

# € TRAINING

Engineering and Construction Contract  
Management Certificate Program (ECCM  
Workshop)



## Engineering and Construction Contract Management Certificate Program (ECCM Workshop)

### Introduction:

This course focuses on practical solutions for today's construction problems. Actual case examples are discussed, explaining contract performance, how to resolve construction disputes, prepare for a litigation case, and the bidding process. The course also covers legal issues, from contract formation to the final payment, and is designed to assist construction professionals and their lawyers in day-to-day construction activities. The emphasis is on using the civil law code as the legal framework of the contract. This course provides the construction professional with a detailed understanding of scheduling project activities, along with identifying the critical activities and critical path. It also covers resource management, resource leveling, and allocation as essential elements in controlling project costs and establishing the resources needed. In addition, it provides a basis for the many areas of estimating that construction professionals may face. Other methods of cost control, such as value engineering and earned value, will also be discussed.

The course systematically covers the subjects vital to training competent contract and field administrators to manage time, cost, documentation, and disputes. It focuses on the legal, technical, and personal responsibilities involved in observation, supervision, and coordination of on-site construction. It increases knowledge of construction practices and control techniques and develops skills in management, contract administration, decision-making, and, finally, contract close-out - all essential in administering the contract.

In this course, you will analyze the issues when a dispute arises during construction, examine its time and cost impacts on a project, and learn how to put in place more cost-effective procedures to resolve such disputes amicably by the parties before the project close-out. You also learn how to deal with contract claims, prepare and negotiate a settlement, and produce a counterclaim if needed. You will build your negotiation and mediation skills, learn how to prepare for and proceed with arbitration, and how to deal with litigation.

### Course Objectives:

At the end of this course the participants will be able to:

- Enhance the awareness of construction professionals regarding their rights, responsibilities, and legal liabilities and the methods of managing risk
- Achieve their project objectives.
- Encounter in the industry.
- Provide comprehensive instruction on key issues that contracting authorities and contractors need to focus their attention on, from early planning to contract tendering and award, with emphasis on the applicable law.
- Explain the techniques for scheduling a project, establishing time-cost relationships, resource management methods, different types of cost estimates, and expanding one's cost-estimating skills.
- Increase familiarity with the various methods and their components, with the goal of preparing cost estimates and project schedules as accurately as possible.
- Identify management responsibilities, develop your communication skills, learn effective administrative responsibilities, understand legal requirements, structure effective record-keeping methods, and promote good organizational and contract close-out procedures.
- Prepare you to analyze dispute causes and their impact on the time and cost of a project, and to effectively assess the parties' entitlements in order to negotiate an amicable settlement.
- Expand knowledge of negotiation and mediation and improve your practical skills, through role-plays, to more effectively resolve disputes in an amicable manner. You will also gain a better understanding of how

arbitration works, and how to deal with litigation if all else fails to resolve the matter.

### Targeted Audience:

- This workshop will benefit contractors, sub-contractors, building design engineers, civil engineers, employers, developers, contract managers, project managers, consultants, specification-writers, government employees, public-sector employees, buyers of construction, owners, contract administrators, specification writers, officers of project management firms and construction management firms, officials of government agencies responsible for bid calls, architects, bond and insurance providers.

### Course Outlines:

#### Unit 1:

- Managing Construction Risks - Project Life Cycle, Reviewing the Fundamentals of Project Risk Management, Risk Identification and Classification, Risk Priorities, Risk Allocation, Contractual Risk Allocation, Reducing Risk when Selecting Construction Projects, Contractual Risk Management, Case Study.
- Legal Aspects of Construction Contracts - The Law of the Contract: Civil Law, Common Law, Administrative Law - Basic Contract Law, Basic Principles: Mandatory and Complementary Rules in Civil Law, Elements of Contracts, Sources of Obligation under Civil Law, Enforceability of Contracts, Principles of Interpretation, Damages, Force Majeure, Unforeseen Conditions, Assignment of Rights, Redemption of Breach, Limitation Period, Warranties, Notice Requirements, Case Study.

#### Unit 2:

- Parties' Obligations - Types of Relationship with the Employer: Contractor, Agent and Employee, General and Particular Conditions, Obligations of the Parties: Contractor, Designer, Employer, Contract Manager, Role of the Engineer in Construction Contracts, Change Clauses, Time is of the Essence, Case Study.
- Preparing Construction Documents - Project Manual Concept, Forms of Agreement, Conditions of Contract, Master, Section and Page Format Overview, Methods of Specification, Specification Writing, Substitutions and Submittals; General Aspects of Tendering, Bidding and Awarding - Ads for Bids, Pre-Qualification, Value Engineering, Constructability Review, The Decision to Bid, Plan Deposit, Bidding Period, Accuracy of the Bidding Information, Addendum, Bid Form, Modifying and Withdrawing Bids, The Award.

#### Unit 3:

- Selecting Contracting Strategies and Procurement Methods - Standard Forms, Stipulated Price Contracts, Unit Price Contracts, Cost-Plus-A-Fee Contracts, Design-Build Contracts, Construction Management Contracts, Selecting an Appropriate Form of Procurement to Minimize Disputes, Designing a Dispute Resolution System; Bonding and Insurance Requirements - Award Considerations - Importance of Pre-Award Meeting, Employer-Supplied Materials, Equipment and Services, Bid Bonds, Conclusion.
- The Art of Planning, Fundamentals of Project Time Management, Establishing the Project and Work Breakdown Structure, Developing the Schedule, Project Network Logic, Arrow Diagrams, and Precedence Diagrams, Time Analysis, Critical Path and Floats, Bar Charts, Case Study.

#### Unit 4:

- Resource Planning, Leveling and Allocation, Time-Cost Relationships, Project Compression and Acceleration, Project Controlling and Monitoring; Case Study.
- The Cost Management Process in Planning and Design, Introduction to Project Budgeting and Concept

Estimating, Budget Estimating Approaches, The Parametric Systems Budget Estimate, Concept Design Estimating Approaches, Life Cycle Costing LCC, Value Engineering VE; Case Study.

#### Unit 5:

- Introduction to Estimating, Types of Estimates, Preliminary Estimates/Parametric Estimates, Final Estimates, Direct Costs, Indirect Costs, Cash Flow Analysis; Case Study.
- Effective Cost and Time Control - Payments and Payment Certificates, Monitoring Job Progress and Scheduling Requirements, Procedures for Progress and Cost Control, Earned Value and Project Control, Monthly Status Reports, Case Study, Conclusion.