

Basics of Construction Purchasing

I. Introduction

- a. Importance of Construction Purchasing
- b. Differences in Construction vs. Commodity Buying
- c. Future Value of Construction Purchasing in Firms

II. The Fundamentals of Construction Purchasing

- a. Definitions
- b. Identification of the Construction Team
- c. Understanding the Types of Construction
- d. The Impact to Project Control via Cost Control
- e. Team Case Analysis

III. Issues Being Faced Today as Well as in the Future

- a. Technology in Construction
- b. EDI, EFT and Automated Bill Through
- c. Impact on Inventory Control
- d. Quality Assurance/Quality Control
- e. Hiring the Best in a Myriad of Expertise
- f. Purchasing Requirement for Construction Management
- g. Environmental Concerns, Local and Federal
- h. Exacting Contract Administration
- i. Globalization and International Projects

IV. *Constructing the Purchasing Construction Plan*

- a. Why We Need a Purchasing Plan for Construction Projects
- b. Design of the Purchasing Plan
- c. Using a Construction Checklist Approach
- d. Having an Effective and Efficient Purchasing Process
- e. How to Employ Prime and Sub-Contractors in the Work Plan
- f. The Use of a BOM (Build on Materials)
- g. Establishing the Project Timeline
 1. People
 2. Equipment
 3. Materials
 4. Transportation

- h. Managing the Supply Management Process

V. Purchasing Bottom-line Contribution

- a. Classical Definition and How it Relates to Construction
- b. Who Should be Involved from the Purchasing Team
 - 1. Public
 - 2. Private
 - 3. Combination
- c. Benefits to Project Management Through a Purchasing Team
- d. Primary Responsibilities a Buyer has to Project Management
- e. Segmentation of the Materials Plan
- f. Documentation Necessary for Effective Purchasing Control
 - 1. Manual System
 - 2. Automated

VI. Advanced Areas of Purchasing Involvement and Skills

- a. Quality Assurance and Control
 - 1. Scope and Control
 - 2. Identifying the QA/QC Map
 - 3. Developing a QA/QC Checklist
 - 4. Shop Control
 - 5. Samples
 - 6. Certified Laboratory Standards
 - 7. Reports Necessary
- b. Transportation
 - 1. Scope and Control
 - 2. Source Selection
 - 3. Rationale for Selection
 - 4. Transportation
 - a. Domestic
 - b. International
 - 5. Developing a Logistical Checklist
 - 6. Reports Necessary

VII. Contracting for Project Success

- a. Overview of Industry
- b. BPI the Contracting Process
 - 1. Project Owner
 - 2. Architect/Engineer Design

- 3. Prime Contractors
- 4. Subcontractors
- c. Sections of the Construction Contract
 - 1. What Constitutes a Valid Contract
 - a. Offer
 - b. Acceptance
 - c. Consideration
 - d. Legal Purpose
 - e. Legal Capacity
- d. Payment Types of Contracts
 - 1. Firm Fixed Price
 - 2. Lump Sum
 - 3. Fixed Price with Incentive
 - 4. Cost Plus
 - 5. Cost Plus a Fixed Fee
 - 6. Cost Plus an Incentive
 - 7. Time and Materials
- e. Negotiated Contracts
 - 1. Planning
 - 2. Allowing for Alternatives
 - 3. Defining the LOB
- f. Elements in Contract Selection
- g. Contractor Selection
- h. Mapping the Awards Process
- i. Creating the Auditable Contract Document File
(If a State of Federal Agency then include the following.)
- j. Establishing an Effective Scope of Work
- k. Bid Letters
- l. Sealed vs. Informal Bidding
- m. Two-Step Bidding
- n. Bid Review and Evaluation
- o. Award of the Order
- p. Contract Changes and Documentation
- q. Bonding
 - 1. Bid Bond
 - 2. Performance Bond
 - 3. Payment Bond
 - 4. Fidelity Bond

VIII. Contract Review and Analysis -- Team Exercise

This time we will review a couple of construction contracts highlighting both issues and opportunities for both sides of the table concerning the method of applications and intent. We will consider the risk to the firm by the way the contract is and has been written as well as what would be advised to amend this for the company.

IX. Conclusion

X. Article

XI. Instructor's Bibliography

XII. Notes