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2012 Rough / Advanced Guide to Construction Costs

Prepared by



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Cost Consultants and Quantity Surveyors

in co-operation with the

Commercial Division

of

THE TORONTO REAL ESTATE BOARD

2012

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The Toronto Real Estate Board was founded in 1920. It strives to promote the real estate business and the public interest, not only through the services individual members provide for clients, but in the operation of the Multiple Listing Service (MLS), a co-operative arrangement through which any Member may sell any property listed on MLS by a member firm.

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The Toronto Real Estate Board's Commercial Division is governed by the Executive Council Commercial Division. The Commercial Division produces a number of publications including Introductory GTA Green Guide, Just the Commercial Facts, and the Rough / Advanced Guide to Construction Costs.

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- The Aragon Group Inc.
- Colonia Treuhand Limited
- SmartCentres
- Royal LePage Commercial Inc.
- The Sorbara Group

4.0 SIOR Standard Method of Establishing Rentable Floor Areas in Industrial Buildings

Please note that the Standard Methods of Measuring Floor Area in Industrial Buildings, developed by BOMA (Building Owners and Managers Association) and SIOR (Society of Industrial and Office REALTORS®) gives users the two alternative methods of measuring an industrial building. Users can choose one of the two dominant market practices observed in North America – the Exterior Wall Methodology or the Drip Line Methodology – depending on their specific building configuration. The guide is available for order online at www.boma.org.

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1.0 A BRIEF EXPLANATION OF THE GUIDE

Some of you may note that the long standing *TREB Rough Guide to Construction Costs* has been combined with the relatively new *TREB Advanced Rough Guide to Construction Costs*. We have divided the information from each of the previous guides largely into their own section, to allow existing users to easily locate the information to which they've grown accustomed to referencing. Our hope is that by bringing these two popular guides under one cover, readers will be able to gain a better understanding of current construction costs.

The purpose of this guide is to give the real estate salesperson and others connected with the real estate profession a guide to current construction costs. It must be emphasized that **this is a guide only** and is not intended to be a definitive statement of the construction costs of individual buildings. **The rates in this guide are not suitable for building appraisal purposes, building permit calculation purposes or construction purposes, as they are only average prices.** Cost variances can occur for a variety of reasons (e.g. building size, shape, shape, & height, location, quality, site area ratio, market conditions) due to the uniqueness of each individual project. Therefore, for specific projects, it is recommended that services of a professional quantity surveying firm be commissioned.

The unit costs given are applicable only to Toronto and district and represent the hard construction cost of the buildings, not the market value. The figures represent the cost at which the sample buildings may be constructed on a flat site under favourable circumstances. They include the cost of general construction and equipment, plumbing, heating and air conditioning, elevators, etc. where applicable, contractors' overhead and profit and Provincial Sales Tax. They do not include the Harmonized Sales Tax. The cost of land, site development, hazardous materials removal (contaminated soil, asbestos, etc.), financing costs and architect's or other professional fees, are not included. The costs, therefore, bear no direct relation to what a purchaser might be prepared to pay for a building.

It should be noted that the costs given in this manual for multi-storey buildings should not be applied to buildings exceeding 30 storeys.

Costs are based on the use of competitive labour for all portions of the work, except where otherwise stated.

The unit costs for factories and warehouses are for owner occupied premises competitively tendered on drawings and specifications prepared by an independent design consultant. Factories and warehouses which are built under a design/build package are frequently constructed to varying standards and may have unit costs which differ **significantly** from those shown in the schedule.

1.1 COST COMMENTS

In 2011, the Toronto construction market experienced changes in construction cost in the range of 3 to 5% (i.e. modest to medium gains). Looking forward, we believe that costs can be expected to continue to rise at the mid to high end of a 3 to 5% per annum range throughout 2012.

We should perhaps note that as our yearly updates are based on our opinion of current pricing levels, individual unit rates listed in this guide are not necessarily intended to 'track to escalation'.

As always, it should also be noted that the predicted range of construction cost increases does not include for potential market conditions during the tendering of a specific project. Therefore, we would continue to caution owners and project team members who are implementing a project to carefully review trade packages with an eye towards facilitating competitive bid conditions.

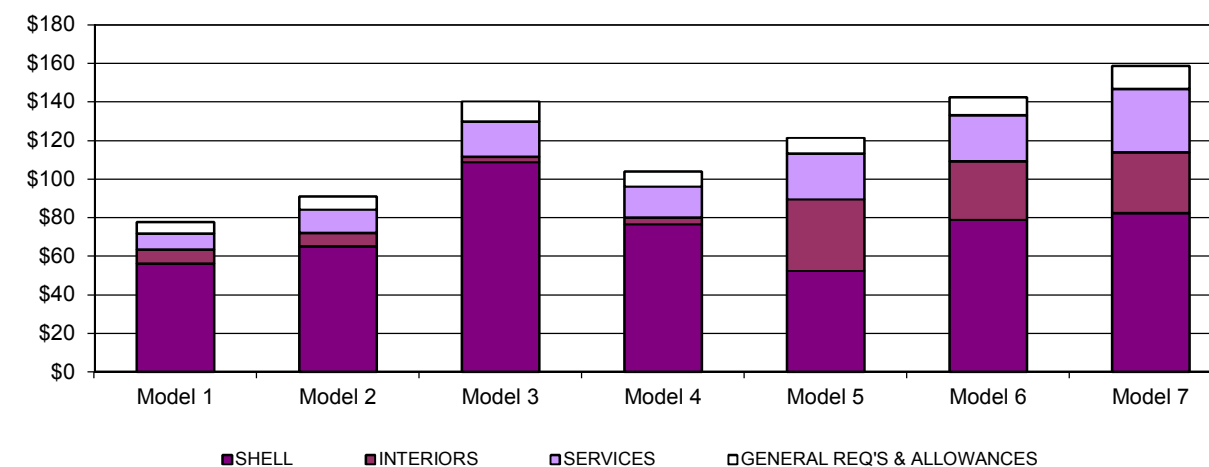
The unit costs contained herein exclude Harmonized Sales Tax (HST). Therefore, in order to achieve accurate costing, the HST at the applicable rate (certain categories of building are subject to partial refund of HST) should be added to all cost exercises based upon the unit costs and additional costs listed in this schedule (see Section 1.4 for further discussion on HST).

3.8 BUILDING ELEMENT COST APPORTIONMENT COMPARISON

Table 2 - Comparison of Cost Apportionment (by \$/SF)

ELEMENT	Model 1 \$/SF	Model 2 \$/SF	Model 3 \$/SF	Model 4 \$/SF	Model 5 \$/SF	Model 6 \$/SF	Model 7 \$/SF
A SHELL	\$56.02	\$65.02	\$108.67	\$76.30	\$52.26	\$78.81	\$82.27
A1 SUBSTRUCTURE	\$5.98	\$8.40	\$13.51	\$7.68	\$7.49	\$9.09	\$12.45
A2 STRUCTURE	\$25.83	\$26.12	\$22.38	\$21.00	\$15.00	\$14.99	\$44.87
A3 EXTERIOR ENCLOSURE	\$24.22	\$30.51	\$72.78	\$47.61	\$29.77	\$54.73	\$24.95
B INTERIORS	\$7.32	\$7.06	\$2.73	\$3.45	\$37.09	\$30.24	\$31.43
B1 PARTITIONS & DOORS	\$2.58	\$2.88	\$1.93	\$2.80	\$19.65	\$12.80	\$11.27
B2 FINISHES	\$2.76	\$2.95	\$0.60	\$0.60	\$12.56	\$12.56	\$8.55
B3 FITTINGS & EQUIPMENT	\$1.99	\$1.23	\$0.20	\$0.04	\$4.88	\$4.88	\$11.61
C SERVICES	\$8.40	\$11.94	\$18.23	\$16.26	\$23.78	\$23.78	\$32.90
C1 MECHANICAL	\$4.65	\$6.76	\$14.00	\$12.49	\$17.84	\$17.84	\$21.05
C2 ELECTRICAL	\$3.75	\$5.18	\$4.23	\$3.76	\$5.94	\$5.94	\$11.85
NET BUILDING COST - EXCL. SITE	\$71.75	\$84.02	\$129.63	\$96.00	\$113.14	\$132.83	\$146.60
Z GENERAL REQ'S & ALLOWANCES	\$5.83	\$6.82	\$10.51	\$7.80	\$8.03	\$9.42	\$11.90
Z1 GENERAL REQ'S & FEE	\$5.83	\$6.82	\$10.51	\$7.80	\$8.03	\$9.42	\$11.90
TOTAL EXCL. ALLOWANCES	\$77.57	\$90.84	\$140.14	\$103.80	\$121.17	\$142.25	\$158.51
Z2 ALLOWANCES	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL INCL. ALLOWANCES	\$77.57	\$90.84	\$140.14	\$103.80	\$121.17	\$142.25	\$158.51

Chart 2 - Comparison of Cost Apportionment (by \$/SF)



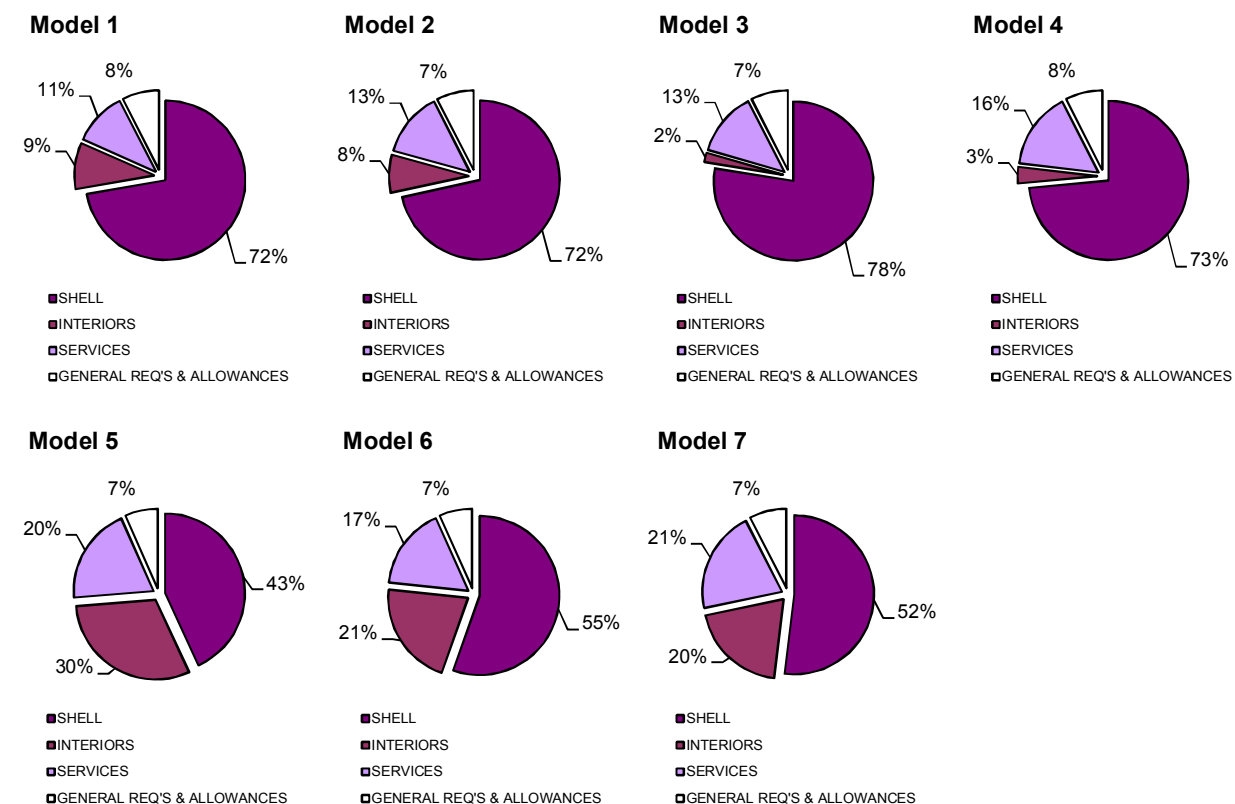
MODEL 1 - Industrial Distribution Building	73,960 SF
MODEL 2 - Heavy Industrial Building	37,800 SF
MODEL 3 - Small Commercial Retail Unit	4,311 SF
MODEL 4 - Large Commercial Retail Unit	20,327 SF
MODEL 5 - Townhouse (2 Storey) Middle Unit	1,444 SF
MODEL 6 - Townhouse (2 Storey) End Unit	1,444 SF
MODEL 7 - Residential Condominium	101,547 SF

3.8 BUILDING ELEMENT COST APPORTIONMENT COMPARISON

Table 1 - Comparison of Cost Apportionment (by Percent)

ELEMENT	Model 1 % of Total	Model 2 % of Total	Model 3 % of Total	Model 4 % of Total	Model 5 % of Total	Model 6 % of Total	Model 7 % of Total
A SHELL	72.2	71.6	77.5	73.5	43.1	55.4	51.9
A1 SUBSTRUCTURE	7.7	9.2	9.6	7.4	6.2	6.4	7.9
A2 STRUCTURE	33.3	28.8	16.0	20.2	12.4	10.5	28.3
A3 EXTERIOR ENCLOSURE	31.2	33.6	51.9	45.9	24.6	38.5	15.7
B INTERIORS	9.4	7.8	1.9	3.3	30.6	21.3	19.8
B1 PARTITIONS & DOORS	3.3	3.2	1.4	2.7	16.2	9.0	7.1
B2 FINISHES	3.6	3.3	0.4	0.6	10.4	8.8	5.4
B3 FITTINGS & EQUIPMENT	2.6	1.4	0.1	0.0	4.0	3.4	7.3
C SERVICES	10.8	13.1	13.0	15.7	19.6	16.7	20.8
C1 MECHANICAL	6.0	7.4	10.0	12.0	14.7	12.5	13.3
C2 ELECTRICAL	4.8	5.7	3.0	3.6	4.9	4.2	7.5
NET BUILDING COST - EXCL. SITE	92.5	92.5	92.5	92.5	93.4	93.4	92.5
Z GENERAL REQ'S & ALLOWANCES	7.5	7.5	7.5	7.5	6.6	6.6	7.5
Z1 GENERAL REQ'S & FEE	7.5	7.5	7.5	7.5	6.6	6.6	7.5
TOTAL EXCL. ALLOWANCES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Z2 ALLOWANCES	-	-	-	-	-	-	-
TOTAL INCL. ALLOWANCES	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Chart 1 - Comparison of Cost Apportionment (by Percent)



1.2 ADDITIONAL COSTS

The building unit rates presented in this guide represent construction costs only. Accordingly, they do not include for any of the items listed below:

A - Allowances

1. Design Allowance (allows for changes during the design of a project, excluding increases to scope)
2. Escalation Allowance (allows for increases in costs from the estimate date to the project tender date)
3. Construction Allowance (allows for 'change orders' during construction period)

Typically vary depending on the complexity of the project and the level of completed design from approximately 5% to 15%.

B - Soft Costs

1. Architectural and engineering fees
2. Legal fees
3. Land Surveyors' fees
4. Developers' head office and administrative costs
5. Marketing
6. Land transfer taxes
7. Assembly fees
8. Land taxes during construction
9. Sewer levies and other impost charges
10. Soil tests
11. Brokers' / leasing commissions (based on 5 year)
12. Completion appraisal
13. Completion surveys
14. Development charges, site and/or construction levies

Typically range from 8 to 15% of the total costs of the 'Construction Estimate' value (provided in this guide) and 'A - Allowances'.

C - Land Costs and Related (except as noted under Section 2.0)

1. Land
2. Site services, landscaping, roads and sidewalks outside the individual property line
3. Interim financing and stand-by fees
4. Title insurance

D - Project Specific Costs

1. Special foundation requirements including piles, caissons, shoring, underpinning, rock blasting, hazardous materials removal, including contaminated soil, environmental remediation, brownfield, asbestos, etc.
2. Tenant inducements, special equipment and/or furnishings

Unfortunately, 'C - Land and Related' and 'D - Project Specific Costs' are truly quite project specific and therefore difficult to approximate. We would suggest contact a representative of the TREB Commercial Division for further assistance.

E - Taxes

1. The Harmonized Sales Tax (see Section 1.4 for further discussion on HST)

Category 'E - Taxes' represents mainly the impact of HST on a project.

To arrive at a more complete cost, one would need to sum up the costs provided in this report together with allowances for the above categories:

$$\text{Project \$} = \text{Construction Estimate (Costs in this Guide)} + A + B + C + D + E$$

In addition to the above, we would recommend that a 'contingency' could be carried in the range of 5-15% of the cost of construction for project specific requirements.

1.3 METHOD OF MEASUREMENT

The appropriate method of measuring building gross floor areas for use with the unit rates contained in this guide is that adopted by the Canadian Institute of Quantity Surveyors and is generally as follows:

1. Measure each floor including the basement to the outer face of the external walls. No deductions are to be made for openings within the floor area, i.e. for stairs, elevators, ducts, etc. Include the area of all mezzanine floors.
2. Mezzanine (unfinished) floor areas in industrial buildings should not be included in the gross floor area.
3. Measure special floors, such as enclosures for mechanical equipment, crawl spaces having concrete floors, areaways, balconies, etc., separately.
4. Measure sloping and stepped floors as flat
5. When the external walls are broken up with a large number of small projections (e.g. projecting column) the measurement should be taken to the mean face of the external wall.
6. Exclude all external steps, paved areas and covered ways.

When using the unit rates contained in this guide, in the case of townhouses and residences, the area of the basement should not be included in the square foot (square meter) area.

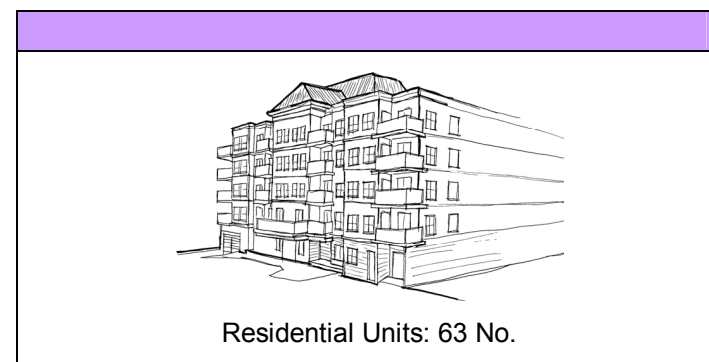
3.7 RESIDENTIAL CONDOMINIUM

Building Area (GFA): 101,547 SF (Incl. Parking)

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		101,547 SF			\$8,353,910		\$82.27	51.9
A1 SUBSTRUCTURE					\$1,264,200		\$12.45	7.9
A11 Foundations	0.204	20,699 SF	17.54	363,130		3.58		
A12 Basement Excavation	0.164	16,688 CY	16.48	275,070		2.71		
A13 Special Conditions	0.204	20,699 SF	30.24	626,000		6.16		
A2 STRUCTURE					\$4,556,520		\$44.87	28.3
A21 Lowest Floor Construction	0.204	20,699 SF	6.77	140,190		1.38		
A22 Upper Floor Construction	0.796	80,848 SF	46.06	3,723,700		36.67		
A23 Roof Construction	0.204	20,699 SF	33.46	692,630		6.82		
A3 EXTERIOR ENCLOSURE					\$2,533,190		\$24.95	15.7
A31 Walls Below Grade	0.152	15,424 SF	31.16	480,650		4.73		
A32 Walls Above Grade	0.256	25,995 SF	42.66	1,108,960		10.92		
A33 Windows & Entrances	0.068	6,931 SF	48.50	336,200		3.31		
A34 Roof Covering	0.114	11,571 SF	19.48	225,440		2.22		
A35 Projections	1.000	101,547 SF	3.76	381,940		3.76		
B INTERIORS		101,547 SF			\$3,191,900		\$31.43	19.8
B1 PARTITIONS & DOORS					\$1,144,120		\$11.27	7.1
B11 Partitions	0.905	91,883 SF	8.77	806,040		7.94		
B12 Doors	0.003	354 Lvs	955.03	338,080		3.33		
B2 FINISHES					\$868,600		\$8.55	5.4
B21 Floor Finishes	1.000	101,547 SF	3.78	384,210		3.78		
B22 Ceiling Finishes	1.000	101,547 SF	2.38	242,080		2.38		
B23 Wall Finishes	2.465	250,346 SF	0.97	242,310		2.39		
B3 FITTINGS & EQUIPMENT					\$1,179,180		\$11.61	7.3
B31 Fittings & Fixtures	1.000	101,547 SF	6.30	640,160		6.30		
B32 Equipment	1.000	101,547 SF	2.34	237,420		2.34		
B33 Elevators	0.000	2 No	150,800.00	301,600		2.97		
C SERVICES		101,547 SF			\$3,341,120		\$32.90	20.8
C1 MECHANICAL					\$2,137,510		\$21.05	13.3
C11 Plumbing & Drainage	1.000	101,547 SF	11.13	1,130,470		11.13		
C12 Fire Protection	1.000	101,547 SF	2.00	202,930		2.00		
C13 HVAC	1.000	101,547 SF	7.54	766,160		7.54		
C14 Controls	1.000	101,547 SF	0.37	37,950		0.37		
C2 ELECTRICAL					\$1,203,610		\$11.85	7.5
C21 Service & Distribution	1.000	101,547 SF	3.57	362,760		3.57		
C22 Lighting, Devices & Heating	1.000	101,547 SF	5.33	541,150		5.33		
C23 Systems & Ancillaries	1.000	101,547 SF	2.95	299,700		2.95		
NET BUILDING COST - EXCLUDING SITE					\$14,886,930		\$146.60	92.5
Z GENERAL REQ'S & ALLOWANCES					\$1,208,800		\$11.90	7.5
Z1 GENERAL REQ'S & FEE					\$1,208,800		\$11.90	7.5
Z11 General Requirements	6.0%			893,200		8.80		
Z12 Fee	2.0%			315,600		3.11		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$16,095,730		\$158.51	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%		(Excluded)	-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$16,095,730		\$158.51	100.0
							\$1,706 /m2	

Note: 'Rate per SF of GFA' is based on the building area including the two levels of underground parking.

3.7 RESIDENTIAL CONDOMINIUM



Building Area		
Incl. Parking	101,547 SF	9,434 m ²

Note: '\$/SF' is for area including 41,398SF for 2 parking levels

Construction Cost			
Ranges	\$ /SF	\$ /m ²	%
Lower	\$143.70	\$1,547	(9.3%)
As priced	\$158.51	\$1,706	0%
Upper	\$174.94	\$1,883	10.4%

BUILDING INFORMATION:

Substructure:	Foundations: reinforced concrete foundation walls, pad and strip footings Basement excavation: 2 levels of below grade parking Special conditions: shoring with soldier piles, lagging & rakers; dewatering to excavation
Structure:	Lowest floor construction: 5" (125mm) slab on grade to lowest parking level with 2-1/2" (65mm) concrete topping Upper floor construction: reinforced concrete frame; reinforced concrete stairs Roof construction: reinforced concrete frames; structural steel frame to penthouse
Exterior Enclosure:	Walls below grade: reinforced concrete walls Walls above grade: 2% stucco; 2% aluminum curtain wall; 24% precast concrete; 72% clay brick veneer on stud back up Windows and entrances: glazed aluminum windows and entry systems; overhead doors to parking; hollow metal service doors Roof coverings: built up roofing with stone ballast (R20); prefinished metal to penthouse Projections: precast cornices; patios and terraces
Partitions & Doors:	Interior partitions: 2% glazed screens; 15% concrete block; 83% gypsum wallboard and furring on metal studs Interior doors: 26% hollow metal doors; 72% wood doors to suites; 2% other
Finishes:	Floor finish: 7% miscellaneous; 10% ceramic tile; 10% sealed concrete; 35% traffic topping; 38% carpet Ceiling finish: 28% painted suspended cement board and gypsum wallboard; 72% paint to structure Wall finish: 3% ceramic tile; 97% paint
Fittings & Equipment:	Fittings & fixtures: plastic laminate vanities, kitchen and misc. millwork; hollow core closet doors; wire mesh lockers Equipment: mailboxes; garbage chute; gas fireplaces; rooftop anchors for window washing Elevators: 2 geared overhead traction passenger elevators, 7 stops
Mechanical:	Residential type plumbing fixtures Storm drain system to roof connected to underground system (control flow) Natural gas for heating to each suite and common areas Sprinklers to basement and underground parking Heating/cooling units in each suite and common areas Washroom exhaust fan and ductwork Programmable thermostats Snow melting to ramps, glycol system
Electrical:	800A 600V 3ph 3W incoming service; 347/600V panels, step down transformers and 120/208V panels Digital metering to individual units Lighting: combination incandescent and fluorescent to corridors and common areas, fluorescent to kitchens, incandescent to all other areas with local switches and photocell & timer for lighting control. Exterior wall mounted fixtures for perimeter lighting Duplex receptacles to living areas, bedrooms and common areas, split circuit receptacles to kitchens and mechanical areas Fire alarm system: single stage c/w control panel, detectors & bell, smoke detectors in suites Other systems: cable television [CATV] and security system, only empty conduiting is provided for communication systems

1.4 ESTIMATOR'S CHECKLIST – TIPS TO GET THE MOST OUT OF THIS GUIDE

Before you begin...

Read the introductory notes and comments included in this guide. Pay careful attention to inclusions, exclusions and recommendations regarding appropriate uses for cost information. Remember, this publication is intended as a guide only and should not be considered as a definitive statement of construction costs of individual buildings

1. Get the area right.

The construction unit rates in this guide should be multiplied by the building gross floor area to determine the construction cost. Generally, the gross floor area is defined as the area measured from the outside face of exterior walls. No deductions should be taken for interior openings such as stairwells, elevator shafts, duct shafts, etc. The gross floor area includes all building support functions such as circulation spaces, unfinished areas, mechanical & electrical rooms and basements except where noted otherwise in the Cost Model notes. Be sure that you are using the appropriate building area in your calculations. See Section 1.3 of this guide for details.

2. Choose the appropriate project type

Read the Building Information for each of the models and select the building model that most closely matches your requirements. Be sure not to confuse metric and imperial areas and rates. Remember that the rates and costs in this guide are priced for the identified model building types and may require adjustment to suit project specific conditions.

3. Make allowance for 'Additional Costs'.

Section 1.2 of this guide describes items that are not included in the building unit rates. Review these items carefully, note which items are applicable to your project, and make separate provision for them in your estimate.

6. Consider cost escalation.

All building unit rates and costs in this guide are expressed in January 2012 dollar terms. Estimates prepared using these rates assume construction will commence in January 2012. Be sure to make provision for construction cost escalation by adding an allowance for cost increases between January 2012 and the anticipated construction start date of your project.

7. Don't forget HST, and what else?

The building unit rates and costs in this guide do not include HST. Be sure that you have accounted for HST separately. You should also review Section 1.2 to get a sense of what's not already included in the costs provided in this guide.

8. Finally...check your arithmetic.

Enough said. Also, take the time to thoroughly document your estimating procedure and assumptions. Six months from now, you'll be glad you did.

1.5 UNIT OF MEASURE CONVERSION TABLES

LENGTH

Imperial to Metric

1 inch	=	25.4 mm
1 foot	=	304.8 mm
1 yard	=	914.4 mm

Metric to Imperial

1 millimetre	=	0.039 370 079 inch
1 centimetre	=	0.393 700 787 inch
1 metre	=	39.370 078 74 inches
1 kilometre	=	0.621 369 949 mile

AREA

Imperial to Metric

1 square inch	=	645.16 mm ²	=	6.451 6 cm ²
1 square foot	=	0.092 903 04 m ²	=	929.030 4 cm ²
1 square yard	=	0.836 127 36 m ²		
1 acre	=	4046.856 422 4 m ²	=	0.404 685 642 ha
1 square mile	=	2.589 988 11 km ²	=	258.998 811 034 ha

Metric to Imperial

1 square millimetre	=	0.001 550 003 sq in	=	0.000 010 764 sq ft
1 square centimetre	=	0.155 000 31 sq in	=	0.000 119 599 sq yd
1 square metre	=	10.763 910 417 sq ft	=	0.000 247 105 acres
1 hectare	=	11959.900 463 011 sq yd		
1 square kilometre	=	0.386 102 159 square mile		

VOLUME

Imperial to Metric

1 cubic inch	=	16.387 064 cm ³
1 cubic foot	=	0.028 316 847 m ³
1 cubic yard	=	0.764 554 858 m ³

Metric to Imperial

1 cubic millimetre	=	0.000 061 024 cu in		
1 cubic centimetre	=	0.061 023 744 cu in		
1 cubic metre	=	35.314 666 721 cu ft	=	1.307 950 619 cu yd

3.6 TOWNHOUSE (2 STOREY) END UNIT

Building Area (GFA): 1,444 SF (Excl. Basement)

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		1,444 SF			\$113,800		\$78.81	55.4
A1 SUBSTRUCTURE					\$13,130		\$9.09	6.4
A11 Foundations	0.575	830 SF	12.41	10,300		7.13		
A12 Basement Excavation	0.194	280 CY	10.11	2,830		1.96		
A13 Special Conditions	0.001	1 Nil	0.00	-		-		
A2 STRUCTURE					\$21,640		\$14.99	10.5
A21 Lowest Floor Construction	0.575	830 SF	2.61	2,170		1.50		
A22 Upper Floor Construction	1.000	1,444 SF	10.90	15,740		10.90		
A23 Roof Construction	0.575	830 SF	4.49	3,730		2.58		
A3 EXTERIOR ENCLOSURE					\$79,030		\$54.73	38.5
A31 Walls Below Grade	0.586	846 SF	26.22	22,180		15.36		
A32 Walls Above Grade	0.848	1,224 SF	25.31	30,980		21.45		
A33 Windows & Entrances	0.187	270 SF	48.74	13,160		9.11		
A34 Roof Covering	0.575	830 SF	4.92	4,080		2.83		
A35 Projections	1.575	2,274 SF	3.80	8,630		5.98		
B INTERIORS		1,444 SF			\$43,670		\$30.24	21.3
B1 PARTITIONS & DOORS					\$18,490		\$12.80	9.0
B11 Partitions	1.360	1,964 SF	6.89	13,530		9.37		
B12 Doors	0.012	17 No.	291.76	4,960		3.43		
B2 FINISHES					\$18,140		\$12.56	8.8
B21 Floor Finishes	1.575	2,274 SF	3.23	7,340		5.08		
B22 Ceiling Finishes	1.575	2,274 SF	1.08	2,450		1.70		
B23 Wall Finishes	3.260	4,708 SF	1.77	8,350		5.78		
B3 FITTINGS & EQUIPMENT					\$7,040		\$4.88	3.4
B31 Fittings & Fixtures	1.575	2,274 SF	3.10	7,040		4.88		
B32 Equipment	1.575	2,274 SF	0.00	-		-		
B33 Elevators	0.001	1 Nil	0.00	-		-		
C SERVICES		1,444 SF			\$34,340		\$23.78	16.7
C1 MECHANICAL					\$25,760		\$17.84	12.5
C11 Plumbing & Drainage	1.575	2,274 SF	7.69	17,480		12.11		
C12 Fire Protection	1.575	2,274 SF	0.00	-		-		
C13 HVAC	1.575	2,274 SF	3.36	7,640		5.29		
C14 Controls	1.575	2,274 SF	0.28	640		0.44		
C2 ELECTRICAL					\$8,580		\$5.94	4.2
C21 Service & Distribution	1.575	2,274 SF	0.96	2,190		1.52		
C22 Lighting, Devices & Heating	1.575	2,274 SF	2.35	5,350		3.70		
C23 Systems & Ancillaries	1.575	2,274 SF	0.46	1,040		0.72		
NET BUILDING COST - EXCLUDING SITE					\$191,810		\$132.83	93.4
Z GENERAL REQ'S & ALLOWANCES					\$13,600		\$9.42	6.6
Z1 GENERAL REQ'S & FEE					\$13,600		\$9.42	6.6
Z11 General Requirements	5.0%			9,600		6.65		
Z12 Fee	2.0%			4,000		2.77		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$205,410		\$142.25	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%		(Excluded)	-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$205,410		\$142.25	100.0
							\$1,531 /m²	

Note: 'Rate per SF of GFA' is based on the building area excluding the basement and garage.

3.6 TOWNHOUSE (2 STOREY) END UNIT



Building Area		
Excl. Basement	1,444 SF	134 m2
Incl. Basement	2,274 SF	211 m2

Note: '\$/SF' based on 'Excl. Basement' area, garage excluded

Construction Cost			
Ranges	\$ /SF	\$ /m2	%
Lower	\$130.89	\$1,409	(8.0%)
As priced	\$142.25	\$1,531	0%
Upper	\$157.06	\$1,691	10.4%

BUILDING INFORMATION:

- Substructure:** Foundations: reinforced concrete foundation walls, pad and strip footings
Basement excavation: to basement
Special conditions: none
- Structure:** Lowest floor construction: 3" (75mm) slab on grade to basement; 4" (100mm) slab on grade to garage
Upper floor construction: framed using composite wood joists with 5/8" oriented strand board [OSB] tongue & groove [T&G] subfloor
Roof construction: framed using wood trusses with 3/8" plywood sheathing
- Exterior Enclosure:** Walls below grade: reinforced concrete basement wall with dampproofing and drainage board
Walls above grade: 40% vinyl siding on 6" stud framing (R20); 60% calcite face brick veneer on 6" stud framing (R20)
Windows and entrances: wood framed windows; glazed patio door; prefinished entry door; overhead garage door
Roof coverings: standard asphalt shingle; blown insulation (R32)
Projections: front porch, upper and lower roof overhangs
- Partitions & Doors:** Interior partitions: gypsum wallboard on wood studs over reinforced concrete (party walls); gypsum wallboard on wood studs (typically)
Interior doors: hollow core wood doors on hollow metal frames
- Finishes:** Floor finish: 5% vinyl composite tile [VCT]; 10% ceramic tile; 16% oak strip; 17% no finish; 25% carpet; 27% sealed concrete
Ceiling finish: painted gypsum wallboard; no finish to garage and basement areas
Wall finish: 20% ceramic tile; 80% paint
- Fittings & Equipment:** Fittings & fixtures: plastic laminate vanities, kitchen and misc. millwork; hollow core closet doors
Equipment: none (appliances excluded)
- Mechanical:** Washrooms: 2 no. 3 piece (WC, lav, bath), 1 no. 2 piece and rough in for future 3 piece washroom in basement
Storm drain by other trades
Natural gas for water heater and furnace
Heating & cooling: gas fired furnace - 40,000 BTU [British Thermal Unit], split A/C unit, 1.5 ton
Ductwork c/w diffusers and grilles
Bathroom ceiling exhaust fans and kitchen range hood
Programmable thermostat
- Electrical:** 100A 120/208V 3ph incoming service c/w 100A 42 cct. Panel
Lighting: incandescent to basement, corridors and washrooms, fluorescent to kitchen and 1/2 switched receptacle to living & bedrooms
Receptacles, split circuit receptacles in kitchen & mechanical connections
Fire alarm: smoke alarm, interconnected
Rough in for telephone and cable TV (cable pulled)

2.0 ROUGH GUIDE CONSTRUCTION CATEGORY NOTES

The gross area multiplied by the unit cost per square foot or meter shall include all the work usually included in the main building contract, briefly, all the architectural trades, structural, mechanical and electrical work contained within the building and all site services, soft landscaping, paving and all sidewalks within the property line. Costs are based on the use of commercial union labour.

1. Factories

Light Engineering and Warehousing. This type is single storey of brick facing and backup block to three faces, and block to the expansion wall; (buildings over 22' high are generally faced in steel or precast panels); contains approximately 10% office space; (the office space is air conditioned with a suspended ceiling, vinyl flooring painted drywall walls); standard plumbing fixtures for both male and female washrooms; standard lighting and electrical fixtures in plant; 400 amp, 600 volts 3-phase electric service and no air conditioning. Heating by gas fired suspended furnaces (ducted to office area). Building fully sprinklered. No air conditioning to factory area.

Heavy Engineering. (Custom Designed) Similar to Light Engineering but with high bays and structurally heavier to take moving cranes and equipment, but cranes and equipment are not included. This building type generally has much larger foundations, heavier electrical services, standard lighting and electrical fixtures, standard plumbing and no air conditioning, 10% finished office with vinyl composite tile floors, suspended T-bar ceiling with acoustic panels, recessed fluorescent fixtures, and drywall construction. Overhead doors would be electrically operated and at least 18' high.

The costs do not include any special features which a particular industry would require.

It should be noted that the costs of building over 50,000 square feet (4,645 m2) are liable to fluctuate widely since buildings of this size would be occupied by a more specialized type of industry than those of smaller area.

2. Pre-engineered Metal Buildings

Buildings similar to Stransteel or Robertson type pre-engineered industrial buildings. The category description would be similar to '1 Factories' listed above, with prefinished insulated siding in lieu of brick and block. It should be noted that pre-engineered metal buildings are no longer confined only to the industrial field and the prices in this category should not be applied to buildings other than those of the industrial type.

3. Office Buildings

Tenants in office buildings usually pay for their own interior office partitions and finishes, the developer paying for the shell of the building together with demising walls (main division, passage of structural walls, including toilet partitions elevator walls), basic services and finishes. In this context, therefore, the costs given for the shell only are, in effect, the costs to the developer, and the costs given for the building partitioned for tenants, are for the completed building occupied by the tenant. The cost of partitioning and finishing space in an office building for a tenant can fluctuate widely and can add as much as \$39 per square foot (\$420 per m2) of the net rentable area for average office space. The figures given here assume one lineal foot (300 mm) of partitioning for every ten square feet (one square meter) of rentable area.

In all cases air conditioning has been included in the costs.

2.0 ROUGH GUIDE CONSTRUCTION CATEGORY NOTES (Continued)

4. Stores

Stores that are similar to those found in a small neighbourhood shopping plaza. Typically single storey construction arranged in strips with exterior access, both front and rear.

Costs given for single storey stores without basement and for supermarkets with basement are the basic costs for these types of buildings. If a basement is provided, the area of the basement times the unit price given for basements must be added to the basic cost to determine the total cost. Similarly, if apartments or office space are provided above stores, the area of this accommodation times the unit price given should be added to the basic cost.

The 'Big Box Retail' category includes retail commercial buildings similar to those found in power centres or new format retail centres. Typically the units are larger than conventional stores and may be constructed in ways commonly associated with industrial or warehouse type buildings, utilizing less of the upgrades often associated with smaller neighbourhood or community shopping facilities.

Costs of stores with or without a basement and with or without apartments or office space above are based on the use of residential union labour. Costs of supermarkets, department stores, chain or discount stores and 'Big Box Retail' are based on the use of commercial union labour

5. Schools

School costs are given as a guide to current trends.

6. Banks

The costs given for banks are for single storey branch banks, usually with a basement. The figures include for some built-in fittings, but not for special bank equipment such as vault doors, and security grilles.

7. Medical Centres

The costs given for medical centres are for two or three storey neighbourhood centres containing about 24 suites.

8. Hotels

The three classifications given envisage small licensed premises (excluding indoor parking), average multi-storey hotels and prestige multi-storey hotels (including indoor parking). Costs do not include furnishings.

9. Motels

Costs for motels with less than 20 units allow for a small coffee bar. For over 20 units without convention facilities, a dining lounge is included. For over 20 units with convention facilities, such facilities as banqueting hall, convention rooms, bars, dining room and lounges are included. Swimming pools and similar exotic features are not included, nor are furnishings and landscaping.

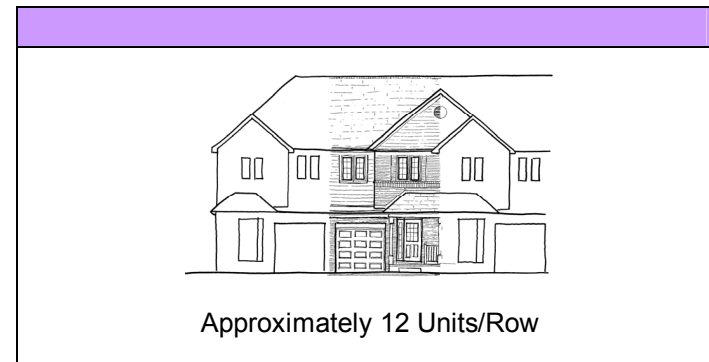
3.5 TOWNHOUSE (2 STOREY) MIDDLE UNIT

Building Area (GFA): 1,444 SF (Excl. Basement)

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		1,444 SF			\$75,470		\$52.26	43.1
A1 SUBSTRUCTURE					\$10,820		\$7.49	6.2
A11 Foundations	0.575	830 SF	10.92	9,060		6.27		
A12 Basement Excavation	0.163	236 CY	7.46	1,760		1.22		
A13 Special Conditions	0.001	1 Nil	0.00	-		-		
A2 STRUCTURE					\$21,660		\$15.00	12.4
A21 Lowest Floor Construction	0.575	830 SF	2.61	2,170		1.50		
A22 Upper Floor Construction	1.000	1,444 SF	10.91	15,760		10.91		
A23 Roof Construction	0.575	830 SF	4.49	3,730		2.58		
A3 EXTERIOR ENCLOSURE					\$42,990		\$29.77	24.6
A31 Walls Below Grade	0.309	446 SF	26.19	11,680		8.09		
A32 Walls Above Grade	0.315	455 SF	23.43	10,660		7.38		
A33 Windows & Entrances	0.140	202 SF	45.89	9,270		6.42		
A34 Roof Covering	0.575	830 SF	4.92	4,080		2.83		
A35 Projections	1.575	2,274 SF	3.21	7,300		5.06		
B INTERIORS		1,444 SF			\$53,560		\$37.09	30.6
B1 PARTITIONS & DOORS					\$28,380		\$19.65	16.2
B11 Partitions	1.793	2,589 SF	9.05	23,420		16.22		
B12 Doors	0.012	17 No.	291.76	4,960		3.43		
B2 FINISHES					\$18,140		\$12.56	10.4
B21 Floor Finishes	1.575	2,274 SF	3.23	7,340		5.08		
B22 Ceiling Finishes	1.575	2,274 SF	1.08	2,450		1.70		
B23 Wall Finishes	3.260	4,708 SF	1.77	8,350		5.78		
B3 FITTINGS & EQUIPMENT					\$7,040		\$4.88	4.0
B31 Fittings & Fixtures	1.575	2,274 SF	3.10	7,040		4.88		
B32 Equipment	1.575	2,274 SF	0.00	-		-		
B33 Elevators	0.001	1 Nil	0.00	-		-		
C SERVICES		1,444 SF			\$34,340		\$23.78	19.6
C1 MECHANICAL					\$25,760		\$17.84	14.7
C11 Plumbing & Drainage	1.575	2,274 SF	7.69	17,480		12.11		
C12 Fire Protection	1.575	2,274 SF	0.00	-		-		
C13 HVAC	1.575	2,274 SF	3.36	7,640		5.29		
C14 Controls	1.575	2,274 SF	0.28	640		0.44		
C2 ELECTRICAL					\$8,580		\$5.94	4.9
C21 Service & Distribution	1.575	2,274 SF	0.96	2,190		1.52		
C22 Lighting, Devices & Heating	1.575	2,274 SF	2.35	5,350		3.70		
C23 Systems & Ancillaries	1.575	2,274 SF	0.46	1,040		0.72		
NET BUILDING COST - EXCLUDING SITE					\$163,370		\$113.14	93.4
Z GENERAL REQ'S & ALLOWANCES					\$11,600		\$8.03	6.6
Z1 GENERAL REQ'S & FEE					\$11,600		\$8.03	6.6
Z11 General Requirements	5.0%			8,200		5.68		
Z12 Fee	2.0%			3,400		2.35		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$174,970		\$121.17	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%		(Excluded)	-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$174,970		\$121.17	100.0
							\$1,304 /m2	

Note: 'Rate per SF of GFA' is based on the building area excluding the basement and garage.

3.5 TOWNHOUSE (2 STOREY) MIDDLE UNIT



Building Area		
Excl. Basement	1,444 SF	134 m2
Incl. Basement	2,274 SF	211 m2

Note: '\$/SF' based on 'Excl. Basement' area, garage excluded

Construction Cost			
Ranges	\$ /SF	\$ /m2	%
Lower	\$111.04	\$1,195	(8.4%)
As priced	\$121.17	\$1,304	0%
Upper	\$134.40	\$1,447	10.9%

BUILDING INFORMATION:

- Substructure:** Foundations: reinforced concrete foundation walls, pad and strip footings
 Basement excavation: to basement
 Special conditions: none
- Structure:** Lowest floor construction: 3" (75mm) slab on grade to basement; 4" (100mm) slab on grade to garage
 Upper floor construction: framed using composite wood joists with 5/8" oriented strand board [OSB] tongue & groove [T&G] subfloor
 Roof construction: framed using wood trusses with 3/8" plywood sheathing
- Exterior Enclosure:** Walls below grade: reinforced concrete basement wall with dampproofing and drainage board
 Walls above grade: 40% vinyl siding on 6" stud framing (R20); 60% clay face brick veneer on 6" stud framing (R20)
 Windows and entrances: wood framed windows; glazed patio door; prefinished entry door; overhead garage door
 Roof coverings: standard asphalt shingle; blown insulation (R32)
 Projections: front porch, upper and lower roof overhangs
- Partitions & Doors:** Interior partitions: gypsum wallboard on wood studs over reinforced concrete (party walls); gypsum wallboard on wood studs (typically)
 Interior doors: hollow core wood doors in hollow metal frames
- Finishes:** Floor finish: 5% vinyl composite tile; 10% ceramic tile; 16% oak strip; 17% no finish; 25% carpet; 27% sealed concrete
 Ceiling finish: painted gypsum wallboard; no finish to garage and basement areas
 Wall finish: 20% ceramic tile; 80% paint
- Fittings & Equipment:** Fittings & fixtures: plastic laminate vanities, kitchen and misc. millwork; hollow core closet doors
 Equipment: none (appliances excluded)
- Mechanical:** Washrooms: 2 no. 3 piece (WC, lav, bath), 1 no. 2 piece and rough in for future 3 piece washroom in basement
 Storm drain by other trades
 Natural gas for water heater and furnace
 Heating & cooling: gas fired furnace - 40,000 BTU [British Thermal Unit], split A/C unit, 1.5 ton
 Ductwork c/w diffusers and grilles
 Bathroom ceiling exhaust fans and kitchen range hood
 Programmable thermostat
- Electrical:** 100A 120/208V 3ph incoming service c/w 100A 42 cct. Panel
 Lighting: incandescent to basement, corridors and washrooms, fluorescent to kitchen and 1/2 switched receptacle to living & bedrooms
 Receptacles, split circuit receptacles in kitchen & mechanical connections
 Fire alarm: smoke alarm, interconnected
 Rough in for telephone and cable TV (cable pulled)

2.0 ROUGH GUIDE CONSTRUCTION CATEGORY NOTES (Continued)

10. Parking Garages

Costs given are for garages constructed solely for the purpose of parking. They should not be applied to garages built as an integral part of office buildings, apartment buildings, etc. The rate indicated for underground parking excludes such work as shoring, excavation, underpinning, adjacent structures, etc.

11. Apartments

The square foot (square meter) costs of apartments vary considerably depending on unit sizes and quality. The unit prices in this schedule have been reviewed and adjusted in 2012 to include for standard rental units with one three-piece washroom and air conditioning. The unit rates include the cost of underground parking where noted. Based on our review and subsequent adjustments, the area of underground parking should be included when applying the unit costs. Condominiums fluctuate in cost from \$130.00 per sq.ft. (\$1,400 per m2) and up per unit.

Note: For townhouses, the area of the basement should not be included when applying the unit costs.

12. Residences

Costs given are those which a builder using residential union labour and building not more than five houses at one time might expect. Costs of large developments in which many houses are being built at one time (with a consequent reduction in the cost per house) are not included.

Costs are given under three categories which may be defined as follows:

- Speculative NHA: a six room house with one bathroom, a full unfinished basement, no fireplace, and about 1,200 SF (111 m2) in area.
- Superior Quality: a six to eight room house with two bathrooms, a full unfinished basement, and one or two fireplaces.
- Luxury: a high quality house, architecturally designed, using expensive materials, with three bedrooms, a den, a full unfinished basement (see Section 2.2 for extra cost of finishing a basement) and two or three fireplaces.

Note: For residences, the area of the basement should not be included when applying the unit costs.

2.1 ROUGH GUIDE CONSTRUCTION CATEGORY COSTS

See '2.0 Rough Guide Construction Category Notes' for descriptions and exclusions

BUILDING CLASSIFICATION	January 2012 Cost	
	per/SF	per/m2
1. FACTORIES		
Light Engineering and Warehousing (16 LF Clear Height)		
Under 10,000 SF	115.00	1,237.50
10,000-20,000 SF	95.30	1,025.00
20,000-50,000 SF	79.40	855.00
50,000-150,000 SF	68.50	737.00
Over 150,000 SF	65.00	700.00
(18 LF Clear Height)		
Under 10,000 SF	119.50	1,285.00
10,000-20,000 SF	98.60	1,062.50
20,000-50,000 SF	81.60	878.00
50,000-150,000 SF	70.30	757.00
Over 150,000 SF	65.40	704.00
(22 LF Clear Height)		
Under 10,000 SF	121.00	1,302.50
10,000-20,000 SF	99.90	1,075.00
20,000-50,000 SF	84.60	911.00
50,000-150,000 SF	71.50	770.00
Over 150,000 SF	68.20	734.00
(25 LF Clear Height)		
Under 10,000 SF	122.50	1,317.50
10,000-20,000 SF	103.25	1,112.50
20,000-50,000 SF	85.20	917.00
50,000-150,000 SF	71.60	771.00
Over 150,000 SF	68.50	737.00
(30 LF Clear Height)		
Under 10,000 SF	129.75	1,397.50
10,000-20,000 SF	108.50	1,167.50
20,000-50,000 SF	93.70	1,007.50
50,000-150,000 SF	74.30	800.00
Over 150,000 SF	70.30	757.00
Heavy Engineering (22 LF Clear Height)		
10,000-20,000 SF	115.50	1,242.50
20,000-50,000 SF	99.90	1,075.00
50,000-150,000 SF	84.80	913.00
Over 150,000 SF	79.90	860.00
Office area Only		
(inside industrial building)	95.20	1,025.00
(independent but attached)	150.50	1,620.00
Open Mezzanine Construction	76.70	826.00
2. PRE-ENGINEERED BUILDINGS		
The Unit Rates for Factories and Warehouses Above Can Be Applied to Pre Engineered Metal Buildings		

3.4 LARGE COMMERCIAL RETAIL UNIT

Building Area (GFA): 20,327 SF

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		20,327 SF			\$1,550,860		\$76.30	73.5
A1 SUBSTRUCTURE					\$156,190		\$7.68	7.4
A11 Foundations	1.000	20,327 SF	7.68	156,190		7.68		
A12 Basement Excavation	0.000	- CY	0.00	-		-		
A13 Special Conditions	0.000	1 Nil	0.00	-		-		
A2 STRUCTURE					\$426,960		\$21.00	20.2
A21 Lowest Floor Construction	1.000	20,327 SF	5.20	105,740		5.20		
A22 Upper Floor Construction	0.000	- SF	0.00	-		-		
A23 Roof Construction	1.000	20,327 SF	15.80	321,220		15.80		
A3 EXTERIOR ENCLOSURE					\$967,710		\$47.61	45.9
A31 Walls Below Grade	0.000	- SF	0.00	-		-		
A32 Walls Above Grade	0.632	12,847 SF	34.95	449,010		22.09		
A33 Windows & Entrances	0.121	2,452 SF	45.63	111,890		5.50		
A34 Roof Covering	1.000	20,327 SF	8.31	168,990		8.31		
A35 Projections	1.000	20,327 SF	11.70	237,820		11.70		
B INTERIORS		20,327 SF			\$70,060		\$3.45	3.3
B1 PARTITIONS & DOORS					\$56,990		\$2.80	2.7
B11 Partitions	0.248	5,039 SF	11.31	56,990		2.80		
B12 Doors	0.000	1 Nil	0.00	-		-		
B2 FINISHES					\$12,200		\$0.60	0.6
B21 Floor Finishes	1.000	20,327 SF	0.60	12,200		0.60		
B22 Ceiling Finishes	1.000	20,327 SF	0.00	-		-		
B23 Wall Finishes	0.000	- SF	0.00	-		-		
B3 FITTINGS & EQUIPMENT					\$870		\$0.04	0.0
B31 Fittings & Fixtures	1.000	20,327 SF	0.04	870		0.04		
B32 Equipment	0.000	1 Nil	0.00	-		-		
B33 Elevators	0.000	1 Nil	0.00	-		-		
C SERVICES		20,327 SF			\$330,430		\$16.26	15.7
C1 MECHANICAL					\$253,920		\$12.49	12.0
C11 Plumbing & Drainage	1.000	20,327 SF	2.71	55,010		2.71		
C12 Fire Protection	1.000	20,327 SF	4.39	89,310		4.39		
C13 HVAC	1.000	20,327 SF	5.14	104,520		5.14		
C14 Controls	1.000	20,327 SF	0.25	5,080		0.25		
C2 ELECTRICAL					\$76,510		\$3.76	3.6
C21 Service & Distribution	1.000	20,327 SF	2.33	47,460		2.33		
C22 Lighting, Devices & Heating	1.000	20,327 SF	1.06	21,630		1.06		
C23 Systems & Ancillaries	1.000	20,327 SF	0.37	7,420		0.37		
NET BUILDING COST - EXCLUDING SITE					\$1,951,350		\$96.00	92.5
Z GENERAL REQ'S & ALLOWANCES					\$158,500		\$7.80	7.5
Z1 GENERAL REQ'S & FEE					\$158,500		\$7.80	7.5
Z11 General Requirements	6.0%			117,100		5.76		
Z12 Fee	2.0%			41,400		2.04		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$2,109,850		\$103.80	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%	(Excluded)		-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$2,109,850		\$103.80	100.0
							\$1,117 /m2	

PART 3 - ADVANCED ROUGH GUIDE TO CONSTRUCTION COSTS

3.4 LARGE COMMERCIAL RETAIL UNIT

	Building Area			
	Building Area	20,327 SF	1,888 m2	
	Construction Cost			
Ranges	\$ /SF	\$ /m2	%	
Lower	\$97.72	\$1,052	(5.8%)	
As priced	\$103.80	\$1,117	0%	
Upper	\$115.71	\$1,246	11.5%	

BUILDING INFORMATION:

Substructure: Foundations: reinforced concrete foundation walls, trench, pad and strip footings
 Basement excavation: none
 Special conditions: none

Structure: Lowest floor construction: 5" (125mm) slab on grade
 Upper floor construction: none
 Roof construction: steel frame with open web steel joists [OWSJ]

Exterior Enclosure: Walls below grade: none
 Walls above grade: 7% stone block veneer; 12% clay face brick veneer; 81% acrylic stucco
 Windows and entrances: aluminum curtain wall and entry system; overhead door to loading dock; hollow metal service doors
 Roof coverings: built up roofing with stone ballast (R20); roof hatch
 Projections: acrylic stucco and clay brick veneer on metal stud backup parapets

Partitions & Doors: Interior partitions: 17% gypsum wallboard over reinforced concrete block; 83% gypsum wallboard on metal studs
 Interior doors: none

Finishes: Floor finish: sealed concrete throughout
 Ceiling finish: none
 Wall finish: none

Fittings & Equipment: Fittings & fixtures: roof access ladder
 Equipment: none

Mechanical: Rough in only of incoming domestic water c/w water meter and hose bibb
 Rough in only of sanitary waste & vent connected to existing line 5' (1.5m) from building
 Roof storm drain system connected to existing line 5' (1.5m) from building (control flow)
 Sprinklered building
 Roof top unit, gas fired/ DX [direct expansion] cooling, 3 no. 5000 CFM [cubic feet per minute] and 1 no. 6000 CFM [cubic feet per minute], roof opening only
 Electric heating and exhaust fan for compactor room

Electrical: 600A 347/600V 3ph incoming service; 347/600V splitter, disconnects, panels, step down transformers and 120/208V panels
 Lighting: exterior wall mounted high intensity discharge [HID] lighting and service room areas lighting only, retail area by others. Lighting control consisting of local switches and photocell
 Convenience outlets only
 Fire alarm system: not allowed
 Other systems: only empty conduit is provided for communication systems

PART 2 - ROUGH GUIDE TO CONSTRUCTION COSTS

2.1 ROUGH GUIDE CONSTRUCTION CATEGORY COSTS (Continued)

See '2.0 Rough Guide Construction Category Notes' for descriptions and exclusions

	January 2011 Cost		January 2010 Cost		January 2009 Cost		January 2008 Cost	
	per/SF	per/m2	per/SF	per/m2	per/SF	per/m2	per/SF	per/m2
	111.25	1,197.50	108.75	1,170.00	106.25	1,142.50	97.10	1,045.00
	92.20	992.00	90.10	970.00	88.10	948.00	80.50	866.00
	76.80	827.00	75.00	807.00	73.30	789.00	67.00	721.00
	66.30	714.00	64.80	697.00	63.40	682.00	58.00	624.00
	62.90	677.00	61.50	662.00	60.10	647.00	54.90	591.00
	115.50	1,242.50	112.75	1,212.50	110.25	1,187.50	100.75	1,085.00
	95.40	1,027.50	93.20	1,002.50	91.10	981.00	83.30	897.00
	78.90	849.00	77.10	830.00	75.40	812.00	68.90	742.00
	68.00	732.00	66.40	715.00	64.90	699.00	59.30	638.00
	63.30	681.00	61.90	666.00	60.50	651.00	55.30	595.00
	117.00	1,260.00	114.25	1,230.00	111.75	1,202.50	102.25	1,100.00
	96.60	1,040.00	94.40	1,015.00	92.30	993.00	84.40	908.00
	81.80	880.00	79.90	860.00	78.10	841.00	71.40	768.00
	69.20	745.00	67.60	728.00	66.10	711.00	60.40	650.00
	66.00	710.00	64.50	694.00	63.10	679.00	57.70	621.00
	118.50	1,275.00	115.75	1,245.00	113.25	1,220.00	103.50	1,115.00
	99.80	1,075.00	97.50	1,050.00	95.30	1,025.00	87.10	937.00
	82.40	887.00	80.50	866.00	78.70	847.00	71.90	774.00
	69.30	746.00	67.70	729.00	66.20	713.00	60.50	651.00
	66.30	714.00	64.80	697.00	63.40	682.00	58.00	624.00
	125.50	1,350.00	122.50	1,317.50	119.75	1,290.00	109.50	1,177.50
	105.00	1,130.00	102.50	1,102.50	100.25	1,080.00	91.70	987.00
	90.60	975.00	88.50	953.00	86.50	931.00	79.10	851.00
	71.90	774.00	70.30	757.00	68.70	739.00	62.80	676.00
	68.00	732.00	66.40	715.00	64.90	699.00	59.30	638.00
	111.25	1,197.50	111.00	1,195.00	113.50	1,222.50	108.00	1,162.50
	96.20	1,035.00	96.10	1,035.00	98.30	1,057.50	93.50	1,007.50
	81.70	879.00	81.60	878.00	83.40	898.00	79.30	854.00
	77.00	829.00	76.90	828.00	78.60	846.00	74.80	805.00
	90.50	974.00	88.90	957.00	87.60	943.00	83.30	897.00
	143.00	1,540.00	140.50	1,512.50	138.50	1,490.00	131.75	1,417.50
	74.20	799.00	72.50	780.00	70.90	763.00	67.50	727.00

2.1 ROUGH GUIDE CONSTRUCTION CATEGORY COSTS (Continued)

See '2.0 Rough Guide Construction Category Notes' for descriptions and exclusions

BUILDING CLASSIFICATION	January 2012 Cost	
	per/SF	per/m2
3. OFFICE BUILDINGS SPECULATIVE		
Two storeys - shell only	113.75	1,225.00
- shell + tenant fit-out	152.25	1,640.00
Under 10 storeys shell only	122.00	1,312.50
- shell + tenant fit-out	160.25	1,725.00
10-20 storeys - shell only	133.75	1,440.00
- shell + tenant fit-out	173.50	1,867.50
20 storeys and over - shell only	150.75	1,622.50
- shell + tenant fit-out	191.75	2,065.00
4. STORES		
Single Storey		
without basement	101.50	1,092.50
add for basement	49.00	527.00
add for office space above	101.50	1,092.50
add for apartment above	93.70	1,007.50
Supermarket		
without basement	112.75	1,212.50
add for basement	51.50	554.00
Department Store	143.00	1,540.00
Chain or Discount Store	101.50	1,092.50
"Big Box" Retail		
Under 35,000 SF	81.40	876.00
Over 35,000 SF	74.80	805.00
5. SCHOOLS		
Elementary School	163.75	1,762.50
High School	193.25	2,080.00
Technical or Vocational Schools	197.00	2,120.00
6. BANKS AND TRUST COMPANIES		
Single storey and basement	227.50	2,447.50
7. MEDICAL CENTRE		
Medical Centres and Clinics	205.75	2,215.00
8. HOTELS		
Two Storeys	140.25	1,510.00
Multi-storey		
- ordinary	177.00	1,905.00
- prestige	255.25	2,747.50
9. MOTELS		
Under 20 units	130.25	1,402.50
Over 20 units		
- without convention facilities	100.00	1,077.50
- with convention facilities	154.50	1,662.50

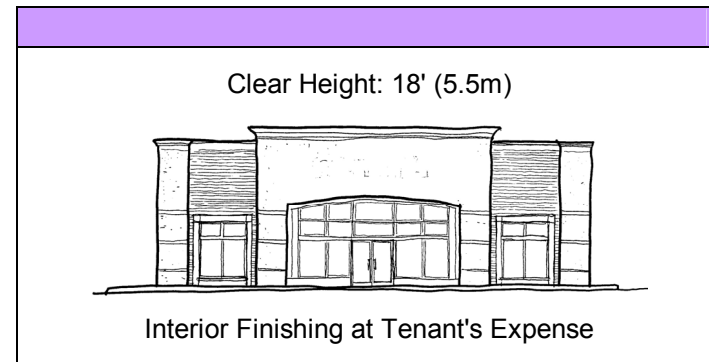
3.3 SMALL COMMERCIAL RETAIL UNIT

Building Area (GFA): 4,311 SF

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		4,311 SF			\$468,490		\$108.67	77.5
A1 SUBSTRUCTURE					\$58,240		\$13.51	9.6
A11 Foundations	1.000	4,311 SF	13.51	58,240		13.51		
A12 Basement Excavation	0.000	- CY	0.00	-		-		
A13 Special Conditions	0.000	1 Nil	0.00	-		-		
A2 STRUCTURE					\$96,500		\$22.38	16.0
A21 Lowest Floor Construction	1.000	4,311 SF	5.19	22,370		5.19		
A22 Upper Floor Construction	0.000	- SF	0.00	-		-		
A23 Roof Construction	1.000	4,311 SF	17.20	74,130		17.20		
A3 EXTERIOR ENCLOSURE					\$313,750		\$72.78	51.9
A31 Walls Below Grade	0.000	- SF	0.00	-		-		
A32 Walls Above Grade	1.226	5,285 SF	34.91	184,530		42.80		
A33 Windows & Entrances	0.129	555 SF	47.96	26,620		6.17		
A34 Roof Covering	1.000	4,311 SF	8.76	37,760		8.76		
A35 Projections	1.000	4,311 SF	15.04	64,840		15.04		
B INTERIORS		4,311 SF			\$11,780		\$2.73	1.9
B1 PARTITIONS & DOORS					\$8,320		\$1.93	1.4
B11 Partitions	0.113	489 SF	17.01	8,320		1.93		
B12 Doors	0.000	1 Nil	0.00	-		-		
B2 FINISHES					\$2,590		\$0.60	0.4
B21 Floor Finishes	1.000	4,311 SF	0.60	2,590		0.60		
B22 Ceiling Finishes	1.000	4,311 SF	0.00	-		-		
B23 Wall Finishes	0.000	- SF	0.00	-		-		
B3 FITTINGS & EQUIPMENT					\$870		\$0.20	0.1
B31 Fittings & Fixtures	1.000	4,311 SF	0.20	870		0.20		
B32 Equipment	1.000	4,311 SF	0.00	-		-		
B33 Elevators	0.000	1 Nil	0.00	-		-		
C SERVICES		4,311 SF			\$78,580		\$18.23	13.0
C1 MECHANICAL					\$60,360		\$14.00	10.0
C11 Plumbing & Drainage	1.000	4,311 SF	4.16	17,920		4.16		
C12 Fire Protection	1.000	4,311 SF	3.06	13,200		3.06		
C13 HVAC	1.000	4,311 SF	6.18	26,660		6.18		
C14 Controls	1.000	4,311 SF	0.60	2,580		0.60		
C2 ELECTRICAL					\$18,220		\$4.23	3.0
C21 Service & Distribution	1.000	4,311 SF	2.32	9,990		2.32		
C22 Lighting, Devices & Heating	1.000	4,311 SF	1.74	7,480		1.74		
C23 Systems & Ancillaries	1.000	4,311 SF	0.17	750		0.17		
NET BUILDING COST - EXCLUDING SITE					\$558,850		\$129.63	92.5
Z GENERAL REQ'S & ALLOWANCES					\$45,300		\$10.51	7.5
Z1 GENERAL REQ'S & FEE					\$45,300		\$10.51	7.5
Z11 General Requirements	6.0%			33,500		7.77		
Z12 Fee	2.0%			11,800		2.74		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$604,150		\$140.14	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%		(Excluded)	-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$604,150		\$140.14	100.0
							\$1,509 /m2	

PART 3 - ADVANCED ROUGH GUIDE TO CONSTRUCTION COSTS

3.3 SMALL COMMERCIAL RETAIL UNIT



Building Area		
Building Area	4,311 SF	401 m2

Construction Cost			
Ranges	\$ /SF	\$ /m2	%
Lower	\$132.08	\$1,422	(5.8%)
As priced	\$140.14	\$1,509	0%
Upper	\$156.37	\$1,683	11.6%

BUILDING INFORMATION:

- Substructure:** Foundations: reinforced concrete foundation walls, trench, pad and strip footings
Basement excavation: none
Special conditions: none
- Structure:** Lowest floor construction: 5" (125mm) slab on grade
Upper floor construction: none
Roof construction: steel frame with open web steel joists [OWSJ]
- Exterior Enclosure:** Walls below grade: none
Walls above grade: 5% stone block veneer; 21% clay face brick veneer; 74% acrylic stucco
Windows and entrances: aluminum curtain wall and entry system; overhead door to loading dock; hollow metal service doors
Roof coverings: built up roofing with stone ballast (R20); roof hatch
Projections: acrylic stucco and clay brick veneer on metal stud backup parapets
- Partitions & Doors:** Interior partitions: gypsum wallboard on metal studs over reinforced concrete block
Interior doors: none
- Finishes:** Floor finish: sealed concrete throughout
Ceiling finish: none
Wall finish: none
- Fittings & Equipment:** Fittings & fixtures: roof access ladder
Equipment: none
- Mechanical:** Rough in only of incoming domestic water c/w water meter and hose bibb
Rough in only of sanitary waste & vent connected to existing line 5' (1.5m) from building
Roof storm drain system connected to existing line 5' (1.5m) from building (control flow)
Sprinklered building
Roof top unit, gas fired/ DX [direct expansion] cooling, 5000 CFM [cubic feet per minute], roof opening only
Electric heating and exhaust fan for compactor room
- Electrical:** 100A 347/600V 3ph incoming service; 347/600V splitter, disconnects, step down transformers and 120/208V panels
Lighting: exterior wall mounted high intensity discharge [HID] lighting only, retail area by others. Lighting control consisting of local switches and photocell
Convenience outlets only
Fire alarm system: not allowed
Other systems: only empty conduit is provided for communication systems

PART 2 - ROUGH GUIDE TO CONSTRUCTION COSTS

2.1 ROUGH GUIDE CONSTRUCTION CATEGORY COSTS (Continued)

See '2.0 Rough Guide Construction Category Notes' for descriptions and exclusions

	January 2011 Cost		January 2010 Cost		January 2009 Cost		January 2008 Cost	
	per/SF	per/m2	per/SF	per/m2	per/SF	per/m2	per/SF	per/m2
	108.25	1,165.00	106.25	1,142.50	104.75	1,127.50	96.90	1,042.50
	144.75	1,557.50	142.00	1,527.50	140.00	1,507.50	129.50	1,395.00
	116.00	1,247.50	114.00	1,227.50	112.25	1,207.50	104.00	1,120.00
	152.25	1,640.00	149.50	1,610.00	147.25	1,585.00	136.25	1,467.50
	127.25	1,370.00	125.00	1,345.00	123.25	1,327.50	114.00	1,227.50
	165.00	1,775.00	162.00	1,742.50	159.50	1,717.50	147.75	1,590.00
	143.25	1,542.50	140.75	1,515.00	138.75	1,492.50	128.50	1,382.50
	182.25	1,962.50	179.00	1,927.50	176.25	1,897.50	163.25	1,757.50
	97.50	1,050.00	95.30	1,025.00	93.50	1,007.50	87.70	944.00
	47.10	507.00	46.00	495.00	45.10	485.00	42.30	455.00
	97.50	1,050.00	95.30	1,025.00	93.50	1,007.50	87.70	944.00
	90.10	970.00	88.00	947.00	86.30	929.00	80.90	871.00
	108.50	1,167.50	106.00	1,140.00	104.00	1,120.00	97.60	1,050.00
	49.50	533.00	48.40	521.00	47.50	511.00	44.50	479.00
	137.50	1,480.00	141.75	1,525.00	139.00	1,495.00	130.25	1,402.50
	97.50	1,050.00	95.30	1,025.00	93.50	1,007.50	87.70	944.00
	78.30	843.00	76.50	823.00	75.00	807.00	70.30	757.00
	71.90	774.00	70.30	757.00	68.90	742.00	64.60	695.00
	156.00	1,680.00	152.00	1,635.00	150.75	1,622.50	146.25	1,575.00
	184.25	1,982.50	179.50	1,932.50	178.00	1,915.00	172.50	1,857.50
	187.75	2,020.00	183.00	1,970.00	181.50	1,952.50	176.00	1,895.00
	217.50	2,340.00	215.25	2,317.50	212.75	2,290.00	194.00	2,087.50
	196.75	2,117.50	194.75	2,095.00	192.50	2,072.50	175.50	1,890.00
	134.00	1,442.50	132.50	1,425.00	131.00	1,410.00	119.50	1,285.00
	169.25	1,822.50	167.50	1,802.50	165.75	1,785.00	151.00	1,625.00
	244.00	2,627.50	241.50	2,600.00	238.75	2,570.00	217.50	2,340.00
	124.50	1,340.00	123.25	1,327.50	122.00	1,312.50	111.25	1,197.50
	95.60	1,030.00	94.60	1,017.50	93.60	1,007.50	85.30	918.00
	147.75	1,590.00	146.25	1,575.00	144.75	1,557.50	132.00	1,420.00

2.1 ROUGH GUIDE CONSTRUCTION CATEGORY COSTS (Continued)

See '2.0 Rough Guide Construction Category Notes' for descriptions and exclusions

BUILDING CLASSIFICATION	January 2012 Cost		
	per/SF	per/m2	
10. PARKING GARAGES			
With ramps	58.10	625.00	
Underground parking	76.90	828.00	
11. APARTMENTS			
Under 2 storey	(no garage)	104.75	1,127.50
2-10 storeys	(with under-ground garage)	152.25	1,640.00
Over 10 storeys	(with under-ground garage)	148.75	1,600.00
Townhouse	(with single car garage)	120.50	1,297.50
12. RESIDENCES			
Single storey brick	- speculative NHA (no garage)	142.75	1,537.50
	- superior quality (with garage)	169.00	1,820.00
	- luxury (with garage)	227.75	2,452.50
Two storey brick	- speculative NHA (no garage)	134.50	1,447.50
	- superior quality (with garage)	155.75	1,677.50
	- luxury (with garage)	218.25	2,350.00
Split level brick	- speculative NHA (no garage)	147.50	1,587.50
	- superior quality (with garage)	173.25	1,865.00
	- luxury (with garage)	232.25	2,500.00

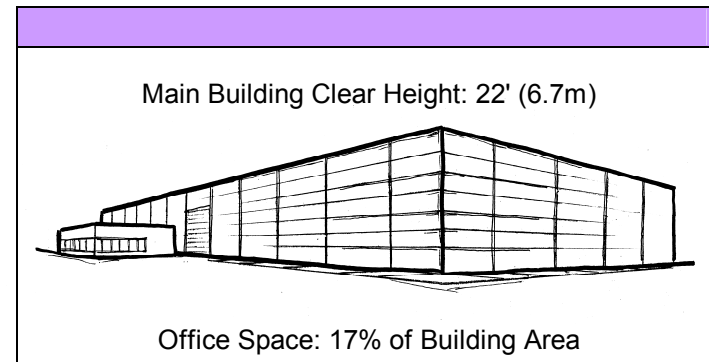
3.2 HEAVY INDUSTRIAL BUILDING

Building Area (GFA): 37,800 SF

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		37,800 SF			\$2,457,850		\$65.02	71.6
A1 SUBSTRUCTURE					\$317,360		\$8.40	9.2
A11 Foundations	1.000	37,800 SF	8.40	317,360		8.40		
A12 Basement Excavation	0.000	- CY	0.00	-		-		
A13 Special Conditions	0.000	1 Nil	0.00	-		-		
A2 STRUCTURE					\$987,350		\$26.12	28.8
A21 Lowest Floor Construction	1.000	37,800 SF	8.28	312,810		8.28		
A22 Upper Floor Construction	0.000	- SF	0.00	-		-		
A23 Roof Construction	1.000	37,800 SF	17.84	674,540		17.84		
A3 EXTERIOR ENCLOSURE					\$1,153,140		\$30.51	33.6
A31 Walls Below Grade	0.000	- SF	0.00	-		-		
A32 Walls Above Grade	0.649	24,517 SF	28.28	693,260		18.34		
A33 Windows & Entrances	0.040	1,521 SF	43.30	65,860		1.74		
A34 Roof Covering	1.000	37,800 SF	8.91	336,940		8.91		
A35 Projections	1.000	37,800 SF	1.51	57,080		1.51		
B INTERIORS		37,800 SF			\$266,800		\$7.06	7.8
B1 PARTITIONS & DOORS					\$108,710		\$2.88	3.2
B11 Partitions	0.114	4,319 SF	13.77	59,460		1.57		
B12 Doors	0.001	38 No.	1,296.05	49,250		1.30		
B2 FINISHES					\$111,670		\$2.95	3.3
B21 Floor Finishes	1.000	37,800 SF	1.19	44,870		1.19		
B22 Ceiling Finishes	1.000	37,800 SF	1.13	42,860		1.13		
B23 Wall Finishes	0.833	31,497 SF	0.76	23,940		0.63		
B3 FITTINGS & EQUIPMENT					\$46,420		\$1.23	1.4
B31 Fittings & Fixtures	1.000	37,800 SF	1.09	41,070		1.09		
B32 Equipment	1.000	37,800 SF	0.14	5,350		0.14		
B33 Elevators	0.000	1 Nil	0.00	-		-		
C SERVICES		37,800 SF			\$451,380		\$11.94	13.1
C1 MECHANICAL					\$255,460		\$6.76	7.4
C11 Plumbing & Drainage	1.000	37,800 SF	1.53	57,840		1.53		
C12 Fire Protection	1.000	37,800 SF	2.82	106,430		2.82		
C13 HVAC	1.000	37,800 SF	2.16	81,560		2.16		
C14 Controls	1.000	37,800 SF	0.25	9,630		0.25		
C2 ELECTRICAL					\$195,920		\$5.18	5.7
C21 Service & Distribution	1.000	37,800 SF	2.46	93,050		2.46		
C22 Lighting, Devices & Heating	1.000	37,800 SF	2.02	76,260		2.02		
C23 Systems & Ancillaries	1.000	37,800 SF	0.70	26,610		0.70		
NET BUILDING COST - EXCLUDING SITE					\$3,176,030		\$84.02	92.5
Z GENERAL REQ'S & ALLOWANCES					\$257,900		\$6.82	7.5
Z1 GENERAL REQ'S & FEE					\$257,900		\$6.82	7.5
Z11 General Requirements	6.0%			190,600		5.04		
Z12 Fee	2.0%			67,300		1.78		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$3,433,930		\$90.84	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%	(Excluded)		-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$3,433,930		\$90.84	100.0
							\$978 /m2	

PART 3 - ADVANCED ROUGH GUIDE TO CONSTRUCTION COSTS

3.2 HEAVY INDUSTRIAL BUILDING



Building Area		
Building Area	37,800 SF	3,512 m2

Construction Cost			
Ranges	\$ /SF	\$ /m2	%
Lower	\$85.03	\$915	(6.4%)
As priced	\$90.84	\$978	0%
Upper	\$101.06	\$1,088	11.2%

BUILDING INFORMATION:

- Substructure:** Foundations: reinforced concrete foundation walls, trench, pad and strip footings
Basement excavation: none
Special conditions: none
- Structure:** Lowest floor construction: 6" (150mm) slab on grade
Upper floor construction: none
Roof construction: steel frame with open web steel joists [OWSJ]
- Exterior Enclosure:** Walls below grade: none
Walls above grade: 10% architectural block; 25% concrete block; 65% industrial steel sandwich panel
Windows and entrances: steel industrial strip windows; glazed entry system; overhead doors to loading docks; hollow metal service doors
Roof coverings: built up roofing with stone ballast (R20)
Projections: architectural block on metal stud back up parapets
- Partitions & Doors:** Interior partitions: 2% glazed screens; 30% reinforced concrete block; 68% gypsum wallboard on metal studs and furring
Interior doors: 70% hollow metal doors; 30% wood doors to offices
- Finishes:** Floor finish: 1% ceramic tile; 16% vinyl composite tile [VCT]; 83% sealed concrete
Ceiling finish: 1% gypsum board; 16% acoustic ceiling tile [ACT]; 83% painted structure
Wall finish: paint throughout
- Fittings & Equipment:** Fittings & fixtures: plastic laminate millwork to washrooms & kitchenette; some heavy duty millwork to production area; roof access ladder
Equipment: none
- Mechanical:** 2 no. 2 piece washrooms and kitchen sink complete with electric hot water tank
Storm drain system to roof connected to underground system (control flow)
Sprinklered building
Heating to industrial area by gas fired radiant tube heaters. Heating to office area by roof top unit gas fired/ DX [direct expansion] cooling, 10 ton, complete with ductwork and diffusers
Washroom exhaust fan and ductwork
Local thermostatic control for A/C and gas fired radiant tube heaters
- Electrical:** 1200A 600V 3ph 3W incoming service; 347/600V panels, step down transformers and 120/208V panels
Lighting: metal halide high bay fixture to industrial area and 2'x4' fluorescent fixtures to offices
Exterior wall mounted high intensity discharge [HID] fixtures for perimeter lighting. Lighting control consisting of local switches and photocell
Duplex receptacles to office area and convenience outlet to industrial area
Fire alarm system: single stage c/w control panel, detectors and bell
Other systems: only empty conduit is provided for communication systems

PART 2 - ROUGH GUIDE TO CONSTRUCTION COSTS

2.1 ROUGH GUIDE CONSTRUCTION CATEGORY COSTS (Continued)

See '2.0 Rough Guide Construction Category Notes' for descriptions and exclusions

	January 2011 Cost		January 2010 Cost		January 2009 Cost		January 2008 Cost	
	per/SF	per/m2	per/SF	per/m2	per/SF	per/m2	per/SF	per/m2
	55.50	597.00	54.90	591.00	54.30	584.00	49.50	533.00
	73.50	791.00	72.70	782.00	71.90	774.00	65.50	705.00
	99.00	1,065.00	96.50	1,037.50	95.00	1,022.50	83.90	903.00
	143.75	1,547.50	140.00	1,507.50	137.75	1,482.50	121.50	1,307.50
	140.50	1,512.50	137.00	1,475.00	135.00	1,452.50	119.25	1,282.50
	114.25	1,230.00	109.25	1,175.00	105.50	1,135.00	93.60	1,007.50
	135.25	1,455.00	129.25	1,390.00	124.75	1,342.50	110.75	1,192.50
	160.25	1,725.00	153.00	1,647.50	147.50	1,587.50	131.00	1,410.00
	216.00	2,325.00	206.25	2,220.00	199.00	2,142.50	176.75	1,902.50
	127.50	1,372.50	121.75	1,310.00	117.50	1,265.00	104.25	1,122.50
	147.75	1,590.00	141.25	1,520.00	136.25	1,467.50	121.00	1,302.50
	207.00	2,227.50	197.75	2,127.50	190.75	2,052.50	169.25	1,822.50
	139.75	1,505.00	133.50	1,437.50	128.75	1,385.00	114.25	1,230.00
	164.25	1,767.50	157.00	1,690.00	151.50	1,630.00	134.50	1,447.50
	220.25	2,370.00	210.50	2,265.00	203.00	2,185.00	180.25	1,940.00

2.2 ROUGH GUIDE UNIT IN PLACE PRICING

	Unit Cost at January 2012	
	Imperial \$/Unit	Metric \$/Unit
GENERAL		
Geotechnical & Environmental Investigation for proposed 30,000 SF industrial structure 22 to 30 ft ceiling, site area 5 acres. 10 boreholes, 5 m deep and 10 samples tested assume routine investigation only.	4,080.00 E	4,080.00 E
Geotechnical Investigation		
Environmental testing and site history for the above 5 acres site	2,460.00 and Up	2,460.00 and Up
Site Survey for above 5 acres site and 30,000 SF proposed building	3,840.00 E	3,840.00 E
Routine demolition cost for leasehold improvements including partitions, carpet, doors and general cleaning (excluding removal of contaminated materials)	3.90 SF and up	42.00 m2 and up
NON- RESIDENTIAL		
Site services (site area)	2.50 SF	26.90 m2
Asphalt paving including granular sub-base	29.30 SY	35.00 m2
Concrete sidewalks including granular base	5.10 SF	54.90 m2
Concrete curbs	21.40 LF	70.20 m
Sodding	5.90 SY	7.06 m2
Ramp for disabled	16,300.00 E and up	16,300.00 E and up
5" (125mm) reinforced hardened concrete floor with 6" (150mm) crushed stone base	5.30 SF	57.00 m2
Suspended acoustic tile ceiling	5.55 SF	59.70 m2
Facebrick with 8" (200mm) block backup	32.80 SF	353.00 m2
Built-up felt roofing complete, incl. 75mm insulation	7.90 SF	85.00 m2
Fluid applied roofing complete, incl. 75mm insulation	9.65 SF	104.00 m2
Block partition		
- 6" (150mm) block	11.30 SF	122.00 m2
- 8" (200mm) block	12.20 SF	131.00 m2
- 10" (250mm) block	14.60 SF	157.00 m2
Insulated steel siding including steel girts	20.30 SF	219.00 m2
Precast concrete panels	33.60 SF	362.00 m2
Medium quality commercial broadloom	33.00 SY and up	39.50 m2 and up
080g. (2mm) vinyl composite flooring 300mm x 300mm	2.95 SF	31.80 m2
Ceramic tile	12.40 SF	133.00 m2
Wall base, 4" (100mm)		
- rubber	2.25 LF	7.38 m
- carpet base	4.30 LF	14.10 m
- wood base (paint grade, unfinished)	7.20 LF	23.60 m
Raised flooring	15.90 SF and up	171.00 m2 and up
Drywall partition	7.75 SF	83.40 m2
Painting	0.95 SF	10.20 m2
Vinyl fabric	5.15 SF	55.40 m2
Rubber base- 6" (150mm)	2.80 LF	9.19 m

3.1 INDUSTRIAL DISTRIBUTION BUILDING

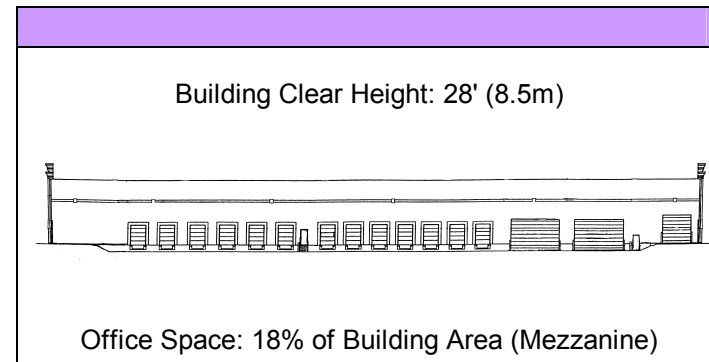
Building Area (GFA): 73,960 SF

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA		
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total	%
A SHELL		73,960 SF			\$4,143,530		\$56.02	72.2
A1 SUBSTRUCTURE					\$442,190		\$5.98	7.7
A11 Foundations	0.896	66,285 SF	6.55	434,200		5.87		
A12 Basement Excavation	0.007	485 CY	16.47	7,990		0.11		
A13 Special Conditions	0.000	1 Nil	0.00	-		-		
A2 STRUCTURE					\$1,910,220		\$25.83	33.3
A21 Lowest Floor Construction	0.896	66,285 SF	6.79	450,010		6.08		
A22 Upper Floor Construction	0.104	7,675 SF	49.24	377,930		5.11		
A23 Roof Construction	0.896	66,285 SF	16.33	1,082,280		14.63		
A3 EXTERIOR ENCLOSURE					\$1,791,120		\$24.22	31.2
A31 Walls Below Grade	0.000	- SF	0.00	-		-		
A32 Walls Above Grade	0.358	26,455 SF	35.18	930,610		12.58		
A33 Windows & Entrances	0.083	6,121 SF	46.53	284,780		3.85		
A34 Roof Covering	0.896	66,285 SF	8.23	545,730		7.38		
A35 Projections	1.000	73,960 SF	0.41	30,000		0.41		
B INTERIORS		73,960 SF			\$541,660		\$7.32	9.4
B1 PARTITIONS & DOORS					\$190,720		\$2.58	3.3
B11 Partitions	0.114	8,451 SF	13.30	112,440		1.52		
B12 Doors	0.001	72 No.	1,087.22	78,280		1.06		
B2 FINISHES					\$204,030		\$2.76	3.6
B21 Floor Finishes	1.000	73,960 SF	1.19	87,790		1.19		
B22 Ceiling Finishes	1.000	73,960 SF	1.13	83,860		1.13		
B23 Wall Finishes	0.576	42,602 SF	0.76	32,380		0.44		
B3 FITTINGS & EQUIPMENT					\$146,910		\$1.99	2.6
B31 Fittings & Fixtures	1.000	73,960 SF	0.57	42,230		0.57		
B32 Equipment	1.000	73,960 SF	1.42	104,680		1.42		
B33 Elevators	0.000	1 Nil	0.00	-		-		
C SERVICES		73,960 SF			\$621,310		\$8.40	10.8
C1 MECHANICAL					\$344,240		\$4.65	6.0
C11 Plumbing & Drainage	1.000	73,960 SF	1.15	84,860		1.15		
C12 Fire Protection	1.000	73,960 SF	2.17	160,270		2.17		
C13 HVAC	1.000	73,960 SF	1.19	87,980		1.19		
C14 Controls	1.000	73,960 SF	0.15	11,130		0.15		
C2 ELECTRICAL					\$277,070		\$3.75	4.8
C21 Service & Distribution	1.000	73,960 SF	1.56	115,440		1.56		
C22 Lighting, Devices & Heating	1.000	73,960 SF	1.74	128,850		1.74		
C23 Systems & Ancillaries	1.000	73,960 SF	0.44	32,780		0.44		
NET BUILDING COST - EXCLUDING SITE					\$5,306,500		\$71.75	92.5
Z GENERAL REQ'S & ALLOWANCES					\$430,900		\$5.83	7.5
Z1 GENERAL REQ'S & FEE					\$430,900		\$5.83	7.5
Z11 General Requirements	6.0%			318,400		4.31		
Z12 Fee	2.0%			112,500		1.52		
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$5,737,400		\$77.57	100.0
Z2 ALLOWANCES					\$0		\$0.00	0.0
Z21 Design Allowance	0.0%			-		-		
Z22 Escalation Allowance	0.0%		(Excluded)	-		-		
Z23 Construction Allowance	0.0%			-		-		
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$5,737,400		\$77.57	100.0
							\$835 /m2	

Note: As highlighted under 'Building Information', heating to industrial area consists of 'gas fired radiant tube heaters'. As an alternative, 'gas fired open heating' is often used. The approximate cost savings for providing 'gas fired open heating' would be in the order of \$0.40/SF (net, or \$0.43/SF excl. allowances).

PART 3 - ADVANCED ROUGH GUIDE TO CONSTRUCTION COSTS

3.1 INDUSTRIAL DISTRIBUTION BUILDING



Building Area		
Building Area	73,960 SF	6,871 m2

Construction Cost			
Ranges	\$ /SF	\$ /m2	%
Lower	\$72.63	\$782	(6.4%)
As priced	\$77.57	\$835	0%
Upper	\$86.23	\$928	11.2%

BUILDING INFORMATION:

Substructure: Foundations: reinforced concrete foundation walls, trench, pad and strip footings
 Basement excavation: to truck wells and loading dock
 Special conditions: none

Structure: Lowest floor construction: 90% - 6" (150mm) slab on grade; 10% - 12" (300mm) to truck wells and loading dock
 Upper floor construction: fireproofed steel frame with open web steel joists [OWSJ] (office)
 Roof construction: steel frame with open web steel joists [OWSJ]

Exterior Enclosure: Walls below grade: none
 Walls above grade: 7% architectural precast; 93% precast sandwich panel
 Windows and entrances: glazed aluminum curtain wall and entry system; overhead doors to truck docks; hollow metal service doors
 Roof coverings: built up roofing with stone ballast (R20)
 Projections: architectural precast sandwich panels parapets

Partitions & Doors: Interior partitions: 2% glazed screens; 30% reinforced concrete block; 68% gypsum wallboard on metal studs and furring
 Interior doors: 70% hollow metal doors; 30% wood doors to offices

Finishes: Floor finish: 2% ceramic tile; 16% vinyl composite tile [VCT]; 82% sealed concrete
 Ceiling finish: 2% gypsum board; 16% acoustic ceiling tile [ACT] to offices; 80% painted structure
 Wall finish: paint throughout

Fittings & Equipment: Fittings & fixtures: plastic laminate millwork to washrooms & kitchenette; limited amount of heavy duty millwork to production area; roof access ladder
 Equipment: none

Mechanical: 4 no. 2 piece washrooms and kitchen sink complete with electric hot water tank
 Storm drain system to roof connected to underground system (control flow)
 Sprinklered building
 Heating to industrial area by gas fired radiant tube heaters. Heating to office area by roof top unit gas fired/ DX [direct expansion] cooling, 6 ton, complete with ductwork and diffusers
 Washroom exhaust fan and ductwork
 Local thermostatic control for A/C and gas fired radiant tube heaters

Electrical: 1200A 600V 3ph 3W incoming service; 347/600V panels, step down transformers and 120/208V panels
 Lighting: metal halide high bay fixtures to industrial area and 2'x4' fluorescent fixture to offices, exterior wall mounted high intensity discharge [HID] fixtures for perimeter lighting. Lighting control consisting of local switches and photocell
 Duplex receptacles to office area and convenience outlet to industrial area
 Fire alarm system: single stage c/w control panel, detectors and bell.
 Other systems: only empty conduit is provided for communication systems

PART 2 - ROUGH GUIDE TO CONSTRUCTION COSTS

2.2 ROUGH GUIDE UNIT IN PLACE PRICING (Continued)

	Unit Cost at January 2012	
	Imperial \$/Unit	Metric \$/Unit
NON- RESIDENTIAL (cont'd)		
Prefinished partition	9.85 SF	106.00 m2
1 3/4 (44mm) Commercial hollow core door including hollow metal frames, painting, medium duty hardware and installation	1,260.00 E and up	1,260.00 E and up
Narrow line aluminum glazed entrance doors complete	104.00 SF	1,120.00 m2
Automatic dock leveler	4,870.00 E	4,870.00 E
Door seals 10' x 15' (3.0m x 4.6m)	2,610.00 E	2,610.00 E
Shipping door cushions	179.00 E	179.00 E
Fluorescent lighting - 80 f.c. (800 lux)	4.80 SF	51.70 m2
(Plant area) - 60 f.c. (600 lux)	3.80 SF	40.90 m2
(T8 Lamp/electronic ballast) - 30 f.c. (300 lux)	2.75 SF	29.60 m2
H.I.D. (15 to 20 ft, 30 F.C.)	2.10 SF	22.60 m2
Power outlet - wall mounted	170.00 E	170.00 E
Telephone outlet - wall mounted	125.00 E	125.00 E
Relocate 2' x 4' light fixtures	99.50 E	99.50 E
New light fixtures 2' x 4', (4 lamps, lense)	232.00 E	232.00 E
Light switch	104.00 E	104.00 E
Fluorescent PL		
- downlight	220.00 E	220.00 E
- wall washer	228.00 E	228.00 E
Exit light fixture (LED Type)	307.00 E	307.00 E
300 W battery unit c/w 2 heads emergency lights	738.00 E	738.00 E
Emergency light		
- single remote unit	106.00 E	106.00 E
- double remote unit	148.00 E	148.00 E
Electrical service (factory)		
- 100 amp	1,580.00 and up	1,580.00 and up
- 400/300 amp	4,360.00 and up	4,360.00 and up
Sub-stations - 450 KVA (factory)	25,400.00 and up	25,400.00 and up
F.H. cabinet & pipework system		
- simple	2,900.00 F.H.C.	2,900.00 F.H.C.
- medium	4,230.00 F.H.C.	4,230.00 F.H.C.
- complex	5,670.00 F.H.C.	5,670.00 F.H.C.
Sprinklers, average overall		
- open space	2.10 SF	22.60 m2
- partitioned	2.50 SF	26.90 m2
New sprinkler heads		
- open space	222.00 E	222.00 E
- partitioned	254.00 E	254.00 E
Relocate existing sprinkler heads	153.00 E and up	153.00 E and up
WC - wall mounted, fixture and rough-in only	2,010.00 E	2,010.00 E
Lavatory - wall hung, fixture and rough-in only	1,590.00 E	1,590.00 E
Urinal - wall mounted, fixture and rough-in only	1,860.00 E	1,860.00 E

2.2 ROUGH GUIDE UNIT IN PLACE PRICING (Continued)

	Unit Cost at January 2012	
	Imperial \$/Unit	Metric \$/Unit
NON- RESIDENTIAL (cont'd)		
Office air conditioning		
- summer cooling	16.20 SF	174.00 m2
- year round	22.00 SF	237.00 m2
Rooftop A/C unit only	1,870.00 TR	532.00 kW
Rooftop unit c/w supply & return ductwork system		
- simple	2,530.00 TR	720.00 kW
- medium	3,730.00 TR	1,060.00 kW
- complex	4,940.00 TR	1,410.00 kW
Computer room		
- A/C unit & ductwork	5,700.00 TR and up	1,620.00 kW and up
- A/C unit & ductwork	111.00 SF and up	1,190.00 m2 and up
Gas fired unit heater 48 MBH/HR (14 KW)	2,120.00 E	2,120.00 E
Cabinet/Forceflo/Baseboard heating	306.00 kW	306.00 kW
Shipping door 8' x 10' (2.4m x 3.0m) manual wood section	2,270.00 E	2,270.00 E
Chain link fencing 8' (2.4m) high	26.20 LF	86.00 m
RESIDENTIAL		
Residential garage		
- single, attached	39.70 SF	427.00 m2
- two car, attached	36.70 SF	395.00 m2
- single, attached (10 x 20 ft or 3.0m x 6.1m)	7,910.00 and up	7,910.00 and up
- two car, attached (20 x 20 ft or 6.1m x 6.1m)	14,700.00 and up	14,700.00 and up
Fireplaces (each)	4,070.00 and up	4,070.00 and up
Bathrooms (each)	5,040.00 and up	5,040.00 and up
Two piece washrooms	4,550.00 and up	4,550.00 and up
Extra for finishing residential basement		
- average quality	25.60 SF	276.00 m2
- superior quality	39.80 SF	428.00 m2
Roofing Shingles, 25 year		
- new roofing only	2.15 SF	23.10 m2
- re-roofing	3.20 SF	34.40 m2
Hardwood flooring		
- parquet	9.00 SF and up	96.90 m2 and up
- planks	12.50 SF and up	135.00 m2 and up

Notes:

- 1- The above units are given to enable extra costs to be added over and above the units given under the various building classifications.
- 2- The costs for fireplaces are the extra cost to be added for fireplaces in addition to the number given in the basic specification under Section 2.1.
- 3- The costs for bathrooms are the extra costs to be added for bathrooms in excess of the number given under Section 2.1.
- 4- The costs for finishing basements are the costs of actual finished basement space, done at the time the house is constructed. None of the costs under Section 2.1 allow for any finished basement area.
- 5- The cost of a two piece basement washroom is an extra cost over and above the costs of finished basement space.

3.0 UNDERSTANDING THE ELEMENTAL COST SUMMARY

The cost information presented in this guide is organized based on a format referred to by the Canadian Institute of Quantity Surveyors (www.ciqs.org) as an 'Elemental Cost Summary'. To help you get the most out of the guide, we have summarized the key features of this type of summary.

Building components are summarized into 'elements'. This grouping system has the advantage of allowing comparisons between buildings constructed with different materials. Under this format, we can review the cost of 'A22 Upper Floor Construction' for a building whether it is made of steel, concrete or wood - something that can prove difficult when using a summary by 'trade'.

Another feature of the summary is the column titled 'Ratio to GFA'. As the name implies, the value is arrived at by dividing the 'Element Quantity' by the 'GFA' (gross floor area) of the building. This can be a useful tool for getting a sense of layout. For example, in the case of partitions, this ratio allows us to get a feel for the overall 'density' of partitions. Or if we compare the ratios for 'A21 Lowest Floor Construction' and 'A22 Upper Floor Construction', we can get a sense of the number of stories. By listing these values by 'element' we can compare independently of the different systems (and even compare different projects).

ELEMENT	Ratio to GFA	Element Cost		Element Amount		Rate per SF of GFA	
		Quantity	Unit Rate	Sub-total	Total	Sub-total	Total
A SHELL		101,547 SF			\$8,353,910		\$82.27
A1 SUBSTRUCTURE					\$1,264,200		\$12.45
A11 Foundations	0.204	20,699 SF	17.54	363,130		3.58	7.9
A12 Basement Excavation	0.164	16,688 CY	16.48	275,070		2.71	
A13 Special Conditions	0.204	20,699 SF					
A2 STRUCTURE							28.3
A21 Lowest Floor Construction	0.204	20,699 SF	0.796	16,488		0.796	
A22 Upper Floor Construction	0.796	80,848 SF					
A23 Roof Construction	0.204	20,699 SF					
A3 EXTERIOR ENCLOSURE							
A31 Walls Below Grade	0.152	15,424 SF					
A32 Walls Above Grade	0.256	25,995 SF					
A33 Windows & Entrances	0.068	6,931 SF					
A34 Roof Covering	0.114	11,571 SF					
A35 Projections	1.000	101,547 SF					
B INTERIORS		101,547 SF					
B1 PARTITIONS & DOORS							
B11 Partitions	0.905	91,883 SF					
B12 Doors	0.003	354 Lvs					
B2 FINISHES							
B21 Floor Finishes	1.000	101,547 SF					
B22 Ceiling Finishes	1.000	101,547 SF					
B23 Wall Finishes	2.465	250,346 SF					
B3 FITTINGS & EQUIPMENT							
B31 Fittings & Fixtures	1.000	101,547 SF					
B32 Equipment	1.000	101,547 SF					
B33 Elevators	0.000	2 No					
C SERVICES		101,547 SF					
C1 MECHANICAL							
C11 Plumbing & Drainage	1.000	101,547 SF					
C12 Fire Protection	1.000	101,547 SF					
C13 HVAC	1.000	101,547 SF					
C14 Controls	1.000	101,547 SF					
C2 ELECTRICAL							
C21 Service & Distribution	1.000	101,547 SF	3.57	362,760	\$1,205,910	3.57	\$11.95
C22 Lighting, Devices & Heating	1.000	101,547 SF	5.33	541,150		5.33	7.5
C23 Systems & Ancillaries	1.000	101,547 SF	2.95	299,700		2.95	
NET BUILDING COST - EXCLUDING SITE					\$14,886,930		\$146.60
Z GENERAL REQ'S & ALLOWANCES					\$1,208,800		\$11.90
Z1 GENERAL REQ'S & FEE					\$1,208,800		\$11.90
Z11 General Requirements	6.0%			893,200		8.80	7.5
Z12 Fee	2.0%			315,600		3.11	
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$16,095,730		\$158.51
ZZ ALLOWANCES					\$0		\$0.00
ZZ1 Design Allowance	0.0%	(Excluded)		-		-	
ZZ2 Escalation Allowance	0.0%			-		-	
ZZ3 Construction Allowance	0.0%			-		-	
TOTAL CONSTRUCTION ESTIMATE - INCLUDING ALLOWANCES					\$16,095,730		\$158.51
							\$1,706 /m2

The last set of columns returns to the concept of GFA by converting the costs associated with each 'element' into a cost per SF (or m2) of building area and as a percentage of the total construction cost. This allows us to get a sense of the relative cost of the different elements of a building.

Subtotals as well as a listing of the percentages that may have been included for costs additional to the 'net' building cost.

As can be seen, the power of the elemental cost summary lies in the ability to compare building alternatives without losing sight of the cost associated with that *element* of the building. As well, we can compare different types of buildings and get a sense where the costs may vary.

When we start asking questions such as "what's different between the buildings?" or "why is the 'roof covering' element more on this project, if it's fulfilling the same function?" we can begin to have an understanding and be better prepared for the all-important question we are all asked at one time or another: "why are the costs different?"