



DEVELOPMENT & INFRASTRUCTURE SERVICES – ENGINEERING SERVICES
TOWN OF NEWMARKET
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DATE: August 21 2015

**DEVELOPMENT & INFRASTRUCTURE SERVICES REPORT
ENGINEERING SERVICES INFORMATION REPORT 2015-41**

TO: Mayor and Members of Council

**COPY: Bob Shelton, P.Eng., CAO
Members of OLT and SLT**

SUBJECT: Old Town Hall Project Update

ORIGIN: Engineering Services

PREAMBLE

In accordance with the Procedure By-Law, any Member of Council may request this Information Report be placed on an upcoming Committee of the Whole or Council agenda for discussion.

PURPOSE OF PROJECT REPORT

The purpose of this Project Report is to provide an update on the key activities/milestones affecting the project scope, schedule and cost for the Old Town Hall renovation and construction activities.

EXECUTIVE SUMMARY

- Activities in July & August 2015: Curtain wall installation continues and elevator installation has commenced. Hard landscaping is underway; east laneway concrete curbs and planters have been poured and south podium concrete pours are underway.
 - Compass Construction Resources Ltd. (CCRL) is reporting a delay of plus or minus 12 weeks from the July 31st substantial performance date to complete the balance of the Project.
 - Compass is reporting an anticipated Substantial Performance date in the mid to late fall.
- Further information regarding the current schedule is in Appendices E and F.



SUMMARY OF CONSTRUCTION ACTIVITY - JULY 2015

Existing Building:

- Mechanical and electrical services are ongoing
- Interior drywall and taping continues

New Addition:

- Curtain wall installation is underway
- Roofing is complete
- Elevator installation is underway
- Landscaping has begun in the east laneway
- Concrete curbs and planters have been poured
- South entrance podium concrete pours have begun

Schedule Mitigation:

- CCRL continue to report an anticipated Substantial Performance date in the fall of 2015.
- As per the latest construction schedule, CCRL is aiming to complete interior construction works by September 30, 2015, so that the Town may begin Operational and Transition Readiness activities prior to Substantial Performance later in the fall. The exterior aluminum panel cladding will still be outstanding at that time.
- As requested by the Town, Compass Construction has reduced the Construction Staging Area in the Market Square by half, thereby increasing the number of public parking spaces.

CHANGE MANAGEMENT

Subcontractor Delay Claim

- Delay Claims with the Electrical, Window and Structural Steel Contractors have been resolved.
- Delay claims were submitted, and are still under review by the Consultants, for the following subcontracts: Hollow Metal Doors, Rolling Shutter, Flooring, Mechanical Equipment, and Door Hardware.
- Compass Construction has advised the project team that the Curtain Wall, Glazing, Aluminum Panel, Drywall, Elevator, & Roofing subcontractors have also made claims for compensation due to the schedule delays. Formal claims have not been submitted to the Project Team for review. The Project Team estimates a total maximum exposure of \$6,000 (recorded as Exposure in Appendix B Change Order Tracking Form).

SEE PHOTOS ON FOLLOWING PAGES



East Lane hard landscaping has commenced



Podium at south entrance is underway



Elevator installation has commenced, stair at reception installed



Drywall and taping continue

KEY COSTING/BUDGET ACTIVITIES

- To view:
 - Total Project Budget Status as of August 7, 2015, please refer to Appendix A
 - Change Order Tracking - Construction Contingency Form as of August 7, 2015, please refer to Appendix B
 - Change Order Tracking- Cost Savings Form as of August 7, 2015, please see Appendix C
 - Fixtures, Furniture and Equipment Budget Tracking Form as of July 31, 2015, please refer to Appendix D
 - Master Schedule Update, dated July 31, 2015, please refer to Appendix E
 - Compass Construction Project Schedule, Version 8.0, updated July 22, 2015, please see Appendix F

INTERNAL AUDIT REPORT

In response to a Council request, the CAO arranged for a peer review of the Old Town Hall renovation project's original foundation work to determine if sound industry standards had been followed. The Town retained the services of the York Region Audit Services Department in 2014 for a third party to conduct the independent Audit. The conclusion drawn by the Auditor was that good industry standards were followed and that the appropriate level of care and attention was taken by the Town. Please refer to Appendix G for the full Audit Report.


BUSINESS PLAN AND STRATEGIC PLAN LINKAGES

Well Equipped and Well Managed

- Provide efficient, effective and environmentally sound maintenance services to an appropriate level that achieves Council and/or Provincially mandated service levels, which meet public health and safety requirements and enhances quality of life while ensuring that system capital assets retain their value and are managed and funded according to sustainable, lifecycle based principles and practices.

CONTACT


For more information on this report, please contact Meredith Goodwin at 905-895-5193 extension 2518; mgoodwin@newmarket.ca.

Prepared by: 


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P. Noehammer, P. Eng., Commissioner,
Development & Infrastructure Services

Attach.

APPENDIX A

Total Project Budget Status as of August 7, 2015

	A	B	C	D = A-C
	Revised Budget as per Report 2013-24	Invoiced to Date (Period Ending 05-Aug-15)	Anticipated Cost at Completion	Anticipated Variance to Budget
Remediation & Interior Demolition Subtotal:	\$104,301	104,301	104,301	\$0
Other Charges Subtotal:	\$215,000	\$141,964	\$208,522	\$6,478
Consultants Subtotal:	\$1,331,710	\$1,227,462	\$1,117,570	\$214,140
Permits & Licenses Subtotal:	\$178,500	\$144,895	\$178,500	\$0
Construction Subtotal:	\$7,191,655	\$5,308,477	\$7,924,142	(\$732,487)
FFE Subtotal:	\$156,950	\$25,766	\$239,634	(\$82,684)
Contingencies Subtotal:	\$756,057	\$23,620	\$23,620	\$732,438
Total (Excl HST):	\$9,934,173	\$6,976,483	\$9,796,289	\$137,884



APPENDIX B

Old Town Hall Change Order Tracking- Construction Contingency

Construction Contract Value at Award:	\$6,552,940
Construction Contingency	\$655,294
Project Contingency	\$100,763
Additional Contract Award (New Foundations) (\$1,213,715 - \$250,000)	\$963,715
Revised Contingency	\$1,619,009
Revised Total Contract (Excluding Cost Savings)	\$8,171,949

A Revised Contingency	\$1,619,009.00
B Approved Change Orders to date	\$1,586,817.76
C Outstanding Exposure	\$282,511.58
D Balance of Contingency Inc. Outstanding Exposure	-\$250,320.34 (D=A-B-C)

TABLE A - CONSTRUCTION CONTINGENCY

Item	Date	CCN.# CD.No	Title/Description	Reason for Change	Original Quote Date	Original Est. Quote	Revised Date Quoted	Rev. Est. Quote Amount	Final Quote Amount	Rejected	CO#	Status/Comments	Approval Authority	Approved CO Amount	Exposure
1	4-Jun-13	PCO02, PCO03	COR2&3 Temp. access to 216 & Credit for Builder's Risk Insurance	Client initiated	30-May-13	-4,573.65			-4,573.65		1	Approved	Manager CP	-4,573.65	0.00
2	3-Jun-13	CD01	COR4 Removal of SOG in Basement	Unforeseen Site Conditions	30-May-13	7,537.20			7,537.20		5	Approved	Manager CP	7,537.20	0.00
3	4-Jun-13	PCO01	Hydro Revisions	Unforeseen Site Conditions	1-Jul-13	7,726.80			7,726.80						7,726.80
4	12-Jun-13	PCO04	SI2 Gridline 10 Remedial Work	Unforeseen Site Conditions		0.00		21-Nov-14	3,208.39		31	Approved	Manager CP	3,208.39	0.00
5	21-Jun-13	N/A	COR5 Determine Extent of Floor Leveling	Unforeseen Site Conditions	21-Jun-13	2,472.00			2,472.00		2	Approved	Manager CP	2,472.00	0.00
6	18-Jul-13	PCO05	COR6.1 Stone Foundation Wall - Item 3.1	Unforeseen Site Conditions	18-Jul-13	1,178,181.90			1,178,181.90		4	Approved	Commissioner D&IS	1,178,181.90	0.00
7	23-Jul-13	PCO06	COR7 Modification to size of Scullery Sink	Consultant Coordination	23-Jul-13	1,367.92			1,367.92		3	Approved	Manager CP	1,367.92	0.00
8	1-Aug-13	COR09	COR9 Bonding & Insurance	Client initiated	1-Aug-13	257.04			0.00			Cancelled			0.00
9	3-Sep-13	PCO07	Upgrade electrical circuit as per ERN-1	Consultant Coordination	28-Oct-13	404.02			404.02		6	Approved	Manager CP	404.02	0.00
10	22-Oct-13	PCO08	West Lane Lighting	Client initiated	28-Oct-13	760.16			760.16		6	Approved	Manager CP	760.16	0.00
11	11-Nov-13	COR24	Brick Tie Upcharge	Unforeseen Site Conditions	11-Nov-13	3,319.29	10-Dec-13	0.00	0.00						0.00
12	11-Nov-13	COR25	North Unit Paver Slab Removal	Unforeseen Site Conditions	11-Nov-13	9,928.74			9,928.74						9,928.74
13	19-Dec-13	COR27	Temporary Power	Contractor Initiated	19-Dec-13	29,890.96	21-May-14	27,620.87	22,651.08		24R1	Approved	Budget Task Force	22,651.08	0.00
14	27-Dec-13	COR28/CD2	East Stair Demolition	Unforeseen Site Conditions	27-Dec-13	14,829.06	6-May-14	13,082.07	13,082.07		19	Approved	Manager CP	13,082.07	0.00
15	29-Jan-14	-	Reverse Parging Credit from CO#4	Consultant Coordination	29-Jan-14	5,000.00			5,000.00		13	Approved	Manager CP	5,000.00	0.00
16	23-Jan-14	PCO19	Ground Floor Brick Repairs as per SSI#005	Unforeseen Site Conditions	13-Feb-14	19,566.33			19,566.33		14	Approved	Manager CP	19,566.33	0.00
17	19-Feb-14	PCO20	Infill Wall Void at Gridline 11/b & 11/c	Unforeseen Site Conditions	20-Feb-14	2,271.09			2,271.09		15	Approved	Manager CP	2,271.09	0.00
18	26-Mar-14	PCO21	Brick Repair due to Stair Removal	Unforeseen Site Conditions	22-Aug-14	5,104.26			5,104.26		23	Approved	Manager CP	5,104.26	0.00
19	11-Apr-14	COR33	Bonding Reconciliation	Unforeseen Site Conditions	11-Apr-14	-1,990.55			-1,990.55		16	Approved	Manager CP	-1,990.55	0.00
20	23-Apr-14	PCO22	Ground & Second Floor Voids	Unforeseen Site Conditions	19-Jun-14	23,090.69			23,090.69		20	Approved	Budget Task Force	23,090.69	0.00
21	25-Apr-14	COR35	S&I Additional Bricks due to Wood Strapping Replacement	Unforeseen Site Conditions	23-Apr-14	6,987.98			6,987.98		18	Approved	Manager CP	6,987.98	0.00
22	17-Apr-14	COR34	East Lane Existing Sanitary & Storm Manholes	Unforeseen Site Conditions	17-Apr-14	22,077.92			0.00		17	Approved	Manager CP	0.00	0.00
23	22-May-14	-	Electrical Subcontractor Delay Claim	Contractor Initiated	21-May-14	34,125.91	28-Oct-14		2,035.63						2,035.63
24	13-Jun-14	PCO23	Elevator Shop Drawing Co-ordination	Consultant Coordination	26-Sep-14	-1,392.85			-1,392.85		26	Approved	Manager CP	-1,392.85	0.00
25	25-Jun-14	PCO24	Modifications due to Ground Water Table	Unforeseen Site Conditions	14-Oct-14	12,971.50	28-Oct-14		16,150.11						16,150.11
26	2-Jul-14	PCO25	Partial Roof Replacement	Unforeseen Site Conditions	26-Sep-14	4,642.45			4,642.45		27	Approved	Manager CP	4,642.45	0.00
27	7-Jul-14	PCO26	Foundation Wall Build Out to Support Existing Rotten Floor Beam	Unforeseen Site Conditions	11-Aug-14	0.00			0.00		21	Approved	Manager CP	0.00	0.00
28	7-Jul-14	PCO27	Floor Leveling - 1st & 2nd Floor	Unforeseen Site Conditions	24-Jul-14	45,000.00	11-Aug-14		47,329.86		22	Approved	Budget Task Force	47,329.86	0.00
29	5-Aug-14	-	CO#4 Foundation Replacement Additional Claim	Contractor Initiated	5-Aug-14	123,644.00	19-Aug-14		85,000.00		35	Approved	Budget Task Force	85,000.00	0.00
30	5-Aug-14	-	Subs Delay Claims (Curtain Wall, Glazing, Alum Panels, Drywall, Elevator)	Contractor Initiated	5-Aug-14	30,000.00	19-Nov-14		60,000.00						60,000.00
31	5-Aug-14	COR42	1 Month Delay - Water Table Issues (Captured in COR60)	Contractor Initiated	5-Aug-14	17,000.00			0.00						0.00
32	2-Sep-14	COR78	AV Tender 2015 Draw (Balance) (Council Approved other Funding Source Apr20/15)	Client initiated	2-Sep-14	90,242.13		2-Jul-15	102,930.22		47				102,930.22
33	12-Sep-14	COR49	Brick Replacement East & West Walls	Unforeseen Site Conditions		10,937.70		21-Nov-14	10,937.70		30	Approved	Manager CP	10,937.70	0.00
34	18-Aug-14	COR37	Large Boulder Removal (included in CO#35)	Contractor Initiated	3-Nov-14	8,324.96			8,324.96						0.00
35	29-Sep-14	COR45R1	Upcharge for Steel Supply	Contractor Initiated	29-Sep-14	6,249.68			6,249.68		25	Approved	Manager CP	6,249.68	0.00
36	28-Sep-14	COR46	Profit Correction on Misc. Approved CO's	Contractor Initiated	28-Sep-14	2,876.64			2,876.64		28	Approved	Manager CP	2,876.64	0.00
37	29-Sep-14	COR50	Bond Extension & Value Increase	Contractor Initiated	29-Sep-14	48,438.55	21-Nov-14		45,835.86		29	Approved	Budget Task Force	45,835.86	0.00
38	14-Oct-14	COR40R1	Upcharge for Windows	Contractor Initiated	14-Oct-14	781.43			781.43		33	Approved	Manager CP	781.43	0.00
39	7-Jul-14	PCO26	Foundation Wall Build Out to Support Existing Rotten Floor Beam	Unforeseen Site Conditions	14-Oct-14	2,855.96			2,855.96		32	Approved	Manager CP	2,855.96	0.00
40	3-Nov-14	PCO28	Add Wall Type W-21 at Foundation Wall	Consultant Coordination	19-Jan-15	5,489.63			5,489.63						5,489.63
41	14-Nov-14	PCO29	Modify ceiling framing of Control Booth to accommodate existing truss	Unforeseen Site Conditions	2-Feb-15	7,899.45			7,899.45		46				7,899.45
42	12-Nov-14	CD03	Steel Remedial Work - Drawing Coordination	Consultant Coordination		7,000.00		8-Dec-14	8,386.78		37	Approved	Manager CP	8,386.78	0.00
43	14-Nov-14	PCO30R1	New Generator	Client initiated	2-Feb-15	11,045.77		15-Apr-15	45,175.36		39	Approved	Budget Task Force	45,175.36	0.00
44	5-Dec-14	PCO31	Basement Spray Insulation	Consultant Coordination	2-Feb-15	16,062.87			42,150.00		44	Approved	Manager CP	7,957.54	0.00
45	7-Jan-15	PCO32R1	SI13 Miscellaneous Structural Site Conditions	Unforeseen Site Conditions	30-Mar-15	11,422.61			10,536.66		41				10,536.66
46	5-Jan-15	PCO33	Delete Redundant Roof Drain	Consultant Coordination	27-Apr-15	0.00			0.00						0.00
47	8-Jan-15	PCO34	Modify Existing Basement Beam Over Door#14	Unforeseen Site Conditions	31-Jul-15	2,472.37			2,472.37						2,472.37
48	15-Jan-15	PCO35	Reduce Accent Tiles	Client initiated	30-Mar-15	0.00			0.00						0.00
49	23-Jan-15	PCO36	Additional Conduit - WiFi & Duress Button	Client initiated		10,000.00		22-May-15	13,385.71		42				13,385.71
50	29-Jan-15	PCO37	Control Room Ceiling Fire Rating	Consultant Coordination	2-Feb-14	1,254.19			1,254.19		38	Approved	Manager CP	1,254.19	0.00
51	2-Feb-15	COR58	Stair Modifications Credit	Contractor Initiated	2-Feb-15	-18,750.00		26-Jun-15	-17,450.00						-17,450.00
52	11-Nov-11	COR48	Storm Clean Up - Billed Against Dewatering Cash Allowance	Contractor Initiated	11-Nov-14	5,833.44			0.00						0.00
53	20-Feb-15	COR60R1	Extension of Time	Contractor Initiated	20-Feb-15	49,995.00	24-Feb-15		28,886.00		36	Approved	Budget Task Force	28,886.00	0.00
54	17-Feb-15	PCO38R1	Relocate AP Boxes	Client initiated	22-May-15	12,248.19			12,248.19		43				12,248.19
55	19-Feb-15	PCO40	Security Contract Assignment (to be paid from FF&E Budget)	Client initiated		12,182.17		4-Mar-15	13,400.39		34	Approved	Manager CP	13,400.39	0.00



APPENDIX B

**Old Town Hall
Change Order Tracking- Construction Contingency**

Construction Contract Value at Award:	\$6,552,940
Construction Contingency	\$655,294
Project Contingency	\$100,763
Additional Contract Award (New Foundations) (\$1,213,715 - \$250,000)	\$963,715
Revised Contingency	\$1,619,009
Revised Total Contract (Excluding Cost Savings)	\$8,171,949

A Revised Contingency	\$1,619,009.00
B Approved Change Orders to date	\$1,586,817.76
C Outstanding Exposure	\$282,511.58
D Balance of Contingency Inc. Outstanding Exposure	-\$250,320.34 (D=A-B-C)

TABLE A - CONSTRUCTION CONTINGENCY

Item	Date	CCN.# CD.No	Title/Description	Reason for Change	Original Quote Date	Original Est. Quote	Revised Date Quoted	Rev. Est. Quote Amount	Final Quote Amount	Rejected	CO#	Status/Comments	Approval Authority	Approved CO Amount	Exposure				
56	11-Mar-15	PCO41	Various M&E Site Issues	Unforeseen Site Conditions	31-Jul-15	7,914.74			7,914.74						7,914.74				
57	30-Mar-15	PCO42	Revise Roof Hatch	Consultant Coordination											0.00				
58	30-Mar-15	COR66	Welded Fittings to Relocate Basement Services	Unforeseen Site Conditions	30-Mar-15	1,973.17			1,973.17		40	Approved	Manager CP	1,973.17	0.00				
59	31-Mar-15	SI18	SI18 Stone/Brick Repairs	Unforeseen Site Conditions		8,000.00			8,000.00						8,000.00				
60	10-Apr-15	PCO43	Soffit Space - Add Sprinkler Line, Ducted Supply Air & Return	Unforeseen Site Conditions		6,781.37			6,781.37						6,781.37				
61	13-Apr-15	PCO44	Studio A&B Ceiling Drywall at Wood Beams	Unforeseen Site Conditions											0.00				
62	14-Apr-15	COR67	Upcharge for HM Doors	Contractor Initiated	14-Apr-15	1,681.98			1,681.98						1,681.98				
63	27-Apr-15	COR69	Upcharge for Rolling Shutter	Contractor Initiated	27-Apr-15	3,743.12			3,743.12						3,743.12				
64	6-May-15	COR72	Upcharge TPL Light Fixtures	Contractor Initiated	6-May-15	3,852.50			3,852.50		45				3,852.50				
65	6-May-15	COR73	Additional Labour to Install Type D Fixtures	Authorities Having Jurisdiction	6-May-15	7,741.60			7,741.60						7,741.60				
66	4-May-15	PCO45	Modify Wall Thickness in Control Room	Unforeseen Site Conditions		10,356.59			10,356.59						10,356.59				
67	4-May-15	PCO46	Stage Curtain Reinforcing	Client initiated	10-Jul-15	2,947.10			2,947.10		48	Approved	Manager CP	2,947.10	0.00				
68	6-May-15	PCO47	Replace Sealant on Existing Windows	Client initiated											0.00				
69	27-May-15	PCO48	Remove Paint on Ground Floor Bricks	Unforeseen Site Conditions											0.00				
70	28-May-15	PCO49	Repair Existing Roof Penetrations	Unforeseen Site Conditions											0.00				
71	9-Jun-15	COR75	Upcharge Mechanical Equipment	Contractor Initiated	9-Jun-15	6,927.21			6,927.21						6,927.21				
72	19-Jun-15	COR76	Extension of Time - 5 Working Days	Contractor Initiated	19-Jun-15	0.00			5,625.83						5,625.83				
73	24-Jun-15	COR77	Type B Radiators Revision	Contractor Initiated	24-Jun-15	9,290.97			9,290.97						9,290.97				
74	6-Jul-15	COR70	Upcharge for Flooring Material	Contractor Initiated	6-Jul-15	12,114.11			12,114.11						12,114.11				
75	6-Jul-15	COR79	Upcharge Door Hardware	Contractor Initiated	6-Jul-15	884.60			884.60						884.60				
76	6-Jul-15	COR80	Basement Mech Pipe Re-Routing	Consultant Coordination	6-Jul-15	12,778.56		31-Jul-15	12,238.22						12,238.22				
77	7-Jul-15	PCO50	Add Grab Bars at Men WC Urinals	Authorities Having Jurisdiction											0.00				
78	14-Jul-15	CD04	Rebuild Neighbours Retaining Wall	Client initiated		4,000.00			4,000.00						4,000.00				
79	15-Jul-15	PCO51	Backstage Window Blinds	Client initiated											0.00				
80	15-Jul-15	CD05	Vent Pipe Reconfiguration	Client initiated		19,999.00			50,000.00						50,000.00				
81	27-Jul-15	PCO52	Upgrade Washroom 206 to Barrier Free	Client initiated											0.00				
82	5-Aug-15	PCO54	Add (1) Pot Light in Basement	Unforeseen Site Conditions											0.00				
83	23-Feb-15	COR61	Revise Studio 109 & 111 Light Fixture Layout	Unforeseen Site Conditions		938.45			938.45						938.45				
TOTAL									2,001,041.08					\$ 587,873.94	1,993,984.91			1,586,817.76	\$ 282,511.58

Notes:
 1. Values have been estimated by the Project Team; formal quotations have not been provided by the Contractor at this time
 2. COR has not been submitted by CCRL; Value as per latest Change Management Log
 3. Not billable to the Project
 4. Bonding - \$35,533 already captured under CO#4: Foundation Replacement - Balance to come out of Contingency (\$45,835.86-\$35,533 = \$10,302.86)



APPENDIX C

Change Order Tracking - Cost Savings

A	Cost Savings Target	\$	325,000.00
B	Total Cost Savings Change Orders Approved to date	\$	298,127.42
C	Maximum Cost Savings to be Identified	\$	26,872.58 (C=A-B)
D	Additional Cost Savings Under Review	\$	-

TABLE B - COST SAVINGS

Item	Date	CCN.# CD.No	Title/Description	Reason for Change	Original Quote Date	Original Est. Quote	Revised Date Quoted	Rev. Est. Quote Amount	Final Quote Amount	Rejected	CO#	Status/Comments	Approval Authority	Approved CO Amount	Credits Under Review
1	9-Oct-13	PCO9/COR11	Project Donation	Client initiated		-50,000.00			-50,000.00			Approved		-50,000.00	0.00
2	9-Oct-13	PCO9/COR11	Provide Hydraulic Elevator in lieu of Traction	Client initiated	9-Oct-13	-20,000.00			0.00						0.00
3	29-Oct-13	PCO10	Modern Fold Panel System in lieu of Nanawall	Client initiated	18-Sep-13	-53,000.00	5-Dec-13	-44,560.20	-44,560.20		11	Approved	Manager CP	-44,560.20	0.00
4	29-Oct-13	PCO11	Delete Panel Lock System from Backstage and Room 207	Client initiated	18-Sep-13	-30,000.00	4-Dec-13	-49,134.62	-49,134.62		12	Approved	Manager CP	-49,134.62	0.00
5	29-Oct-13	PCO12	Aluminum Flag Pole in lieu of Stainless Steel	Client initiated	18-Sep-13	-16,000.00	31-Oct-13	-16,350.00	-16,350.00		7	Approved	Manager CP	-16,350.00	0.00
6	29-Oct-13	PCO13	Alumicor Curtainwall system in lieu of Kawneer	Client initiated	18-Sep-13	-14,500.00	5-Nov-13	-10,050.00	-10,050.00			Rejected by BTF			0.00
7	29-Oct-13	PCO14	Alternate Exterior Wood Species	Client initiated	18-Sep-13	-4,500.00	7-Nov-13	-4,500.00	-4,500.00			Rejected by BTF			0.00
8	29-Oct-13	PCO15	Delete 5 Chandeliers and Hoists from Theatre	Client initiated	18-Sep-13	-39,000.00	8-Nov-13	-40,278.00	-40,278.00		10	Approved	Manager CP	-40,278.00	0.00
9	29-Oct-13	PCO16	Delete all new Aluminum Clad Wood Windows, Except 5	Client initiated	18-Sep-13	-91,000.00	7-Nov-13	-87,804.60	-87,804.60		8	Approved	Manager CP	-87,804.60	0.00
10	29-Oct-13	PCO17	Stamped Concrete in lieu of Concrete Pavers (Not Accepted by BTF Feb 25/15)	Client initiated	18-Sep-13	-18,000.00	29-Nov-13	-16,100.00	0.00			Rejected by BTF			0.00
11	29-Oct-13	PCO18	Alternate Stair Tread & Riser Material	Client initiated	18-Sep-13	-25,000.00			0.00						0.00
12	11-Nov-13	COR26	Tile Grout Substitution	Client initiated	18-Sep-13	-10,000.00	13-Nov-13		-10,000.00		9	Approved	Manager CP	-10,000.00	0.00
13	3-Feb-14	COR30	Change Fully Tiled Washroom Walls to Half Tiled	Client initiated	3-Feb-14	-4,000.00	14-Feb-14	0.00	0.00						0.00
TOTAL									-375,000.00					-298,127.42	\$ -

Old Town Hall Renovation

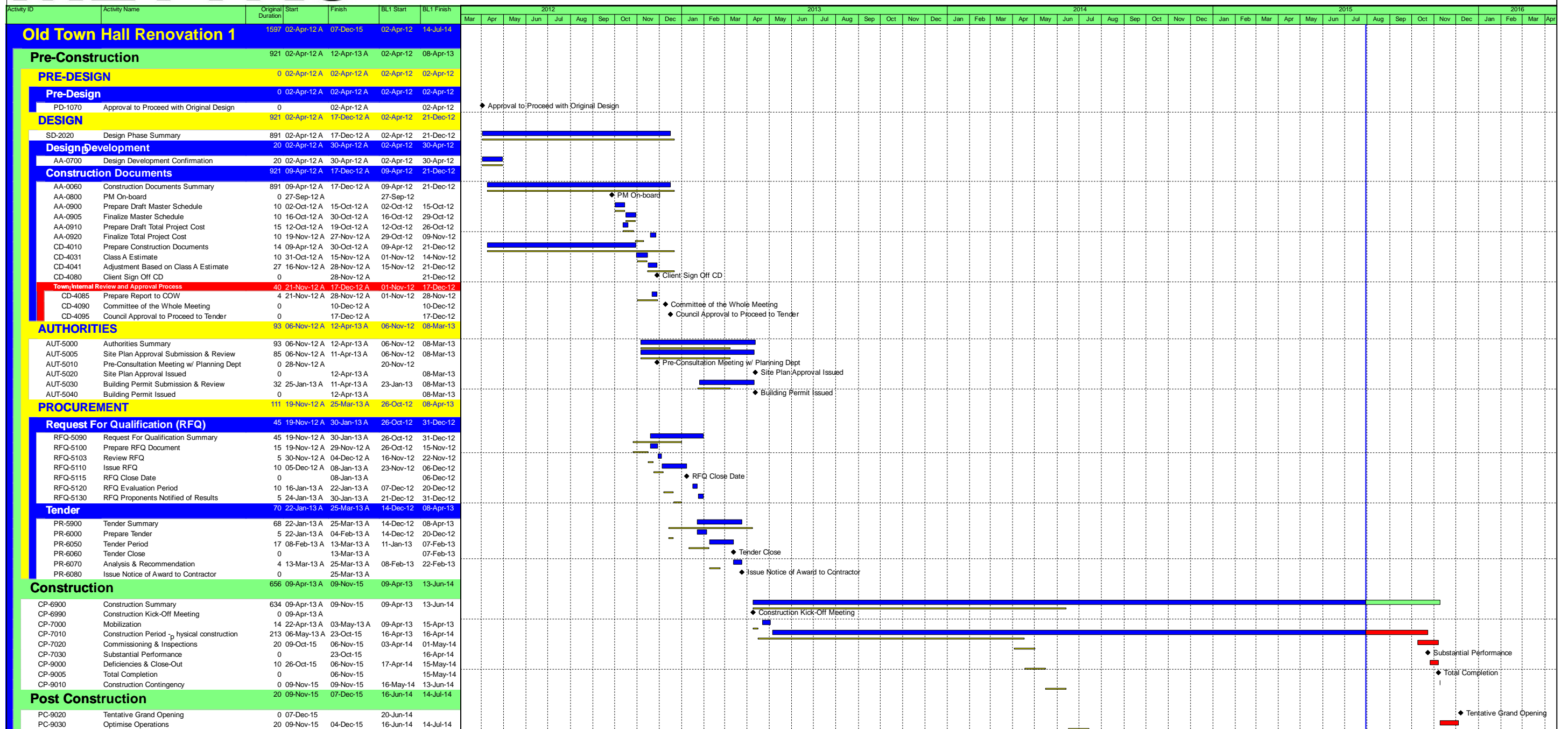
Appendix D: FF&E Tracking Form

	Approved Budget	Revised Scope Budget Impact	Anticipated Cost at Completion	Total Commitments To Date
Customer Service				
Safe*		\$2,500.00	\$2,500.00	\$ -
WiFi*		\$9,000.00	\$9,000.00	
Facilities				
300 Padded chairs (for Theatre)	\$14,500.00		\$14,500.00	\$ -
Chair Dolley & Holders (for 300 chairs above)	\$1,500.00		\$1,500.00	\$ -
150 Plastic Chairs (for Main floor)	\$4,750.00		\$4,750.00	\$ -
Plastic 6ft tables (with adjustable height)	\$5,700.00		\$5,700.00	\$ -
Plastic Rounds (for both levels)	\$4,800.00		\$4,800.00	\$ -
Table Carts (for storage)	\$1,500.00		\$1,500.00	\$ -
Podium	\$900.00		\$900.00	\$ -
Risers	\$10,000.00		\$10,000.00	\$ -
Coat Racks	\$1,500.00		\$1,500.00	\$ -
6 large storage cupboards	\$13,200.00		\$13,200.00	\$ -
Security/Camera System	\$22,000.00	\$47,483.96	\$69,483.96	\$ 13,400.39
Christmas Tree/Decorations	\$400.00		\$400.00	\$ -
Patio Furniture	\$12,000.00		\$12,000.00	\$ -
Coffee Maker Chest Freezer	\$2,000.00		\$2,000.00	\$ -
Main Stage drapes with motor drive	\$12,000.00		\$12,000.00	\$ -
Janitorial Equipment	\$4,800.00		\$4,800.00	\$ -
Office Furniture	\$3,600.00		\$3,600.00	\$ -
IT				
Omnivex System (TV Programming Display)	\$10,000.00		\$10,000.00	\$ -
POS System (computers, phone, touch screen, software, maintenance)	\$14,000.00	\$6,000.00	\$20,000.00	\$ 11,250.14
PCs/apps*		\$14,500.00	\$14,500.00	\$ 1,115.00
CS Agent Phone*		\$3,200.00	\$3,200.00	\$ -
Recreation				
Lobby Furniture x 2	\$5,800.00		\$5,800.00	\$ -
Piano for Theatre	\$12,000.00		\$12,000.00	\$ -
Total of Furniture, Fixtures & Equipment	\$156,950.00			\$ 25,765.53
Anticipated Changes		\$82,683.96		
Revised FF&E anticipated Final Cost			\$239,633.96	

* New Scope added by Staff at FF&E Scope Confirmation & Validation Meeting held 06-Jan-15



Town of Newmarket - Old Town Hall Renovation & Expansion



APPENDIX F

Addition & Renovations to NOTH Cultural Centre
Town of Newmarket
MASTER Project Schedule, Version 8.2

ID	Task Name	Duration	Start	Finish				
					Jul	Aug	Sep	Oct
1	Preliminaries	13.8 wks	Mon 3/25/13	Fri 6/28/13				
8	Shop Drawings & Submittals	120.3 wks	Fri 4/26/13	Fri 9/18/15				
9	Structural Steel	76.4 wks	Fri 5/10/13	Tue 11/18/14				
13	Aluminum Framed Glazing System (Curtain Wall)	12.7 wks	Fri 2/6/15	Fri 5/8/15				
14	Shop Drawings / Submittal / Review	9.7 wks	Fri 2/6/15	Fri 4/17/15				
15	Fabrication & Delivery	3 wks	Mon 4/20/15	Fri 5/8/15				
16	Aluminum Panel Cladding	8 wks	Fri 7/24/15	Fri 9/18/15				
17	Shop Drawings / Submittal / Review (COMPLETE = 0-time)	0 wks	Fri 7/24/15	Fri 7/24/15				
18	Fabrication & Delivery	8 wks	Fri 7/24/15	Fri 9/18/15				
19	Aluminum Clad Wood Windows	58 wks	Tue 11/12/13	Fri 1/9/15				
22	Hydraulic Passenger Elevator	22.7 wks	Mon 3/3/14	Wed 8/13/14				
25	Division 15 - Mechanical	37.1 wks	Fri 4/26/13	Wed 1/22/14				
34	Division 16 - Electrical	65.3 wks	Mon 5/6/13	Fri 8/22/14				
41	Fdn Replacement - Engineered Shoring	9.4 wks	Wed 8/14/13	Mon 10/21/13				
46	EXISTING OLD TOWN HALL	99 wks	Mon 5/13/13	Fri 5/1/15				
47	Demolition	7 wks	Mon 5/13/13	Tue 7/2/13				
54	WORK STOP Due to Foundation Instability	7.6 wks	Wed 6/19/13	Tue 8/13/13				
55	Cost Savings / Value Engineering	7.3 wks	Wed 8/14/13	Fri 10/4/13				
56	Final Cost Savings Instruction (TON / METTKO)	0 days	Mon 3/3/14	Mon 3/3/14				
57	New Foundation Walls	37.7 wks	Tue 10/15/13	Tue 7/15/14				
115	1st Flr Stabilization - Shoring System	4 wks	Mon 3/3/14	Fri 3/28/14				
116	1st Flr Stabilization - Masonry Infills	1 wk	Mon 3/31/14	Fri 4/4/14				
117	RELOCATE WEST FENCING (Feb 12-14)	0 wks	Wed 2/12/14	Wed 2/12/14				
118	Porch Foundations (North, West & East)	2.7 wks	Tue 4/22/14	Thu 6/19/14				
119	Parge New Fdn Wall for Waterproofing	2.2 wks	Mon 5/26/14	Tue 6/10/14				
120	Waterproof Existing Building (Phased)	3 wks	Mon 6/16/14	Mon 7/28/14				
121	Weeping Tile Installation	2 days	Mon 7/28/14	Wed 7/30/14				
122	Backfill (Partial)	5 days	Wed 7/30/14	Thu 8/7/14				
123	2nd Flr Stabilization - Masonry Infills (sequenced)	9.7 wks	Thu 5/8/14	Thu 7/17/14				
124	Window Installations (based on five windows)	0.7 wks	Tue 2/17/15	Fri 2/20/15				
125	Complete Backfilling	3 days	Tue 7/22/14	Fri 7/25/14				
126	Structural Steel Delivery (Basement Beams)	0 wks	Thu 6/19/14	Thu 6/19/14				
127	Basement / Main Flr Shoring (Beam Removal)	4 wks	Wed 6/25/14	Wed 7/23/14				
128	Structural Steel Mobilization	3 days	Mon 7/28/14	Thu 7/31/14				
129	Demo Ex Columns / Beams (salvage)	3 wks	Thu 7/31/14	Fri 8/22/14				
130	Steel Installation (Basement)	2 wks	Thu 7/31/14	Fri 8/15/14				
131	Demo & Removal of Basement Slab	1 wk	Fri 8/15/14	Fri 8/22/14				
132	Under Slab Services & Backfill	2 wks	Fri 8/22/14	Mon 9/8/14				
133	WEEPER GRID CONFIRMATION: SEL Review & Comment	0 wks	Thu 9/25/14	Thu 9/25/14				
134	Slab on Grade	1 wk	Wed 10/8/14	Wed 10/15/14				
135	SWBD PP-0 Installation	2 wks	Mon 12/8/14	Mon 12/22/14				
136	New Power Service Activation (Basement only)	1 wk	Fri 1/16/15	Thu 1/22/15				
137	Power Transfer to NEW	0 days	Mon 3/2/15	Mon 3/2/15				
138	Mechanical & Electrical Rough-ins (Basement)	12 wks	Thu 10/16/14	Mon 1/12/15				
139	Structural Steel Erection (1st, 2nd Flrs)	10.7 wks	Fri 8/15/14	Fri 10/31/14				
140	New Subfloor (2nd Flr)	2.5 wks	Mon 8/25/14	Thu 9/11/14				
141	New Subfloor (1st Flr)	4 wks	Thu 9/25/14	Fri 10/24/14				
142	Steel & Timber Framing (1st, 2nd Flrs)	3 wks	Mon 11/3/14	Fri 11/21/14				
143	Mechanical & Electrical Rough-ins (1st, 2nd Flrs)	10 wks	Wed 11/5/14	Fri 1/16/15				
144	Shoring Activities	1 wk	Mon 11/10/14	Fri 11/14/14				
145	Control Booth / Catwalk	6 wks	Mon 11/17/14	Tue 12/30/14				
146	Knee Walls & Stage Level Timber Framing	2 wks	Mon 11/17/14	Fri 11/28/14				
147	Catwalk Detail Rework	4 wks	Thu 1/15/15	Wed 2/11/15				
148	Complete Control Booth / Catwalk	4.4 wks	Tue 3/17/15	Fri 4/17/15				
149	Roofing (R9, R10, R11, R12)	9.7 wks	Mon 2/23/15	Fri 5/1/15				

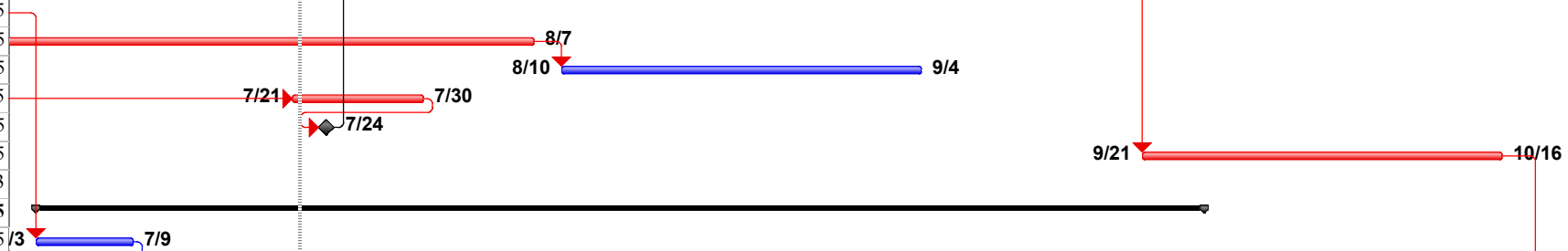


Addition & Renovations to NOTH Cultural Centre

Town of Newmarket
MASTER Project Schedule, Version 8.2

APPENDIX F

ID	Task Name	Duration	Start	Finish	Month			
					Jul	Aug	Sep	Oct
150	Flagpole Installation	1 day	Thu 3/26/15	Thu 3/26/15				
151	INTERIOR FINISHES: EXISTING BUILDING	14.3 wks	Wed 12/3/14	Wed 3/18/15				
152	Basement	8.8 wks	Wed 12/3/14	Thu 2/5/15				
153	Partition Layout & Installation	2 wks	Wed 12/3/14	Tue 12/16/14				
154	Door Frame Installation	1 wk	Fri 1/30/15	Thu 2/5/15				
155	Ceiling Framing incl Light Fixture Layout / Rough-ins	2 wks	Tue 1/20/15	Mon 2/2/15				
156	Ground Floor	7.3 wks	Mon 1/26/15	Wed 3/18/15				
157	Partition Layout & Installation	2 wks	Mon 1/26/15	Fri 2/6/15				
158	Door Frame Installation	1 wk	Wed 2/25/15	Tue 3/3/15				
159	Changes to Lighting Layout (RCP)	3.1 wks	Tue 2/3/15	Wed 2/25/15				
160	Ceiling Framing incl Light Fixture Layout / Rough-ins	3 wks	Wed 2/25/15	Wed 3/18/15				
161	Second Floor	5 wks	Mon 2/9/15	Mon 3/16/15				
162	Partition Layout & Installation	3 wks	Mon 2/9/15	Mon 3/2/15				
163	Door Frame Installation	1 wk	Tue 3/3/15	Mon 3/9/15				
164	Ceiling Framing incl Light Fixture Layout / Rough-ins	3 wks	Tue 2/24/15	Mon 3/16/15				
165	Panel Track Installation	1 wk	Tue 2/3/15	Mon 2/9/15				
166	NEW ADDITION	122.2 wks	Mon 5/13/13	Fri 10/16/15				
167	Demolition (Addition, Trees & Ashphalt Parking Areas)	1 wk	Wed 7/3/13	Tue 7/9/13				
168	Excavation	2 wks	Mon 5/12/14	Tue 5/27/14				
169	Foundation Wall - GRIDLINE A	3 wks	Mon 6/16/14	Mon 7/7/14				
170	DEWATERING ISSUES: SEL Borehole Installation	0 wks	Wed 5/21/14	Wed 5/21/14				
171	BMA PC No. 24-R1 Issued (Dewatering)	0 wks	Fri 6/27/14	Fri 6/27/14				
172	PHASED: Site Work	15.2 wks	Mon 6/30/14	Fri 10/17/14				
173	Excavation CONTINUED	10 wks	Mon 6/30/14	Wed 9/10/14				
174	Footings (inc elevator, sump pits & pads)	9.7 wks	Fri 7/4/14	Fri 9/12/14				
175	Foundation Walls	10 wks	Mon 7/14/14	Wed 9/24/14				
176	Waterproofing & Weeping Tile	2.2 wks	Thu 10/2/14	Fri 10/17/14				
177	Backfill	1 wk	Fri 10/10/14	Fri 10/17/14				
178	Under Slab M/E Services	1 wk	Mon 10/20/14	Fri 10/24/14				
179	Additional Weeper Work (PC No. 24-R1)	4 days	Mon 10/27/14	Thu 10/30/14				
180	DELAYS due to Inclement Weather (Exterior Concrete Pours)	11 days	Mon 10/27/14	Mon 11/10/14				
181	Elevator Shaft & Architectural Wall (1st lift)	10 wks	Wed 9/24/14	Mon 12/15/14				
182	GL D: Drawing Coordination & Change Directive (Remedial Work)	3.6 wks	Thu 10/23/14	Tue 11/18/14				
183	Delayed Structural Steel Delivery	0 days	Tue 11/18/14	Tue 11/18/14				
184	Structural Steel Erection & Metal Deck (2nd Flr)	10 wks	Tue 11/18/14	Fri 1/30/15				
185	DELAYS due to Inclement Weather (Steel Erection & Arch Wall)	12 days	Fri 1/30/15	Wed 2/18/15				
186	Structural Steel Erection Continued	8.2 wks	Wed 2/18/15	Fri 4/17/15				
187	Slab on Grade	1 wk	Mon 1/12/15	Fri 1/16/15				
188	Mechanical & Electrical Rough-ins	8.2 wks	Wed 3/4/15	Fri 5/1/15				
189	Measure for Aluminum Framed Glazing System (Curtain Wall)	0 days	Fri 2/6/15	Fri 2/6/15				
190	Concrete Topping (2nd Flr)	1 wk	Mon 4/13/15	Fri 4/17/15				
191	Metal Deck (Roof)	2 days	Wed 4/1/15	Mon 4/6/15				
192	Steel Stairs	2 wks	Mon 5/4/15	Tue 5/19/15				
193	Roofing (Addition)	4 wks	Mon 4/20/15	Tue 5/19/15				
194	Intumescent Fire Paint	1 wk	Tue 5/19/15	Tue 5/26/15				
195	Sprayed Fire Proofing	2 wks	Tue 5/26/15	Tue 6/9/15				
196	Aluminum Framed Glazing System (Curtain Wall)	4 wks	Mon 5/11/15	Mon 6/8/15				
197	Glazing Delay	8.2 wks	Tue 6/9/15	Fri 8/7/15				
198	Glazing Install	4 wks	Mon 8/10/15	Fri 9/4/15				
199	Install Girt Framing (Aluminum Panel Cladding)	1.5 wks	Tue 7/21/15	Thu 7/30/15				
200	Measure for Aluminum Panel Cladding	0 days	Fri 7/24/15	Fri 7/24/15				
201	Aluminum Panel Cladding Install	4 wks	Mon 9/21/15	Fri 10/16/15				
202	Flashings (incl for measurement & fabrication)	2 wks	Mon 5/13/13	Mon 5/27/13				
203	Elevator Installation	11.9 wks	Fri 7/3/15	Fri 9/25/15				
204	CCRL Temp Enclosure (weather-tight)	1 wk	Fri 7/3/15	Thu 7/9/15				

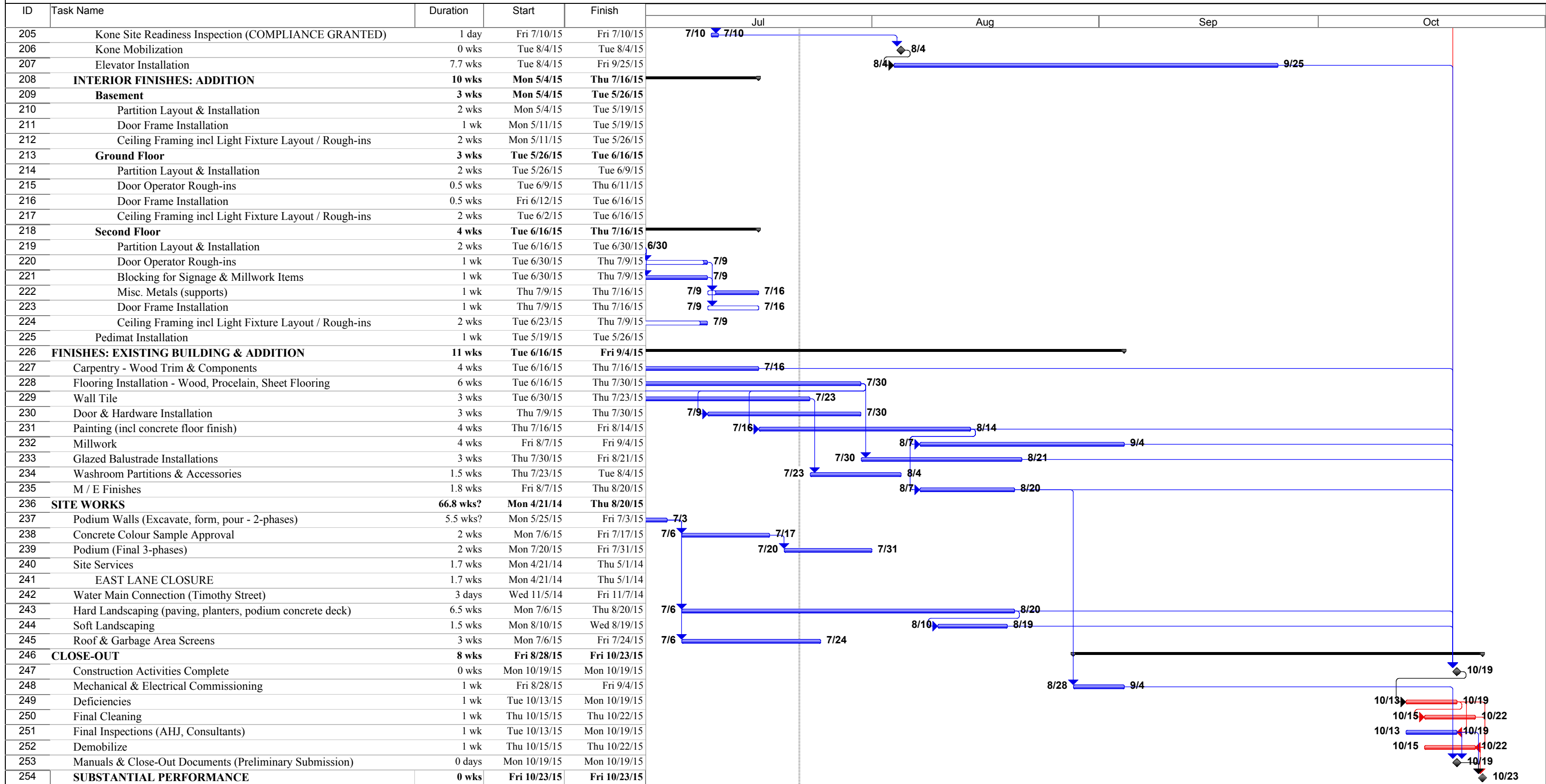


NOTE: Version 8.2 corrects a 4-week calculation error affecting anticipated Substantial Performance date, regarding Aluminum Panel Cladding work.



APPENDIX F

Addition & Renovations to NOTH Cultural Centre
 Town of Newmarket
 MASTER Project Schedule, Version 8.2



APPENDIX G



TOWN OF NEWMARKET

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June 30, 2015

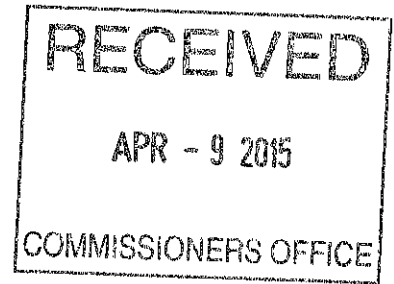
Old Town Hall Renovation Project – Note to Audit Services Report

The Town of Newmarket has used the services of the York Region Audit Services department since 2005 to conduct peer reviews and audits of various Town processes/procedures. This is a resource shared by the N6 group of municipalities.

In 2014 in response to a Council request, the CAO arranged for a peer review of the Old Town Hall renovation project's original foundation work to determine if good industry standards had been followed.

Audit Services conducted the peer review through a third party engineering consultant and the initial draft report was submitted to staff. It was shared with the architect for comments and the final report (attached) was received in April, 2015.

The Old Town Hall Budget Control Task Force received the report at its meeting of May 11, 2015 and the report is now being included in the Task Force Update to Council.



Town Of Newmarket

Newmarket's Old Town Hall Renovation Project

Report

June 2014

Newmarket's Old Town Hall Renovation Project

TABLE OF CONTENTS

Section	Page
1.0 Management Summary and Conclusion	2
2.0 Introduction	2
3.0 Objective and Scope	3
4.0 Observations/Assessments and Findings	4
Appendix Documents and Meetings	7

Newmarket's Old Town Hall Renovation Project

1.0 Management Summary

We have carried out a review of Newmarket's Old Town Hall renovation project's original foundation work, undertaken prior to construction, to determine if good industry standards were followed in reviewing the original foundations and if the issues later discovered during construction could have been identified.

Conclusion

Based on the findings from our review, it is our opinion, that good industry standards were followed in reviewing the original foundations and that a key factor that prevented the participants, during the design phase of the project, to identify issues later discovered during construction, was the extent and location of the structural testing.

The decision to limit testing to one exterior test pit together with the designated location of the pit, we believe, impacted the original conclusions reached regarding the integrity of the foundations. In hindsight and with the knowledge gained during the construction phase, had additional investigative measures been employed, they may have had an effect on the discovery of issues with the structural integrity of the foundations during the design phase of the project.

However, we believe that an appropriate level of care/attention that would reasonably be expected, was taken in this situation by the participants in arriving at an opinion that "based on the interior and exterior reviews it was not indicative of further investigations at the time".

Note:

It should be noted that the costs to excavate additional exterior test pits would have been extensive. The costs would have included the installation and removal of shoring, plating over the pits to allow vehicle access, safety fencing, lighting, backfilling, reinstatement, etc.

We assume that the additional costs together with access restrictions would have been taken into consideration by the Town of Newmarket as to whether additional exterior test pits should be undertaken. The Town of Newmarket's decision to restrict the exterior pit to one location was apparently influenced by these added costs and access restrictions.

2.0 Introduction

In November 2008, the Town of Newmarket (Town) submitted an application for a Building Canada Fund Grant for the renovation and expansion of the Old Town Hall. The main premise of the application was to make the building accessible and to utilize the building as an Arts and Culture Centre. On February 12, 2009 the Federal Government announced approval of the application, with funding consisting of equal investments from the Federal and Provincial governments.

Newmarket's Old Town Hall Renovation Project

The building has been used for various purposes over the years, including a town market, municipal offices and police station including a jail and courthouse. The renovation project will include the incorporation of existing historical materials such as the jail cell steel partitions and salvaged beams.

When construction is completed, it will consist of the renovation of the existing 9000ft² building, constructed in 1890, and a 5600ft² addition. Community programming will comprise Arts and Cultural programs, meeting rooms, gallery display space, and large public and private functions.

Following approval of the Building Canada Fund grant in early 2009, the Town conducted an RFP and retained the services of Black and Moffat, a heritage architect to begin the design process. In September 2012, the Town then awarded a contract to Mettko for Project Management Services, who proceeded to be engaged in the prequalification and tendering phases together with the construction phase.

In 2013, the project for the renovations of the Old Town Hall was awarded to Compass Construction Resources Limited. During the renovations, as excavation of the foundations for underpinning and waterproofing commenced, issues with the structural integrity of the foundations became apparent. This resulted in a scope change to the project, with an additional \$1,400,000 being required for the project. The total capital cost for the project is \$10,590,172.

Newmarket's Old Town Hall Renovation Project

3.0 Objective and Scope

The objective of this review was to determine if good industry standards were followed in reviewing the original foundations and if the issues later discovered during construction could have been identified.

The scope of the review included:

1. A review of Tender Documents including Tender Forms, General Requirements and Specifications;
2. A review of the various Contracts;
3. A review of Architectural and Structural Drawings, the Geotechnical and other relevant reports;
4. Interviews with appropriate personnel, including the Architect, Structural Engineer, Project Manager and Town Management; and
5. A review of documents presented to Council regarding the project status.

Details of our observations/assessments and findings are contained in Section 4.0 of this report.

A draft copy of this report was shared with Black & Moffatt for any comments. Black & Moffatt had no comment.

We wish to thank Town of Newmarket Management and Project Consultants for their excellent co-operation and assistance in providing Audit Services with requested documentation and timely responses.

Newmarket's Old Town Hall Renovation Project

4.0 Observations/Assessments and Findings

Background

The project progressed in the standard manner of the design, tender and construction stages. An Architect (BMA) was hired, preliminary layouts prepared, budgets submitted and numerous designs for the renovations and an addition was submitted to Council for approval.

This process occurred over the period from June 2009 to December 2011 with consulting engineers now being involved and the project consequently progressed to the Tender stage in early 2012. The Structural Engineers, RJC and the Mechanical and Electrical Engineers Lam & Associates Ltd. were all involved during design and tendering phases as part of BMA's contract.

The Geotechnical Engineer, Soil Engineers Ltd. was awarded a separate contract and carried out their site investigation in October/November 2009.

Due to this being a Renovation to a Heritage Building Project and not a typical type of contract the Town would have experience in managing, it was recommended that a Project Management Company, familiar with this type of project, be hired. Consequently, MET was awarded a contract on September 28, 2012, by the Town and proceeded to be engaged in the Prequalification and Tendering phases together with the Construction phase.

Observations/Assessments

During our investigation, based on emails between BMA, RJC and the Town, it was confirmed that one exterior test pit, limited to one location, was authorized. This limitation by the Town was due to adjacent laneways and local traffic access restrictions around the building. Consequently only one exterior test pit was conducted together with interior pits and wall openings. They were reviewed, commented on and assessed by RJC.

In a July 29, 2013 Commissioner of Development and Infrastructure Services Report – 2013-34, it indicated that “A series of six wall openings and three test pits, two interior and one exterior were performed by the Structural Engineers, Reed Jones Christofferson Ltd (RJC) in early October 2009. The condition of the foundation walls as reviewed from the interior were in fair condition and based on similar foundations works on similar renovation projects RJC was of the opinion that no further exterior investigations were required.

Page 3 of the Soils Report, Section 3 Field Work references “test pit and wall opening locations are shown on Drawing No 2”. Drawing No 2 was included in the Soils Report. We noted that the report on the test pits and wall openings was not included in the Soils Report issued as part of the Tender Package. The reason for this omission was never ascertained and was not realized by BMA, RJC or MET.

The Elevation Drawings, showing the existing building, indicate “existing rubble foundations to be parged, waterproofed/insulation drainage board and weeping tile typically to be installed throughout”. This indicated that the perimeter of the existing building would have had to be excavated to expose the existing rubble foundation walls other than just at areas to be underpinned.

Newmarket's Old Town Hall Renovation Project

The Architectural drawings required the rubble foundations of the exterior perimeter of the old building to be “parged.....& weeping tile” to be installed. This would require the existing face of the rubble foundations to be cleaned prior to the parging. Depending on the cleaning method this possibly could have had a detrimental effect on mortar deterioration and the stability of portions of the wall, as dislodgement of stones and mortar could occur.

We ascertained from our review that two interior test pits and one exterior test pit together with six wall openings were carried out. In the Soils Report, Drawing #2 (included in the request for quote), four interior test pits were indicated. It should be noted the wall openings were only cut through the interior skin walls to allow visual inspections of the rubble foundation walls behind the skin walls. No openings were cut in the rubble walls. The report for the pits and wall openings was prepared in sketches with written remarks imprinted on the sketches.

Noted in these sketches were remarks as to the status of the rubble foundation walls at those locations. Particular extracts from these sketches are as follows:

- TP#1 & WO#2 Rubble stone foundation wall, areas where no mortar in joints.
- WO#3, #4, #5, #6 (East Wall) Rubble stone foundation wall, some joints in better condition than others.
- TP#2 _ Benching appears to have settled.
- TP#2 (wrong Location) Exterior Test Pit - Deteriorated mortar joints.

The building was worked on by the Town's in house building maintenance / construction crew for an opening in 1980 and was used up until the last couple of years when it was closed due to mould and the impending project. Part of the reason for it being designated as a historical building was that it had been built on a “random granite rubble foundation”. The rubble foundation wall subsequently because of the new additions and renovation had to be underpinned at various locations and possibly could be considered as an important consequence in not having the condition of the rubble wall fully investigated.

The wall openings in the skin walls indicated some mortar joints in the interior face of the rubble wall were in better condition than others. Indicated in the accompanying written notes, applicable to the areas observed through the openings, it was assumed this condition to be uniform throughout the basement area. The confirmation of the condition of the mortar in the core of the wall, as to possible deterioration, was never achieved. A number of cores would have been helpful in indicating the strengths and/or weaknesses of the wall.

The location of the exterior test pit, as designated by the Town, turned out not to be representative of the entire structural condition of the building as it was in an area where work had been carried out in a previous 1980 addition & renovation. This location indicated a wall that in essence appeared in fair condition with only mortar missing from some joints. Unfortunately the exterior condition of the rubble wall, encountered in the test pit, was taken as being uniform throughout the perimeter of the existing building.

In our opinion the interior test pits were not excavated deep enough to ascertain the condition of the rubble walls below the existing slab on grade. We arrived at this conclusion, based on our

Newmarket's Old Town Hall Renovation Project

review of the sketches, as the sketches did not have any written notes pertaining to the condition of the walls below the slab on grade.

It should be noted that items were included in the Tender Documents for low pressure grouting to accommodate wall areas that may require stabilization to permit underpinning to take place. Items for additional mortar pointing also were included. This indicates that some allowances had been considered by the consultants for the possibility of some deterioration of the rubble foundation wall.

Newmarket's Old Town Hall Renovation Project

Findings

The decision to limit testing to one exterior test pit together with the designated location of the pit impacted on the original conclusions reached regarding the integrity of the foundations. Based on these limitations and test results it appears that the structural engineers, Reed Jones Christoffersen, deemed it reasonable to assume the inspection report on this area would be uniform throughout.

Drawings and reports of the Old Town Hall 1980's Renovations and Addition were not available for review and/or reference. Had these been available, they would have identified that the test location was not representative of the entire structural condition of the building as it was in an area where work had been carried out in a previous 1980 addition & renovation.

In hindsight and with the knowledge gained during the construction phase, had additional investigative measures been employed, they may have had an effect on the discovery of issues with the structural integrity of the foundations during the design phase of the project. These included:

- The visual observations from the "wall openings" indicated the interior face of the rubble wall was in fair condition. This only applied to the areas above the slab on grade. The investigation of the portion of the wall below the slab on grade was incomplete. Had this been fully investigated this may have had an impact on the design requirements pertaining to the underpinning of the rubble wall foundations; and
- It may have been reasonable to expect that further investigation of the wall should have been considered particularly in the areas of underpinning. However this would have had to be done from the interior of the building and may not have produced the results that additional exterior test pits would have shown.

Additionally, due to an oversight, the report for the Test Pits and Wall Openings was not issued with the Tender Documents. If included this could have generated questions from the Tenderers that possibly may have initiated further investigations prior to the closing of the Tender.

Newmarket's Old Town Hall Renovation Project

Appendix

Documents Reviewed

The list of documents reviewed is as follows:

- Tender Documents including Tender Forms, General Requirements and Specifications.
- Architectural and Structural Drawings.
- Addenda #1 - #6.
- Geotechnical Report.
- Town Of Newmarket contract with Architect, Black and Moffat.
- Town Of Newmarket contract with Project Manager, Mettko.
- Town Of Newmarket contract with Contractor, Compass Construction Resources Ltd. (CMRL).
- Project Manager's Reports Nos. 1 – 12.
- Site Meeting Reports CMRL.
- Contract Change Orders.
- Binder- Old Town Hall Renovation Design Task Force as of May 2012.
- Binder- Old Town Hall Heritage Renovation Project.

Meetings

The list of interviewees is as follows:

- Architect: Black and Moffat
- Project Manager: Mettko
- Structural Engineers: Reed Jones Christoffersen
- Town of Newmarket Engineering Services