison Solutions to supply and install the two exterior building signs for the new fire station.	Jan. 4/23		$11,193.82

12.0 CASH ALLOWANCE DRAWS (CAD)

The following cash allowance summary notes awarded contracts and tracks billing progress against a total Contract Allowance of $325,000 The project cash allowances are drawn from the Contract Allowance as stipulated in the construction contract.

The Sum of Approved Allowances awarded to date on Certificate of Payment 8 is $126,757.54 against the Allowance Budget of $325,000.

CAD Description	CAD Approved by Township (Exc. HST)	CAD Invoiced to Date (Exc. HST)	CAD Invoiced this Period (Exc. HST)	CAD Remaining to be Drawn (Exc. HST)
Door Hardware (AD-01)	$46,350.00	$32,571.48	$32,571.48	$13,778.52
Door Hardware (AD-02)	$250.00	$0.00	$0.00	$250.00
Testing & Inspection (AD-05)	$12,366.00	$12,366.00	$0.00	0.00
Testing & Inspection (AD-11)	$9,634.00	$6,579.50	$0.00	$3,054.50
Hydro & Gas (AD-03)	$1,571.06	$1,571.06	$0.00	$0.00
Hydro & Gas (AD-07)	$20,074.08	$20,074.08	$0.00	$0.00
Surveying (AD-10)	$1,729.80	$1,729.80	$1,729.80	$0.00
Security Control (AD-08)	$25,780.00	$0.00	$0.00	$25,780.00
Construction Rubble (AD-04)	$572.00	$572.00	$0.00	$0.00
Construction Rubble (AD-06)	$8,430.60	$8,430.60	$0.00	$0.00
Window Coverings	TBD	$0.00	$0.00	n/a
Building Signage (AD-12)	$11,193.82	$0.00	$0.00	$11,193.82
Wayfinding Signage	TBD	$0.00	$0.00	n/a
Project Sign Board	TBD	$0.00	$0.00	n/a
Commissioning	$14,700.00	$0.00	$0.00	$14,000.00
Total Allowance in Contract (A)	**$325,000.00**	**-**	**-**	**-**
Total Approved CAD's (B)	**$152,651.36**	**$83,894.52**	**$34,301.28**	**$68,056.84**
Difference (A - B)	**$172,348.64**	**-**	**-**	**-**

***** The total cash allowance for the above items is $325,000. The cost for each item will be allocated as the contractor awards the individual contracts.

13.0 CERTIFICATE OF PAYMENTS SUMMARY

Certificate of Payment "CoP No. 09", Draw 9 for the period ending January 31st, 2023, was issued by the Architect on February 9th, 2023, and recommended for payment by UEM on February 9th, 2023, for the Wainfleet Central Fire Station project. The amount payable excluding HST is $255,358.04. The schedule of Certificate of Payments received and recommended is as follows. All costs exclude HST.

Certificate of Payment (CoP) / Period Ending	Cumulative Net Amount Certified by Architect (Exc. 10% Holdback)	TRP Contract Cost (Including COs & CDs)	Balance of Statutory Holdback (10%)	Balance to Complete Contract
$97,110.00 (CoP No. 01 for May '22)	$107,900.00	$6,275,000.00	$10,790.00	$6,177,890.00
$136,785.44 (CoP No. 02 for Jun. '22)	$259,883.82	$6,283,318.65	$25,988.38	$6,049,423.21
$557,822.46 (CoP No. 03 for Jul. '22)	$879,686.56	$6,288,705.18	$87,968.66	$5,496,987.28
$390,213.62 (CoP No. 04 for Aug. '22)	$1,313,257.24	$6,276,187.03	$131,325.72	$4,962,929.76
$386,336.47 (CoP No. 05 for Sept. '22)	$1,742,519.99	$6,296,260.45	$174,252.00	$4,727,992.46
$290,675.70 (CoP No. 06 for Oct. '22)	$2,065,492.99	$6,289,077.83	$206,549.30	$4,430,134.14
$429,702.53 (CoP No. 07 for Nov. '22)	$2,542,940.24	$6,274,508.21	$254,294.02	$3,985,861.99
$280,997.33 (CoP No. 08 for Dec. '22)	$2,855,159.50	$6,300,617.38	$285,515.95	$3,730,973.83
$255,358.04 (CoP No. 09 for Jan. '23)	$3,138,890.66	$6,302,031.46	$313,889.07	$3,477,029.87

14.0 Supplemental (Site) Instructions (SI)

SI	Date Issued	Description
SI-1.0	July 28, 2022	Electrical/Mechanical Conduit Chase
SI-2.0	September 15, 2022	Tile Colour Clarifications
SI-3.0	September 28, 2022	Countertop and Cabinet Colour Clarifications
SI-4.0	October 27, 2022	Revise Window Location – Deputy Chief Office
SI-5.0	November 28, 2022	Commissioning Requirements
SI-6.0	December 13, 2022	Keypad Clarifications
SI-7.0	January 11, 2023	Additional Electrical Outlet Clarifications
SI-8.0	January 20, 2023	South Exterior Lights
SI-9.0	January 26, 2023	Revise Mechanical Room Door, Revise Attic Space Firestopping
SI-9.0r1	January 26, 2023	Revise Attic Space Firestopping

15.0 Request for Township Information (RFTI)

RFCI	Date Issued	Description	Status

16.0 STATUS OF PROJECT BUDGET

The status of the project budget and costs (excluding HST) to January 31st, 2023, for the Wainfleet Central Fire Station are as follows.

Note: The status of construction costs to date represents the amount paid by the Township of Wainfleet to the contractor and INCLUDES Holdbacks (10%).

ACTIVITY		BUDGET	STATUS TO DATE
A1.	Construction Cost (Tender Cost from TRP)	$5,950,000	$2,944,071
A2.	Construction Allowances (By Competitive Bid)	$325,000	$83,894
	Construction Contingency	$311,000	$27,031
A3.	Pre-Construction Township Activities	$8,100	$7,979
B.	Owners Allowances	$686,100	$503,544
C.	Advisory Services	$378,700	$268,714
	TOTAL PROJECT BUDGET	**$7,658,900**	**$3,835,233**

17.0 POTENTIAL PROJECT RISKS

All construction projects carry some level of risk and uncertainty to participants. Owners mitigate risk by following a rigorous planning, evaluative, investigative and design process and transfers risk by insurances, bonding, indemnification, supplementary conditions, and contracts. However, there remains potential project risks to the owner that should be regularly assessed by a risk register and ongoing evaluation of the probability of specific risks.

The probability of a project risk is considered as "low" (unlikely), "moderate" (possible), "high" (likely) or "very high" (active). A construction risk can have one or more causes and one or more impacts. Construction project risks are interrelated and interdependent.

The assessment of potential project risks considers the probability, uncertainty, and consequences of a potential risk. The probability of the risk may change as circumstances change or arise and are specific to a particular project. Some of the most consequential potential project risks experienced during construction include:

Schedule – Schedule risks include weather delays, unknown site conditions, moisture in concrete, fire, permit delays, contractor performance (including financial issues), supply (labour and material) problems, work stoppages (strikes and mandated shutdowns) and decision-making delays.

The effect of the potential return of the pandemic in 2023 is considered in rating the schedule risk. Potential schedule impacts are mitigated by agreeing to a critical path schedule and monitoring completion of milestone activities against the approved baseline. Supply of goods and labor is an ongoing scheduling matter that is monitored regularly. The schedule and actual cash flow is lagging well behind forecasted (see graph in Section 5.0).

- **Risk to Project: Medium - Monitor**

Budget – Factors contributing to budget risk include design omissions and errors, unknown site conditions, contract disputes, schedule delays, increases in material costs, and work stoppages. Consequences could be that certain parts of the project are eliminated, changed, or not fully completed.

- **Risk to Project: Low**

Overpayment to Contractor – There is a risk of overpayment to the contractor if the process of contractor draws are not rigorously reviewed. This can be a significant project risk in terms of completed project and addressing construction deficiencies.

Payment to the contractor follows due diligence involving the architect, engineering sub-trades, the contract administrator, and the project manager. The percent of work claimed by the contractor and the verification of delivered equipment and materials is reviewed by the frequent on-site visits. Reference to the contractor's schedule and forecasted cashflow provide another monitor. Details such as the inclusions of only approved changes is another check against over payment. Holdbacks, both statutory and against unfinished or deficient work, provide assurances.

There is also risk of duplicate payment for work in the base contract and new work defined by changes to project scope. The contract administrator works closely with the design team to determine what is acceptable new scope and what the contractor is providing as part of their contractual obligations.

- **Risk to Project: Low**

Pandemic – A public health crisis would likely affect construction productivity, or the government could again mandate the construction industry, including supply of equipment, materials, and products, to stop work because of the COVID-19 virus. The consequence is a high level of uncertainty which has potential effects on the project schedule, cash flow, budget and potentially equipment, material and labour supply.

- **Risk to Project: Low**

Goods and Labour Supply – The supply of goods (equipment and materials) and labour (including availability of trades and specialized subtrades) can be affected by several factors such as a pandemic, mandated shutdowns, labour shortages, disputes and strikes, high demand for specific goods, currency exchange fluctuations and seasonal shutdown by manufacturers. The consequences are probable impacts on project schedule/completion date.

The construction industry is seeing an unprecedented number of labour strikes. Several key trades are poised to strike that could impact the Central Fire Station project.

- **Risk to Project: Moderate**

Health and Safety – Worker safety is paramount to the general contractor, subtrades and the owner. Unsafe work conditions, carelessness or a serious workplace accident can affect the project schedule. The general contractor has implemented a comprehensive work health and safety program. Consequence is that workers health and safety is affected which in turn could impact project schedule and completion.

- **Risk to Project: Low**

Environmental – Unknowns and the unexpected such as severe weather events, subsurface conditions not suitable for construction, contaminated soils, underground hazards, structures and tanks, endangered or sensitive species or the presence of archaeological or historical resources represent high levels of risk, particularly in the early stages of the project. The consequences are impacts to budget, schedule and project completion.

- **Risk to Project: Low**

Contractor Performance – The quality of construction including defective work, the completion of the project on schedule, negligence, project close-out and operational readiness, the financial stability of the general contractor, bankruptcy, the availability of trades and labour, health & safety practices and labour unrest represent high levels of risk. The consequences affect all aspects of the project.

This risk is mitigated by employing a rigorous contractor (including major subtrades) selection process that considers qualifications and experience, financial stability, and proposed project management and on-site supervision personnel.

As noted in the assessment of schedule risk, contractor performance in the last stages of the project is critical to its success. A coordinated effort of all trades and the architectural/engineering team is imperative to meet project milestones.

- **Risk to Project: Low – Monitor**

18.0 Other Project Matters

No other project matters to document at this time.

19.0 Close Out Documents

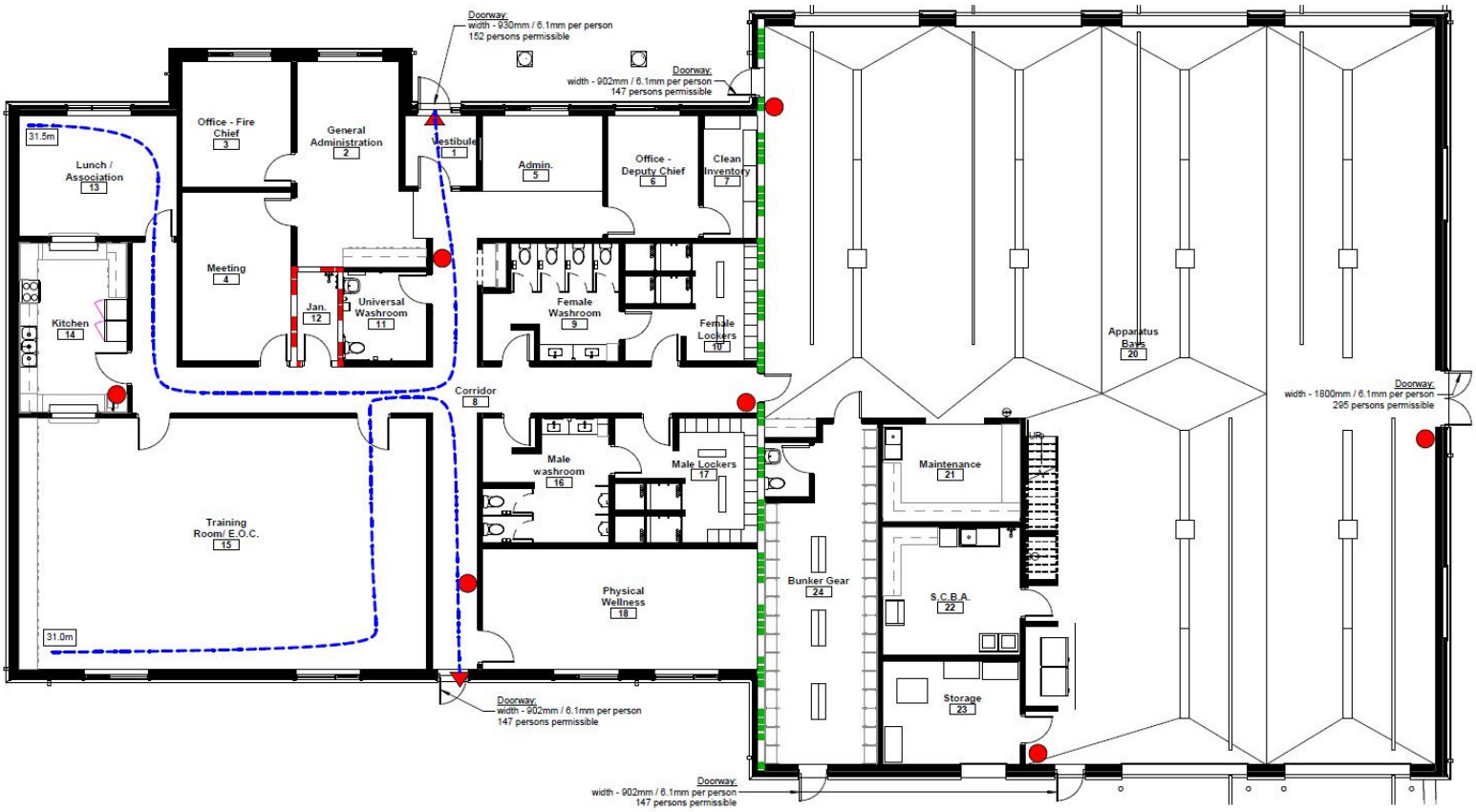
There are four significant milestones at the end of a construction project that must be addressed to permit occupancy:

- Certificate of Substantial Performance
  - **Construction in Progress**
- Occupancy Permit from Building Department (in consultation with Fire Department) including verification/compliance letters (i.e. ESA, emergency lighting, fire alarm, seismic restraint, sprinkler, electrical, mechanical), letters from sub-contractors and from the design architects/engineers. Balancing and controls can be ongoing during occupancy.
  - **Building Inspector and Fire Department undertake periodic inspections during construction**
  - **Submission of Fire & Life Safety Plan** (Owners responsibility)
- Architectural/Civil, Electrical, Mechanical and Structural As-Built Drawings
  - **Construction in Progress**
- Operation and Maintenance Manuals
  - **Construction in Progress**

20.0 CONSULTANT & SUBCONTRACTOR LIST

Scope	Consultant / Contractor	Location
Architect	Raimondo + Associates Architects	Niagara Falls
Project Management	Urban & Environmental Management (UEM)	Niagara Falls
Mech./Elec./ Civil/ Structural Engineering	Mantecon Partners	Dundas
Commissioning Agent	CFMS- West	Grimsby
Testing & Inspection	GHD	St Catharines
General Contractor	TRP Construction General Contractors	Burlington
Demolition	Budget Environmental Disposal Inc	Hamilton
Civil/Siteworks	Backwoods Excavating Inc.	Grassie
Septic	Dynamic Fusion	Dunnville
Mechanical	Besseling Mechanical Inc	Hamilton
Electrical	Fred Giessler Electric	Niagara-on-the-Lake
Masonry	Cecchini Masonry Ltd.	Thorold
Landscape	Touchstone Site Contractors	Thorold
Finish Carpentry	Baywood Interiors Ltd.	Kitchener
Concrete Formwork	Niagara Formwork Structure Inc.	Welland
Concrete Supplier	Inter County Concrete Contracting	Dunnville
Concrete Finishing	Appolo Concrete Contracting	Hamilton
Structural Steel	Bradshaw Ironworks Ltd.	Welland
Metal Doors, Frames, Hardware	William Knell and Company Ltd.	Kitchener
Metal Siding, Soffit, Roofing	Plazo Constriction Corporation	North York
Overhead Doors	Overhead Door Company Limited	St. Catharines
Toilet & Bath Accessories	Canada Washroom Products Inc.	Burlington
Glazing	Welland Glass & Entrances Inc.	Welland
Gypsum Board/ACT	DBN Drywall & Acoustics Ltd.	St. Catharines
Flooring	Percella Flooring Inc.	Toronto
Painting	Painting-Canada Inc.	Hamilton

21.0 WAINFLEET CENTRAL FIRE STATION FLOOR PLAN



22.0 Site Pictures

Mezzanine Concrete Poured

Attic Firestopping and Mechanical & Electrical Rough-Ins

Z-Girts Installed North Side – Membrane Complete on Administration Side

Z-Girts Installed East Side

Drywalling in Training Room

PROJECT FACT SHEET

Wainfleet Fire Station Construction Contract:	
TRP Construction	$ 5,950,000.00
Construction Allowances	$ 325,000.00
Total Wainfleet Fire Station Contract (Ex. HST)	$ 6,275,000.00
Wainfleet Fire Station Project Scope:	
- Gross Floor Area	1,239 m^2 (13,342 ft^2)
- Site Area	2.02 ha (4.99 ac)

Wainfleet Fire Station Key Features:

Six Apparatus Bays	Dedicated Offices for Fire Chief and Deputy Fire Chief
1,200 ft^2, 60-person Training Room	440 ft^2 Physical Wellness Room
Male Washroom and Change Rooms w/32 lockers	Female Washroom and Change Rooms w/20 lockers
300kW Natural Gas Generator	Metal Roof
Provisions for Future Apparatus Bays (2)	Provisions for Future EMS Station

50,000 Gallon Greywater Storage (Rainwater) c/w Pumps for Filling Fire Trucks

Schedule:

Occupancy	June 8th, 2023
Substantial Completion	June 14th, 2023

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