

COT 348 Davenport Sprinkler, Plumbing & Kitchen Modifications

Part 1: Domestic Hot Water (DHW) System Upgrade

RJC Project Number: TOR.121290.0014

Class A Estimate (Rev.0)



Prepared for:
Read Jones Christoffersen Ltd

Prepared by:

A.W. HOOKER®
QUANTITY SURVEYORS

2265 Upper Middle Rd. E Suite 400
Oakville, ON L6H 0G5

T 905.823.8111
F 905.823.5111
info@awhooker.com

www.awhooker.com

February 22, 2024

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Read Jones Christoffersen Ltd
100 University Ave, North Tower, Suite 400
Toronto, ON, M5J 1V6

Attn: Paul Fritze, B.A.Sc., P.Eng.
Principal
Building Science and Restoration

Re: COT 348 Davenport Sprinkler, Plumbing & Kitchen Modifications Class A Est (R.0)
Part 1: Domestic Hot Water (DHW) System Upgrade
RJC Project Number: TOR.121290.0014

Dear Paul,

Please find enclosed our Class A Estimate for the above project. The estimate is based on design drawings and information provided by RJC received on February 14, 2024.

This estimate is meant to reflect the fair market value for the construction of this project; it is not intended to be the prediction of the lowest bid and should be representative of the median bid amount received in a competitive bidding scenario.

We recommend that the owner and/or the design team carefully review the cost estimate report, including line item descriptions, unit price clarifications, exclusions, inclusions and assumptions, contingencies, escalation, and mark-ups. This is to ensure that the design intent is captured within the content of the report.

Please refer to the preamble of our cost report for all exclusions, assumptions, and information pertaining to the estimate.

Requests for modifications of any apparent errors or omissions to this document must be made to A.W. Hooker Associates Ltd. within ten (10) business days of receipt of this estimate. Otherwise, it will be understood that the contents in this estimate have been concurred with and accepted as final version of the cost report.

We trust our work will assist in the decision making process and look forward to our continued involvement in this important project.

Sincerely,
A.W. Hooker Associates Ltd



Josh Logan, C.Tech
Quantity Surveyor

Sincerely,
A.W. Hooker Associates Ltd



Stew Kyle, PQS, CET
Partner

Encl. (Class A Estimate (R.0) – February 22, 2024)

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1. Introduction to the Estimate

1.1 Project Description

This project consists of the Domestic Hot Water (DHW) System Upgrades to the existing building at 348 Davenport Road Toronto Ontario. Based on our review the impacted renovation floor area of work is 263m² (2,831 SF)

Refer to section 7.2 Gross Floor Areas (graphical representation) for area illustrations.

1.2 Type of Estimate

This Class A Estimate is intended to establish a realistic elemental estimate of the hard construction costs based on the level of design information provided. Detailed quantities have been measured from drawings where possible for the proposed building (excluding site). This estimate reflects our opinion as to the fair market value for the hard construction of this project.

The accuracy of the estimate is based on the documentation provided and design stage is intended to be +/- 5%-10%. This accuracy is based on the definition for Estimate Classifications (Class A) outlined in the *Guide to Cost Predictability in Construction prepared by the Joint Federal Government & an Industry Cost Predictability Taskforce. Contingencies are included to offset the accuracy risk, to the extent that the estimated amount represents the current opinion of the likely fair market value at the time of tender.

The intention of the estimate is not to predict the low bid price received; typically based on historical tender results estimates are more likely to be towards the median value of bids received under competitive conditions as per common practice based CIQS guidelines. This is a deliberate methodology due to the inherent risk in attempting to predict the low bid and numerous factors which can contribute to lower than anticipated tender submissions which are beyond our control.

Cost Estimate Classification Systems					
AACE *(1)	Class 5	Class 4	Class 3	Class 2	Class 1
DND *(2)			Indicative	Substantive	
RAIC *(3)	OME	Sketch Design	Design Development	Contract Documents	Tender Documents
GOC *(4)	OME	D	C	B	A
		↓	↓	↓	↓
Design Documentation % Complete					
		12.5%	25.0%	95.0%	100.00%
Cost Estimate Accuracy (+ or - Percentage)					
	+/- 30-100%	+/- 20-30%	+/- 15-20%	+/- 10-15%	+/- 5-10%

Legend

***(1)** AACE Association for the Advancement of Cost Engineering

***(2)** DND Department of National Defence

***(3)** GOC Government of Canada

***(4)** RAIC Royal Architectural Institute of Canada

*Reference: <https://www.cca-acc.com/wp-content/uploads/2016/07/GuideCostPredictability.pdf>

2. Basis of the Estimate

2.1 General Information

From the design information provided, we have measured quantities where possible and applied typical unit rates for each of the specific elements based on the project specifications. Where specific design information has not been provided, unit rates are based on historical cost data for this type of project. In some instances where design information is limited, we have made reasonable assumptions based on our experience with projects of a similar scope and design. Estimates for mechanical and electrical systems are developed based on information prepared by the project engineers

Significant changes to the basis of design will impact the estimate value; this is particularly critical where changes are made after the final estimate prior to tender. We recommend that all major design or scope changes be reviewed for their cost, time and constructability impact prior to incorporation in a finalized tender package.

2.2 Location Cost Base

The location cost base for this estimate is Toronto, Ontario.

2.3 Unit Rates

The unit rates in the preparation of the elemental estimate include labour and material, equipment, and subcontractors overheads and profits. We have assumed for pricing purposes that fair wage / union contractors, sole source tender via city roster would perform the work.

Unit rates in all estimates combine the material, labour, and equipment components for a single unit cost for ease of presentation. This estimate is not a prediction of low bid.

2.4 Taxes

Harmonized Sales Tax (HST) is excluded from our estimate.

2.5 Construction Schedule

The estimate has been prepared on the assumption that the work will be performed within the timelines of a normal construction schedule. The duration of the schedule would be based on the work being performed during regular daytime work hours. No allowances have been included for premium time and after hours work associated with an accelerated construction schedule.

2.6 General Requirements and Fees

The General Requirements for the General Contractor are included as a percentage of the hard construction cost. This estimate of the prime contractor's site overheads includes site supervision and labour, access to the site, site accommodations, site protection, temporary utilities, clean up, equipment, and other miscellaneous project requirements provided by the General Contractor.

The Fee element of the estimate is meant to cover the General Contractor's fee to perform the work. The fee would be based on the competitive nature of the bidding process and the market conditions at the time of tender.

2.7 Bonding and Insurance

We have included the median estimated costs for 50% Performance, 50% Labour and Materials, and 10% bid bonds. These are the traditional bonding requirements commonly requested by the owner. The actual final bonding costs will vary depending on the selected contractors' performance history.

The estimate includes an allowance for general liability and builder's risk insurance based on an average cost per \$1,000 of estimated hard construction costs. The actual insurance costs would be subject to the insurance requirements for the project.

2.8 Procurement

It was assumed for the preparation of this estimate that the project would be sole sourced by a city of Toronto plumber or vendor.

2.9 Specifications

Where detailed and comprehensive specifications are unavailable, we have assumed that no onerous special requirements will be applicable to this project. It was assumed that all materials and equipment could be substituted with an alternative product to avoid sole-sourcing which results in a non-competitive market condition.

2.10 Soft Costs

The estimated soft costs have been excluded in this estimate.

These costs include items traditionally funded by the owner and separate from the hard construction costs which would be applicable to the contractor. The soft costs include items such as consultant fees; disbursements; project management fees; independent inspection and testing; third party commissioning; legal fees; permits and development charges; operational and moving expenses; financing and loan fees; owner supplied furnishings, fixtures, and equipment; land acquisition costs; and Harmonized Sales Tax.

3. Contingencies

3.1 Design and Pricing Contingency

The design and pricing contingency has been excluded from the estimate. This contingency, when included, is meant to cover design and pricing unknowns in the preparation of an estimate to reflect the incomplete nature of the design information provided at the time the estimate is prepared.

3.2 Escalation Contingency

The estimate excludes an allowance for escalation. This allowance, when included, is meant to provide for increases in construction costs due to changes in market conditions between the time of the estimate and the potential construction commencement. For projects with a schedule in excess of 12 months, the contingency is based on a timeframe that takes escalation to the midpoint of the construction phase.

Escalation during construction is included in the unit rates; essentially this allowance is the risk carried by the general contractor and trades with a fixed price made years before the work is completed or carried out for some trades.

3.3 Construction Contingency (Post Contract Changes)

The estimate excludes a contingency for the construction phase of the project. This contingency, when included, is meant to cover the potential cost of post contract changes that may occur after the project is tendered.

As the contingency is excluded from the estimate, we recommend that at a minimum the owner retain a 3-5% contingency for new construction and a 5-7% contingency for renovation. Where a project is of a complex nature these contingencies should be increased to reflect the risk of changes during construction.

This contingency excludes any major program or scope requests by the client; these should form part of an overall project management reserve or be reflected in increased funding.

4. General Liability

4.1 Statement of Probable Costs

A.W. Hooker Associates Ltd. (HOOKER) has no control over the cost of labour and materials, the general contractors or any subcontractors' methods of determining prices, or competitive bidding and market conditions. This opinion of probable cost of construction is based on the experience, qualifications, and best judgment of the professional consultant familiar with the construction industry. HOOKER does not warranty that proposals or actual construction costs will not vary from this or subsequent estimates.

4.2 Ongoing Cost Control

A.W. Hooker Associates Ltd. **recommends** that the owner and/or the design team carefully review the cost estimate report, including line item descriptions, unit price clarifications, exclusions, inclusions and assumptions, contingencies, escalation, and mark-ups. This is to ensure that the design intent is captured within the content of the report. This is especially important at early stage estimates which tend to be based on a lesser level of design completion.

If the project is over budget or there are unresolved budget issues, alternative systems or schemes should ideally be evaluated before proceeding with the design phase. We recommend that cost control be implemented throughout the various stages of the design process to ensure the proposed design remains within the overall budget. It is recommended that the final estimate be produced by HOOKER using Bid Documents to determine overall cost changes, which may have occurred since the preparation of this estimate. The final update estimate will address changes and additions to the documents as well as addenda issued during the bidding process. HOOKER cannot reconcile bid results to any estimate not produced from bid documents including all addenda.

5. Estimate Scope Clarifications

5.1 List of Exclusions

1. Harmonized Sales Tax (HST)
2. Project Soft Costs (as described in item 2.10 above)
3. Furniture, furnishings, and equipment (except as noted in the estimate)
4. Premium time / after hours work
5. Accelerated construction schedule
6. Construction Contingency allowance
7. Escalation Contingency allowance
8. Design and Pricing Contingency allowance
9. Abatement and handling of asbestos and other hazardous materials
10. Premium for construction management or alternate approaches to procurement
11. Consumption costs for any utilities used during construction (gas, water, hydro etc.)
12. Landscaping and major structural modifications

5.2 List of Assumptions

Architectural:

1. We have assumed the majority of the work to be performed during regular day shifts (unrestricted access to the building during the hours of 8AM to 6 PM Monday to Friday).
2. Contractor will clean up daily to general housekeeping standards.
3. Work is assumed to be completed in one continuous phase.
4. Allowance for patch and repair of ceiling finishes have been included.
5. Allowance for through slab coring patch have been included.

Mechanical:

6. Work will be conducted during regular working hours.
7. See estimate for detailed assumptions.

Electrical:

8. Work will be conducted by union/ fair wage contractor during regular working hours.
9. Existing head end equipment has sufficient capacity to accommodate renovation.
10. Refer to estimate for scope specific assumptions.

General:

11. Various assumptions have been made based on the design information available and our experience with projects of a similar nature. Please refer to the specific items within the estimate for the detailed assumptions made.

6. Documentation Received

Drawings and design documentation were provided by RJC:

Pages	Documentation	Documentation Received
2 Drawings	348 Davenport Shelter New DHW Heater Feb-13-2024 REVISED	February 14, 2024

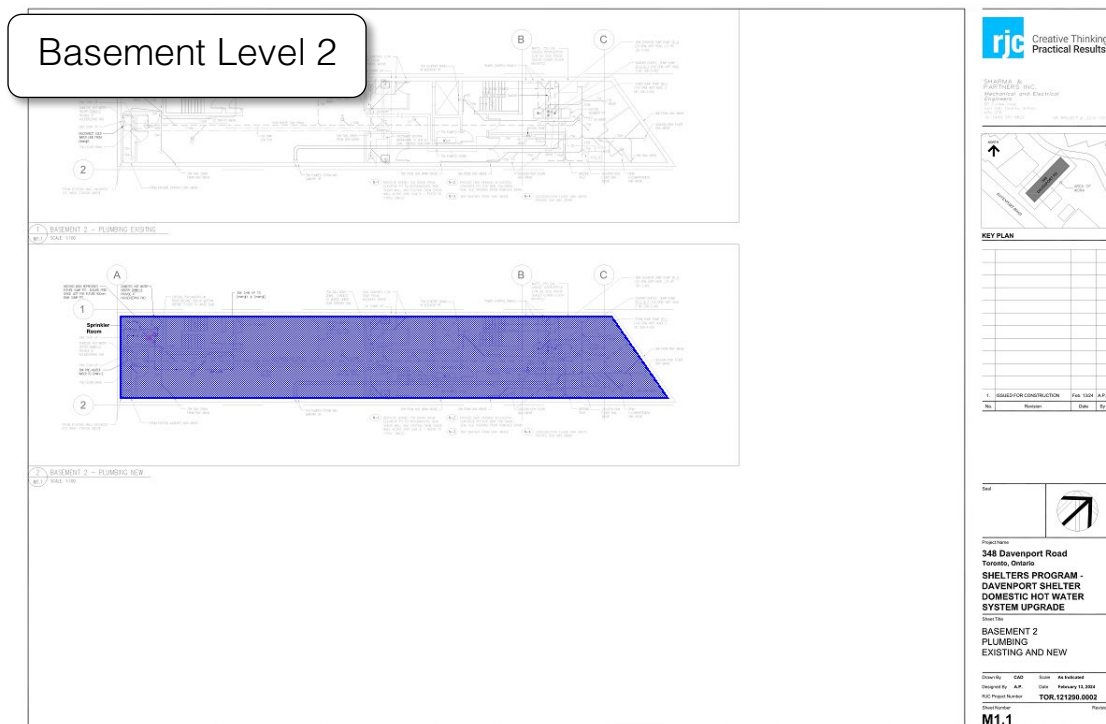
7. Gross Floor Area Summary

The gross floor area of Impacted Renovation Area has been measured from drawing M1.1.

7.1 Summary of Impacted Renovation Area

Area Description	Gross Floor Area
Basement Level 2	263
Total Gross Floor Area (square meters)	263
Total Gross Floor Area (square feet)	2,831

7.2 Gross Floor Areas (graphical representations)



MASTER ESTIMATE SUMMARY
COT 348 DAVENPORT SPRINKLER, PLUMBING &
KITCHEN MODIFICATIONS
Part 1: Domestic Hot Water (DHW) System Upgrade
RJC Project Number: TOR.121290.0014
 CLASS A ESTIMATE (Rev.0)
 FEBRUARY 22, 2024

Hard Construction Costs	GFA (m2)	Unit (Cost/m2)	Sub Total	Estimated Total	% of Total
1 Mechanical	263	\$111.03		\$29,200	44.9%
- Plumbing and Drainage		\$111.03	\$29,200		
- Fire Protection		\$0.00	\$0		
- Heating, Ventilation, Air Conditioning		\$0.00	\$0		
- Controls		\$0.00	\$0		
2 Electrical	263	\$17.34		\$4,560	7.0%
- Service and Distribution		\$17.34	\$4,560		
- Lighting, Devices, and Heating		\$0.00	\$0		
- Systems and Ancillaries		\$0.00	\$0		
3 Ancillary Work	263	\$64.64		\$17,000	26.2%
- Demolition		\$0.00	\$0		
- Alterations		\$64.64	\$17,000		
4 Contractor's General Requirements	263	\$41.83		\$11,000	16.9%
5 Contractor's Fees (OH&P) 5.0%	263	\$11.41		\$3,000	4.6%
6 Design & Pricing Contingency		Excluded			0.0%
Sub Total (current dollars)	263	\$247.15		\$65,000	
7 Escalation Contingency		Excluded			0.0%
Sub Total (Excluding Escalation)	263	\$247.15		\$65,000	
8 Construction Contingency (Post Contract Changes)		Excluded			0.0%
Total Estimated Hard Construction Cost	263	\$247.15		\$65,000	
Imperial Conversion	2,831	\$22.96		Per SF	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
C1. SERVICES - MECHANICAL						
<u>C1.1 Plumbing & Drainage</u>						
<u>C1.12 - Domestic Water</u>						
						\$19,700
1	Connection to existng domestic water distribution piping at various locations	3	NO	\$1,000.00	\$3,000	
2	Electric domestic hot water heater equal to AO Smith #DRE-120 - 119 USG	1	NO	\$10,000.00	\$10,000	
3	Domestic hot and cold water distribution piping, copper type "L" c/w joints, fittings, and supports - 32mm - 38mm dia.	40	m	\$120.00	\$4,800	
4	Thermal insulation to above piping	40	m	\$30.00	\$1,200	
5	Isolation, check, and balancing valves	2	NO	\$350.00	\$700	
<u>C1.13 - Sanitary Waste & Vent</u>						
						\$1,000
6	Condensate drainage to nearest floor drain	1	NO	\$1,000.00	\$1,000	
<u>C1.16 - Specialty Systems:</u>						
<u>C1.16.8 - Selective / General Demolition</u>						
						\$2,500
7	Disconnect, remove and dispose of existing water piping, cap for future reconnection	1	NO	\$2,500.00	\$2,500	
<u>C1.17 - Miscellaneous Works and General Accounts</u>						
						\$6,000
8	Supervision, job set up, clean up, small tools, rentals, permits & inspections, overhead / profit, etc.	1	NO	\$6,000.00	\$6,000	
TOTAL FOR MECHANICAL - Plumbing & Drainage		1.00	263	m2	\$111.03	\$29,200
<u>C1.2 Fire Protection</u>						
9	No work required					
TOTAL FOR MECHANICAL - Fire Protection		0.00	0	m2	\$0.00	\$0
<u>C1.3 Heating, Ventilation & Air Conditioning</u>						
10	No work required					
TOTAL FOR MECHANICAL - HVAC		0.00	0	m2	\$0.00	\$0
<u>C1.4 MECHANICAL - Controls</u>						
11	No work required					
TOTAL FOR MECHANICAL - Controls		0.00	0	m2	\$0.00	\$0
				Total Mech Unit Rate	\$111.03	

C2. SERVICES - ELECTRICAL

No.	Description	Quant.	Unit	Rate	Sub Total	Total
<u>C2.1 ELECTRICAL - Service & Distribution</u>						
<u>C2.11 - Main Service</u>						\$1,980
12	Add a 50A 600V 3P breaker to existing main switchboard	1	NO	\$1,980.00	\$1,980	
<u>C2.12 - Emergency Power</u>						\$0
13	No work required				N/A	
<u>C2.13 - Distribution</u>						\$0
14	No work required				N/A	
<u>C2.14 - Feeders</u>						\$0
15	No work required				N/A	
<u>C2.15 - Motor Controls & Wiring</u>						\$1,930
16	50A 600V 3P power connection with line and load side wiring c/w disconnect switch for electric domestic hot water heater	1	NO	\$1,930.00	\$1,930	
<u>C2.16 - Miscellaneous</u>						\$0
17	No work required				N/A	
<u>C2.17 - Electrical Contractors Overhead</u>						\$650
18	Supervision	1	LS	\$190.00	\$190	
19	Premium time, etc.				N/A	
20	Job set-up, etc.	1	LS	\$300.00	\$300	
21	Rentals, small tools, etc.	1	LS	\$90.00	\$90	
22	Permits & inspections	1	LS	\$60.00	\$60	
23	Insurance	1	LS	\$10.00	\$10	
TOTAL FOR ELECTRICAL - Service & Distribution		1.00	263	m2	\$17.34	\$4,560

D. SITE & ANCILLARY WORK

D2.2 ANCILLARY WORK - Alterations

D2.21 - Alterations

24	Allowance for xray and through core slab drilling to floors	4	NO	\$1,000.00	\$4,000	
25	Allowance for xray and core slab drilling to walls	4	NO	\$1,000.00	\$4,000	
26	Allowance to remove and patch existing ceilings for mechanical work	4	NO	\$500.00	\$2,000	
27	New housekeeping pad , 4" thick including	1	NO	\$1,500.00	\$1,500	
27.1	- roughen existing concrete surface					
27.2	- edge formwork					
27.3	- welded wire fabric 6x6 w2.9/2.9 (152x152 mw18.7/18.7) 1 layer					
27.4	- dowels @ 48" interior of slab, assumed					
27.5	- no.4 (10m) dowels @ 16" around perimeter, 12" lap length with min. 2" epoxy embed. into slab, assumed					
27.6	- concrete					
27.7	- concrete finish					
28	Allowance for miscellaneous metals	1	LS	\$500.00	\$500	
29	Allowance for caulking and fireproofing	1	LS	\$5,000.00	\$5,000	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
	TOTAL FOR ANCILLARY WORK - Alterations	1.00	263 m2	\$64.64	\$17,000	
Z. GENERAL REQUIREMENTS & CONTINGENCIES						
<u>Z1.1 GENERAL REQUIREMENTS & FEES - General Requirements</u>						
<u>Z1.11 - Supervision & Labour Expenses</u>						
30	Allowance for the General Contractor's supervision & labour expenses as follows:		1 LS	\$8,000	\$8,000	15.0%
30.1	- supervision and coordination of subcontractors					
30.2	- site superintendent and vehicle					
30.3	- general labour expenses					
	<u>Cash Allowances</u>				\$0	
31	Independent inspection and testing				Excluded	
	<u>Z1.13 - Permits, Insurance & Bonds</u>				\$3,000	
32	Building permit				Excluded	
33	General Liability and Builder's Risk insurance		1 LS	\$1,500	\$1,500	
34	Labour & Material and Performance bonding		1 LS	\$1,500	\$1,500	
	TOTAL FOR GEN. REQ'MENTS & FEES - Gen. Req'ments	1.00	263 m2	\$41.83	\$11,000	
<u>Z1.2 GENERAL REQUIREMENTS & FEES - Fees</u>						
<u>Z1.21 - General Contractor's Fees</u>						
35	Allowance for the General Contractor's Fees (Head Office Overhead, Profit and Risk). (applied to measured works plus general requirements)		1 LS	\$3,000	\$3,000	5.0%
	TOTAL FOR GEN. REQ'MENTS & FEES - Fees	1.00	263 m2	\$11.41	\$3,000	
<u>Z2.1 ALLOWANCES - Design & Pricing Contingency</u>						
36	Design & Pricing Contingency as a percentage of the above to cover increases in the overall scope of the design during the remaining stages of the design phase (applied to measured works plus general requirements and fees)				Excluded	
	TOTAL FOR ALLOWANCES - Design & Pricing Contingency	1.00	263 m2	\$0.00	\$0	
<u>Z2.2 ALLOWANCES - Escalation Contingency</u>						
37	Contingency for escalation that might occur between the date of the estimate and the anticipated tender date (applied to measured works plus general requirements, fees and Design Contingency)				Excluded	0.0%
	TOTAL FOR ALLOWANCES - Escalation Contingency	1.00	263 m2	\$0.00	\$0	

No.	Description	Quant.	Unit	Rate	Sub Total	Total
<u>Z2.3 ALLOWANCES - Construction Contingency</u>						
38	Construction Contingency for post contract changes (applied to measured works plus general requirements, fees, Design Contingency and Escalation Contingency)				Excluded	0.0%
TOTAL FOR ALLOWANCES - Construction Contingency		1.00	263 m2	\$0.00		\$0