

Mechanical Contractors Association of Ottawa  
2039 Robertson Road, Suite 401  
Ottawa, ON K2H 8R2  
(613) 237-1491

[info@mcaottawa.com](mailto:info@mcaottawa.com)  
[www.mcaottawa.com](http://www.mcaottawa.com)



## Change Order Labour Rate Guide

This guide provides MCA Ottawa's suggested **minimum** labour rate guide for Change orders or additional work in  
**Fabrication Shop - Piping trade.**

Effective May 1, 2023

MCA Ottawa recommended rate is **\$146.56**

If the change order work is being done using overtime hours  
MCA Ottawa recommended overtime rate **\$216.81**

The following **are not** included in the above calculations (see next page for definitions):

**All Projects:**

Overhead & Profit (recommended at **20%** for own force and **15%** for subcontract work)  
Project Management  
Estimating Changes  
Bonding Cost  
As-Builts & manuals  
Warranty  
Startup, Commissioning & Training  
Labour evaluation and productivity loss factor

**Project Specific costs:**

\*BIM (Drafting, coordination, Interference Drawings)  
\*LEED Material & Labour  
\*Security Clearance  
\*Exceptional entry requirements  
\*Infection Control unique to the jobsite  
\*Exceptional project related costs

**The above change order rates are only applicable to members of MCA Ottawa. Details and calculations supporting these rates are available upon request by contacting the MCA Ottawa office.**



## **Definitions:**

**Overhead** - Overhead expenses are administrative expenses of a business which cannot be allocated to any specific project, but are necessary for the business to operate. Typical items may be but are not limited to the following items:

- Office rental, maintenance, utilities, and expenses
- Office equipment, furniture, and supplies
- Property taxes, business licenses, and auto insurance
- Dues and subscriptions
- Postage and courier (non-job related)
- Advertising and telephone
- Legal and accounting fees
- Sales and marketing
- President's salary and benefits
- Sales force salary and benefits
- Dispatcher's salary and benefits
- Purchaser's salary and benefits
- Clerical staff salary and benefits
- Estimators' salary and benefits (except for Change Orders)

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

**Labour evaluation and productivity loss factor** - Change orders can have an adverse effect on labour productivity due to circumstances beyond the control of the contractor. Factors that should be evaluated may be as follows:

- Stacking of trades
- Reassignment of Manpower
- Concurrent Operations
- Learning Curve
- Joint Occupancy
- Logistics
- Overtime
- Morale and attitude
- Crew size inefficiency
- Dilution of supervision
- Errors and Omissions
- Site Access
- Fatigue
- Season and Weather changes

**Bonding Cost** - the adjustment in premiums for all bonds and insurance which the contractor is required to purchase and maintain may be added as a lump sum if required

**As BUILTS & Manuals**- cost to incorporate the altered as-builts drawings into the original set. Costs of staff engaged in preparation or review of all drawings may also be included.

**Warranty** - all new items will now be covered by warranty, therefore an additional cost must be added.

*Support for the above definitions is found in CCDC2 general condition Article 6.3.*

MCA Ottawa recommends the use of the following Impact Factors and Productivity Loss Percentages table found in the Ottawa Construction Association 2023 Change Order Protocol.

TABLE 9 IMPACT FACTORS AND PRODUCTIVITY LOSS PERCENTAGES

FACTORS	% of loss if condition is:		
	Minor	Average	Severe
<b>1. Stacking of Trades</b> 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.	10%	20%	30%
<b>2. Morale and Attitude</b> Excessive hazard, competition for overtime, over-inspection, multiple contract changes and rework, disruption of Labour rhythm and scheduling, poor site conditions, etc.	5%	10%	15%
<b>3. Reassignment of Manpower</b> Loss occurs with move-on, move-off men because of unexpected changes, excessive changes, or demand made to expedite or reschedule completion of certain work phases. Preparation not possible for orderly change.	5%	10%	15%
<b>4. Crew Size Inefficiency</b> Additional men to existing crews "breaks up" original team effort, affect Labour rhythm. Applies to basic contract hours also.	10%	20%	30%
<b>5. Concurrent Operations</b> 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.	10%	20%	30%
<b>6. Dilution of Supervision</b> 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.	10%	15%	25%
<b>7. Learning Curve</b> Period of orientation in order to become familiar with changed condition. If new men are added to project, effects more severe as they learn tool locations, work procedures, etc. Turnover of crew.	5%	15%	39%
<b>8. Errors and Omissions</b> Increases in errors and omissions because changes usually performed on crash basis, out of sequence or cause dilution of supervision or any other negative factors.	1%	3%	6%
<b>9. Beneficial Occupancy</b> 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.	15%	25%	40%
<b>10. Joint Occupancy</b> Change causes work to be performed while facility occupies by other trades and not anticipated under original bid.	5%	12%	20%
<b>11. Site Access</b> Interferences with convenient access to work areas, door man-lift management or large and congested worksites.	5%	12%	30%
<b>12. Logistics</b> 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 re-handling of substituted materials at site.	10%	25%	50%
<b>13. Fatigue</b> Unusual physical exertion. If on change order work and men return to base contract work, effects also affect performance on base contract.	8%	10%	12%
<b>14. Ripple</b> Changes in other trades' work affecting our work such as alteration of our schedule. A solution is to request, at first job meeting, that all change notices/bulletins be sent to our Contract Manager.	10%	15%	20%
<b>15. Overtime</b> Lowers work output and efficiency through physical fatigue and poor mental attitude.	10%	15%	20%

Specifics on how to use this chart may be found in the OCA 2023 Change Order Protocol

<https://oca.ca/resources/standard-practices/>