

OCA Contractor Guide on Contractual Changes 2011



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OCA Contractor Guide on Contractual Changes

Foreword

Changes in projects are a fact of everyday life in construction and as such pose a challenge to the 'client/design/construction team' to deal with efficiently and fairly in a cooperative environment.

The commentary "Contractual Changes Demystified" by John G. Davies on the opposite page is offered as a good synopsis as to why industry is challenged at times to deal efficiently and cooperatively with change orders.

The OCA Standard Practices Committee which is comprised of an impressive group of industry practitioners representing general contractors, trade contractors, architects, consulting engineers and even representatives of the legal community have held lively exchanges on these very challenges of change order negotiation and acceptance.

One outcome of those Committee discussions is the development of this guide which is intended to assist contractors in either developing or re-assessing their firm's methodology of pricing for contractual changes by way of a change order.

It is difficult to create a fixed, standard, change order protocol as each project and prime contract tends to vary in allowable margins for overhead and profit and the nature of changes vary widely from one to another.

This guide offers insight as to how contractors may calculate the hourly trade labour rate as well as offering a list of additional site-specific charges that MAY be applicable in the calculation of a change order.

The hope is that this guide will educate all to recognize project variations and to encourage flexibility to respond to those project variations, preferably at the outset of the contract.

The Standard Practices Committee wishes to underscore John Davies fundamental message that ALL parties must work harder in a team approach to reduce the mistrust and adversarial environment associated with many change orders.

John Owens
2011 OCA Chair

OCA Standard Practices Committee – *Chairman Dwight Brown of PCL Constructors*, Dan Belcourt of AECON Buildings Ottawa, Doug Burnside of Dolyne Developments, Mike Caletti of Univex Group, James Chapman of Mill & Ross Architects, Ken Crawford of C & M Electric, Luc DesLauriers of Daoust Construction, Tony DeMarinis of DeMarinis (DMA) Inc., Toon Dreesen of Dreesen Architect, Dean Drevniok of Frecon Construction, Cathy Godin of SK Sheetmetal, Richard Goldstein of Kanata Research Park, John Graf of JL Richards, Bert Hendriks of R. W. Tomlinson Ltd, Ole Jensen of Scrivens Insurance, Sean Lundy of MP Lundy Construction (GCAO rep), Greg Lynes of Graebeck Construction Serge Massicotte of Massicotte Construction, , Paul McCarney of Graydex Ottawa, Randy McGee of Defence Construction Canada, Kevin Nearing of Borden Ladner Gervais, Bernie Normand of BJ Normand, John Owens of Revay & Associates, Bill Pieterston of Doran Contractors, Ron Price of Rasmussen Starr Ruddy, Allister Savage of Covertite Eastern, Mike Sharp of Black & McDonald, Tony Sottile of Modern Niagara, Brian Vlaming of LTR Industries.

Contractual Changes Demystified

by John G. Davies, JGD Resolutions

What is so complicated and mysterious about contractual changes? In standard contractual relationships, the procedure for introducing and implementing changes is simple. Any of three conditions generates the need for a change:

- the owner wishes to introduce one;
- an unknown or unanticipated condition, beyond the reasonable knowledge and control of one or other party, is discovered during the course of the work; or
- there is an error or an omission in the contract documents that demands a remedy.

Changes can only be initiated within the general scope of the work, by the owner through the consultant (i.e. not by the contractor), and by way of a change order or a change directive.

A change order adjusts the only two permitted variables in the contract (i.e. contract price and contract time). It requires both the owner and the contractor to agree to the change. If both parties do not agree, a change directive must be implemented.

A change directive permits the change to proceed immediately on a pay-as-you-go, cost-plus basis. Once the change is completed and the costs reconciled, the impact on contract time is assessed and a close-out change order is issued.

Changed work cannot start without either a change order or a change directive. It's all quite simple, really.

So, why the fuss?

The seeds of the answer lie in the inability of the parties to reach an accord on the honest value of the changed work or schedule before implementing the change. For example, this occurs when:

- the owner hasn't budgeted or scheduled additional funds or time;
- the owner (and its consultant) fears that the contractor is given an opportunity to play 'catch-up' for the low margins and omissions that formed the basis of its initial bid;
- the contractor is presented with an opportunity to capitalize on assembling a price and related schedule adjustments without the usual market forces prevalent in the competitive bidding process; or
- the consultant refuses to admit liability for errors and omissions in its documents in case it is held liable for the impact of these costs by the owner (It is also a term of its E&O insurance coverage that, should the consultant admit liability, its insurance coverage is denied).

Consultants often try to forestall the impact of change costs by establishing supplementary conditions that arbi-

trarily impose pre-established unit costs for labour, overheads, profit, OH&P mark-ups for sub-trades and certain classes of unit-price work. This approach is singularly unhelpful because:

- these values are pre-established at a time when the real cost of a change is unpredictable;
- there is a general lack of industry knowledge on the part of consultants as to how, and the extent to which these real costs are established, (e.g. published union labour rates, overhead costs, profit etc.); and
- unit prices, to be effective and appropriate, require an estimate of the number of units to be consumed (accurate to within 15 percent) as the economy of scale can seriously impact the cost of such units.

Conversely, contractors, at risk of suffering delays and impact costs arising from untimely changes, often qualify their responses by adding words to the effect that this change (or combination of changes) may require additional consideration at a future date depending upon the degree of impact and/or delay ultimately experienced during the changed course of the project.

This approach is equally unhelpful, for several reasons.

One, there is no finality to the cost of an individual change – therefore no accord.

Two, the contractor establishes the basis of an open-ended and unlimited cost and schedule charge over which an owner has no constraint.

Finally, agreement to proceed with any change containing such qualifications invites the ultimate preparation of a costly delay claim.

Unfortunately, all the above scenarios are founded on the basis of suspicion, mistrust, intransigence, incompetence and just plain old insecurity on the part of the parties.

In truth, I don't think that either contractors or owners like changes. They are unwelcome additions to the normal flow of contractual and administrative relations between the parties and often result in diminished job morale and untimely and unwelcome expense to all concerned.

The solution, as I see it, is to reduce the mistrustful and adversarial environment in which changes are currently addressed and replace it with a team approach in which each of the parties contributes to the resolution by contributing their intrinsic skills: consultants for technical solutions; contractors for building, costing and scheduling solutions; and owners for financial and scheduling solutions.

Once one can overcome the aforementioned hurdles and create a more trusting and cooperative climate in which teamwork is used to resolve changes, then the complexity and mystery will disappear.



OCA Contractor Guide on Contractual Changes

Change Order 101 – “So what comprises a change order?”

Essentially there are six separate classes of charge in arriving at a cost of a change order:

1. **Hourly Trade Labour Rate** multiplied by **Number of Hours of Trade Work**
2. **Supervision**
3. **Cost of all Materials**
4. **Additional Site and Head Office Job Specific Charges**
5. **Off-Site Head Office Overheads**
6. **Profit.**

Let's examine each.

1. Hourly Trade Labour Rate multiplied by Number of Hours of Trade Work

Hourly Trade Labour Rate is the first half of the formula.

The OCA Standard Practices Committee suggests 8 items that should be in the calculation of the hourly trade labour rate.

1. Base Hourly Trade Rate
2. Vacation Pay and Statutory Holidays Pay
3. Pension Plan & Health/Welfare Benefits
4. Legislated Provincial & Federal Payroll Burdens
5. OCA Recommended 'Day to Day' Clean Up Standard
6. Small Tools
7. Health and Safety Program
8. Factor for non-productive time of Rest Periods

The following template offers the reader additional detail on each of the 8 suggested items comprising the hourly trade labour rate.

Suggested 8 items of an hourly trade rate

Item 1	<p>Base Hourly Trade Rate Labour rate is based on a journeyman basis.</p>	\$ per hour
Item 2	<p>Vacation Pay and Statutory Holidays Pay For Union Firms - Usually defined as 10% of Base Hourly Rate. For Non-Union Firms – Employment Standards Legislation or Company Policy Prevails. Take total annual vacation pay benefit divided by 1,800 hours worked in year.</p>	\$ per hour
Item 3	<p>Pension Plan & Health/Welfare Benefits For Union Firms - Defined hourly contribution in agreement For Non-Union Firms – Amount of Benefit & RRSP Contributions. Take total annual benefit divided by 1,800 hours worked in year.</p>	\$ per hour
Item 4	<p>Legislated Provincial & Federal Payroll Burdens</p> <p>4 (a) Employment Insurance - 2011 Contribution Rate = 1.78% Suggested Formula: (Base \$ rate + \$ Vac Pay) x 1.73% EI Rate x 1.4 Employer Rate <i>Example:</i> Based on a \$35 per hour carpenter with 10% vacation pay ($\\$35.00 + \\3.50) x 1.78% x 1.4 = \$0.95 per hour</p> <p>4 (b) Canada Pension Plan - 2011 Contribution Rate = 4.95% Suggested Formula: (Base \$ rate + \$ Vac Pay) x 4.95% <i>Example:</i> ($\\$35.00 + \\3.50) x 4.95% = \$1.90 per hour</p> <p>4 (c) Ontario Employer Health Tax – For Payroll that is over \$400,000 annually - Tax is 1.95% Suggested Formula: (Base \$ rate + \$ Vac Pay) x 1.95% <i>Example:</i> ($\\$35.00 + \\3.50) x 1.95% = \$0.75 per hour</p> <p>4 (d) Workers Safety Insurance Board (WSIB) 2011 WSIB Premiums vary by trade from a low of \$3.25 to a high of \$15.86 per \$100 payroll. Suggested Formula: (Base \$ rate + \$ Vac Pay) x WSIB premium rate</p>	\$ per hour
Item 5	<p>OCA Recommended 'Day to Day' Clean Up Standard A clean construction site is a safe construction site and for over 30 years, the OCA has recommended a 'clean up standard' to the industry. This recommended standard focuses on the site 'house-keeping' cleanup for the debris from ALL workers on the jobsite. It includes such items as paper, bottles, food, dust and small garbage accumulation. The OCA standard does NOT cover waste generated from trade construction.</p> <p>Go to OCA website www.o.ca "Resources" Section Source to download OCA Recommended Clean Up Standard: Effective May 1, 2011 - \$4.46 per day or \$0.56 per hour</p>	\$ per hour

<p>Item 6</p>	<p>Small Tools - defined as tools under \$500 associated with the trade Valuation for small tools will vary significantly from trade to trade. OCA is recommending small tools be defined as tools under \$500. Industry practices involves either using a percentage of the labour hourly rate or taking the annual small tool costs of the trade/firm divided by the number of field workers divided by 1,800 average working hours in a year per worker.</p>	<p>\$ per hour</p>																		
<p>Item 7</p>	<p>Health & Safety Program Valuation for health and safety training and management will vary from firm to firm and also project to project depending on complexity and size factors. Included in this item would be: — Personal hygiene and facilities required. — Safety Training — Job Site Talks — WHMIS Information — Health and Safety Committee — Personal Protection Equipment — Escalating Site Safety Procedures</p> <p>Industry costing practices involves either using a percentage of the labour hourly rate or taking the annual personal, health & safety program costs of the firm divided by the number of field workers divided by 1,800 average working hours in a year per worker.</p>	<p>\$ per hour</p>																		
<p>Item 8</p>	<p>Factor for non-productive time of Rest Periods – <u>May or may not be included</u> and is dependent on trade and nature/quantum of the change. There are several trades that employ recognized International Trade Labour Unit Manuals which base their labour units on working time only. Example: Labour Unit manual recommends a 2 hour standard for installation of an electrical receptacle by a journey electrician. The change order calls for 100 receptacles. Costing the change on 200 hours would not recognize local trade practice of having a 15 minute break every 4 hours.</p> <p>Industry trade practice is to have a 10 to 15 minute break every 4 hours. Union Collective Agreements all require rest breaks. This example is based on a 10 minute break per 4 hours.</p> <p>Suggested Formula: (Base \$ rate + \$ Vac Pay + Pension/ H & W Benefits) x 10 minutes/240 minutes Example: (\$35.00 + \$3.50 + \$8.00) x 10/240 = \$1.94 per hour</p> <p>SUBTOTAL – Hourly Trade Labour Rate</p> <table border="0"> <tr><td>1. Base Hourly Rate</td><td>\$</td></tr> <tr><td>2. Vacation Pay and Statutory Holidays Pay</td><td>\$</td></tr> <tr><td>3. Pension Plan & Health/Welfare Benefits</td><td>\$</td></tr> <tr><td>4. Legislated Provincial & Federal Payroll Burdens</td><td>\$</td></tr> <tr><td>5. OCA Recommended 'Day to Day' Clean Up Standard</td><td>\$</td></tr> <tr><td>6. Small Tools</td><td>\$</td></tr> <tr><td>7. Safety Program</td><td>\$</td></tr> <tr><td>8. Rest Periods</td><td>\$</td></tr> <tr><td>Subtotal</td><td>\$ per hour</td></tr> </table>	1. Base Hourly Rate	\$	2. Vacation Pay and Statutory Holidays Pay	\$	3. Pension Plan & Health/Welfare Benefits	\$	4. Legislated Provincial & Federal Payroll Burdens	\$	5. OCA Recommended 'Day to Day' Clean Up Standard	\$	6. Small Tools	\$	7. Safety Program	\$	8. Rest Periods	\$	Subtotal	\$ per hour	<p>\$ per hour</p>
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Manhours Calculation and Factors affecting Productivity

In the absence of agreed to pre-authorized rates and units, it is strongly recommended that industry standard Labour Units are used in calculating labour units required to complete a change notice.

In the construction industry, there are a number of Internationally recognized trade manuals, primarily in the Mechanical and Electrical sectors, that are generally adopted as the standard for how much time a tradesperson will require to perform a certain task.

OCA acknowledges and supports the use of such manuals, including but not limited to the following:

- *NECA Manual of Labour Units* – National Electrical Contractors Association — www.necanet.org
- *MCAA Labour Estimating Manual* – Mechanical Contractors Association of America — www.mcaa.org
- *SMACNA Cost Reference Manual*– Sheet metal and Air Conditioning Contractors National Association — www.smacna.org

You have now arrived at an hourly trade labour rate but before you move onto calculating the number of hours of labour required, you need to consider the uniqueness of your project and all factors that may negatively impact your usual levels of labour productivity.

The following factors are example that may be present on your job that negatively impact on your productivity and percentage adjustments should be negotiated in recognition of them.

<p>STACKING OF TRADES: Operations take place within physically limited space with other contractors. Results in congestion of personnel, inability to locate tools conveniently, increased loss of tools, additional safety hazards and increased visitors. Optimum crew size cannot be utilized.</p>	<p>CONCURRENT OPERATIONS: Stacking of this contractor’s own force. Effect of adding operation to already planned sequence of operations. Unless gradual and controlled implementation of additional operations made, factor will apply to all remaining and proposed contract hours</p>
<p>BENEFICIAL OCCUPANCY: Working over, around or in close proximity to owner’s personnel or production equipment. Also badging, noise limitations, dust and special safety requirements and access restrictions because of owner. Using premises by owner prior to contract completion.</p>	<p>JOINT OCCUPANCY: Change causes work to be performed while facility occupies by other trades and not anticipated under original bid.</p>
<p>SITE ACCESS: Interferences with convenient access to work areas, door man-lift management or large and congested worksites.</p>	<p>LOGISTICS: Owner furnished materials and problems of dealing with his storehouse people, no control over material flow to work areas. Also contract changes causing problems of procurement and delivery of materials and rehandling of substituted materials at site.</p>
<p>OVERTIME: Lowers work output and efficiency through physical fatigue and poor mental attitude.</p>	<p>SEASON AND WEATHER CHANGE: Either very hot or very cold weather.</p>
<p>DILUTION OF SUPERVISION: Applies to both basic contract and proposed change. Supervision must be diverted to (a) analyze and plan change, (b) stop and replan affected work, (c) take off, order and expedite material and equipment, (d) incorporate change into schedule, (e) instruct foreman and journeyman, (f) supervise work in progress, and (g) revise punch lists, testing and start-up requirements.</p>	<p>MORALE AND ATTITUDE: Excessive hazard, competition for overtime, over-inspection, multiple contract changes and rework, disruption of labour rhythm and scheduling, poor site conditions, etc.</p>

2. Supervision

Field supervision is required in all change orders by the contractors employing the field labour.

The manner in which contractors charge for field supervision is either incorporating the cost in the hourly rate of the hourly trade labour charge OR it is charged as a line item or fixed cost.

In the Ottawa region, 3 trade associations: The Walls and Ceilings Contractors Association (WACCA), the Mechanical Constructors Association (MCA) and the Electrical Contractors Associations (ECA) of Ottawa recommend the inclusion of field supervision as an add-on to the hourly trade rate.

3. Cost of all Materials, Equipment Rentals, Re-stocking charges and Delivery consumed in the changed work.

4. Additional Site and Head Office Job Specific Charges Where Applicable:

The standard construction document CCDC 2- 2008 article 6.3.6 only addresses the permitted Overhead and Profit (OH&P) component of a change by way of employing the term Contractor's Fee" which amount it offers "...shall be as specified in the Contract Documents or otherwise agreed by the Parties."

A good guide to additional permitted site specific changes, other than labor and materials, that are commonly accepted on construction projects, is to follow the list set out in CCDC 2-2008 article 6.3.7. (See appendix at end for text of CCDC 2 articles 6.3.6 and 6.3.7)

Unfortunately this list doesn't permit charges to be made for many 'General Requirements' or 'Head-Office' costs commonly attributable to general changes that are not included in the list.

In some cases, items like bonding and insurance values cannot be adequately priced at the time of making a change (they are often valued by the bonding and insurance companies at the end of a project as opposed to on a day-to-day basis) so it is impossible to be properly compensated for any increases in value of such items at the time of making a change.

In an attempt to establish the value of a Contractor's Fee (described above) consultants often prepare Supplementary Conditions that cap the amounts chargeable by the Contractor for OH&P. These capped values are often unrealistic and do not reflect the real and reasonable OH&P values that are commonly consumed in a change. As a consequence, the Contractor is left wanting.

It is therefore wise to review the list provided below as a guide to listing additional legitimate Site or Head Office Specific Charges, that are not provided, for in the wording of the Contract.

Project Management
Travel, Room & Board, Parking 1. Travel Car Expense – Cost as per collective agreement or an amount per km. Note – Revenue Canada Guideline sets a maximum per km amount guideline that if exceeded would be taxable income. Check the CRA website for most up to the current guideline. In 2011, the maximum is \$0.52 per kilometer for the first 5,000 kms and \$0.46 thereafter 2. Room & Board – Cost as per collective agreement or cost of room divided by 8 hours. 3. Parking – Cost as per collective agreement or per day charge divided by 8 hours. *Could also be a separate line item.
Bonding any adjustment in premiums for bonds which the contractor is liable

<p>Insurance any adjustment in premiums for insurance which the contractor is liable</p>
<p>Material Handling - Excessive Not all sites are equal and for those challenging work sites whether due to size, space restrictions or security for example, there may be additional costs associated with material handling.</p>
<p>Security Conditions Depending on the Client building, security screening and access may be a serious productivity challenge that needs to be considered.</p>
<p>Time Keeping – Scheduling – Dependent on the project.</p>
<p>Seismic Restraint – Dependent on the project and the product.</p>
<p>Site Facilities – Trailer/Lunchroom, change room, facilities, Communications equipment - Dependent on the project and the product.</p>
<p>Engineering, As-Builts, Estimating, Auto Cad, BIM – Dependent on the project.</p>
<p>Special Cleaning, Infection Control, Disposal – Dependent on the project.</p>
<p>Permits & Inspection – Dependent on the project.</p>
<p>Equipment, Cartage & Freight – Dependent on the project.</p>
<p>Finance – Interest Charges – Dependent on the project and contract.</p>
<p>Temporary Services</p>
<p>Other Reasonable and/or legitimate Site or Head office charge</p>

5. Overhead

Overhead expenses are administrative expenses of a business nature which cannot be allocated to any specific project, but are necessary for the business to operate.

Off-Site Head (and/or Branch) Office Overheads (including, but not necessarily limited to: rent (or mortgage carrying costs), city taxes, office insurance (PLPD), heating, lighting, secretarial services, telephone, accounting and legal services, advertising and promotion, head office furniture and equipment (and replacement costs), software, HST less input tax credits, snow removal, head office maintenance, etc., and all other non site-specific overheads that form part of the cost of doing, and remaining, in business).

6. Profit

Profit is to compensate for risk, effort and return on investment.

The Canadian Construction Association Change Order Guide (CCA Doc 14) recommends a combined 20% mark-up for overhead and profit and states that it is intended to reflect an appropriate average. Depending upon the circumstances, however, a lower or greater percentage may be more appropriate. Sometimes the agreement itself will state the allowable mark-ups for overhead and profit as a matter of contract. In such cases both parties must agree to any deviation from the specified mark-ups.

Appendix

CCDC 2 Contract Article 6 on Changes

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

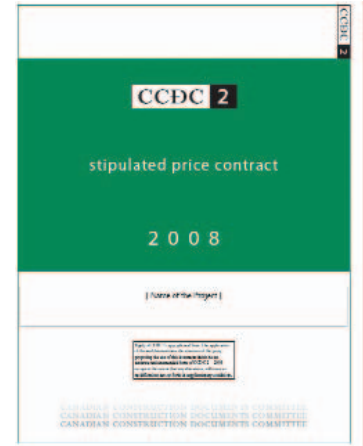
- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- 1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
 - 2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present, in a form acceptable to the *Consultant*, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 When the *Owner* and *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the application for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner* through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.
- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other, shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- 1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
 - 2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
 - 3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following:
- 1 salaries, wages and benefits paid to personnel in the direct employ of the *Contractor* under a salary or wage schedule agreed upon by the *Owner* and the *Contractor*, or in the absence of such a schedule, actual salaries, wages and benefits paid under applicable bargaining agreement, and in the absence of a salary or wage schedule and bargaining agreement, actual salaries, wages and benefits paid by the *Contractor*, for personnel



- (1) stationed at the *Contractor's* field office, in whatever capacity employed;
 - (2) engaged in expediting the production or transportation of material or equipment, at shops or on the road;
 - (3) engaged in the preparation or review of *Shop Drawings*, fabrication drawings, and coordination drawings; or
 - (4) engaged in the processing of changes in the *Work*.
- .2 contributions, assessments or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan, insofar as such cost is based on wages, salaries or other remuneration paid to employees of the *Contractor* and included in the cost of the *Work* as provided in paragraph 6.3.7.1;
 - .3 travel and subsistence expenses of the *Contractor's* personnel described in paragraph 6.3.7 .1;
 - .4 all *Products* including cost of transportation thereof;
 - .5 materials, supplies, *Construction Equipment*, *Temporary Work*, and hand tools not owned by the workers, including transportation and maintenance thereof, which are consumed in the performance of the *Work*; and cost less salvage value on such items used but not consumed, which remain the property of the *Contractor*;
 - .6 all tools and *Construction Equipment*, exclusive of hand tools used in the performance of the *Work*, whether rented from or provided by the *Contractor* or others, including installation, minor repairs and replacements, dismantling, removal, transportation, and delivery cost thereof;
 - .7 all equipment and services required for the *Contractor's* field office;
 - .8 deposits lost;
 - .9 the amounts of all subcontracts;
 - .10 quality assurance such as independent inspection and testing services;
 - .11 charges levied by authorities having jurisdiction at the *Place of the Work*;
 - .12 royalties, patent licence fees and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10'3 -PATENT FEES;
 - .13 any adjustment in premiums for all bonds and insurance which the *Contractor* is required, by the *Contract Documents*, to purchase and maintain;
 - .14 any adjustment in taxes, other than *Value Added Taxes*, and duties for which the *Contractor* is liable;
 - .15 charges for long distance telephone and facsimile communications, courier services, expressage, and petty cash items incurred in relation to the performance of the *Work*;
 - .16 removal and disposal of waste products and debris; and
 - .17 safety measures and requirements.
- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the Contract, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof when requested.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for determination.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

