

CONSTRUCTION 101

AN INTRODUCTION TO THE CONSTRUCTION INDUSTRY

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Total Duration 16 hours

1.0 INTRODUCTION TO THE CONSTRUCTION INDUSTRY

In this Section

- 1.1 The Industry
 - 1.1.1 Industrial
 - 1.1.2 Institutional
 - 1.1.3 Commercial
 - 1.1.4 Civil
 - 1.1.5 Residential
- 1.2 Construction Associations
 - 1.2.1 Construction Associations
 - 1.2.2 Professional Societies
 - 1.2.3 Bid Depositories
- 1.3 The Parties: their roles and responsibilities
 - 1.3.1 Owners
 - 1.3.2 Designers
 - 1.3.3 Governments
 - 1.3.4 General Contractors
 - 1.3.5 Subcontractors
 - 1.3.6 Manufacturers and Suppliers
 - 1.3.7 Allied Professionals
- 1.4 The Contractor's Office
 - 1.4.1 The Executive Office
 - 1.4.2 Technical Staff
 - 1.4.3 Support and administrative staff
- 1.5 The Project Office
 - 1.5.1 Project Superintendent
 - 1.5.2 Own Forces
 - 1.5.3 Subcontractors
- 1.6 Union and Non-Union Contractors
- 1.7 Corporate Structures
 - 1.7.1 Sole Proprietorship
 - 1.7.2 Partnership
 - 1.7.3 Joint Venture Partnership
 - 1.7.4 Corporations

Reference materials

2.0 CONSTRUCTION DOCUMENTS

In this Section

- 2.1 Invitation to Tender
 - 2.1.1 Invitation to Tender
 - 2.1.2 Obtaining Documents.
 - 2.1.3 Receiving Projects into the Office
 - 2.2 The Bid Documents
 - 2.2.1 The bid Documents
 - 2.2.2 Plans
 - 2.2.3 Schedules
 - 2.2.4 Specifications
 - 2.2.5 Addenda
 - 2.3 Format of Drawings
 - 2.3.1 Content of a set of drawings
 - 2.3.2 Site and Landscape Drawings
 - 2.3.3 Architectural Drawings (A series)
 - 2.3.4 Structural Drawings (S series)
 - 2.3.5 Mechanical Drawings (M series)
 - 2.3.6 Electrical Drawings (E series)
 - 2.4 Format of Specifications
 - 2.4.1 The Technical Specifications
 - 2.5 Preparing the Bid
- Reference materials

3.0 TENDERING, BIDDING AND AWARD OF CONTRACTS

In this Section

- 3.1 Principals of the Laws of Competitive Bidding
- 3.2 Methods of Bid Solicitation
- 3.3 Preparing a Tender Call
- 3.4 Privilege clauses
- 3.5 The Bid Form
- 3.6 Supplemental Information
 - 3.6.1 List of Subcontractors
 - 3.6.2 Alternative Prices
 - 3.6.3 Unit Prices
- 3.7 Calling for Bids
- 3.8 Receiving Bids
 - 3.8.1 Bid closing time and date
 - 3.8.2 Receiving Bids
 - 3.8.3 Late Bids
 - 3.8.4 Bid Modifications
 - 3.8.5 Bid Opening
 - 3.8.6 Electronic Bids
 - 3.8.7 Bid Evaluation
 - 3.8.8 Contract Award
 - 3.8.9 Post Bid Negotiations
- 3.9 The Law of Bidding
- 3.10 Requirements of Contract A
 - 3.10.1 Requirements for a 'formal' bid
 - 3.10.2 Informal bids
 - 3.10.3 Irregular bids

Reference materials

4.0 FORMAT OF CONTRACTS

In this Section

- 4.1 Common Features of Construction Contracts
 - 4.1.1 Articles of Agreement
 - 4.1.2 Definitions
 - 4.1.3 General Conditions of Contract
 - 4.1.4 Supplementary General Conditions
 - 4.1.5 Plans and Specifications
 - 4.1.6 Addenda
- 4.2 Letters of Intent
- 4.3 Types of Contract
 - 4.3.1 Stipulated Price Contracts (Standard form CCDC 2)
 - 4.3.2 Cost Plus Contracts (Standard form CCDC 3)
 - 4.3.3 Unit Price Contracts (Standard form CCDC 4)
 - 4.3.4 Civil Works Contracts (Standard form CCDC 18)
 - 4.3.5 Construction Management Contracts (Standard forms CCDC 5A and 5B)
 - 4.3.6 Project Management Contracts
 - 4.3.7 Design Build Contracts (Standard form Document 14)
 - 4.3.8 Subcontracts (Standard form CCA 1)
 - 4.3.9 Trade Contracts on Construction Management Projects (Standard form (CCDC 17)
 - 4.3.10 Purchase Orders
- 4.4 Relationships between the Parties
 - 4.4.1 The Owner employs a General Contractor
 - 4.4.2 The Owner employs a Construction Manager
 - 4.4.3 The Owner employs a Project Manager
 - 4.4.4 The Owner employs a Design Build Contractor
- 4.5 Fast tracking

Reference materials

5.0 LEGAL MATTERS

In this Section

- 5.1 General principles of law
- 5.2 Contract v Tort
- 5.3 What makes a valid contract?
- 5.4 The law with respect to tenders in Canada (contracts A & B)
- 5.5 The importance of contract time
- 5.6 A typical contract (CCDC 2)
 - 5.6.1 Notice Requirements
 - 5.6.2 Contract Documents
 - 5.6.3 Authority of the Consultant
 - 5.6.4 Payment
 - 5.6.5 Changes
 - 5.6.6 Construction Schedule
 - 5.6.7 Delays
 - 5.6.8 Claims for A Change in Contract Price
 - 5.6.9 Dispute Resolution
 - 5.6.10 Insurance
 - 5.6.11 Warranties
- 5.7 What is a breach of contract?
- 5.8 What happens when the contract is breached?
- 5.9 Mitigation
- 5.10 Dispute resolution
 - 10.1 Methods of resolving Disputes
 - 10.2 Litigation Process
- 5.11 Builder's Lien Acts

Reference materials

6.0 RISK MANAGEMENT

In this section

- 6.1 Risk Management
- 6.2 Bonding
 - 6.2.1 General Principles
 - 6.2.2 Bid Bonds
 - 6.2.3 Agreement to Bond (Consent of Surety)
 - 6.2.4 Performance Bonds
 - 6.2.5 Labour & Material Bonds
 - 6.2.6 Lien Bond
 - 6.2.7 Holdback Bonds
 - 6.2.8 Maintenance Bonds
 - 6.2.9 Letters of Credit
 - 6.2.10 Handling of Claims
 - 6.2.11 Why Contractors Fail
- 6.3 Property Risks
 - 6.3.1 Property Risks
 - 6.3.2 Who Should Arrange Builder's Risk Insurance?
 - 6.3.3 Damage to Subcontractor Property
- 6.4 Liability Risks
 - 6.4.1 Liability to others
 - 6.4.2 Common Endorsements or Extensions to the Commercial General Liability Policy
- 6.5 Other Exposure to Loss
 - 6.5.1 Inability to Collect Receivables
 - 6.5.2 Pre Contract Costs
 - 6.5.3 Extra Expenses, Penalties and Other Costs That Exceed Estimates
 - 6.5.4 Early termination
- 6.6 Wrap up Policies
- 6.7 Insurance Review at Tender Stage
- 6.8 Coverage to Be Carried
- 6.9 Deductibles
- 6.10 Making a Claim
- 6.11 Subrogation

Reference materials

7.0 PROJECT MANAGEMENT AND ADMINISTRATION

In this Section

7.1 Project Start Up

- 7.1.1 Assigning the Personnel to the Project Team
- 7.1.2 Evaluating the Specifications and Cost Estimate
- 7.1.3 Selecting Subcontractors
- 7.1.4 Developing a Project Schedule
- 7.1.5 Securing the Labour Work Force
- 7.1.6 Securing Materials and Supplies
- 7.1.7 Insurances
- 7.1.8 Developing a Project Manual
- 7.1.9 Establishing a Project Communication System
- 7.1.10 A Project Filing System
- 7.1.11 Implement a Cost Control System
- 7.1.12 Implement a process for Shop Drawings and Samples
- 7.1.13 Quality Assurance/Quality Control System
- 7.1.14 Safety Program
- 7.1.15 Submitting a Schedule of Values
- 7.1.16 Permits and Licenses
- 7.1.17 Mobilizing

7.2 Safety

7.3 Quality Control

7.4 The Payment process

- 7.4.1 Contractor's Application
- 7.4.2 Consultants Review
- 7.4.3 Payment by Owner
- 7.4.4 Payment to Subcontractors etc
- 7.4.5 Statutory Declarations
- 7.4.6 Holdbacks

7.5 Changes to the Contract

- 7.5.1 Introduction and Definitions
- 7.5.2 Method of Pricing
- 7.5.3 What goes into the Contractors price?
- 7.5.4 Change Directives
- 7.5.5 Effect on the Schedule

7.5.6 Impact

7.5.7 Administration of Changes

7.5.8 Notice Provisions affecting Change Orders

7.5.9 Contract Considerations

7.6 Schedules and Recording Progress

7.6.1 Schedules

7.6.2 Site Diaries

7.6.3 Minutes of meetings

7.6.4 Photographs

7.7 Accounting and Administration Considerations

7.7.1 Accounting and Cost Control

7.7.2 Cash Flow

7.7.3 Reporting to Bonding Company

7.7.4 Labour Relations

7.7.5 Public Relations

7.8 Handling Disputes

7.8.1 Dispute over responsibility for costs of delays

7.8.2 Contractor's Potential Damages Resulting from Delays

7.8.3 Disputes over amounts owing

7.8.4 Important Documents for Preparing a Claim

7.8.5 Notice Provisions

7.8.6 Settlement

7.9 Project Close-out and Final Payment

7.9.1 Substantial Performance

7.9.2 Correction of Deficiencies

7.9.3 Final payment

Reference materials

8.0 SERVICES PROVIDED BY CONSTRUCTION ASSOCIATIONS

In this Section

8.1 About CCA

8.2 CCA's Membership Structure

8.3 Services Provided by Construction Associations

8.4 Special Committees and Affiliations

Reference materials

