

## **CONTENT OUTLINE**

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### **CONSTRUCTION JOB SITE CONTROLS**

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## OVERVIEW

The purpose of this course is to provide participants with the knowledge necessary to manage a construction site. Participants will learn how to layout a job site, manage documents, materials, tools, and equipment as well as coordinate labour and sub-contracts.

## PREREQUISITE

Although there is no formal educational prerequisite for this course, the participants' chances of success will be enhanced if their reading and comprehension skills are at a high school or equivalent level. Participants must be familiar with basic computer operating and word processing programs.

## LEARNING OBJECTIVES

Upon successful completion of this course, participants will be able to:

- plan site layout
- manage materials
- manage equipment and tools
- maintain document control
- manage site labour and sub-contractors
- practice environmental controls
- identify concepts related to quality
- establish monitoring programs
- conduct project close-out

## CONTENT

### 1. Plan site layout.

- areas for material storage, site office, temporary services, and parking
- access routes
- existing services
- possible public safety, fire, and environmental considerations
- layout / lines / levels (boundaries)
- site security

## **2. Manage materials.**

- purchasing / ordering material
- sources for alternate materials
- receiving procedures
- storing materials
- inventory control systems
- safe material handling procedures
- scheduling material delivery
- review shop drawings, product data sheets, samples, mock-ups
- WHMIS
- minimizing material handling
- security of materials
- coordination of deliveries
- waste management

## **3. Manage tools and equipment.**

- tools and equipment
- maintenance programs
- equipment lists
- suppliers
- scheduling equipment use
- rental inventory
- product data sheets
- rental / purchase agreements
- security of equipment
- loss control

## **4. Maintain document control.**

- methods of controlling documents
- methods for document storage
- document retrieval methods
- change documents (site, design, time, etc.)
- shop drawings
- job site journal (consequences of not keeping current)
- digital imagery/pictures

## **5. Manage site labour and sub-contractors.**

- trade overlaps
- union agreements
- good working environment / safety
- back-charges

- production management
  - o establish benchmark performance
  - o time logging process
  - o time management
- sub-contracts
- own forces

**6. Practice environmental controls.**

- laws and regulations (federal, provincial, and municipal)
- procedures to minimize waste (reduce, reuse, recycle)
- hazardous materials, dust, noise and air pollution

**7. Identify concepts related to quality.**

- quality control / quality assurance
- existing corporate national and international standards

**8. Establish monitoring programs.**

- quality / quantity control
- safety
- interrelationship of job progress, schedule, costs, and reporting
- changes / potential claims
- as built
- cost controls
- inspections
- sustainability (LEED®)

**9. Conduct project close-out.**

- deficiency list
- as built documents and manuals
- commissioning
- final inspections
- permits and certificates
- lessons learned

## **METHODOLOGY**

This course lends itself to short lectures, case studies, and practical projects. Instructors may involve the participants in the following specific techniques and activities:

- icebreaker type activity to get students engaged as soon as possible;
- completing a purchase order and matching it to a packing slip;
- visiting a job site;
  
- exercises on rent vs. purchase;
- completing a purchase order;
- given a specification, identifying:
  - shop drawings, product data sheets, samples, mock-ups ,
  - applicable codes and standards,
  - testing requirements,
  - required tool list,
- resourcing a guest to speak on environmental / safety issues;
- analysing a safety program;
- analysing a quality assurance program;
- analysing a quality control program;
- working with drawings and specifications;
- establishing a benchmark performance (productivity).
- sustainability issues

## **ASSESSMENT**

In order to successfully complete this course, participants will be expected to demonstrate that they have achieved the learning objectives. They will be evaluated through various assignments, projects, and/or tests based on each of these objectives. Final assessment for the course will be determined by the following weighting:

Learning Objective	Weighting (%)
1. Plan Site Layout .....	20
2. Manage Materials .....	5
3. Manage Tools and Equipment.....	5
4. Maintain Document Control .....	20
5. Manage Site Labour and Sub-Contractors .....	15
6. Practice Environmental Controls .....	10
7. Identify Concepts Related to Quality .....	10
8. Establish Monitoring Programs.....	10
9. Conduct Project Close-out.....	5
	100

## **RESOURCES**

### **Reports, Manuals, Textbooks, and Documents**

A Guide to the Project Management Body of Knowledge (PMBOK), PMI Standards Committee, Project Management Institute, 1996 [ISBN: 1-880410-12-5 (pbk. : alk. paper) / ISBN: 1-880410-13-3 (hdbk)]

Construction Site Management by William R. Mincks and Hal Johnston, Delmar (ISBN: 0-8273-7152-7) <http://www.abebooks.com/>

PMP Exam: Practice Test and Study Guide, ESI International, 1998 (ISBN: 1-890367-11-7)

PMP ©: Project Management Professional Study Guide, SYBEX Inc., 2002 (ISBN: 0-7821-4106-4)

Tool and Material Control Systems by James E. Rowings and Mark O. Federle, National Electrical Contractors Association <http://www.necanet.org>

BC Manual on Management of Building Projects (<http://www.bcprojectsmanual.com>)

### **Government/Association Websites**

Canadian Construction Association (CCA) (<http://www.cca-acc.com>)

Canadian Construction Document Committee (<http://www.ccdc.org>)

Local construction associations

### **Other Resources**

Applicable Acts and Regulations

Standard close-out documents such as OGCA – OAA (Ontario General Contractors Association – Ontario Association of Architects)