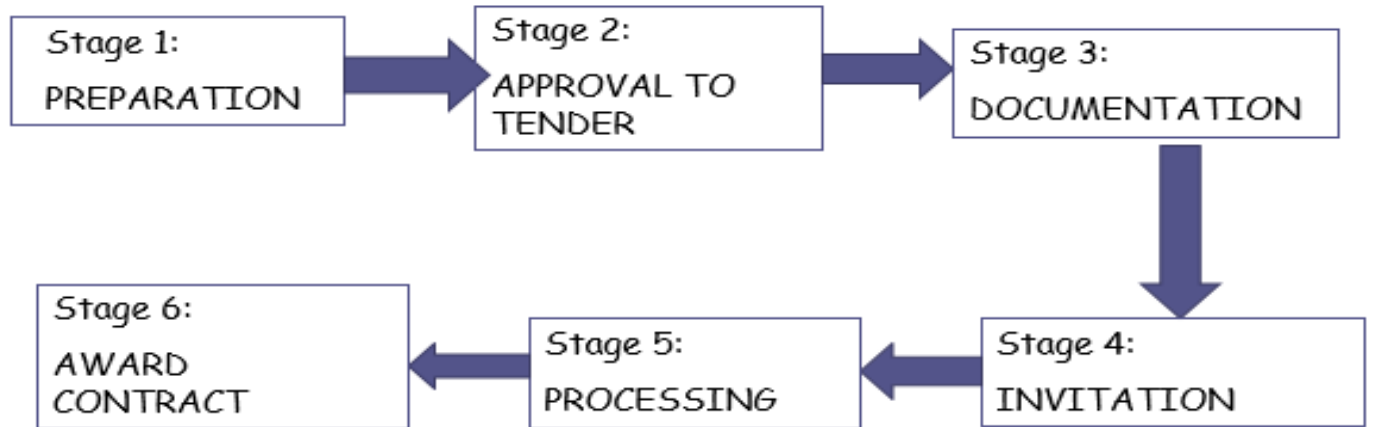


FINISHING CONSTRUCTION WORKS Level III

Oct, 2023 Curriculum Version - II



Module Title: Bid/Tender Development for Finishing Works

Module code: EIS FCW4 08 1023

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Introduction

The module on Bid/Tender Development for Finishing Works focuses on equipping participants with the necessary skills, knowledge, and attitude required to effectively prepare and manage bid/tender processes in the context of finishing works. This module recognizes that successful bidding and tendering play a vital role in securing projects and contracts in the construction and renovation industry. Participants will gain a comprehensive understanding of the key components involved in bid development, including assessing project requirements, formulating competitive pricing strategies, and compiling compelling bid documents. Additionally, the module emphasizes the importance of cultivating a proactive and professional attitude throughout the bid/tender process, promoting effective communication, collaboration, and attention to detail. By the end of this module, participants will have the confidence and competence to navigate the intricacies of bid/tender development for finishing works, enabling them to pursue and secure profitable opportunities in the construction industry.

Bid/Tender Development for Finishing Works

This module covers the units:

- Contract Risk
- bid/tender process
- development of human and physical costs
- bid/tender documentation and operating margins
- bid documentation prior to submission

Learning Objective of the Module

- Evaluate contract risk
- Prepare and Manage bid/tender process
- Manage development of human and physical costs
- Prepare complete bid/tender documentation and operating margins
- Evaluate bid documentation prior to submission

Module Learning Instructions:

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1. Read the specific objectives of this Learning Guide.
2. Read the information written in the information Sheets
3. Accomplish the Self-checks
4. Perform Operation Sheets
5. Do the “LAP test”

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UNIT ONE: CONTRACT RISK

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Basic concept of Bid/Tender Development
- Role and Responsibilities of Professionals Involved in Bid/Tender Preparation
- Tender in construction
- Invitation to Tender and Instruction to Bidders
- Contract Documents and Conditions
- Evaluating Contractual Risk
- Organization's Workload
- Assessing Project Risks and Conducting Risk Analysis
- Management team Client

This guide will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Understand Basic concept of Bid/Tender Development
- Identify Role and Responsibilities of Professionals Involved in Bid/Tender Preparation
- Identify Tender in construction
- Review and analysis Invitation to Tender and Instruction to Bidders
- Obtain Contract Documents and Conditions
- Evaluate Contractual Risk
- Verify Organization's Workload
- Assess Project Risks and Conducting Risk Analysis
- Advise Management team Client

1.1 Basic concept of Bid/Tender Development

A. Definition of Bid/Tender Development:

Bid/tender development refers to the process of preparing and submitting a comprehensive proposal in response to a request for proposal (RFP) or invitation to tender (ITT). It involves gathering project requirements, analyzing project scope, estimating costs, developing a competitive strategy, and presenting a compelling bid to secure a contract for executing finishing works projects. Bid/tender development encompasses various activities, including technical assessment, cost estimation, risk analysis, contract evaluation, and proposal preparation.

B. Importance of Bid/Tender Development in Finishing Works Projects:

- **Securing Contracts:**

Bid/tender development is essential for winning contracts in the highly competitive construction industry, particularly for finishing works projects. It provides an opportunity for the bidding entity to showcase its capabilities, expertise, and competitive advantage. A well-prepared bid enhances the chances of securing the contract, which can significantly contribute to the organization's growth and profitability.

- **Project Understanding and Requirements Analysis:**

The bid/tender development process requires a thorough understanding of the project's requirements, scope, and objectives. This involves analyzing project specifications, architectural plans, and design intent to accurately assess the finishing works needed. By conducting a detailed requirements analysis, the bidding entity can develop a comprehensive bid proposal that aligns with the client's expectations and project goals.

- **Cost Estimation and Financial Planning:**

Bid/tender development involves estimating the costs associated with the finishing works project. This includes evaluating material requirements, labor costs, equipment needs, subcontractor expenses, and other project-related expenditures. Accurate cost estimation is crucial for developing a competitive bid that covers all project costs while maintaining

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profitability. It also enables effective financial planning and resource allocation throughout the project lifecycle.

- **Competitive Advantage:**

A well-prepared bid provides a platform for the bidding entity to differentiate itself from competitors. Through effective bid/tender development, the organization can highlight its unique strengths, technical expertise, innovation, past performance, and added value propositions. This competitive advantage enhances the chances of winning the bid and establishing long-term relationships with clients in the finishing works sector.

- **Risk Assessment and Mitigation:**

Bid/tender development includes conducting a comprehensive risk analysis to identify potential risks and develop appropriate risk mitigation strategies. By assessing project risks, such as changes in project scope, unforeseen site conditions, supply chain disruptions, or regulatory compliance issues, the bidding entity can proactively address these risks in the bid proposal. This demonstrates the organization's risk management capabilities and instills confidence in the client regarding its ability to handle uncertainties effectively.

- **Professionalism and Reputation:**

A well-prepared bid reflects the professionalism and capabilities of the bidding entity. It showcases the organization's attention to detail, clear communication, and commitment to delivering high-quality finishing works. A strong bid proposal enhances the organization's reputation within the industry and increases its credibility, positioning it as a reliable and competent contractor.

1.2 Role and Responsibilities of Professionals Involved in Bid/Tender Preparation

Bid/tender development for finishing works projects involves the collaboration of various professionals who play critical roles in the preparation and management of the bidding process. Each professional brings unique expertise and responsibilities to ensure the development of a comprehensive and competitive bid.

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A. Project Managers:

Project managers oversee the entire bid/tender development process. Their role includes:

- Analyzing project requirements and scope to determine the feasibility of bidding.
- Coordinating with various stakeholders, such as architects, engineers, estimators, and subcontractors, to gather necessary information.
- Assigning tasks and timelines to team members involved in bid preparation.
- Conducting risk assessments and developing risk mitigation strategies.
- Ensuring compliance with legal, regulatory, and organizational requirements.
- Reviewing and approving the final bid proposal before submission.
- Managing the overall bidding timeline and ensuring timely completion of all deliverables.

B. Estimators:

Estimators are responsible for accurately assessing the costs associated with the finishing works project. Their responsibilities include:

- Evaluating project specifications, architectural plans, and design intent to determine the materials, labor, equipment, and subcontractor requirements.
- Researching and analyzing market rates for materials, labor, and equipment to estimate costs.
- Preparing detailed cost breakdowns and itemized estimates for various aspects of the project.
- Considering factors such as inflation, project duration, and any unforeseen contingencies when estimating costs.
- Collaborating with suppliers and subcontractors to obtain accurate pricing information.

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- Reviewing and revising cost estimates as necessary during the bid preparation process.

C. Architects and Engineers:

Architects and engineers play a crucial role in bid/tender development, particularly in assessing project requirements and providing technical expertise. Their responsibilities include:

- Reviewing project specifications, architectural plans, and design intent to understand the scope of finishing works.
- Assessing the feasibility of proposed designs and identifying any potential technical challenges.
- Collaborating with estimators to determine material quantities, construction methods, and engineering requirements.
- Providing technical input and recommendations for optimizing the efficiency and quality of finishing works.
- Assessing compliance with building codes, regulations, and industry standards.
- Assisting in the development of technical drawings, specifications, and other relevant documents for the bid proposal.

D. Legal and Contract Specialists:

Legal and contract specialists ensure compliance with legal and contractual obligations during bid/tender preparation. Their responsibilities include:

- Reviewing and interpreting the contractual terms and conditions specified in the bid documents.
- Assessing the legal and regulatory requirements applicable to the finishing works project.
- Identifying any potential legal risks or liabilities associated with the bid proposal.
- Collaborating with project managers and estimators to draft and negotiate contractual terms.

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- Assisting in the preparation of legal documentation required for the bid submission, such as bonds, insurances, and warranties.
- Ensuring that the bid proposal aligns with the organization's legal and ethical standards.

E. Proposal Writers:

Proposal writers play a crucial role in preparing a compelling bid proposal that effectively communicates the bidding entity's strengths and capabilities. Their responsibilities include:

- Understanding the requirements and evaluation criteria specified in the bid documents.
- Collaborating with project managers, estimators, and technical experts to gather relevant information.
- Writing clear, concise, and persuasive content that addresses all aspects of the bid requirements.
- Highlighting the organization's unique value proposition, past performance, experience, and qualifications.
- Ensuring that the bid proposal is well-structured, coherent, and free from errors.
- Incorporating graphics, charts, and visual aids to enhance the readability and impact of the proposal.

The successful collaboration and coordination among these professionals are essential for the effective preparation and management of bid/tender development for finishing works projects. Each professional brings their expertise to ensure that the bid proposal is thorough, competitive, and aligns with the client's expectations and project requirements.

1.3 Tender in construction

A tender in construction is a document that outlines the scope of work, deliverables, and pricing for a construction project. It is an important step in the procurement process, as it helps to ensure that both the client and the contractor have a clear understanding of what is expected.

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The tender process typically begins with the client issuing an invitation to tender (ITT). The ITT include information such as the scope of work, the deadline for submitting tenders, and the criteria that will be used to evaluate the tenders.

Contractors who are interested in the project will then submit their tenders. The tenders will typically include a price, a schedule, and a description of how the contractor will meet the requirements of the ITT.

The client evaluate the tenders and select the contractor that they believe is the best fit for the project. The tender process can be a complex and time-consuming process, but it is an important step in ensuring that the right contractor is selected for the project.

A. Types of construction tenders

There are three main types of tendering methods used in construction, and tendering methods are selected based on the requirements of the construction contracts.

- **Open Tendering**

Open tendering in construction is a tendering procedure used particularly within the public sector but also used within the private sector. Open tendering allows anyone to submit a tender to supply the goods, works or services that are required. It is a very simple, two-stage process, and is used in construction in order for a buyer to procure mainly simple goods, works or services.

Open Tendering is the most common type of tendering. It is open to all interested contractors, regardless of their size or experience. The client will typically issue an invitation to tender (ITT) that outlines the scope of work, the deadline for submitting tenders, and the criteria that will be used to evaluate the tenders.

- **Pre-qualification / Selective Tendering**

Pre-qualification Tendering is used when the client wants to limit the number of contractors that are invited to submit tenders. The client will typically select a shortlist of contractors based on their experience, qualifications, and past performance.

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For more complex and larger projects, a pre-qualification process will likely be used. Pre-qualifications can come in a variety of forms such as pre-qualification questionnaires (PQQ) and selection questionnaires (SQ). These contain a set of standardized questions and categorized into document, for example can include the following:

- Supplier identity.
- Financial information.
- Business and professional standing.
- Health & safety.
- Equal opportunity & diversity.
- Environmental management.
- Quality management.
- Building Information Modeling (BIM).
- Modern slavery.
- Anti-bribery and corruption.
- **Negotiated Tendering**

Negotiated Tendering is used for projects that are broken down into smaller phases. The client will typically issue an ITT for each phase of the project.

Negotiated tenders are obtained by the buyer inviting a contractor/supplier of their choice to submit prices for a project. Usually this is for specialized work or when particular equipment is needed as an extension of existing works, or for further work following a previous contract. Sometimes negotiated tenders can be used when there is a very tight deadline, or emergency works are necessary. The process usually involves a single contractor/supplier but may involve up to three contractors/suppliers.

1.4 Invitation to Tender and Instruction to Bidders

Preparing and managing bid/tender development for finishing works involves various stages and elements, including the review and analysis of the invitation to tender (ITT) and instruction to bidders (ITB).

A. invitation to tender (ITT)

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The ITT serves as a formal invitation for interested parties to submit their bids or proposals for a specific project. It provides essential information about the project, including its scope, requirements, timelines, evaluation criteria, and contractual terms. The ITT is typically prepared by the client or project owner and plays a crucial role in attracting qualified bidders and ensuring a fair and transparent bidding process.

- **Main points for an Invitation to Tender (ITT) document:**

- **Project Information:**

- ✓ Project Name
- ✓ Project Description
- ✓ Project Location
- ✓ Start Date
- ✓ Completion Date

- **Tender Submission Requirements:**

- ✓ Tender Document
- ✓ Valid Business License
- ✓ Company Profile
- ✓ References
- ✓ Insurance

- **Tender Submission Deadline:** Specify the date and time by which tenders must be submitted.

Site Visit/Pre-Tender Meeting (if applicable):

- ✓ Date
- ✓ Time
- ✓ Location
- ✓ Attendance (mandatory/optional)

- **Evaluation Criteria:**

- ✓ Price Competitiveness
- ✓ Experience and Qualifications

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- ✓ Technical Approach
- ✓ Compliance with Specifications
- ✓ Timeliness of Delivery/Completion
- Confirmation of Participation: Request confirmation of intent to participate in the tender process by a specified deadline.
- Contact Information: Provide contact details of the designated person for inquiries and additional information.
- Closing and Signature: Conclude the ITT with a closing statement and the signature of the issuing authority.

Note: The template provided earlier contains additional details and a more comprehensive layout

When reviewing the ITT, it is important to carefully analyze its contents to gain a clear understanding of the project's objectives and requirements. This analysis helps bidders determine whether they have the necessary capabilities, resources, and expertise to successfully complete the finishing works. Key aspects to consider during the review include:

- **Scope of Work:** The ITT should clearly define the scope of work for the finishing works project. It should outline the specific tasks, deliverables, and outcomes expected from the successful bidder. Understanding the scope helps bidders assess their capacity to meet the project's requirements.
- **Technical Specifications:** The ITT should provide detailed technical specifications for the finishing works. This includes information about materials, methods, quality standards, and any specific regulations or codes that need to be followed. Bidders must carefully review these specifications to ensure they can comply with them.
- **Contractual Terms:** The ITT should outline the contractual terms and conditions that will govern the relationship between the client and the successful bidder. Bidders need to review these terms thoroughly to understand their rights, obligations, payment terms, warranties, dispute resolution mechanisms, and any other relevant provisions.

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- **Evaluation Criteria:** The ITT should clearly state how bids will be evaluated and scored. This may include criteria such as price, technical capabilities, experience, past performance, and compliance with specifications. Bidders should carefully review these criteria to understand how their bids will be assessed and how they can maximize their chances of success.
- **Legal and Regulatory Compliance:** Compliance with applicable laws, regulations, and standards is crucial in any construction project. During the review process, it is essential to identify any legal or regulatory requirements specified in the ITT and ITB. This includes permits, licenses, certifications, or specific construction methodologies that may be mandated by the client or regulatory authorities. Failure to comply with these requirements can result in costly delays, penalties, or even disqualification from the bidding process.
- **Risk Assessment:** The review and analysis of the ITT and ITB should also involve a comprehensive risk assessment. This includes identifying and evaluating both project-specific risks and general contractual risks. Project-specific risks may arise from factors such as site conditions, weather, or unforeseen circumstances. Contractual risks may include issues related to payment delays, variations in project scope, or inadequate project documentation. By understanding and quantifying these risks, the bidding entity can develop appropriate risk mitigation strategies and contingencies, which can ultimately enhance its competitiveness and protect its interests.

B. Instruction to bidders (ITB).

The ITB is another crucial document that bidders need to review and analyze. It provides instructions and guidelines on how to prepare and submit a bid in response to the ITT. The ITB typically includes the following key elements:

- **Bid Submission Requirements:** The ITB outlines the format, structure, and content requirements for the bid submission. This includes information on the required documents, forms, certifications, and any other supporting materials that need to be included.
- **Deadline and Delivery Instructions:** The ITB specifies the deadline for bid submission and provides instructions on how to deliver the bid

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documents. Bidders must carefully adhere to these instructions to ensure their bids are considered.

- **Clarification Process:** The ITB outline a process for bidders to seek clarifications or ask questions regarding the ITT or the bidding process. Bidders should take advantage of this opportunity to seek clarification on any ambiguities or uncertainties in the ITT.
- **Confidentiality and Non-Disclosure:** The ITB may include provisions related to confidentiality and non-disclosure of bid information. Bidders must understand these provisions to ensure they protect sensitive information during the bidding process.

Instruction to Bidders (ITB) document may include:

- Introduction:
- Name and address of the organization issuing the ITB
- Overview of the project or service for which bids are being solicited
- Eligibility and Prequalification:
- Eligibility criteria for bidders (e.g., licenses, certifications, qualifications)
- Prequalification requirements, if any
- Bid Document Availability:
- Details on how bidders can obtain the bid documents
- Location or website where bid documents can be accessed
- Any associated costs or fees, if applicable
- Bid Submission:
- Deadline for bid submission
- Method of submission (e.g., physical delivery, email)
- Specific formatting or documentation requirements
- Instructions on how to submit queries or clarifications
- Bid Opening:
- Date, time, and location of the bid opening
- Whether it will be open to the public or limited to authorized personnel
- Confidentiality and Non-Disclosure:

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- Requirements for maintaining the confidentiality of bid documents and information
- Non-disclosure agreements or restrictions on sharing bid details with third parties
- Bid Evaluation:
 - Criteria that will be used to evaluate bids (e.g., price, experience, technical approach)
 - Weighting or importance assigned to each criterion
 - Any required documentation or evidence to support claims
- Contract Award:
 - Timeline for the evaluation process and contract award notification
 - Method or basis for contract award (e.g., lowest responsive bid, best value)
- Contractual Terms and Conditions:
 - General terms and conditions that will govern the contract
 - Payment terms, project timeline, dispute resolution procedures, and other contractual obligations
- Risk and Liability:
 - Any specific risks or liabilities associated with the project or service
 - Indemnification and insurance requirements
- Addenda and Amendments:
 - Organization's right to issue addenda or amendments to the bid documents
 - Process for distributing addenda and impact on bid submission
- Contact Information:
 - Name, title, phone number, and email address of the contact person for inquiries or clarifications
- Rights and Disclaimers:
 - Organization's rights to accept or reject bids, cancel or modify the ITB, or request additional information
 - Any legal or regulatory disclaimers or notices

Remember to adapt the Instruction to Bidders to the specific requirements and guidelines of your organization and the particular bidding process.

1.5 Contract Documents and Conditions

A. Contract Document

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Construction “Contract Documents” are the written documents that define the roles, responsibilities, and “Work” under the construction Contract, and are legally-binding on the parties (Owner and Contractor). A contractual agreement is a legally binding agreement between two parties. The contract's terms and conditions will require the parties to either do or refrain from doing specific actions.

Contract should fulfill the following seven requirements:

- **Lawful and capable** is to mean they are legally allowed to enter into contract and provides statements of facts (statement of opinion + Knowledge) for their ability to perform their Consideration can simply be interpreted as ‘price for the promise’ which involves a benefit accrued from the offered in exchange for the promise the offer or is bound by the contract.
- **Intent** is willingness or consent by the contracting parties to create a legal contract.
- **Legal and distinct** is a description of both the promises and considerations (including rights and obligations) clearly and distinctly stated and they should be practicable and legally binding.
- **Standards** can be conditions, forms, formats, schedules, instructions, etc which are created for use as part of contracts.
- **Consideration** can simply be interpreted as ‘price for the promise’ which involves a benefit accrued from the offer in exchange for the promise the offer or is bound by the contract.
- **An Offer** is an indication that one party is willing to be bound by specific terms set out in the contract.
- **An Acceptance** is the key for the formation of a contract which must be absolute, indication of consent, and communicated to the offering entity by the offered.

Construction Contract Is Critical

- Statement of relationship between the parties
 - Obligations
 - Rights

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- Procedures
- Risk management and mitigation—are risks accounted for and properly allocated?
- Bond may incorporate construction contract
- Read and understand the contract: ignorance is not bliss; it can kill the company.
- Your surety bond producer can help you spot contractual risk issues.
- Consult a knowledgeable construction attorney to analyze the contract and to negotiate changes, if necessary

To evaluate contract risk effectively, contractors should carefully review each document to gain a comprehensive understanding of their implications. Key aspects to consider when examining contract documents:

- **Scope of Work:** The scope of work outlines the specific tasks, activities, and deliverables required for the project. Contractors should ensure that they have a clear understanding of what is expected from them and whether any ambiguities or gaps exist in the scope. This examination helps identify potential risks related to incomplete or conflicting requirements.
- **Technical Specifications:** Technical specifications provide detailed information about materials, methods, standards, and quality requirements for the project. Contractors must assess whether they have the necessary expertise, resources, and capabilities to meet these specifications. Failure to comply with technical requirements may result in delays, rework, or additional costs.
- **Contract Terms and Conditions:** The terms and conditions section defines the legal framework governing the relationship between the contractor and the client. It covers aspects such as payment terms, warranties, dispute resolution mechanisms, insurance requirements, indemnification clauses, and termination provisions. Contractors should carefully review these terms to identify any unfavorable or high-risk clauses that may impact their ability to perform or expose them to excessive liabilities.

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- Drawings and Design Documents:** Drawings and design documents provide visual representations of the project, including architectural, structural, electrical, and mechanical details. Contractors should examine these documents to ensure they align with the scope of work and technical specifications. Inconsistencies or errors in the drawings can lead to costly rework or disputes during the construction phase.
- Project Schedule and Milestones:** The project schedule outlines the timeline for completing various stages of the project. Contractors should assess whether the proposed schedule is realistic and achievable based on their available resources and expertise. Delays in the project schedule can impact profitability and may result in contractual penalties.
- Payment Terms:** Examining the payment terms is crucial to understand how and when payments will be made throughout the project. Contractors should evaluate whether the proposed payment schedule aligns with their cash flow requirements and assess any potential risks associated with delayed or disputed payments.
- Insurance and Bonding Requirements:** Contract documents often specify insurance coverage and bonding requirements that contractors must meet. It is essential to review these requirements to ensure compliance and assess any potential financial risks associated with obtaining the necessary insurance coverage or bonding.

Obtaining and examining contract documents in detail, contractors can identify potential risks and make informed decisions during the bid/tender development process. This thorough evaluation enables them to accurately assess their capabilities, resources, and potential liabilities before submitting a bid.

B. The Construction Contract

- The term “construction contract” is somewhat confusing because it is NOT just one document.
- Each “construction contract” is typically comprised of many documents:
 - Agreement
 - General Conditions
 - Supplemental Conditions

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- Drawings
- Specifications
- Addenda
- Modifications/Change Orders

C. **Conditions of Contract**

The condition of contract is a document that states the obligations and rights of the parties and detail the conditions under which the contract is to be carried out. It states to what extent should be the relation between the engineer, contractor and client. It includes General and Supplementary or Special/Particular conditions of contract.

General Conditions

- General Conditions of the Contract
- The General Conditions document contains many of the provisions on construction project risks, addressing such matters as:
 - Responsibilities of the contractor and the owner
 - Administration of the contract by the owner and/or design professional
 - Terms relating to separate contractors and to contractor's subcontractors
 - Procedures for initiating changes in the work
 - Procedures for resolving disputes and claims
 - Provisions addressing delays and time for performance
 - Procedures for payments
 - Requirements for indemnity, insurance, and bonds
 - Procedures for contract suspension and termination
 - Procedures for project close-out
 - Miscellaneous terms, such as governing law
- **Supplementary Conditions**

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The Supplementary Conditions are sometimes known as Special Provisions or Special/Particular Conditions. The purpose of the Supplementary Conditions is to provide an extension of the General Provisions of the contract to fit the specific project at hand.

They serve as amendments or augmentation to the General Conditions. Items included in the Supplementary Conditions are entirely subject to the discretion of the owner, and include topics such as:

- The number of copies of contract documents to be received by the contractor
- Survey information to be provided by the owner
- Materials provided by the owner
- Changes in insurance requirements
- Phasing requirements
- Site visit
- Start date of the construction
- Requirements for security and temporary facilities
- Procedures for submittal and processing of shop drawings.
- Cost and schedule reporting requirements
- Traffic control and street cleaning requirements
- Responsibilities for testing of materials

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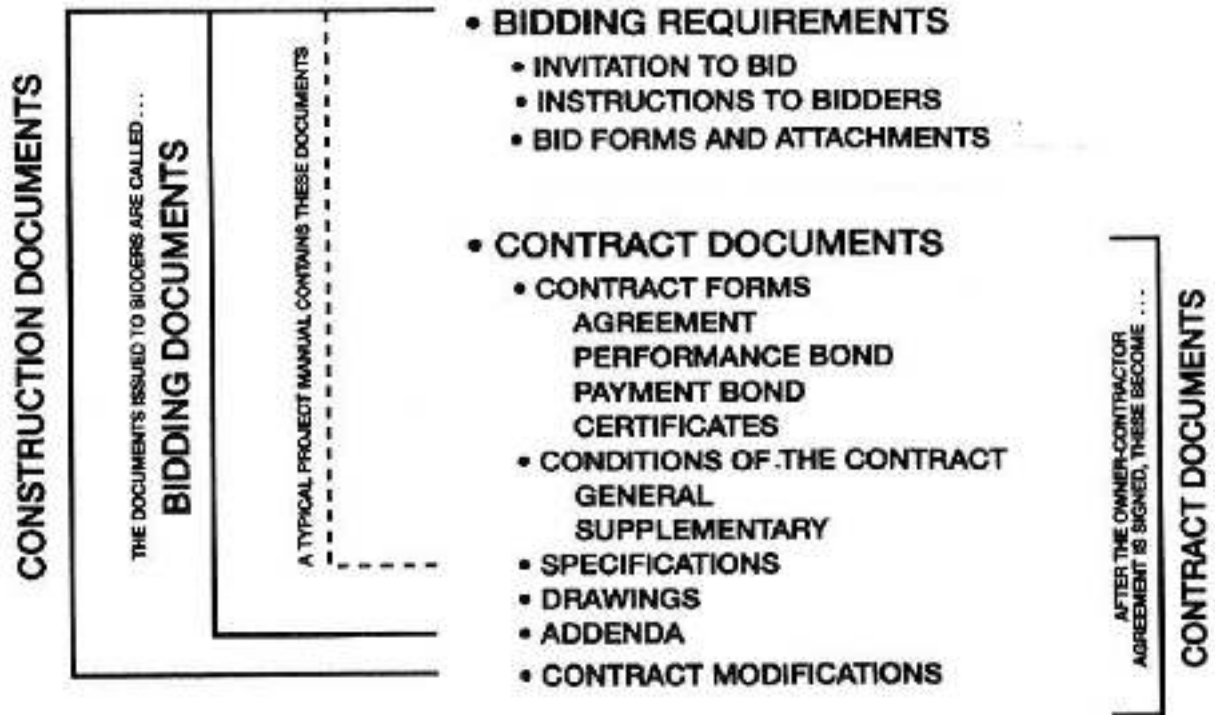


Figure 1-1 construction documents

Common contract clauses and intentions:

- ✓ **Price:** The price is the amount of money that the buyer agrees to pay to the seller.
- ✓ **Quality:** The quality of the goods or services must meet the standards that are set out in the contract.
- ✓ **Quantity:** The quantity of the goods or services must be as agreed in the contract.
- ✓ **Timeliness:** The goods or services must be delivered or performed on time.
- ✓ **Payment terms:** The buyer must pay the seller the agreed price on time.
- ✓ **Warranties:** The seller may provide warranties about the quality of the goods or services.
- ✓ **Dispute resolution:** The contract may include a provision for how disputes will be resolved.

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- **Liabilities**

1.6 Evaluating Contractual Risk

Contract risk evaluation is a crucial step in bid/tender development for finishing works projects. It involves assessing and mitigating potential risks associated with the contractual obligations and terms. By thoroughly evaluating contract risk, the bidding entity can make informed decisions and develop strategies to protect its interests and ensure successful project execution.

- A. **Identifying Contractual Risks:**

- **Ambiguous or Incomplete Contract Terms:**

Carefully review the contract to identify any ambiguous or incomplete terms that may lead to disputes or misunderstandings. Ensure that all key project requirements, scope, deliverables, timelines, and payment terms are clearly defined.

- **Financial Risks:**

Assess the financial risks associated with the contract, such as payment delays, non-payment, or inadequate compensation for additional work or scope changes. Consider the financial stability and track record of the client to determine their ability to fulfill their contractual obligations.

- **Change Management Risks:**

Evaluate the contract provisions related to change orders, variations, and scope changes. Consider the impact of these changes on project timelines, costs, and resource allocation. Assess the mechanisms for addressing and documenting change requests to minimize potential disputes.

- **Performance and Quality Risks:**

Analyze the contract terms regarding performance standards, quality expectations, and acceptance criteria. Identify the risks associated with not meeting these requirements, including penalties, liquidated damages, or termination of the contract.

- **Legal and Regulatory Risks:**

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Consider the legal and regulatory risks associated with the contract, such as compliance with building codes, environmental regulations, and safety standards. Ensure that the contract includes provisions for addressing these risks and allocating responsibilities appropriately.

- Force Majeure and Risk Allocation:

Evaluate the contract's force majeure clause and risk allocation provisions. Assess the potential risks arising from unforeseen events, such as natural disasters, labor strikes, or supply chain disruptions. Determine the allocation of these risks between the parties and the mechanisms for managing them.

- B. Mitigating Contractual Risks:

- Contract Review and Legal Advice:

Engage legal experts to review the contract thoroughly and provide advice on mitigating contractual risks. Ensure that the contract accurately reflects the agreed-upon terms and protects the bidding entity's interests.

- Risk Allocation and Insurance:

Consider obtaining appropriate insurance coverage to mitigate potential risks, such as professional indemnity insurance, liability insurance, or performance bonds. Evaluate the cost-effectiveness of insurance options and ensure compliance with contractual requirements.

- Risk Contingency Planning:

Develop a risk contingency plan that outlines strategies for mitigating identified risks. This may include alternative approaches, backup resources, or subcontracting arrangements to address potential challenges or delays.

- Effective Communication and Documentation:

Establish clear communication channels with the client and other stakeholders to address contract-related issues promptly. Maintain detailed documentation of all contract-related correspondence, change orders, and variations to ensure transparency and clarity.

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- Performance Monitoring and Reporting:

Implement robust monitoring and reporting mechanisms to track project progress, performance, and compliance with contractual obligations. Regularly assess the project's adherence to contractual terms and address any deviations promptly.

- Dispute Resolution Mechanisms:

Evaluate the contract's dispute resolution provisions, such as mediation, arbitration, or litigation. Consider alternative dispute resolution methods to minimize costs and delays associated with formal legal proceedings.

- **Dispute resolution**

Dispute resolution is the process of resolving a disagreement or conflict between two or more parties. There are many different methods of dispute resolution.

Some of the most common methods of dispute resolution include:

- ✓ **Negotiation:** This is a process in which the parties involved in the dispute try to reach an agreement on their own. Negotiation can be informal or formal, and it can be conducted with or without the help of a mediator.
- ✓ **Mediation:** This is a process in which a neutral third party, called a mediator, helps the parties involved in the dispute reach an agreement. The mediator does not impose a solution on the parties, but rather helps them to communicate and negotiate with each other.
- ✓ **Arbitration:** This is a process in which a neutral third party, called an arbitrator, hears the evidence and an argument from the parties involved in the dispute and then makes a decision that is binding on the parties. Arbitration can be either binding or non-binding, depending on the agreement of the parties.

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- ✓ **Litigation:** This is a process in which the parties involved in the dispute go to court and ask a judge to resolve the dispute. Litigation is the most formal and adversarial form of dispute resolution.

1.7 Organization’s Workload

An organization's workload is the amount of work that it has to do in a given period of time. It is important to consider an organization's workload when determining its capacity to meet contract timelines.

There are a number of factors that can affect an organization's workload, including:

- The number of projects that the organization is working on
- The size and complexity of the projects
- The number of employees that the organization has
- The skills and experience of the employees
- The availability of resources, such as equipment and materials
- The time constraints of the projects

The organization's workload is a critical factor to consider when evaluating contract risk. It provides insights into the organization's capacity to effectively manage and fulfill contractual obligations. Here are the main points to consider when assessing the organization's workload:

- **Current Projects:** Evaluate the organization's current workload by identifying the number and scale of ongoing projects. Consider the resources allocated to each project, including personnel, equipment, and materials. Assess whether the organization has sufficient capacity to take on additional projects without compromising quality or timelines.
- **Project Management Capability:** Assess the organization's project management capabilities and track record. Review its ability to successfully deliver projects on time, within budget, and meeting the required quality standards. Consider factors such as project planning, risk management, stakeholder coordination, and change management.
- **Resource Availability:** Evaluate the availability and allocation of key resources, including skilled personnel, equipment, and subcontractors. Determine if

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the organization has the necessary resources to fulfill the contractual requirements of the project under consideration. Consider any potential conflicts or constraints that may arise due to overlapping commitments.

- **Financial Stability:** Assess the organization's financial stability and liquidity. Review its financial statements, cash flow, and creditworthiness. Evaluate whether the organization has the financial capacity to handle the project's financial requirements, including upfront costs, ongoing expenses, and contingencies.
- **Capacity Planning:** Determine if the organization has a well-defined capacity planning process in place. This includes assessing its ability to forecast and manage resource demands, identify potential bottlenecks, and allocate resources effectively. Consider whether the organization has a backup plan or contingency measures to address unexpected changes or disruptions.
- **Subcontracting and Outsourcing:** Evaluate the organization's approach to subcontracting and outsourcing. Assess its track record in managing subcontractors and the associated risks. Consider the organization's ability to effectively monitor and coordinate subcontracted work to ensure compliance with contractual requirements.
- **Lessons Learned:** Review the organization's past projects and identify any lessons learned or areas for improvement. Consider how the organization has addressed issues or risks in previous contracts and whether it has implemented measures to avoid similar challenges in the future.
- **Mitigation Measures:** Based on the evaluation of the organization's workload, identify any mitigation measures that can help address potential risks. This may include adjusting project timelines, securing additional resources, implementing stricter project monitoring and control mechanisms, or subcontracting certain tasks to specialized entities.

1.8 Assessing Project Risks and Conducting Risk Analysis

When it comes to evaluating contract risk in the bid/tender development process for finishing works, a crucial element is the assessment of project risks and conducting comprehensive risk analysis. This involves identifying potential risks, analyzing their potential impact, and

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developing strategies to mitigate or manage them effectively. By conducting a thorough risk analysis, the bidding entity can enhance its understanding of the project's risk profile and develop appropriate solutions and recovery scenarios to address potential challenges.

In assessing project risks and conducting risk analysis, the following activities may be included:

- A. **Critical Incident Analysis and Reporting:** It is important to analyze past projects or similar experiences within the organization to identify critical incidents or risks that have occurred previously. By reviewing these incidents, their causes, and the associated impacts, the bidding entity can gain valuable insights into potential risks that may arise during the finishing works project. These findings can be documented and reported to stakeholders to facilitate informed decision-making and risk mitigation efforts.
- B. **Risk Management Practices:** The bidding entity should evaluate its existing risk management practices and procedures. This includes assessing whether there is a structured process in place to identify, assess, and respond to risks throughout the project lifecycle. It is essential to ensure that risk management strategies align with industry best practices and are integrated into project planning and execution. This may involve reviewing risk registers, risk assessment methodologies, and risk mitigation plans to identify any gaps or areas for improvement.
- C. **Scheduling and Planning for Contingencies:** A comprehensive risk analysis should include evaluating the project schedule and planning for contingencies. This involves identifying potential risks that may impact the project timeline and developing contingency plans to address them. By analyzing critical path activities, dependencies, and potential delays, the bidding entity can develop alternative strategies and recovery scenarios to mitigate the impact of unforeseen events or risks that may arise during the project.
- D. **Analysis and Revision of Data:** Risk analysis requires a careful examination of available data related to the project. This includes reviewing project specifications, site conditions, financial projections, resource availability, and any other relevant information. By analyzing this data, the bidding entity can

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identify potential risks and their likelihood of occurrence, as well as assess their potential impact on project objectives. It is important to continuously update and revise the risk analysis as new information becomes available throughout the bid/tender development process.

- E. **Proposing Solutions and Recovery Scenarios:** Based on the risk analysis findings, the bidding entity should propose appropriate solutions and recovery scenarios. This involves developing strategies to mitigate identified risks, minimize their impact, or recover from potential adverse events. These solutions may include alternative approaches to project execution, resource allocation adjustments, contractual provisions, or contingency plans. By presenting well-thought-out recovery scenarios, the bidding entity demonstrates its ability to handle potential risks and provides assurance to the client that it can effectively manage uncertainties.

Conducting a thorough assessment of project risks and performing comprehensive risk analysis, the bidding entity can effectively evaluate contract risk in the bid/tender development process for finishing works. This proactive approach enables the identification and understanding of potential risks, the development of appropriate risk mitigation strategies, and the proposal of recovery scenarios, enhancing the bidding entity's competitiveness and ability to deliver a successful project.

1.9 Management team Client

The management team should be consulted in relation to the likely construction approach and resources required for the finishing works. This includes the project's scope of work, timeline, budget, and any specific requirements or constraints that may impact the project's success. The management team should also be involved in the evaluation of potential risks associated with the finishing works and the development of a risk management plan to mitigate those risks.

A. Factors to Consider When Consulting Management Team

When consulting the management team regarding the likely construction approach and resources required for the finishing works, several factors taken into account. These include:

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- **Project Scope:** The management team should be aware of the project's scope of work, including all the finishing works that need to be completed. This includes the type of finishes required, the materials to be used, and any specialized equipment or techniques that may be needed.
- **Timeline:** The management team should be aware of the project's timeline, including the expected start and completion dates for each phase of the finishing works. This helps ensure that the project stays on schedule and that any delays or issues can be addressed promptly.
- **Budget:** The management team should be aware of the project's budget, including the allocated funds for the finishing works. This helps ensure that the project stays within budget and that any cost overruns can be addressed promptly.
- **Specific Requirements or Constraints:** The management team should be aware of any specific requirements or constraints that may impact the project's success. For example, there may be specific building codes or regulations that must be adhered to, or there may be restrictions on the types of materials that can be used.
- **Potential Risks:** The management team should be aware of the potential risks associated with the finishing works, such as delays, cost overruns, or quality issues. They should also be involved in the development of a risk management plan to mitigate these risks.

B. Benefits of Management Team Involvement

The benefits of involving the management team in the planning phase of the finishing works include:

- **Improved Project Outcomes:** By involving the management team in the planning phase, the project's objectives can be aligned with the organization's goals, leading to improved project outcomes.
- **Reduced Risk:** The management team can help identify potential risks and develop strategies to mitigate them, reducing the likelihood of delays, cost overruns, or other issues that could impact the project's success.

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- **Increased Efficiency:** By involving the management team throughout the project lifecycle, any changes or issues that arise can be addressed promptly and effectively, increasing the efficiency of the project.
- **Enhanced Communication:** The management team can provide a single point of contact for all stakeholders, enhancing communication and collaboration throughout the project.

C. **Advising the Client of Tender Response Intention**

When preparing to submit a tender response, it is essential to advise the client of the intention to submit a bid. This includes providing the client with a detailed overview of the proposed works, the estimated costs, and the expected timeline.

- To advise the client of the tender response intention, the following steps should be taken:
 - Provide a detailed overview of the proposed works: First, provide the client with a detailed overview of the proposed works, including the scope of work, the estimated costs, and the expected timeline.
 - Discuss the tender response strategy: Next, discuss the tender response strategy with the client, including the proposed approach, the estimated costs, and the expected timeline.
 - Obtain client approval: Finally, obtain client approval of the tender response strategy and the proposed works. This will ensure that the client is aware of the proposed approach and the estimated costs, and can provide any necessary feedback or approval.

Self-check-1: Written Test

Test-IMultiple Choice Questions:

Instruction: Select the correct answer for the give choice. You have given 1 Minute for each question. Each question carries 2 Point.

1. Bid/tender development refers to the process of:

- | | |
|----------------------------|--|
| A) Analyzing project risks | C) Preparing and submitting a proposal |
| B) Evaluating market rates | D) Drafting legal documentation |

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2. Which of the following is an importance of bid/tender development in finishing works projects?

- A) Managing project timelines
- B) Enhancing architectural designs
- C) Securing contracts
- D) Ensuring legal compliance

3. Estimators are responsible for:

- A) Reviewing and revising cost estimates
- B) Managing subcontractor expenses
- C) Developing risk mitigation strategies
- D) Coordinating with architects and engineers

4. Architects and engineers play a crucial role in bid/tender development by:

- A) Highlighting the organization's reputation
- B) Assessing project feasibility
- C) Writing persuasive content
- D) Negotiating contractual terms

5. Pre-qualification tendering is used to:

- A) Limit the number of invited contractors
- B) Procure simple goods, works, or services
- C) Evaluate project risks
- D) Obtain negotiated tenders

6. The main purpose of an invitation to tender (ITT) is to:

- A) Evaluate bid proposals
- B) Select the best-fit contractor
- C) Outline project requirements
- D) Assess legal and contractual obligations

7. The tendering method that allows anyone to submit a tender is called:

- A) Open tendering
- B) Negotiated tendering
- C) Pre-qualification tendering
- D) Selective tendering

Say True or False:

- 1. Bid/tender development plays a crucial role in securing contracts and contributing to an organization's growth and profitability.
- 2. Estimators are responsible for developing technical drawings and specifications for bid proposals.

3. Legal and contract specialists ensure compliance with legal and ethical standards during bid/tender preparation.
4. Bid/tender development is essential for winning contracts in the construction industry.
5. Architects and engineers assess project feasibility and provide technical expertise in bid/tender development.

Matching:

Match the professional with their role in bid/tender development:

- | A | B |
|-----------------------------------|---|
| 1. Project Managers | A. Assessing project feasibility |
| 2. Estimators | B. Reviewing and interpreting contractual terms |
| 3. Architects and Engineers | C. Writing persuasive bid proposal content |
| 4. Legal and Contract Specialists | D. Overseeing bid/tender development process |
| 5. Proposal Writers | E. Accurately assessing project costs |

UNIT TWO: BID/TENDER PROCESS

This learning guide is developed to provide you the necessary information regarding the

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following content coverage and topics:

- Allocation of Staff and Team Responsibilities
- Interacting with Subcontractors and Suppliers to Obtain Quotations
- Development of the pre-tender construction
- Preliminary site investigation
- Tender process

This guide will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Allocate of Staff and Team Responsibilities
- Obtain Quotations for Subcontractors and Suppliers
- Manage and supervise Development of the pre-tender construction
- Undertake Preliminary site investigation
- Identify Tender process

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2.1 Allocation of Staff and Team Responsibilities

Effectively allocating staff and assigning team responsibilities is crucial for the successful preparation of bid/tender development for finishing works projects. This section highlights the key considerations and best practices for allocating staff and defining team responsibilities during the bid/tender preparation process.

A. Assessing Staff Expertise and Availability:

Before allocating staff to bid/tender preparation, it is essential to assess their expertise, knowledge, and experience relevant to finishing works projects. Consider the following factors:

- **Technical Expertise:** Identify team members with expertise in finishing works, such as architects, engineers, estimators, and project managers. Their knowledge and understanding of finishing works requirements will contribute to the accuracy and quality of the bid proposal.
- **Past Experience:** Consider team members who have previous experience in bid/tender development for finishing works projects. Their insights and lessons learned can add value to the preparation process.
- **Availability:** Evaluate the availability of staff members and ensure that they can commit the necessary time and effort to meet the bid/tender submission deadline.

B. Defining Roles and Responsibilities:

Clearly defining roles and responsibilities for each team member involved in bid/tender preparation ensures effective collaboration and accountability. Assign responsibilities based on individual strengths and expertise. Common roles and responsibilities include:

- **Project Manager:** Oversees the overall bid/tender preparation process, coordinates team activities, sets deadlines, and ensures compliance with project requirements and submission timelines.
- **Estimators:** Responsible for accurate cost estimation, analyzing project specifications, gathering pricing information, and preparing a detailed breakdown of costs for finishing works.

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- **Architects and Engineers:** Provide technical expertise, review project requirements, assess design intent, evaluate feasibility, and contribute to the development of technical drawings and specifications.
- **Legal and Contract Specialists:** Ensure legal compliance, review and negotiate contractual terms and conditions, and prepare necessary legal documentation required for bid submission.
- **Proposal Writers:** Develop persuasive and well-structured bid proposals, gather information from team members, highlight the organization's strengths and added value, and address all aspects of the bid requirements and evaluation criteria.

C. Establishing Communication and Collaboration Channels:

Effective communication and collaboration are vital for successful bid/tender preparation. Establish clear channels for communication, such as regular team meetings, email updates, and collaborative project management tools. Encourage open dialogue, knowledge sharing, and feedback among team members to foster a collaborative environment.

D. Monitoring Progress and Providing Support:

Throughout the bid/tender preparation process, regularly monitor the progress of each team member and provide necessary support and guidance. Address any challenges or bottlenecks promptly to ensure that the bid proposal stays on track and meets the submission deadline.

E. Quality Assurance and Review:

Incorporate a quality assurance process to review and validate the bid proposal before submission. Assign team members responsible for reviewing the proposal for accuracy, completeness, adherence to requirements, and overall quality. Conduct thorough proofreading, editing, and formatting checks to ensure a professional and error-free bid proposal.

2.2 Interacting with Subcontractors and Suppliers to Obtain Quotations

Interacting with subcontractors and suppliers is a crucial aspect of bid/tender development for finishing works projects. The best practices and considerations when engaging with subcontractors and suppliers to obtain accurate quotations and pricing information.

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A. Identifying Relevant Subcontractors and Suppliers:

Before initiating interactions with subcontractors and suppliers, it is essential to identify those who specialize in the specific finishing works required for the project. Consider the following factors:

- **Expertise:** Look for subcontractors and suppliers with expertise in the specific finishing works, such as painting, flooring, cabinetry, electrical installations, etc.
- **Reputation:** Consider subcontractors and suppliers with a track record of delivering high-quality work and meeting project deadlines.
- **Capacity:** Assess the capacity of subcontractors and suppliers to handle the project requirements in terms of resources, manpower, and equipment.

Supplier Qualification and Evaluation:

To ensure the selection of reliable and competent subcontractors and suppliers for your bid/tender process, it is important to establish a robust qualification and evaluation process. This section outlines the steps involved in qualifying and evaluating potential subcontractors and suppliers.

- **Define Qualification Criteria:**

Clearly define the criteria that subcontractors and suppliers must meet to be considered for qualification. These criteria may include:

- Relevant experience in the industry or specific project requirements.
- Financial stability and capability to handle the project's scope.
- Compliance with legal and regulatory requirements.
- Quality management systems and certifications.
- Health, safety, and environmental performance.
- Capacity to meet project deadlines and deliverables.
- Tailor the criteria to your specific project needs and industry standards.
- Prequalification Questionnaire:

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- Develop a prequalification questionnaire that gathers essential information from potential subcontractors and suppliers.
- The questionnaire should cover key areas such as company background, experience, financial statements, certifications, references, and previous project portfolios.
- Request supporting documentation to verify the information provided.
- **Evaluation Process:**
 - Establish an evaluation process that includes a scoring system or rating mechanism to objectively assess potential subcontractors and suppliers.
 - Assign weights or scores to each criterion based on their relative importance to the project.
 - Create an evaluation team comprising relevant stakeholders, such as project managers, procurement specialists, and technical experts.
- **Capability Assessment:**
 - Evaluate the capabilities of potential subcontractors and suppliers based on their qualifications, resources, and technical expertise.
 - Assess their ability to meet the project's requirements, including technical specifications, quality standards, and capacity to handle the workload.
 - Consider reviewing their past performance, including completed projects, client references, and feedback from previous customers.
- **Financial Stability:**
 - Review the financial statements and creditworthiness of potential subcontractors and suppliers.
 - Assess their financial stability, liquidity, and ability to manage project costs and potential risks.
 - Evaluate their payment history with previous clients and their relationships with financial institutions.
- **Compliance and Legal Considerations:**
 - Verify that potential subcontractors and suppliers comply with all relevant legal and regulatory requirements, including licenses, permits, and certifications.
 - Assess their adherence to health and safety regulations, environmental standards, and ethical business practices.

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- Consider conducting background checks to ensure there are no legal or compliance issues associated with the potential suppliers.
- **Scoring and Comparison:**
 - Use the scoring system or rating mechanism to objectively evaluate and compare potential subcontractors and suppliers.
 - Consolidate the evaluation scores and rankings to identify the most qualified and suitable candidates.
 - Consider conducting interviews or site visits to further assess their capabilities, facilities, and project management processes.

By following a comprehensive qualification and evaluation process, you can objectively assess potential subcontractors and suppliers, ensuring that they meet the necessary criteria and are capable of delivering high-quality work. This approach helps mitigate risks and increases the likelihood of successful bid/tender outcomes.

B. Requesting Quotations:

Once you have identified potential subcontractors and suppliers, it is time to request quotations. This is some practical tips:

- **Clearly Define Requirements:** Clearly communicate the scope, specifications, and requirements of the finishing works to subcontractors and suppliers. Provide detailed information such as project plans, drawings, material specifications, and any other relevant documentation.
- **Provide Adequate Time:** Give subcontractors and suppliers sufficient time to prepare and submit their quotations. Consider setting a reasonable deadline that allows them to evaluate the project requirements and provide accurate pricing information.
- **Standardized Format:** Provide a standardized format or template for subcontractors and suppliers to submit their quotations. This ensures consistency and ease of comparison during the evaluation process.
- **Request Breakdowns:** Ask subcontractors and suppliers to provide detailed breakdowns of their pricing, including labor costs, material costs, equipment costs, and any additional

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charges or contingencies. This breakdown helps in accurate cost estimation and cost comparison.

C. Clarifying Expectations:

During the quotation process, it is essential to clarify expectations with subcontractors and suppliers. This includes:

- **Delivery Dates:** Clearly communicate the project timeline and the expected start and completion dates for the finishing works. Seek confirmation from subcontractors and suppliers on their ability to meet these deadlines.
- **Quality Standards:** Specify the required quality standards for the finishing works. Clearly communicate any specific materials, techniques, or certifications that are necessary to meet the project requirements.
- **Communication Channels:** Establish efficient communication channels with subcontractors and suppliers to address queries, provide clarifications, and ensure ongoing collaboration throughout the bid/tender process.

D. Evaluating Quotations:

Once the quotations are received, evaluate them based on factors such as:

- **Price Competitiveness:** Compare the pricing information provided by subcontractors and suppliers to assess their competitiveness in the market.
- **Adherence to Specifications:** Evaluate how well the quotations align with the project requirements and specifications.
- **Past Performance and References:** Consider the reputation, past performance, and references of subcontractors and suppliers to assess their reliability and ability to deliver quality work.

E. Negotiating and Finalizing Contracts:

After evaluating the quotations, negotiate and finalize contracts with selected subcontractors and suppliers. This involves:

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- **Negotiating Pricing:** Engage in negotiations to arrive at mutually agreeable pricing terms based on the project requirements, budget constraints, and value for money.
- **Contractual Terms:** Clearly define the contractual terms and conditions, including project scope, delivery timelines, payment terms, warranties, and dispute resolution mechanisms.
- **Legal Compliance:** Ensure that contracts comply with legal and regulatory requirements, including any necessary licenses, permits, or insurance coverage.



Figure 2-1 Requesting Quotations:

2.3 Development of the pre-tender construction

The development of a pre-tender construction or project schedule is a crucial aspect of bid/tender development for finishing works. It involves the creation and management of a detailed timeline that outlines the sequence of activities, milestones, and deliverables required for the successful completion of the project. This process is typically managed and supervised by the bid/tender team, which includes project managers, schedulers, and other relevant stakeholders.

To effectively manage and supervise the development of the pre-tender construction or project schedule, several key steps need to be followed:

- **Project Scope Analysis:** The first step in developing a pre-tender construction or project schedule is to conduct a thorough analysis of the project scope. This involves reviewing the project requirements, specifications, and any other relevant documents to gain a clear understanding of what needs to be accomplished. By analyzing the scope, the bid/tender

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team can identify the key activities and milestones that need to be included in the schedule.

- B. **Activity Identification:** Once the project scope has been analyzed, the next step is to identify all the activities required to complete the project. This involves breaking down the scope into smaller tasks or work packages that can be easily managed and scheduled. Each activity should be clearly defined, with specific start and end dates, durations, and dependencies on other activities.
- C. **Sequence and Dependency Analysis:** After identifying all the activities, it is essential to determine their logical sequence and dependencies. Some activities may need to be completed before others can start, while some may be performed concurrently. By analyzing these dependencies, the bid/tender team can establish an accurate sequence of activities that ensures smooth workflow and minimizes delays.
- D. **Resource Allocation:** Once the sequence of activities has been determined, it is necessary to allocate resources to each task. Resources may include labor, equipment, materials, or any other necessary inputs. By accurately estimating the required resources and assigning them to specific activities, the bid/tender team can ensure that the project schedule is realistic and achievable.
- E. **Duration Estimation:** Estimating the duration of each activity is a critical step in developing the pre-tender construction or project schedule. This involves considering factors such as the complexity of the task, resource availability, and any potential risks or uncertainties. Accurate duration estimation helps in setting realistic deadlines and managing stakeholder expectations.
- F. **Schedule Development:** With all the necessary information gathered, the bid/tender team can now develop the pre-tender construction or project schedule. This involves creating a visual representation of the timeline, usually in the form of a Gantt chart or network diagram. The schedule should clearly indicate the start and end dates of each activity, as well as any dependencies or constraints.
- G. **Schedule Optimization:** Once the initial schedule is developed, it is essential to review and optimize it for efficiency and effectiveness. This may involve adjusting activity sequences, reallocating resources, or identifying opportunities for parallelism or

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overlapping activities. The goal is to create a schedule that maximizes productivity while minimizing costs and risks.

H. Schedule Monitoring and Control: After finalizing the pre-tender construction or project schedule, it is crucial to establish a robust monitoring and control mechanism. This involves regularly tracking progress against the schedule, identifying any deviations or delays, and taking corrective actions as necessary. Effective monitoring and control ensure that the project stays on track and meets its deadlines.

2.4 Preliminary site investigation

Preliminary site investigation is an essential step in the bid/tender development process for finishing works. This stage involves conducting a thorough assessment of the site where the project will take place. The purpose of the preliminary site investigation is to gather relevant information and data that will help in making informed decisions during the bidding process.

A. Importance of Preliminary Site Investigation:

Preliminary site investigation provides vital information about the project site, enabling accurate bid/tender preparation and effective project planning. It helps identify potential challenges, assess resource availability, and understand the site's conditions, which are essential for developing a competitive and realistic bid/tender proposal.

- **Geographical Features:**

One of the primary aspects of a preliminary site investigation is to evaluate the geographical features of the project site. Consider factors such as topography, soil conditions, drainage, and any natural or man-made obstacles that may affect the execution of finishing works. This information helps in determining the appropriate construction methods, material selection, and project timeline.

- **Manpower Availability:**

Assess the availability of skilled labor in the project area. Consider the local workforce and their expertise in the specific finishing works required. Evaluate whether additional labor needs to be sourced from outside the project area and account for any associated costs or logistical

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considerations. Understanding the manpower availability helps in estimating labor costs and ensuring adequate resources for timely project completion.

- **Resource Availability:**

Identify the availability of key resources required for the finishing works project. This includes materials, equipment, and specialized tools. Evaluate the local market for suppliers and subcontractors who can provide the necessary resources. Consider factors such as transportation logistics, sourcing options, and potential lead times to ensure a reliable supply chain for the project.

- **Utilities:**

Investigate the availability and accessibility of utilities at the project site. This includes assessing the availability of water, electricity, and communication access. Determine the proximity and capacity of existing utility connections or any requirements for additional infrastructure. Understanding the utility infrastructure helps in estimating costs, planning construction activities, and ensuring a smooth project execution.

- **Water:**

Evaluate the water sources available at the project site. Assess the quality, quantity, and reliability of water supply for construction purposes, such as mixing concrete, curing, or cleaning. Consider any potential water scarcity issues, water treatment requirements, or the need for temporary water storage facilities.

- **Electricity:**

Assess the availability and capacity of electricity supply at the project site. Determine whether existing electrical connections are sufficient to support the finishing works activities or if temporary power sources will be required. Consider any electrical load restrictions, installation requirements, or backup power solutions for uninterrupted project operations.

- **Communication Access:**

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Evaluate the communication infrastructure and access at the project site. Assess the availability of reliable mobile network coverage, internet connectivity, and other communication services. Consider the need for temporary communication facilities to ensure effective coordination and information exchange during the project.

B. Documenting Findings:

Record and document all findings from the preliminary site investigation. Maintain a comprehensive report that includes detailed information about geographical features, manpower availability, resource availability, utilities, water, electricity, and communication access. This documentation serves as a valuable reference for accurate bid/tender preparation and project planning.

C. Incorporating Site Investigation Results into Bid/Tender Preparation:

Integrate the findings from the preliminary site investigation into the bid/tender preparation process. Consider the identified site-specific factors when estimating costs, developing the project timeline, and formulating strategies to address any challenges or constraints. Ensure that the bid/tender proposal reflects a thorough understanding of the project site and its unique requirements.

2.5 TENDER PROCESS

Tender is an offer which incorporates the sum of money, time and other conditions required to carry out the contract obligations in order to complete a project or a part of it consisting of specified works.

Stages of a project

Stage 1: inception & feasibility – identifying project objectives / set up project brief

Stage 2: design – develop further project brief / develop concept & schematic design / Undertake detailed design & detailing / prepare cost plan & budget

Stage 3: tendering – issue tender documents / prepare & submit tender / evaluation of tender / award tenders / prepare contract documents

Stage 4: construction – site possession & mobilization / undertake procurement fabrication, installation, construction / carry out contract admin

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Stage 5: handover & maintenance – undertake all testing, commissioning & training / obtain CF / handover project to owner /carry out necessary maintenance / Defect rectification / etc

Tendering

Will be started after the design complete and project budget must be approved

The process that is used to obtain offers leading to a contract between:



Figure 2-2Tendering

- **Purpose of tendering process**
 - To select a suitable contractor at a time appropriate to the situation of the project.
 - To obtain from the contractor selected at the proper time, an acceptable tender or offer upon which a contract can be let.
- **Difference between a contract and a tender**
 - A tender formally means an invitation to trade under the terms of offer.
 - A contract is the term used for when the parties have reached agreement.
- **PRINCIPAL ACTIVITIES**
 - Selection of the most preferable or appropriate contract procurement method.
 - Development of tender list

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- Preparation of tender documentation
- Invitation / calling off tender
- Preparation and submission of tenders
- Receipt and opening of tenders
- Evaluation of tenders
- Acceptance of tender award or award of contract

Stage1: Selection of the most preferable or appropriate contract procurement method.

- Traditional contract procurement route
 - Longer time – lead to critical work scheduling
 - Less errors – more precise
- Fast-track contract procurement route
 - Shorter time
 - Consequences – may be lead to critical error, variation.

Stage 2: Development of tender list

- Potential tenderers can directly apply to the employer for future works.
- Employer generate list based on previous dealings
- The professional team generate their own list and recommend to the employer

Stage 3: Preparation of tender documentation – typical contents

- Letter of invitation
- Checklist for submission of tender
- Articles of agreement
- Conditions of contract
- Form of tender
- Tender specifications
- Bills of quantities
- Tender drawings
- Sample copy of letter of acceptance
- Sample copy of bang guarantee for performance bond
- Schedule of day work rates

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- Sample copy bank guarantee for advance payment

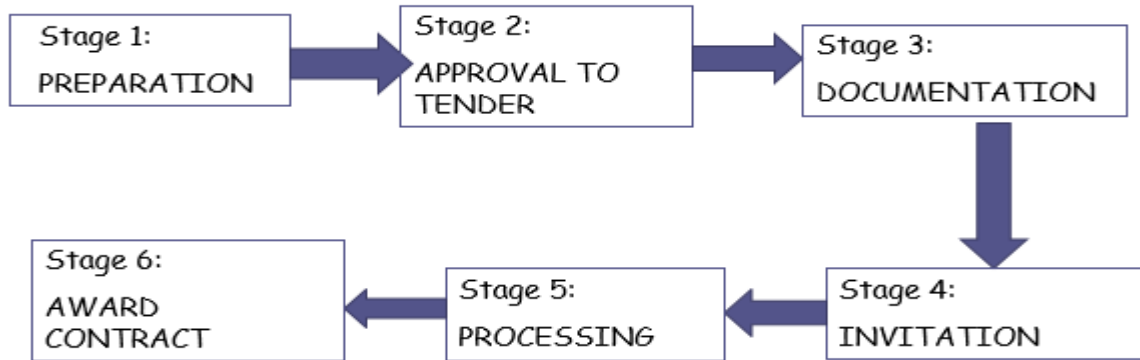


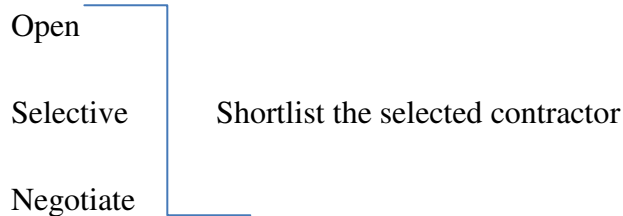
Figure 2-3 Tendering process

Stage 1: Preparation

- Final completion of drawings, specification, measurement / take-off process.
- Choose conditions of contract.
- Parties involved: architect, engineers, QS, client, project manager

Stage 2: Approval to tender

- Discussion and decision on type of tender to be used.
- **Selection of tender:**



- Parties involved: CLIENT, CONSULTANT, PROJECT MANAGER

Stage 3: Documentation

Contract based on quantities

- Compilation of:
 - Letter of invitation to tenderers

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- Articles of agreement / conditions of contract
- Form of tender
- Form of tenderer's details. i.e: contractor's registration, organization background, track record (past and present projects)
- Letter of acceptance
- Bank and insurance guarantee forms (performance bond)
- Bank and insurance guarantee forms (advance payments)
- Specifications
- Bills of quantities
- Relevant drawings

Contract based on tender & specs

- Compilation of:
 - Letter of invitation to tenderers
 - Articles of agreement / conditions of contract
 - Form of tender
 - Form of tenderer's details. i.e: contractor's registration, organization background, track record (past and present projects)
 - Letter of acceptance
 - Bank and insurance guarantee forms (performance bond)
 - Bank and insurance guarantee forms (advance payments)
 - Specifications
 - Summary of tender
 - Schedule of rates
 - Relevant drawings

Stage 4: Invitation

- Based on selection of tendering methods
 - Open / competitive / bid tender – produce tender notice
 - Selective – shot listed contractors will be invited to tender if they wish
 - Negotiated – only one contractor is approached- direct entry to project

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Stage 5: Processing

- Received tender submitted by contractor
- Tender assessment / evaluation
 - Completed tenders are received
 - Arithmetical check
 - Reasonable tender sum
 - Reasonable completion time
 - Capabilities of tenderers under considerations
- Tender recommendation / report – tender board

Stage 6: Award contract

- Pre-award meeting with contractors – validation of lowest complying bid
- Validate lowest bid - Pre-contract meeting with contractor for contract signing
- Approval by tender board / treasury (tender exceeds RM10 mill.) – an acceptance of tender form is issued to tenderer , signed by the authorised officer

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C) To restrict communication among team members D) To increase competition among team members

4. What should be done before finalizing contracts with subcontractors and suppliers?

- A) Negotiating pricing C Evaluating quotations
B) Clarifying expectations D) Requesting breakdowns

5. Which step is crucial in developing a pre-tender construction or project schedule?

- A) Project Scope Analysis C) Preliminary Site Investigation
B) Requesting Quotations D) Quality Assurance and Review

True or False:

1. Past experience of team members is not important in bid/tender development.
2. Effective communication and collaboration are not necessary for bid/tender preparation.
3. The role of project manager is to oversee the overall bid/tender preparation process.
4. It is not necessary to evaluate quotations received from subcontractors and suppliers.
5. Resource allocation is not a critical step in developing the project schedule.

Matching:

Match the roles with their responsibilities.

- | | |
|-----------------------------|---|
| A | B |
| 1. Project Manager | A. Oversees team activities and sets deadlines. |
| 2. Estimators | B. Responsible for accurate cost estimation. |
| 3. Architects and Engineers | C. Provide technical expertise and review project requirements. |

- | | |
|-----------------------------------|--|
| 4. Legal and Contract Specialists | D. Ensure legal compliance and review contractual terms. |
| 5. Proposal Writers | E. Develop persuasive and well-structured bid proposals. |

OPERATIONAL SHEET

Operation Title: Allocation of Staff and Team Responsibilities

Purpose:

The purpose of this operational sheet is to provide guidance and instructions for effectively allocating staff and defining team responsibilities during the bid/tender preparation process for finishing works projects.

Instructions:

- Assessing Staff Expertise and Availability:
 - Identify team members with technical expertise in finishing works.
 - Consider past experience in bid/tender development for finishing works projects.
 - Evaluate the availability of staff members to ensure commitment to the submission deadline.
- Defining Roles and Responsibilities:
 - Assign the following roles based on individual strengths and expertise:
 - Project Manager
 - Estimators

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- Architects and Engineers
- Legal and Contract Specialists
- Proposal Writers
- Establishing Communication and Collaboration Channels:
 - Set up clear communication channels such as team meetings, email updates, and project management tools.
 - Encourage open dialogue, knowledge sharing, and feedback among team members.
- Monitoring Progress and Providing Support:
 - Regularly monitor the progress of each team member.
 - Provide necessary support and guidance to address challenges or bottlenecks promptly.
- Quality Assurance and Review:
 - Incorporate a quality assurance process to review and validate the bid proposal.
 - Assign team members responsible for reviewing accuracy, completeness, adherence to requirements, and overall quality.
 - Conduct thorough proofreading, editing, and formatting checks.
- Precautions:
 - Ensure that staff members have the necessary expertise and experience for finishing works projects.
 - Verify the availability of staff members to meet the bid/tender submission deadline.
 - Clearly define roles and responsibilities to avoid confusion and overlapping tasks.
 - Foster effective communication and collaboration among team members.
 - Monitor progress regularly to identify and address any issues promptly.
 - Conduct thorough quality assurance checks to ensure a professional and error-free bid proposal.
- Tools and Requirements:
 - Project management tools for communication and collaboration.
 - Documentation templates for bid/tender preparation.
 - Relevant expertise and knowledge in finishing works projects.
- Procedures:

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- Assess staff expertise, knowledge, and experience.
- Allocate roles and responsibilities based on individual strengths and expertise.
- Establish clear communication and collaboration channels.
- Monitor progress and provide necessary support.
- Conduct quality assurance checks on the bid proposal.
- Quality Criteria:
 - Accuracy and completeness of the bid proposal.
 - Adherence to project requirements and submission timelines.
 - Professional and error-free documentation.
 - Effective collaboration and communication among team members.

UNIT THREE:HUMAN AND PHYSICAL COST MANAGEMENT

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Developing a Cost Management Plan:
- Human Cost Management:
- Physical Cost Management:
- Integrated Cost Management:
- Equipment and materials charge-out rates
- Establishing Labor Rates for Work
- Organizational contracting processes
- Appropriate rates to the bill of quantities
- Cost Extensions:
- Preliminaries cost
- Overheads cost:
- Supplementary Costs:

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Develop an Effective Cost Management Plan:
- Implement Human Cost Management Strategies:

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- Implement Physical Cost Management Measures:
- Implement Integrated Cost Management Approaches:
- Determine Accurate Equipment and Materials Charge-out Rates:
- Establish Appropriate Labor Rates for Work:
- Streamline Organizational Contracting Processes:
- Assign Appropriate Rates to the Bill of Quantities:
- Manage Cost Extensions Effectively:
- Calculate Preliminaries Costs Accurately:
- Monitor and Control Overheads Costs:
- Manage Supplementary Costs Efficiently:

3.1 Developing a Cost Management Plan:

A. Cost Breakdown Structure:

To effectively manage costs, it is essential to create a comprehensive cost breakdown structure. This structure will categorize and organize the various elements of human and physical costs in alignment with the project's work breakdown structure (WBS). The cost breakdown structure provides a clear framework for cost estimation, tracking, and control. It should include categories such as labor costs, material costs, equipment costs, subcontractor costs, and other relevant cost components. By establishing a well-defined cost breakdown structure, it becomes easier to allocate costs accurately and analyze project expenditures.

B. Cost Estimation Techniques:

- Accurate cost estimation is crucial for effective cost management. Various techniques can be employed to estimate human and physical costs:
- Analogous Estimating: This technique involves using historical data from similar projects as a reference to estimate costs. By comparing the current project with past projects, similarities and patterns can be identified to develop estimates.
- Parametric Estimating: Parametric estimating involves using mathematical models and statistical analysis to estimate costs. It uses specific parameters, such as cost per unit or cost per square foot, combined with project-specific variables to generate estimates.

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- **Bottom-up Estimating:** Bottom-up estimating involves breaking down the project into smaller components and estimating the costs for each component individually. These estimates are then aggregated to determine the total project cost. This technique provides a detailed and accurate estimation but can be time-consuming.
- **Three-Point Estimating:** Three-point estimating involves considering three estimates for each cost item: optimistic, pessimistic, and most likely. These estimates are then used to calculate a weighted average, resulting in a more realistic and reliable cost estimate.

By utilizing these estimation techniques appropriately, organizations can develop accurate estimates for human and physical costs, reducing the likelihood of cost overruns and ensuring effective cost control.

C. Cost Control Measures:

Implementing effective cost control measures is essential for managing costs throughout the project lifecycle. Some strategies for cost control include:

- **Regular Monitoring:** Continuously monitor actual costs against estimated costs to identify any deviations. This enables timely corrective actions and prevents cost overruns. Implement robust tracking systems and processes to capture and analyze cost data accurately.
- **Change Management Processes:** Establish formal change management processes to evaluate and approve changes that may affect project costs. This ensures that changes are properly assessed for their impact on budget and schedule before implementation.
- **Value Engineering:** Conduct value engineering exercises to identify opportunities for cost savings without compromising quality. Value engineering involves analyzing project components, materials, and processes to find more cost-effective alternatives.
- **Cost Contingency Reserves:** Establish cost contingency reserves to account for potential risks and uncertainties that may impact project costs. These reserves act as a buffer to mitigate unforeseen events and minimize the impact on the overall project budget.

3.2 Human Cost Management:

A. Resource Planning:

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Resource planning plays a crucial role in managing human costs effectively. Organizations need to assess their resource requirements based on the project schedule, skill sets needed, and labor availability. By conducting a thorough analysis of resource needs, organizations can allocate resources efficiently, ensuring that the right people with the required skills are available at the right time. Strategies for optimizing resource allocation include:

- **Skill-based Resource Allocation:** Match the skills and expertise of employees with the specific tasks or roles they are best suited for. This helps minimize the learning curve and increases productivity.
- **Resource Leveling:** Smooth out resource utilization by balancing workloads and avoiding overallocation or underutilization of employees. This prevents idle time and ensures optimal resource utilization throughout the project.

B. Labor Productivity Tracking:

Tracking labor productivity is vital for managing human costs effectively. Organizations should implement methods to measure and monitor productivity, including:

- **Productivity Metrics:** Define key performance indicators (KPIs) related to labor productivity, such as units produced per hour, tasks completed per day, or customer satisfaction ratings. Regularly track and analyze these metrics to identify areas for improvement and take corrective actions as necessary.
- **Performance Evaluations:** Conduct regular performance evaluations to assess individual and team productivity. Provide feedback, set performance goals, and offer training or support to enhance productivity levels.
- **Incentive Programs:** Implement incentive programs to motivate and reward high-performing employees. Incentives can be tied to productivity targets or quality standards, encouraging employees to perform at their best and contribute to cost-effective outcomes.

C. Training and Development:

- Investing in training and development programs is crucial for managing human costs. By enhancing employee skills and competencies, organizations can improve efficiency and reduce rework or errors. Strategies for training and development include:

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- **Employee Skill Enhancement:** Offer training programs to enhance specific skills needed for the project. This can include technical training, software proficiency, or soft skills development.
- **Cross-Training:** Cross-train employees to acquire multiple skill sets and increase flexibility within the workforce. This helps mitigate the risks associated with skill shortages or unexpected resource constraints.

D. Risk Management:

- Effective risk management strategies contribute to managing human costs by addressing potential risks related to labor availability, turnover, absenteeism, and labor disputes. Key considerations include:
 - **Risk Identification and Assessment:** Identify and assess risks specific to human resources, such as turnover rates, labor market conditions, or the potential impact of labor disputes. This enables proactive planning and mitigation.
 - **Contingency Planning:** Develop contingency plans to address potential disruptions to human resources. This may involve having alternative resources or subcontractors in place to ensure continuity in case of labor shortages or other unforeseen events.

By implementing robust resource planning, tracking labor productivity, investing in training and development, and addressing human resource risks, organizations can effectively manage human costs and optimize the utilization of their workforce.

3.3 Physical Cost Management:

A. Material Procurement Strategies:

Effective material procurement strategies are crucial for managing physical costs. Consider the following strategies:

- **Bulk Purchasing:** Explore opportunities for bulk purchasing to take advantage of economies of scale. By purchasing materials in larger quantities, organizations can often negotiate lower prices and reduce per-unit costs.

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- **Supplier Contract Negotiation:** Negotiate contracts with suppliers to secure favorable pricing and terms. Long-term contracts or strategic partnerships can provide cost stability and potential discounts.
- **Alternative Material Sources:** Consider alternative material sources to find cost-effective options without compromising quality. This may involve exploring different suppliers or investigating alternative materials that meet project requirements.
- **Just-in-Time Inventory Management:** Implement just-in-time inventory management practices to minimize carrying costs. This approach involves procuring materials as needed, reducing the need for excess inventory and associated storage costs.

B. Value Engineering:

Value engineering plays a significant role in managing physical costs by identifying cost-effective alternatives while maintaining quality and performance. Some key considerations include:

- **Functionality Analysis:** Analyze the functionality of materials, equipment, and systems to identify opportunities for cost savings. Look for alternative options that offer similar or improved functionality at a lower cost.
- **Design Optimization:** Optimize designs to reduce material usage or eliminate unnecessary components without compromising performance. This can result in cost savings both in material procurement and construction.
- **Value Engineering Techniques:** Apply value engineering techniques such as function analysis, cost-benefit analysis, or life-cycle cost analysis. These techniques help identify cost-saving opportunities and inform decision-making processes.

C. Equipment Optimization:

Optimizing equipment usage contributes to managing physical costs effectively. Consider the following strategies:

- **Equipment Utilization Tracking:** Monitor equipment utilization rates to identify underutilized or idle equipment. This allows for better resource allocation and avoids unnecessary costs associated with owning or operating equipment that is not fully utilized.

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- **Preventive Maintenance:** Implement preventive maintenance programs to minimize breakdowns and repair costs. Regular maintenance helps ensure equipment operates efficiently, reducing the risk of costly downtime or major repairs.
- **Rental or Leasing Options:** Explore rental or leasing options for specialized equipment instead of outright purchase. Renting or leasing equipment can provide flexibility, avoid upfront purchase expenses, and reduce the costs associated with owning and maintaining equipment.

D. Waste Management:

Effective waste management practices are essential for controlling physical costs. Consider the following strategies:

- **Proper Material Storage:** Store materials appropriately to prevent damage or spoilage. Proper storage practices reduce the need for re-purchasing materials due to deterioration.
- **Accurate Quantity Take-offs:** Conduct accurate quantity take-offs to avoid overordering materials. Precise estimation of material quantities helps minimize waste and associated costs.
- **Efficient Material Handling:** Implement efficient material handling practices to reduce the risk of damage or loss. This includes proper handling techniques, transportation optimization, and avoiding unnecessary material movements.
- **Recycling and Reusing:** Promote recycling or reusing materials whenever possible. Recycling reduces the need for new material purchases, leading to cost savings and supporting sustainability efforts.

By implementing effective material procurement strategies, utilizing value engineering techniques, optimizing equipment usage, and practicing efficient waste management, organizations can successfully manage physical costs and optimize resource utilization.

3.4 Integrated Cost Management:

A. Cost Integration:

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Integrating human and physical cost management efforts is crucial for effective project cost management. It involves aligning and coordinating the efforts of project managers, procurement teams, human resources, and finance departments. Here's why cost integration is important:

- **Alignment of Efforts:** Effective communication and collaboration ensure that human and physical costs are aligned with the overall project budget. This alignment prevents discrepancies and ensures that all costs are accounted for accurately.
- **Coordinated Resource Allocation:** Integrating human and physical cost management allows for better coordination in resource allocation. It ensures that the right resources, including both personnel and materials, are allocated optimally to achieve project objectives while maintaining cost efficiency.
- **Accurate Budgeting:** Collaboration among different departments helps in accurately estimating and budgeting for both human and physical costs. By considering inputs from various stakeholders, the project budget can be more comprehensive and realistic.

B. Cost Reporting and Analysis:

Cost reporting and analysis provide stakeholders with timely and accurate information on human and physical costs. It involves tracking cost performance, identifying deviations from the budget, and making informed decisions for cost control. Key aspects of cost reporting and analysis include:

- **Cost Performance Indicators:** Use cost performance indicators to measure and report on the project's financial performance. Examples include cost variance, cost performance index (CPI), and earned value metrics. These indicators help stakeholders assess how well the project is performing against the budget.
- **Variance Analysis:** Conduct variance analysis to compare actual costs against the budgeted costs. This analysis helps identify areas where costs are deviating from the plan, enabling timely corrective actions to bring the project back on track.
- **Earned Value Management (EVM):** EVM integrates scope, schedule, and cost to provide a comprehensive view of project performance. It allows for the measurement of work progress and the assessment of cost performance based on the value earned for the work completed.

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C. Lessons Learned and Continuous Improvement:

Capturing lessons learned and implementing continuous improvement initiatives are vital for enhancing cost management practices. Consider the following:

- **Post-Project Reviews:** Conduct post-project reviews to identify successes, challenges, and lessons learned. Analyze the cost performance, resource allocation, and budget accuracy to understand areas for improvement.
- **Best Practice Identification:** Identify best practices from successful projects and share them across the organization. Documenting and disseminating these practices helps improve cost estimation accuracy, resource optimization, and overall project cost management.
- **Continuous Improvement Initiatives:** Implement continuous improvement initiatives based on the lessons learned. This may involve updating cost estimation models, refining resource allocation processes, or enhancing communication and collaboration mechanisms to improve future cost management endeavors.

By integrating human and physical cost management efforts, implementing effective cost reporting and analysis practices, and embracing continuous improvement initiatives, organizations can enhance their overall project cost management capabilities and achieve better cost control and project outcomes.

3.5 Equipment and materials charge-out rates

Equipment and materials charge-out rates refer to the costs associated with the usage of equipment and materials on a project. Monitoring these rates involves tracking the expenses incurred for renting or owning equipment, as well as the costs of procuring and utilizing materials required for the finishing works. By effectively managing these costs, organizations can ensure accurate budgeting and cost control throughout the project.

To effectively determine current equipment and materials charge-out rates, the following steps can be followed:

- Conducting Market Research:** It is crucial to gather information on prevailing market rates for equipment and materials used in finishing works. This can be done by

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researching industry publications, contacting suppliers, or utilizing online resources that provide pricing data. By comparing different sources, organizations can gain a comprehensive understanding of the market rates.

- B. Evaluating Depreciation: Equipment used in finishing works depreciates over time due to wear and tear. It is important to consider the depreciation value when determining charge-out rates. Organizations can calculate depreciation based on factors such as the expected lifespan of the equipment, its residual value, and the number of hours it is expected to be used.
- C. Assessing Maintenance Costs: Regular maintenance is necessary to keep equipment in optimal working condition. The costs associated with maintenance should be factored into the charge-out rates. This includes expenses related to servicing, repairs, spare parts, and any other maintenance requirements specific to the equipment.
- D. Analyzing Demand and Utilization: The demand for specific equipment or materials can vary depending on market conditions and project requirements. Monitoring demand patterns allows organizations to adjust charge-out rates accordingly. Additionally, tracking utilization rates helps determine how frequently equipment is being used, enabling more accurate pricing.
- E. Considering Overhead Costs: In addition to direct costs, organizations must also consider indirect costs associated with equipment and materials. This includes expenses such as storage, insurance, transportation, and administrative overheads. These costs should be allocated proportionally to the charge-out rates.
- F. Regularly Reviewing and Updating Rates: Charge-out rates should not remain static. It is essential to regularly review and update them based on market fluctuations, changes in costs, or any other relevant factors. By keeping rates up to date, organizations can ensure that their bids/tenders reflect current market conditions.

Monitoring the determination of current equipment and materials charge-out rates is crucial for bid/tender development in finishing works. Accurate pricing is essential for winning contracts while maintaining profitability.

Determining equipment and materials charge-out rates for tender development:

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Let's assume you are preparing a tender for a painting project, and you need to determine the charge-out rates for the equipment and materials involved. The steps:

- Conduct Market Research:
 - Research industry publications, contact suppliers, and utilize online resources to gather pricing data.
 - Let's say you find that the prevailing market rate for a paint sprayer is \$50 per day, and the cost of paint per gallon is \$30.
- Evaluate Depreciation:
 - Determine the expected lifespan of the paint sprayer, let's say it's 5 years.
 - Assume the residual value of the sprayer after 5 years is \$200.
 - Calculate the annual depreciation: $(\text{Initial cost} - \text{Residual value}) / \text{Expected lifespan}$.
 - Let's assume the initial cost of the sprayer is \$500, the annual depreciation would be: $(500 - 200) / 5 = \$60$.
- Assess Maintenance Costs:
 - Estimate the annual maintenance costs for the paint sprayer, including servicing, repairs, and spare parts.
 - Let's assume the estimated maintenance costs are \$100 per year.
- Analyze Demand and Utilization:
 - Assess the demand for the paint sprayer in the market and the expected utilization rate.
 - Let's assume the demand is moderate, and the sprayer is expected to be used for an average of 200 hours per year.
- Consider Overhead Costs:
 - Allocate a portion of indirect costs such as storage, insurance, transportation, and administrative overheads to the charge-out rates.
 - Let's assume the estimated annual overhead costs for the equipment and materials are \$500.
- Calculate the Charge-out Rates:
 - Add up the annual depreciation, maintenance costs, and overhead costs: $\$60 + \$100 + \$500 = \660 .

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- Divide the total costs by the expected number of hours the equipment will be used: $\$660 / 200 = \3.30 per hour.
- a. Add the charge-out rate for the equipment to the material cost:
 - Equipment charge-out rate: $\$3.30$ per hour.
 - Material cost: $\$30$ per gallon.

3.6 Establishing Labor Rates for Work

Labor costs account for a significant portion of overall project expenses in finishing works. Estimating labor rates for different work elements is crucial for accurately budgeting and pricing bid/tender proposals. Establishing competitive yet realistic labor rates ensures that the organization can cover its costs, maintain profitability, and win contracts.

A. Analyzing Labor Requirements:

Thoroughly analyze the labor requirements for each work element in the finishing works project. Break down the project scope into specific tasks or work packages and identify the skills, expertise, and time required for each element. Consider factors such as the complexity of the task, the level of specialization required, and any additional certifications or qualifications needed.

B. Labor Market Research:

Conduct comprehensive research on the labor market to gain insights into prevailing wage rates and industry standards. Explore sources such as labor market reports, industry associations, government publications, and online platforms that provide labor rate data. This research helps in understanding regional or local variations, skill shortages, and market trends that may impact labor rates.

C. Collaboration with Human Resources and Finance Departments:

Collaborate with the human resources and finance departments within the organization to gather relevant information for labor rate determination. Human resources can provide insights into employee compensation structures, benefits, and prevailing wage rates within the organization.

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Finance departments can offer guidance on cost factors such as taxes, social security contributions, and overhead expenses associated with labor.

D. Consideration of Productivity and Efficiency:

When establishing labor rates, consider productivity and efficiency factors. Assess historical project data or industry benchmarks to determine the expected productivity rates for each work element. Adjust labor rates accordingly, accounting for factors such as team composition, workflow optimization, and the use of technology or equipment that may impact productivity levels.

E. Employee Compensation and Benefits:

Account for employee compensation and benefits when establishing labor rates. Include factors such as base wages, overtime rates, bonuses, and any applicable allowances or incentives. Consider the organization's policies and collective bargaining agreements, if applicable, to ensure compliance and fairness in labor rate determination.

F. Overhead and Indirect Costs:

Take into account overhead and indirect costs associated with labor. These costs include administrative expenses, insurance, training, and other support functions required to facilitate the labor workforce. Allocate a portion of these costs to each labor hour or work element to ensure that the bid/tender proposal covers the organization's overall cost structure.

G. Updating Labor Rates:

Regularly review and update labor rates based on market changes, labor negotiations, or internal cost analyses. Labor rates may need to be adjusted to reflect inflation, changes in labor laws, or shifts in market demand and supply dynamics. Maintain a proactive approach to ensure that labor rates remain competitive and align with the organization's financial objectives.

H. Documenting Labor Rates:

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Maintain a comprehensive record of established labor rates for each work element. Document the factors considered, including market research, productivity analysis, compensation and benefits, and overhead costs. This documentation serves as a reference for future bids and tenders, allows for accurate cost estimation, and supports transparency in pricing.

I. Continuous Improvement:

Continuously strive for improvement in labor rate determination processes. Analyze the accuracy of labor rate estimates compared to actual project costs and adjust methodologies accordingly. Seek feedback from project teams, estimators, and other stakeholders to identify areas for enhancement and streamline labor rate determination processes.

Thorough analysis, labor market research, collaboration with relevant departments, and a continuous improvement mindset contribute to accurate labor rate determination and maximize project profitability.

Calculation for establishing labor rates for tender development:

Let's assume you are preparing a tender for a painting project, and you need to establish the labor rates for the work involved.

A. Analyze Labor Requirements:

- Break down the project scope into specific tasks. For example, preparing surfaces, applying primer, applying paint coats, and cleanup.
- Determine the number of hours required for each task based on past experience or industry standards. Let's assume the total labor hours required for the project are 200 hours.

B. Labor Market Research:

- Research the labor market to gather information on prevailing wage rates for painters in your area.
- Let's assume that the prevailing wage rate for painters is \$25 per hour.

C. Consider Productivity and Efficiency:

- Assess historical project data or industry benchmarks to determine expected productivity rates for each task.

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- Let's assume that the expected productivity rate for painting tasks is 80% (i.e., 80% of the available time is spent on actual productive work).

D. Employee Compensation and Benefits:

- Consider employee compensation and benefits when establishing labor rates. This includes base wages, overtime rates, bonuses, and applicable allowances.
- Let's assume that the base wage rate for painters is \$20 per hour, and there are no overtime or additional allowances for this project.

E. Overhead and Indirect Costs:

- Take into account overhead and indirect costs associated with labor. This includes administrative expenses, insurance, training, and support functions.
- Let's assume the overhead and indirect costs for this project are estimated at \$5 per hour.

F. Calculate the Labor Rates:

- Calculate the labor cost per hour by summing up the base wage rate, overhead costs, and any applicable benefits: $\$20 + \$5 = \$25$ per hour.
- Adjust the labor cost per hour based on the expected productivity rate: $\$25 / 0.8 = \31.25 per hour.

G. In your tender, you would then include the established labor rate as follows:

- Labor rate: \$31.25 per hour.

3.7 Organizational contracting processes

A. Importance of Contracting Processes:

Organizational contracting processes serve as a framework to govern the procurement and execution of finishing works projects. Adhering to these processes ensures consistency, transparency, and compliance with legal and regulatory requirements. It also helps mitigate risks, maintain project quality, and optimize cost management throughout the project lifecycle.

Analyzing project elements involves a comprehensive review of various aspects related to human and physical costs. This analysis ensures that all costs associated with the project are accurately estimated and accounted for, enabling organizations to develop competitive bids/tenders that align with their financial capabilities and objectives. The following sections provide a detailed

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explanation of how project elements are analyzed to ensure conformity with organizational contracting processes.

B. Human Costs Analysis:

The analysis of human costs involves assessing the labor requirements for the finishing works project. This includes determining the number of skilled workers, supervisors, and support staff needed to complete the project within the specified timeframe. Additionally, it involves evaluating the skill sets required for each task involved in the finishing works, such as carpentry, painting, electrical work, plumbing, etc.

During the analysis, organizations consider factors such as labor rates, overtime requirements, and any additional costs associated with hiring specialized subcontractors or consultants. By conducting a thorough evaluation of human costs, organizations can accurately estimate the labor expenses involved in the project and ensure that they align with their budgetary constraints.

C. Physical Costs Analysis:

The analysis of physical costs focuses on evaluating the materials, equipment, and resources required for the finishing works project. This includes identifying the specific materials needed for each task, such as paints, adhesives, flooring materials, fixtures, etc. Organizations also assess the availability and cost of these materials from various suppliers to determine the most cost-effective options.

Furthermore, organizations analyze equipment requirements for the project. This involves identifying any specialized tools or machinery needed for specific tasks and evaluating their availability and associated costs. By conducting a comprehensive analysis of physical costs, organizations can accurately estimate the expenses related to materials and equipment, ensuring that their bids/tenders reflect the true cost of the project.

D. Compliance with Organizational Contracting Processes:

Throughout the analysis of project elements, organizations must ensure that all findings and estimations conform to their established contracting processes. This involves cross-referencing

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the analyzed costs with internal guidelines, policies, and procedures to ensure consistency and compliance.

Organizations may have specific thresholds or criteria for approving bids/tenders, which include financial considerations. By analyzing project elements in line with these contracting processes, organizations can verify that the estimated costs align with their internal requirements and are in accordance with industry standards.

Evaluating human and physical costs, organizations can accurately estimate labor and material expenses, ensuring that their bids/tenders align with their financial capabilities. Moreover, by ensuring conformity with organizational contracting processes, organizations maintain consistency, efficiency, and compliance throughout the bidding/tendering process.

3.8 Arbitrating and Comparing Rates

In the bid/tender development process for finishing works, one crucial aspect is human and physical cost management. To ensure an accurate estimation of costs, it is essential to arbitrate and compare rates with existing cost records. Significance of this activity and provides insights into effective strategies for achieving accurate cost estimations.

A. Importance of Arbitrating and Comparing Rates:

Arbitrating and comparing rates with existing cost records is vital for several reasons:

- **Cost Accuracy:** By examining historical cost data and comparing it with current rates, organizations can establish benchmarks and make informed decisions. This process helps ensure that the estimated costs for human and physical resources align with industry standards and accurately reflect the project scope.
- **Budgetary Control:** Effective cost management is critical for maintaining project budgets. Comparing rates with existing cost records enables organizations to identify discrepancies and make necessary adjustments to avoid cost overruns. It allows for better budgetary control and minimizes financial risks associated with finishing works.

B. Strategies for Arbitrating and Comparing Rates:

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Collect and Analyze Historical Data: Begin by gathering comprehensive historical cost data related to similar finishing works projects. This data should include labor rates, material costs, equipment rentals, and any other relevant expenses. Analyze this information to identify trends, patterns, and potential cost variations.

- **Establish Cost Categories:** Categorize the different components of human and physical costs to facilitate a more detailed analysis. For example, divide labor costs into skilled and unskilled labor, or differentiate between direct and indirect material costs. This categorization provides a clearer understanding of cost variations within each category.
- **Conduct Market Research:** Stay updated on current market rates and industry trends. Engage with suppliers, subcontractors, and industry experts to gather information on prevailing rates for labor, materials, equipment, and other project-specific resources. This research will help validate and refine the existing cost records.
- **Perform Comparative Analysis:** Compare the rates obtained from market research with the historical cost data. Identify any significant variances and investigate the reasons behind them. Factors such as inflation, changes in labor laws, or market demand can influence rate fluctuations. This analysis will help determine whether adjustments are necessary to align the estimated costs with the current market conditions.
- **Consider Project-Specific Factors:** While comparing rates, consider the unique requirements and complexities of the finishing works project. Factors such as project location, size, duration, and technical specifications may impact resource costs. Adjust the rates accordingly to reflect these project-specific factors accurately.
- **Consult Internal Experts:** Seek input from internal experts, such as project managers, estimators, and procurement specialists. Their experience and knowledge can provide valuable insights into potential cost variations and help refine the cost estimation process.

3.9 Appropriate rates to the bill of quantities

Importance of effectively supervising staff to ensure accurate cost estimation and pricing during the bid/tender development process. By ensuring that appropriate rates are applied to the bill of quantities, organizations can enhance their competitiveness, mitigate financial risks, and optimize project profitability.

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A. Supervising Staff and their Role:

Supervising staff involved in the estimation and pricing process is crucial to maintain consistency, accuracy, and reliability in cost management. These staff members typically include quantity surveyors, estimators, cost analysts, and other relevant personnel. Their responsibilities involve interpreting project requirements, analyzing specifications, and assigning appropriate rates to each item in the bill of quantities.

B. Importance of Applying Appropriate Rates:

Applying appropriate rates to the bill of quantities is vital for several reasons:

- **Accurate Cost Estimation:** The rates assigned to each item in the bill of quantities directly impact the overall cost estimation. By ensuring that the rates reflect the current market conditions, labor costs, material prices, and other relevant factors, organizations can provide accurate cost estimates to clients.
- **Competitive Bidding:** In bid/tender development, organizations compete with other firms to secure projects. Applying appropriate rates allows for competitive pricing while maintaining profitability. Supervising staff can analyze market trends, benchmark against similar projects, and adjust rates accordingly to ensure competitiveness without compromising quality.
- **Risk Mitigation:** Inaccurate rates can lead to underestimation or overestimation of costs, resulting in financial risks. Underestimating costs may lead to losses or insufficient funds for project execution, while overestimating costs may make the bid uncompetitive. Effective supervision helps minimize such risks by ensuring that rates are based on reliable data and calculations.
- **Profit Optimization:** Applying appropriate rates contributes to optimizing project profitability. By accurately estimating costs and pricing the bid/tender, organizations can maintain healthy profit margins, cover expenses, and secure a sustainable revenue stream.

C. Supervision Strategies:

To effectively supervise staff in applying appropriate rates to the bill of quantities, the following strategies can be employed:

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- **Clear Guidelines and Standards:** Provide comprehensive guidelines and standards to staff regarding rate determination methodologies, sources of information, and any specific considerations. This ensures consistency across the estimation process and reduces ambiguity.
- **Training and Development:** Offer training programs and professional development opportunities to staff involved in cost management. This helps enhance their knowledge of market dynamics, cost analysis techniques, and industry best practices, enabling them to make informed decisions when assigning rates.
- **Quality Control and Review:** Implement quality control measures to review and validate the rates assigned to the bill of quantities. This can involve cross-checking rates against historical data, market research, and industry benchmarks to ensure accuracy and reasonableness.
- **Collaboration and Communication:** Foster a collaborative environment where staff can exchange knowledge and seek guidance when encountering challenges. Encourage regular communication within the team to address any uncertainties or inconsistencies promptly.

To determine appropriate rates for the bill of quantities in tender development, you need to consider various factors such as direct costs, indirect costs, profit margins, and market conditions. an example calculation form:

- **Direct Costs:**
 - Identify the specific items or activities listed in the bill of quantities, such as materials, labor, equipment, and subcontractor costs.
 - Determine the direct cost associated with each item or activity. This can be done by considering market rates, supplier quotes, or historical data.
 - For example, let's assume the direct cost for materials required for a specific item is \$1,000.
- **Indirect Costs:**
 - Consider indirect costs that are not directly tied to a specific item but are necessary for the project's execution. This includes overhead expenses, insurance, project management costs, and site supervision.

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- Estimate the total indirect costs for the project based on historical data or a percentage of the direct costs.
- Let's assume the estimated indirect costs for the project are 15% of the total direct costs, which would be \$150 (15% of \$1,000).
- **Profit Margin:**
 - Determine the desired profit margin for the project. This can vary depending on the company's strategy, market conditions, and project risk.
 - Calculate the profit margin as a percentage of the total direct and indirect costs.
 - Let's assume a profit margin of 10% of the total direct and indirect costs, which would be \$115 (10% of \$1,150).
- **Adjusted Rates:**
 - Add the direct costs, indirect costs, and profit margin to determine the adjusted rates for each item or activity in the bill of quantities.
 - In our example, the adjusted rate for the specific item would be \$1,150 (\$1,000 direct costs + \$150 indirect costs + \$115 profit margin).

By applying these calculations to each item or activity in the bill of quantities, you can establish appropriate rates that reflect the direct costs, indirect costs, and desired profit margin for the tender development.

3.10 Cost Extensions:

A. Definition and Purpose:

Cost extensions refer to additional costs that may arise during the execution of a project beyond the initial estimated budget. These extensions can occur due to various factors, such as scope changes, unforeseen conditions, or delays. The purpose of reviewing and monitoring cost extensions is to identify and assess the impact of these additional costs on the project's overall budget and timeline.

B. Identifying Cost Extensions:

To effectively manage cost extensions, it is crucial to establish a robust system for identifying and documenting any changes that may result in additional costs. This includes conducting

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regular site inspections, coordinating with subcontractors and suppliers, and maintaining open communication channels with all stakeholders involved in the project.

C. Importance of Reviewing and Monitoring Cost Extensions:

- **Budget Control:**

By reviewing and monitoring cost extensions, project managers can ensure that the project remains within the allocated budget. Regular evaluation of additional costs allows for proactive decision-making, such as seeking alternative solutions, revising the project scope, or renegotiating contracts with vendors.

- **Risk Management:**

Monitoring cost extensions provides insights into potential risks and allows project teams to develop appropriate mitigation strategies. Recognizing cost overruns in a timely manner enables proactive risk management, reducing the impact on project timelines and financial resources.

- **Client Satisfaction:**

Accurate review and monitoring of cost extensions demonstrate professionalism and transparency to clients. By keeping clients informed about any additional costs, project managers can maintain trust and credibility, ensuring client satisfaction throughout the project lifecycle.

D. Considerations for ensuring accurate translation:

- **Consistency:** Ensuring consistency in the translation of cost extensions is crucial for accurate estimates. This involves using standardized units of measurement, applying consistent rates or prices, and maintaining uniformity in calculations throughout the estimate. Any deviations or inconsistencies should be carefully reviewed and justified to maintain accuracy.
- **Documentation:** Proper documentation is essential for accurately translating cost extensions into the estimate summary. All calculations, assumptions, sources, and justifications should be recorded systematically to provide transparency and traceability. This documentation not only facilitates internal review but also serves as a reference for external stakeholders during bid/tender evaluations.

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- Continuous monitoring: Accurate translation of cost extensions requires continuous monitoring throughout the bid/tender development process. As changes occur, such as scope modifications or price fluctuations, it is important to update the estimate accordingly and ensure that these changes are accurately reflected in the estimate summary. Regular communication with relevant stakeholders helps maintain accuracy and transparency.

3.11 Preliminaries cost

A. Definition and types of preliminaries in finishing works:

Preliminaries in finishing works refer to the activities, resources, and costs that are necessary to initiate and manage a construction project before the actual execution of the finishing works. These activities are essential for the smooth running of the project and include various tasks such as site establishment, project management, administration, and logistics. The types of preliminaries can vary depending on the specific project requirements but commonly include site setup, temporary facilities, security measures, insurance, permits, surveys, and project management activities.

B. Identifying and estimating the cost of preliminaries:

Identifying and estimating the cost of preliminaries involves a thorough analysis of the project requirements and understanding the scope of work. This process typically includes reviewing project plans and specifications, conducting site visits, consulting with relevant stakeholders, and considering any specific regulations or local requirements. Estimating preliminary costs requires breaking down each activity into its constituent elements and determining the associated resources, labor, equipment, materials, and time required. Cost estimation techniques such as historical data analysis, benchmarking, and expert judgment can be employed to ensure accuracy.

C. Factors influencing preliminary costs:

Several factors can influence preliminary costs in finishing works. These factors include but are not limited to:

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- **Project size and complexity:** Larger and more complex projects generally require more extensive preliminary activities and resources.
- **Site conditions:** Challenging site conditions such as difficult terrain or restricted access may necessitate additional resources or specialized equipment.
- **Project duration:** Longer projects may require extended site establishment periods or increased administrative efforts.
- **Local regulations:** Compliance with local regulations regarding permits, licenses, environmental considerations, or safety measures can impact preliminary costs.
- **Project location:** Projects located in remote areas or densely populated urban environments may have different logistical requirements that affect preliminary costs.
- **Client requirements:** Specific client requirements, such as security measures or specialized insurance coverage, can influence preliminary costs.
- **Market conditions:** Fluctuations in labor, material, or equipment costs can impact the overall preliminary costs.

D. Allocating preliminaries in bid/tender documents:

When preparing bid/tender documents, it is essential to allocate preliminaries accurately to ensure that all necessary costs are accounted for and included in the pricing. This allocation should be transparent and clearly defined to avoid any misunderstandings or disputes during the tender evaluation process. The allocation of preliminaries can be done by creating a separate section within the bid/tender document that outlines each preliminary activity and its associated cost. It is crucial to provide detailed explanations and justifications for each cost item to enhance transparency and facilitate accurate evaluation by the client.

3.12 Overheads cost:

A. Understanding overhead costs in finishing works:

Overhead costs in finishing works refer to the indirect expenses incurred during the execution of a construction project that cannot be directly attributed to a specific activity or task. These costs are necessary for the overall functioning of the project but do not directly contribute to the physical construction work. Overhead costs typically include administrative expenses, project management fees, office rent, utilities, insurance, taxes, and other general expenses.

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B. Differentiating between direct costs and overhead costs:

Direct costs are expenses that can be directly attributed to a specific activity or task in finishing works. These costs are directly related to the physical construction work and include materials, labor, equipment rental, subcontractor fees, and any other expenses directly associated with executing a particular task. On the other hand, overhead costs are indirect expenses that support the overall project but cannot be directly linked to a specific activity. They encompass general project management and administrative expenses that benefit multiple tasks simultaneously.

C. Calculating and allocating overhead costs:

Calculating overhead costs requires identifying all indirect expenses incurred during the project's duration. This can be achieved by reviewing financial records, invoices, and expense reports. Once the overhead costs are determined, they can be allocated to specific activities or tasks using an appropriate allocation method. Common methods include allocating overhead costs based on labor hours, material costs, or a predetermined percentage of direct costs. The chosen method should be fair and reflective of the actual usage of resources by each activity.

D. Including overhead costs in bid/tender pricing:

To include overhead costs in bid/tender pricing, it is necessary to determine the appropriate markup or profit margin that covers these expenses. The markup should consider not only the direct costs but also the indirect expenses incurred during the project. The percentage of markup can vary depending on factors such as project size, complexity, market conditions, and company policies. It is crucial to ensure that the markup adequately covers the overhead costs while remaining competitive in the bidding process.

3.13 Supplementary Costs:

A. Definition and examples of supplementary costs:

Supplementary costs in finishing works refer to additional expenses that are not directly related to the physical construction work but are necessary for the successful completion of a project. These costs are often unforeseen or arise due to specific project requirements or client requests. Examples of supplementary costs include additional safety measures, specialized equipment

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rental, temporary works, environmental mitigation measures, unforeseen site conditions, changes in scope, and variations requested by the client.

B. Identifying and quantifying supplementary costs:

Identifying and quantifying supplementary costs requires a thorough understanding of the project scope, specifications, and any potential risks or uncertainties. This can be achieved through comprehensive risk assessments, reviewing project plans and specifications, consulting with relevant stakeholders, and conducting site visits. Quantifying supplementary costs involves estimating the resources, time, materials, and any additional expenses required to address these unforeseen circumstances or client requests.

C. Incorporating supplementary costs into bid/tender pricing:

To incorporate supplementary costs into bid/tender pricing, it is essential to assess their potential impact on the project and determine the appropriate allocation of resources and expenses. Supplementary costs should be included as separate line items in the bid/tender document, clearly outlining the nature of the cost and its justification. It is crucial to provide detailed explanations and justifications for each supplementary cost item to enhance transparency and facilitate accurate evaluation by the client.

Supplementary costs can be classified into two categories:

1. **Direct supplementary costs:** These costs are directly related to the project and can be easily identified and quantified. For example, if the project scope changes and additional materials are required, the cost of those materials would be a direct supplementary cost.
2. **Indirect supplementary costs:** These costs are not directly related to the project and can be more difficult to identify and quantify. For example, if the project schedule changes and the project manager has to work overtime, the cost of the overtime would be an indirect supplementary cost.

Supplementary costs can have a significant impact on the project budget and schedule. It is important to carefully track and manage these costs to ensure that the project remains on track.

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Self-check-1: Written Test

Test-IMultiple Choice:

Instruction: Select the correct answer for the give choice. You have given 1 Minute for each question. Each question carries 2 Point.

1. Equipment and materials charge-out rates refer to the costs associated with:

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- A) Project scheduling
B) Material procurement
C) Employee training
D) Site inspections².

2. What is a crucial step in determining current equipment and materials charge-out rates?

- A) Analyzing demand and utilization
B) Conducting market research
C) Evaluating labor requirements
D) Collaborating with finance departments

3. Labor costs account for a significant portion of overall project expenses in:

- A) Material procurement
B) Quality control
C) Finishing works
D) Site preparation

4. When establishing labor rates, it is important to consider factors such as:

- A) Market research and overhead costs
B) Equipment depreciation and maintenance costs
C) Employee compensation and benefits
D) All of the above

5. Organizational contracting processes help ensure:

- A) Regulatory compliance
B) Efficient project execution
C) Risk mitigation
D) All of the above

True or False:

1. Equipment and materials charge-out rates include only the direct costs associated with their usage.
2. Regular maintenance costs should be factored into equipment charge-out rates.
3. Labor rates should remain static throughout the project.

4. Collaboration with human resources and finance departments is not necessary when establishing labor rates.
5. Analyzing project elements involves evaluating both human and physical costs.

Matching:

Match the following terms with their corresponding descriptions:

- | A | B |
|--|--|
| <ol style="list-style-type: none"> 1. Depreciation 2. Utilization 3. Overhead costs 4. Labor market research 5. Physical costs analysis | <ol style="list-style-type: none"> A. Evaluating the availability and cost of materials and equipment B. Allocating indirect costs to labor hours or work elements C. Assessing the frequency of equipment usage D. Calculating the decrease in value of equipment over time E. Conducting research on prevailing wage rates and industry standards |

Operational Sheet:

Operation Title: Cost Estimation Using Analogous Estimating

Purpose: The purpose of this operation is to estimate project costs by using historical data from similar projects as a reference.

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Instructions:

- Gather historical data: Collect data from past projects that are similar in nature to the current project.
- Identify similarities: Analyze the current project and compare it with the historical projects to identify similarities in terms of scope, complexity, size, and other relevant factors.
- Select reference projects: Choose the most relevant and similar projects from the historical data for cost estimation.
- Adjust for differences: Consider any differences between the reference projects and the current project that may affect costs. Make necessary adjustments based on the identified differences.
- Calculate estimates: Use the cost data from the reference projects as a basis and apply the adjustments to calculate the estimated costs for the current project.
- Document assumptions: Clearly document the assumptions made during the estimation process to ensure transparency and clarity.

Precautions:

- Ensure the selected reference projects are truly similar to the current project in terms of scope, complexity, and other relevant factors.
- Take into account any significant differences between the reference projects and the current project that may impact the accuracy of the estimates.
- Use historical data from reliable sources and ensure its accuracy and relevance.
- Exercise professional judgment when making adjustments based on identified differences.

Tools and Requirements:

- Historical project data from similar projects.
- Spreadsheet software or cost estimation tools for calculations.

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- Relevant documentation and records for reference.

Procedures:

1. Collect historical data from similar projects.
2. Analyze the current project and identify similarities with the reference projects.
3. Select the most relevant reference projects for cost estimation.
4. Identify any differences between the reference projects and the current project.
5. Make necessary adjustments to the cost data based on the identified differences.
6. Calculate the estimated costs for the current project.
7. Document the assumptions made during the estimation process.

Quality Criteria:

- The selected reference projects accurately represent the nature and scope of the current project.
- The adjustments made for differences between the reference projects and the current project are reasonable and well-justified.
- The estimated costs are calculated accurately and reflect the specific requirements of the current project.
- Assumptions made during the estimation process are clearly documented and provide transparency in the cost estimation methodology.

UNIT FOUR: BID/TENDER DOCUMENTATION AND OPERATING MARGINS

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

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- Bid/Tender Preparation Process:
- Operating margins
- Value Proposition and Competitive Advantage:
- Conditions of Contract:
- Subcontractor Quotes
- Plant and Equipment:
- Delivery schedules and materials suppliers

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Prepare an Effective Bid/Tender:
- Optimize Operating Margins:
- Establish a Strong Value Proposition and Competitive Advantage:
- Ensure Compliance with Conditions of Contract:
- Obtain Competitive Subcontractor Quotes:
- Manage Plant and Equipment Efficiently:
- Coordinate Delivery Schedules and Engage Reliable Materials Suppliers:

4.1 Bid/Tender Preparation Process:

Preparing a bid/tender documentation is a critical process that involves careful evaluation, planning, and proposal development to secure a project contract. The following step-by-step process outlines the key stages involved in preparing a comprehensive bid/tender documentation:

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A. Initial Assessment:

- Evaluate Project Requirements: Thoroughly review the project requirements, including the client's specifications, scope of work, timeline, and deliverables.
- Scope and Feasibility Analysis: Assess the feasibility of the project by considering factors such as available resources, technical expertise, potential challenges, and alignment with the organization's capabilities and strategic goals.

B. Cost Estimation:

- Conduct Cost Analysis: Perform a detailed cost estimation by considering various elements, including labor costs, materials, equipment, subcontractor fees, permits, insurance, and indirect expenses.
- Quantify Expenses: Break down the costs into specific components, creating a comprehensive budget that covers all project-related expenditures.

C. Resource Planning:

- Determine Resource Requirements: Identify the human resources, plant and equipment, and subcontractors needed to execute the project successfully.
- Assess Resource Availability: Evaluate the availability and capacity of the required resources, considering factors such as workforce availability, equipment availability, and subcontractor availability.
- Develop Resource Allocation Plan: Create a plan for allocating resources efficiently throughout the project, ensuring that each task is adequately resourced.

D. Risk Assessment:

- Identify Potential Risks: Conduct a thorough risk assessment to identify potential risks and uncertainties that may impact the project's success. This includes analyzing factors such as technical risks, market risks, environmental risks, and project-specific risks.
- Mitigation Strategies: Develop strategies to mitigate identified risks, including contingency plans, risk transfer mechanisms, and proactive risk management approaches. Clearly outline these strategies in the bid/tender documentation.

E. Proposal Development:

- Address Requirements: Develop a well-structured bid/tender documentation that addresses all the requirements stated in the client's request for proposal (RFP). Ensure

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that the proposal clearly demonstrates your understanding of the project and your ability to meet the client's needs.

- **Demonstrate Capabilities and Experience:** Highlight your organization's capabilities, relevant experience, and track record of successful project delivery. Showcase past projects, certifications, awards, and client testimonials to reinforce your expertise and credibility.
- **Technical Approach:** Clearly explain your proposed technical approach, methodologies, and innovations that set your bid apart from competitors. Emphasize how your approach aligns with the project's objectives and addresses any unique challenges.
- **Project Schedule:** Develop a realistic project schedule that outlines key milestones, deliverables, and timelines. Demonstrate your ability to complete the project within the specified timeframe.
- **Pricing and Commercial Terms:** Present a clear and competitive pricing structure that reflects the project's requirements and your cost estimation. Include terms and conditions related to payment, invoicing, warranties, and any other relevant commercial aspects.

F. Review and Refinement:

- **Internal Reviews:** Conduct thorough internal reviews of the bid/tender documentation to ensure accuracy, coherence, and compliance with the client's requirements. Involve relevant stakeholders, such as project managers, estimators, legal advisors, and subject-matter experts, to provide feedback and suggestions for improvement.
- **Seek External Feedback:** If possible, seek external feedback from trusted advisors or industry experts who can provide an objective evaluation of the bid/tender documentation.
- **Refinement:** Incorporate the feedback received from internal and external sources, making necessary revisions and improvements to enhance the clarity, completeness, and persuasiveness of the bid/tender documentation.

4.2 Operating margins

Operating margins are a financial metric that measures the profitability and efficiency of a project or business. In bid/tender documentation, discussing operating margins demonstrates your understanding of financial aspects and your ability to deliver a cost-effective solution.

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A. Definition of Operating Margins:

Operating margins, also known as operating profit margins or operating income margins, represent the percentage of revenue that remains as operating income after deducting operating expenses. It is calculated by dividing the operating income by the revenue generated from the project. The formula for operating margins is as follows:

$$\text{Operating Margins} = (\text{Operating Income} / \text{Revenue}) \times 100$$

B. Importance of Operating Margins:

Operating margins are crucial for assessing the financial health and profitability of a project. They provide insight into the efficiency of operations, cost management, and revenue generation. A higher operating margin indicates that a project is generating a higher proportion of income from its core operations, which is generally considered a positive indicator of financial performance.

C. Factors Affecting Operating Margins:

Several factors can impact operating margins. It is important to discuss these factors in bid/tender documentation to demonstrate your awareness and ability to manage them effectively.

Some key factors include:

- **Labor Costs:** Efficient management of labor costs, including wages, benefits, and productivity levels, can positively impact operating margins.
- **Material Prices:** Fluctuations in material prices can affect operating margins, and strategies such as bulk purchasing or supplier negotiations may be employed to mitigate their impact.
- **Efficiency and Productivity:** Improving operational efficiency and productivity through streamlined processes, automation, and optimization of resources can contribute to higher operating margins.
- **Overhead Expenses:** Effective cost control measures and prudent management of overhead expenses, such as rent, utilities, and administrative costs, can help maintain favorable operating margins.

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D. Strategies for Optimizing Operating Margins:

In bid/tender documentation, it is essential to outline strategies for optimizing operating margins. Consider including the following insights:

- **Efficient Resource Allocation:** Demonstrating your ability to allocate resources effectively, optimize workflows, and eliminate waste can contribute to improved operating margins.
- **Cost Control Measures:** Showcasing your expertise in implementing cost control measures, such as monitoring expenses, negotiating favorable contracts, and minimizing non-essential costs, can help maximize operating margins.
- **Value Engineering:** Highlighting your approach to value engineering, which involves identifying cost-saving opportunities without compromising quality or functionality, can demonstrate your commitment to achieving favorable operating margins.
- **Productivity Improvement Initiatives:** Discuss any plans or methodologies for enhancing productivity, such as training programs, performance incentives, or process improvements that can positively impact operating margins.

E. Demonstrating Competitive Pricing:

Explain how your proposed pricing structure and cost estimation methodology contribute to achieving favorable operating margins while ensuring competitiveness in the market. Highlight any unique strategies or cost advantages that enable you to offer competitive pricing without compromising profitability.

F. Financial Projections:

Include a section in the bid/tender documentation that outlines the projected operating margins for the project. Consider presenting different scenarios and risk assessments to demonstrate your understanding of potential challenges and how they may impact operating margins. Provide a clear and realistic projection that aligns with the project's objectives and timelines.

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4.3 Value Proposition and Competitive Advantage:

In bid/tender documentation, it is crucial to highlight your value proposition and competitive advantage to differentiate your proposal from competitors and demonstrate why you are the ideal choice for the project. Key points to include:

A. Unique Selling Points:

Clearly outline the unique features or strengths of your approach, technology, expertise, or past performance that set you apart from other bidders. This could include:

- **Innovative Solutions:** Describe any unique or cutting-edge solutions you offer that address the client's specific needs or challenges in a novel and effective way.
- **Specialized Expertise:** Highlight any specialized skills or expertise your team possesses that are directly relevant to the project and can provide added value.
- **Advanced Technology:** If applicable, emphasize any advanced technologies or tools you utilize that offer distinct advantages, such as increased efficiency, accuracy, or cost savings.
- **Differentiated Methodologies:** Explain any proprietary methodologies or frameworks you employ that enhance project outcomes or streamline processes.

B. Client Benefits:

Clearly articulate the benefits the client will gain by selecting your bid. Focus on how your proposal addresses their pain points, fulfills their requirements, and provides value. Some potential benefits to emphasize include:

- **Cost Savings:** Highlight any cost-saving measures, efficiency improvements, or value engineering strategies that can significantly reduce project costs without compromising quality.
- **Quality Assurance:** Emphasize your commitment to delivering high-quality results, adhering to industry standards and best practices, and ensuring compliance with relevant regulations.
- **Timely Delivery:** Showcase your track record of meeting project deadlines, implementing effective project management practices, and mitigating potential delays.

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- **Risk Mitigation:** Demonstrate your ability to identify and mitigate project risks effectively, ensuring a smooth execution and minimizing potential disruptions.
- **Innovative Solutions:** If your proposal includes innovative approaches or technologies, explain how they can provide the client with a competitive edge or unique opportunities.

C. Experience and Track Record:

Showcase your relevant experience, successful project delivery, and client testimonials to instill confidence in your ability to meet and exceed expectations. Include the following elements:

- **Relevant Projects:** Highlight similar projects you have successfully completed, emphasizing their similarities to the current project and showcasing your familiarity with the industry or sector.
- **Client Testimonials:** Include testimonials or references from satisfied clients that speak to your professionalism, competence, and ability to deliver outstanding results.
- **Certifications and Awards:** Mention any relevant certifications, awards, or industry recognition that validate your expertise and differentiate you from competitors.

D. Collaborative Approach:

Describe how you plan to collaborate with the client and other stakeholders to ensure a smooth project execution. Emphasize your commitment to effective communication, cooperation, and proactive problem-solving. Highlight the following aspects:

- **Project Management:** Outline your project management methodologies, communication channels, and reporting mechanisms that will facilitate effective coordination and transparency.
- **Stakeholder Engagement:** Demonstrate your willingness to engage with the client and other stakeholders throughout the project lifecycle, seeking their input, addressing their concerns, and fostering a collaborative environment.
- **Conflict Resolution:** Briefly explain your approach to resolving conflicts or disputes that may arise during the project, emphasizing your focus on finding mutually beneficial solutions.

E. Sustainability and Social Responsibility:

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If applicable, highlight any sustainability initiatives or social responsibility practices that align with the client's values and contribute to a positive impact on the community or environment.

These may include:

- **Environmental Considerations:** Explain any environmentally friendly practices, sustainable materials, or energy-saving measures you plan to incorporate into the project.
- **Social Impact:** Discuss any initiatives or programs that demonstrate your commitment to social responsibility, such as local community involvement, diversity and inclusion policies, or workforce development programs.

4.4 Conditions of Contract:

Conditions of contract refer to the terms and provisions that govern the rights, obligations, and responsibilities of the parties involved in a construction project. These conditions outline the legal and operational framework within which the project will be executed. When preparing complete bid/tender documentation, it is crucial to review and assess the conditions of contract to ensure there are no discrepancies or conflicts that may impact the tender process or the subsequent execution of the project.

The conditions of contract include,

- Parties' obligations under contracts:** This section defines the roles and responsibilities of the contracting parties, including the client, contractor, and any subcontractors. It outlines the specific tasks, deliverables, and performance requirements expected from each party.
- General conditions of contract:** These are the standard provisions that apply to the entire contract. They cover aspects such as contract formation, contract duration, termination, dispute resolution mechanisms, and any applicable warranties or guarantees.
- Contract clauses and intentions:** This part includes specific clauses and provisions that address critical aspects of the project, such as scope of work, quality standards, payment terms, variations or change orders, insurance requirements, intellectual property rights, and any special conditions unique to the project.

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- D. **Liabilities:** This section defines the liabilities and obligations of each party in case of breaches, defaults, or non-performance. It may include provisions on indemnification, limitations of liability, and dispute resolution mechanisms.
- E. **Dispute resolution:** This part outlines the process for resolving disputes that may arise during the execution of the contract. It may include procedures for negotiation, mediation, arbitration, or litigation, depending on the agreed-upon methods of dispute resolution.
- F. **Legislative and regulatory requirements:** The conditions of contract should ensure compliance with applicable laws, regulations, permits, licenses, and industry standards. This includes provisions related to health and safety, environmental protection, labor laws, and any other legal requirements specific to the construction industry.

It is essential to carefully review and assess the conditions of contract to ensure a thorough understanding of the contractual obligations and risks associated with the project. Any discrepancies or ambiguities should be addressed and clarified in the bid/tender documentation to avoid misunderstandings or disputes later on. By demonstrating a clear understanding of the conditions of contract and incorporating them into the bid/tender documentation, the bidder can present a comprehensive and compliant proposal that aligns with the client's requirements and expectations.

- **Importance of Reviewing Contract Conditions and Ensuring Tender Compliance:**

Reviewing contract conditions and ensuring tender compliance is of paramount importance due to the following reasons:

- ✓ **Legal Compliance:** Bid/tender documentation must comply with the legal and contractual requirements set forth by the client. Failure to meet these conditions may result in disqualification or legal disputes. Reviewing contract conditions helps ensure that the bid/tender documentation aligns with the contractual obligations, minimizing the risk of non-compliance and associated consequences.
- ✓ **Proposal Accuracy:** Thoroughly reviewing contract conditions ensures that the bid/tender documentation accurately reflects the project's requirements and specifications. Compliance with these conditions demonstrates a clear understanding of

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the client's expectations, increasing the chances of a successful bid and avoiding misunderstandings during contract execution.

- **Strategies for Reviewing Contract Conditions and Ensuring Tender Compliance:**

- ✓ **Obtain and Study Contract Documents:** Obtain the contract documents provided by the client, including the request for proposal (RFP), contract terms and conditions, technical specifications, and any additional contractual requirements. Study these documents carefully to gain a comprehensive understanding of the client's expectations and obligations.
- ✓ **Identify Key Contractual Obligations:** Identify the critical contractual obligations specified in the contract documents. These may include timelines, quality standards, performance guarantees, insurance requirements, certifications, and compliance with local regulations. Create a checklist or matrix to ensure that all obligations are addressed in the bid/tender documentation.
- ✓ **Assess Tender Compliance:** Evaluate the bid/tender documentation against the identified contractual obligations. Ensure that each requirement is clearly addressed, and the proposed solution is compliant in terms of scope, specifications, timelines, and quality. Review the documentation for any inconsistencies or omissions that may jeopardize compliance.
- ✓ **Seek Legal and Expert Advice:** Consult with legal counsel or subject matter experts, if necessary, to ensure a comprehensive review of the contract conditions and tender compliance. These experts can provide insights into legal and technical aspects, helping to identify any potential risks or non-compliance issues that may have been overlooked.
- ✓ **Document Compliance Measures:** Clearly document the measures taken to ensure tender compliance. This documentation can serve as evidence of due diligence in addressing the contractual obligations. Include references to specific contract clauses or requirements in the bid/tender documentation, demonstrating a thorough understanding and commitment to fulfilling the client's expectations.
- ✓ **Review and Update Regularly:** Regularly review and update the bid/tender documentation to align with any changes or clarifications provided by the client. This ensures that the bid remains compliant throughout the bidding process.

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4.5 Subcontractor Quotes

A general contractor's first goal for any construction project is to submit a successful bid that will secure the contract while allowing the contractor to make a reasonable profit. In pursuit of that goal, virtually every general contractor solicits quotes or bids from subcontractors for portions of the labor and materials in order to determine the cost of completing the project. In industry practice, the numbers provided by the subcontractors generally are considered firm offers, binding a subcontractor to the terms contained therein if its bid is selected.

The review process includes the following steps:

- Comparing the conditions of contract and subcontractor quotes to the tender documents.
- Identifying any discrepancies or potential conflicts.
- Discussing any issues with the relevant parties.
- Obtaining clarification or confirmation from the tendering authority.
- Documenting the review process.

The review process is an important part of ensuring that the contract is properly executed and that the project is completed on time and within budget.

- The specific things that are typically reviewed during the process:
- The scope of work
- The pricing
- The payment terms
- The delivery schedule
- The quality standards
- The risk allocation
- The dispute resolution procedures

When preparing bid/tender documentation, it is important to obtain and review subcontractor quotes. Subcontractor quotes play a crucial role in estimating costs, identifying specialized services, and assessing the overall feasibility of the project. Key points to consider regarding subcontractor quotes in the tender process:

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- **Identification of Subcontractors:** Identify the specific trades or services for which you require subcontractors. This could include electrical work, plumbing, carpentry, painting, flooring, or any other specialized tasks related to finishing works.
- **Request for Quotes:** Contact potential subcontractors and provide them with the necessary information to prepare their quotes. This should include detailed specifications, drawings, scope of work, project timeline, and any other relevant documentation.
- **Scope of Work and Specifications:** Clearly define the scope of work and provide detailed specifications to subcontractors. This will ensure that they understand the requirements and can provide accurate quotes based on the provided information.
- **Site Visit:** Consider organizing site visits for subcontractors to familiarize themselves with the project site and any specific conditions that may impact their work. This will help them in preparing more accurate quotes.
- **Submission Deadline:** Set a deadline for subcontractors to submit their quotes. This will ensure that you receive their proposals in a timely manner and can evaluate them effectively.
- **Evaluation Criteria:** Establish clear criteria for evaluating subcontractor quotes. This may include factors such as price competitiveness, experience, and expertise, quality of work, references, and capacity to meet project timelines.
- **Comparative Analysis:** Once you have received the subcontractor quotes, conduct a comparative analysis to evaluate the proposals. Consider factors such as price, scope of work coverage, compliance with specifications, and any additional value-added services offered.
- **Clarifications and Negotiations:** If there are any discrepancies, ambiguities, or missing information in the subcontractor quotes, reach out to the subcontractors for clarifications. This will help ensure that you have a comprehensive understanding of their proposals and can make informed decisions.
- **Subcontractor Selection:** Based on the evaluation and comparative analysis, select the subcontractors that best meet the project requirements, align with your budget, and demonstrate the ability to deliver high-quality work. Notify the selected subcontractors accordingly.

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- Incorporation into Bid/Tender Documentation: Finally, include the selected subcontractor quotes as part of your bid/tender documentation. Clearly indicate the subcontractors, their respective scopes of work, and the quoted prices. This will demonstrate to the client that you have considered and secured reliable subcontractors to execute the finishing works.

Effectively managing the subcontractor quote process, you can ensure that your bid/tender documentation accurately reflects the costs and resources required for the project, leading to a more competitive and comprehensive proposal.

4.6 Plant and Equipment:

A. Understanding the Significance of Confirming Availability of Plant and Equipment:

- **Project Requirements:**

Finishing works often involve specialized tools, machinery, and equipment that are essential for achieving high-quality results within the specified timeframe. Confirming the availability of plant and equipment ensures that the project requirements can be met efficiently, minimizing delays and disruptions.

- **Cost Considerations:**

The cost of plant and equipment can significantly impact the project's budget. By confirming availability during the bid/tender development stage, contractors can accurately estimate the costs associated with renting, purchasing, or maintaining the necessary plant and equipment. This allows for more accurate pricing in the tender submission and helps avoid unexpected financial burdens.

The availability of plant and equipment is checked and confirmed to ensure that they are available and in good working condition to meet the project requirements. This is to avoid any delays or disruptions to the project.

The availability check typically includes the following steps:

- Identifying the plant and equipment that will be needed for the project.
- Checking the availability of the plant and equipment with the owners or suppliers.
- Inspecting the plant and equipment to ensure that they are in good working condition.
- Documenting the availability check results.

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The availability check is an important part of the project planning process. By ensuring that the plant and equipment are available, the project team can avoid any delays or disruptions and can focus on completing the project on time and within budget.

The specific things that are checked during the availability check:

- The condition of the plant and equipment
- The age of the plant and equipment
- The maintenance history of the plant and equipment
- The spare parts availability for the plant and equipment
- The transportation and delivery schedule for the plant and equipment

When preparing bid/tender documentation for finishing works, it is essential to confirm the availability of plant and equipment. This step ensures that you have the necessary resources to successfully execute the project. key points to consider when confirming the availability of plant and equipment:

- **Equipment Assessment:** Evaluate the specific plant and equipment requirements for the project. This may include construction machinery, tools, specialized equipment, or any other resources needed for the finishing works.
- **Inventory Check:** Conduct an inventory check to determine the availability of the required plant and equipment within your organization. Assess whether you have the necessary resources in-house or if you need to source them externally.
- **Maintenance and Servicing:** Ensure that the plant and equipment are in good working condition. Schedule any required maintenance or servicing to address any potential issues before the project commences.
- **Equipment Utilization:** Assess the current utilization of the plant and equipment in your organization. Determine if any resources are already committed to other projects or if they are available for the duration of the finishing works project.
- **Resource Planning:** Develop a resource plan that outlines the plant and equipment requirements for the project. Identify any gaps between the available resources and the project needs.

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- External Suppliers: If you do not have the necessary plant and equipment in-house, research and contact external suppliers or rental companies. Obtain quotes, assess their availability, and negotiate favorable terms and conditions.
- Lead Time: Take into account the lead time required to secure any additional plant and equipment. Consider factors such as delivery time, setup, and any necessary training for operating the equipment.
- Budget Considerations: Evaluate the cost implications of acquiring or renting the required plant and equipment. Ensure that the project budget allows for the necessary resources without compromising profitability.
- Documentation: Document the confirmation of availability of plant and equipment in the bid/tender documentation. Clearly state the resources you have available or the arrangements made with external suppliers to demonstrate your preparedness to execute the project.

Confirming the availability of plant and equipment is crucial to ensure smooth operations and timely completion of the finishing works. By conducting a thorough assessment, planning ahead, and documenting the availability of resources, you can present a comprehensive and reliable bid/tender proposal to the client.

4.7 Delivery schedules and materials suppliers

A. Delivery schedules

A delivery schedule is an important part of tender document preparation. This is to ensure that the materials will be delivered on time and in good condition, so that the project can be completed on schedule.

The steps involved in confirming the delivery schedules in tender document preparation:

- Identify the materials that will be needed for the project.
- Contact the materials suppliers to confirm the delivery schedules.
- Negotiate with the materials suppliers to get the best possible prices.
- Include the confirmed delivery schedules in the tender documents.

By carefully following these steps, you can ensure that the delivery schedules are realistic and that the materials will be delivered on time and in good condition.

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Some specific things to keep in mind when confirming the delivery schedules in tender document preparation:

- The lead time for the materials.
- The availability of the materials.
- The transportation and shipping costs.
- The potential for delays.
- The risk of damage to the materials.

B. Materials suppliers

Suppliers are followed up to ensure that they are meeting the delivery schedules and to address any potential problems. This is an important part of the tender document preparation process, as it helps to ensure that the project can be completed on time and within budget.

The following are the specific activities that are typically carried out during supplier follow-up:

- **Communicating with suppliers regularly:** This allows the project team to stay up-to-date on the status of deliveries and to identify any potential problems early on.
- **Monitoring delivery schedules:** This ensures that the suppliers are meeting the agreed-upon delivery schedules.
- **Addressing any problems:** If there are any problems with deliveries, the project team should work with the suppliers to resolve them as quickly as possible.
- **Keeping records of all communications:** This is important for tracking the progress of the project and for resolving any disputes that may arise.

By carefully following up with suppliers, the project team can minimize the risks of delays and ensure that the project is completed on time and within budget.

The specific questions that you can ask the suppliers during follow-up:

- Are you on track to meet the delivery schedules?
- Have there been any delays?
- If so, what are the reasons for the delays?
- What can we do to help you meet the delivery schedules?
- Are there any other problems that we need to be aware of?

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By asking these questions, you can get a better understanding of the suppliers' progress and make sure that they are meeting the expectations of the project team.

The Tender Form and Schedules include a formal statement of the tender participant's offer to supply the Works or Construction Services. These documents request specific information from tender participants and set out how the information should be provided. For example, it will include the overall cost, a breakdown of this cost, a program, details of manpower, plant and equipment, personnel, subcontractors and methodologies. This may include a Bill of Quantities (a measured list of quantities).

In the bid/tender process for finishing works, it is important to confirm delivery schedules and follow up with materials suppliers. This ensures that the required materials are delivered on time and in accordance with the project timeline. Key steps involved in confirming delivery schedules and following up with materials suppliers:

- **Material Requirements:** Identify the specific materials required for the finishing works based on the project specifications and scope of work.
- **Supplier Selection:** Select reliable materials suppliers based on their reputation, track record, quality of materials, pricing, and ability to meet delivery deadlines.
- **Request for Quotations:** Contact the selected materials suppliers and provide them with the necessary information to prepare their quotations. This should include details of the materials required, quantities, delivery locations, and any specific delivery requirements or restrictions.
- **Quotation Evaluation:** Evaluate the quotations received from materials suppliers. Consider factors such as pricing, lead time, quality of materials, and any additional services offered, such as transportation or installation.
- **Confirmation of Delivery Schedules:** Once you have selected the materials supplier(s), confirm the delivery schedules with them. Clearly communicate the project timeline and any specific milestones or deadlines that need to be met.
- **Follow-Up Communication:** Maintain regular communication with the materials suppliers to ensure that the delivery schedules are on track. Follow up with them to obtain updates on the progress of orders and any potential delays or issues.

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- **Coordination with Project Schedule:** Coordinate the delivery schedules with the overall project schedule. Ensure that the materials will be delivered at the appropriate stages of the project to avoid any disruptions or delays.
- **Addressing Issues:** If there are any deviations or delays in the delivery schedules, promptly communicate with the materials suppliers to identify the reasons and find appropriate solutions. This may involve negotiating revised delivery dates or exploring alternative materials sources if necessary.
- **Documentation:** Keep a record of all communication and correspondence with materials suppliers regarding delivery schedules. This documentation will serve as evidence of your proactive approach in managing the materials supply chain.

By confirming delivery schedules and following up with materials suppliers, you can ensure that the required materials are available when needed, minimizing project delays and maintaining efficient workflow during the finishing works. Effective communication and coordination with materials suppliers are key to successful project execution.

Multiple Choice:

1. What is the first step in the bid/tender preparation process?

A) Cost Estimation

C) Resource Planning

B) Initial Assessment

D) Risk Assessment

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2. Operating margins represent the percentage of revenue that remains as:

- | | |
|-----------------|---------------------|
| A) Net profit | C) Operating income |
| B) Gross profit | D) Total income |

3. Which factor can positively impact operating margins?

- | | |
|------------------------------------|----------------------------------|
| A) Fluctuations in material prices | C) Efficient resource allocation |
| B) Increased overhead expenses | D) Higher labor costs |

4. What does value engineering involve?

- | | |
|--|--|
| A) Maximizing operating margins | C) Streamlining bid/tender documentation |
| B) Identifying cost-saving opportunities | D) Enhancing client benefits |

5. Which section of the bid/tender documentation outlines the projected operating margins?

- | | |
|-------------------------|--------------------------|
| A) Risk Assessment | C) Review and Refinement |
| B) Proposal Development | D) Financial Projections |

True/False:

1. Operating margins represent the percentage of revenue remaining after deducting operating expenses.
2. Efficient resource allocation can contribute to improved operating margins.
3. Labor costs have no impact on operating margins.
4. Value engineering involves compromising quality or functionality to reduce costs.
5. Demonstrating a collaborative approach involves effective communication and proactive problem-solving.

Matching:

Match the term on the left with its corresponding definition on the right.

- | A | B |
|---------------------------|--|
| 1. Feasibility Analysis | A. Assessing the availability and capacity of required resources |
| 2. Risk Assessment | B. Creating a plan for allocating resources efficiently |
| 3. Value Engineering | C. Identifying potential risks and uncertainties |
| 4. Collaborative Approach | D. Identifying cost-saving opportunities |
| 5. Resource Planning | E. Emphasizing effective communication and proactive problem-solving |

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Operation Title: Bid/Tender Preparation Process

Purpose: The purpose of this operational sheet is to provide a comprehensive overview of the bid/tender preparation process, including the key stages, tasks, and quality criteria involved.

Instructions:

- Evaluate Project Requirements:
 - Thoroughly review the project requirements, including specifications, scope of work, timeline, and deliverables.
 - Ensure a clear understanding of the client's needs and expectations.
- Scope and Feasibility Analysis:
 - Assess the feasibility of the project considering available resources, technical expertise, potential challenges, and alignment with organizational capabilities and goals.
 - Evaluate the risks and potential mitigation strategies.
- Conduct Cost Estimation:
 - Perform a detailed cost analysis, considering labor costs, materials, equipment, subcontractor fees, permits, insurance, and indirect expenses.
 - Quantify expenses and create a comprehensive budget.
- Determine Resource Requirements:
 - Identify the human resources, plant and equipment, and subcontractors needed for the project.
 - Assess the availability and capacity of required resources.
- Risk Assessment:
 - Conduct a thorough risk assessment to identify potential risks and uncertainties.
 - Develop mitigation strategies and contingency plans.
- Proposal Development:
 - Develop a well-structured bid/tender documentation that addresses all requirements stated in the client's request for proposal (RFP).
 - Demonstrate capabilities, relevant experience, and track record of successful project delivery.
 - Clearly explain the proposed technical approach, methodologies, and innovations.

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- Develop a realistic project schedule.
- Present a clear and competitive pricing structure.
- Precautions:
 - Ensure accuracy and coherence of the bid/tender documentation.
 - Seek feedback from relevant stakeholders and incorporate necessary revisions.
 - Adhere to legal and ethical guidelines in the preparation process.
- Tools and Requirements:
 - Project requirements documentation
 - Cost estimation tools and templates
 - Resource allocation plan
 - Risk assessment framework
 - Bid/tender documentation template
- Procedures:
 - Evaluate project requirements by reviewing specifications, scope of work, timeline, and deliverables.
 - Conduct a feasibility analysis, considering available resources and potential challenges.
 - Perform a detailed cost estimation by analyzing various cost components.
 - Determine resource requirements and assess their availability and capacity.
 - Conduct a risk assessment to identify potential risks and develop mitigation strategies.
 - Develop the bid/tender documentation, addressing all requirements and demonstrating capabilities and experience.
 - Review the documentation internally, seeking feedback from relevant stakeholders.
 - Seek external feedback, if possible, from trusted advisors or industry experts.
 - Refine the bid/tender documentation based on the feedback received.
 - Ensure compliance with legal and ethical guidelines throughout the process.
- Quality Criteria:
 - The bid/tender documentation is comprehensive and addresses all client requirements.
 - The cost estimation is accurate and considers all relevant expenses.
 - The resource planning is efficient and ensures adequate allocation of resources.
 - The risk assessment identifies potential risks and proposes effective mitigation strategies.

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- The proposal demonstrates a clear understanding of the project and presents innovative and competitive solutions.
- The project schedule is realistic and aligns with the project objectives and timelines.
- The pricing structure is clear, competitive, and reflects the project's requirements.
- The bid/tender documentation is coherent, accurate, and compliant with legal and ethical guidelines.

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Lap test

Name: _____

Date: _____

Time started: _____

Time finished: _____

Allotted Time: 4 Hours

Instruction: For this operation you have given 4 Hour and you are expected to finish in required time

Task 1: Apply and rendering quartz paint

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UNIT FIVE: BID DOCUMENTATION PRIOR TO SUBMISSION

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Bid Evaluation criteria
- Schedules for tender evaluation
- Bid document development
- Documentation Review
- Appraisal of Final Documentation

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Establish and Apply Effective Bid Evaluation Criteria:
- Create and Manage Schedules for Tender Evaluation:
- Develop and Enhance Bid Documents:
- Conduct Thorough Documentation Review:
- Appraise and Validate Final Documentation:
- Implement Objective and Transparent Bid Evaluation:
- Foster Collaborative Decision-Making in Bid Evaluation:

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5.1 Bid Evaluation criteria

To evaluate bid documentation prior to submission, it is important to ensure that the documents are complete, accurate, and aligned with the requirements and objectives of the tender.

- A. **Compliance Checklist:** Include a checklist that outlines the specific compliance requirements outlined in the tender. This checklist should cover areas such as technical specifications, legal and regulatory compliance, insurance and bonding requirements, and any other mandatory criteria. The checklist will serve as a tool to verify that all necessary compliance elements are addressed in the bid documentation.
- B. **Risk Assessment:** Discuss the importance of conducting a thorough risk assessment for the bid documentation. Explain how to identify and evaluate potential risks associated with the project, such as financial risks, legal risks, and operational risks. Provide guidance on documenting risk mitigation strategies and contingency plans to address identified risks effectively.
- C. **Technical Approach and Methodology:** Describe the need to evaluate the technical approach and methodology presented in the bid documentation. Highlight the importance of assessing whether the proposed approach aligns with the project requirements and demonstrates a clear understanding of the scope of work. Provide guidance on evaluating the feasibility, efficiency, and effectiveness of the proposed technical solutions.
- D. **Financial Evaluation:** Explain the process of conducting a financial evaluation of the bid documentation. Discuss the key factors to consider, such as pricing accuracy, cost competitiveness, and value for money. Provide guidance on analyzing the financial aspects of the bid, including the breakdown of costs, payment terms, and any allowances or contingencies included. Emphasize the importance of ensuring that the bid is financially viable and aligns with the budgetary constraints of the project.
- E. **Qualitative Evaluation:** Discuss the importance of assessing qualitative aspects of the bid documentation. This may include evaluating the bidder's experience and qualifications, references and past performance, project team composition and expertise, and any added value or innovative solutions proposed. Provide guidance on developing evaluation criteria and scoring mechanisms to objectively assess the qualitative aspects of the bids.

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- F. Document Formatting and Presentation: Include a section on the importance of document formatting and presentation. Explain how the overall clarity, organization, and professionalism of the bid documentation can influence the evaluators' perception of the bidder. Provide guidance on ensuring consistency in formatting, using clear and concise language, and presenting information in a visually appealing manner.
- G. Confidentiality and Security Measures: Discuss the need to review bid documentation for confidentiality and security measures. Emphasize the importance of protecting sensitive information and intellectual property throughout the evaluation process. Provide guidance on evaluating the bidder's proposed confidentiality and security protocols, such as data protection measures, non-disclosure agreements, and secure document handling procedures.
- H. Review and Approval Process: Describe the steps involved in the review and approval process of bid documentation. Explain how the evaluation team should collaborate, provide feedback, and reach a consensus on the evaluation results. Include guidance on documenting the evaluation findings, addressing any discrepancies or clarifications needed, and obtaining final approval before submission.
- I. Compliance with Ethical Standards: Highlight the significance of evaluating bid documentation for compliance with ethical standards and business conduct. Discuss the importance of assessing the bidder's commitment to ethical practices, anti-corruption measures, and adherence to applicable laws and regulations. Provide guidance on evaluating the bidder's code of conduct, conflict-of-interest policies, and any certifications or accreditations related to ethical business practices.
- J. Lessons Learned and Continuous Improvement: Conclude the document by emphasizing the importance of capturing lessons learned from the bid evaluation process. Encourage the evaluation team to provide feedback and suggestions for process improvement, documentation enhancements, and evaluation criteria refinement. Highlight the value of continuous improvement in the tender evaluation process to ensure more effective and efficient future evaluations.

5.2 Schedules for tender evaluation

Staff preparation of schedules for tender evaluation involves the supervision and management of the sequence of work. This process is crucial in ensuring that all tasks are properly planned and

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executed, leading to a successful tender evaluation. The following points provide a detailed explanation of staff preparation of schedules for tender evaluation:

- **Understanding the Project Requirements:** The first step in staff preparation of schedules is to thoroughly understand the project requirements. This includes reviewing the tender documents, specifications, and any other relevant information provided by the client. By gaining a clear understanding of the project scope, objectives, and deliverables, staff can effectively plan and schedule the necessary tasks.
- **Identifying Work Breakdown Structure (WBS):** Once the project requirements are understood, staff can proceed with developing a Work Breakdown Structure (WBS). A WBS is a hierarchical representation of all the project's deliverables and associated tasks. It breaks down the project into manageable components, allowing for better planning and scheduling. Each task within the WBS should be clearly defined and assigned to specific team members or departments responsible for its completion.
- **Sequencing Tasks:** After creating the WBS, staff need to determine the sequence in which tasks should be performed. This involves identifying dependencies between tasks and establishing logical relationships. For example, certain tasks may need to be completed before others can begin (predecessor-successor relationships). By sequencing tasks appropriately, staff can ensure that work flows smoothly and efficiently.
- **Estimating Task Durations:** Staff must estimate the duration required to complete each task within the schedule. This estimation should take into account factors such as resource availability, skill levels, and potential risks or uncertainties. Accurate task duration estimates are essential for creating realistic schedules that reflect the project's timeline.
- **Assigning Resources:** Once task durations are estimated, staff can assign resources to each task. Resources may include personnel, equipment, materials, or any other necessary inputs. By allocating resources effectively, staff can optimize productivity and ensure that all required resources are available when needed.
- **Creating the Schedule:** With all the necessary information gathered, staff can now create the schedule. This involves inputting the sequenced tasks, estimated durations, and

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assigned resources into a scheduling tool or software. The resulting schedule should provide a clear timeline for the project, including start and end dates for each task.

- **Monitoring and Controlling:** Throughout the tender evaluation process, staff must continuously monitor and control the schedule. This involves tracking progress, identifying any deviations from the planned timeline, and taking corrective actions if necessary. Regular communication with team members and stakeholders is essential to ensure that everyone is aware of any changes or updates to the schedule.
- **Reviewing and Updating:** As the tender evaluation progresses, staff should regularly review and update the schedule as needed. This may involve revising task durations, adjusting resource allocations, or accommodating any changes in project requirements. By keeping the schedule up to date, staff can maintain an accurate representation of the project's progress and make informed decisions accordingly.

In conclusion, staff preparation of schedules for tender evaluation involves a comprehensive process of understanding project requirements, creating a Work Breakdown Structure (WBS), sequencing tasks, estimating durations, assigning resources, creating the schedule, monitoring and controlling progress, and reviewing and updating as necessary. This meticulous approach ensures that all tasks are properly planned and executed, leading to a successful tender evaluation.

5.3 Bid document development

Monitoring the progress of bid document development for timeliness and accuracy is essential to ensure that the bid is submitted on time and contains accurate and comprehensive information. the key steps involved in monitoring the progress of bid document development:

- **Establish a Timeline:** Set a clear timeline for bid document development, taking into account the submission deadline and the scope of work involved. This timeline should include specific milestones and deadlines for each section or component of the bid document.
- **Assign Responsibilities:** Assign clear responsibilities to the team members involved in bid document development. Clearly communicate their roles and expectations regarding the timely completion of their assigned tasks.

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- **Regular Check-ins:** Conduct regular check-ins and progress meetings to review the status of bid document development. This allows you to track the progress of each section, address any challenges or roadblocks, and ensure that the project remains on schedule.
- **Document Control:** Implement effective document control measures to ensure accuracy and consistency. Establish version control protocols to track revisions and updates made to the bid document. This helps to minimize errors and maintain a reliable document throughout the development process.
- **Quality Assurance:** Implement a quality assurance process to review the bid document for accuracy, completeness, and adherence to the requirements specified in the tender. This may involve conducting internal reviews, seeking input from subject matter experts, and verifying that the information provided is up to date and aligned with the project scope.
- **Proofreading and Editing:** Assign dedicated resources or engage professional proofreaders/editors to review the bid document for spelling, grammar, formatting, and presentation. This ensures that the document is error-free and presents a professional image to the client.
- **Review Compliance:** Regularly review the bid document to ensure compliance with all the requirements specified in the tender. Cross-reference the document with the tender documentation to verify that all requested information and supporting documents have been included.
- **Final Review and Approval:** Conduct a final review of the bid document before submission. This review should be conducted by a designated authority or management representative to ensure that the document is accurate, complete, and aligned with the company's standards and objectives.
- **Time Management:** Continuously monitor the progress of bid document development against the established timeline. Identify any potential delays or bottlenecks and take proactive measures to address them. This may involve reallocating resources, adjusting priorities, or seeking additional support if needed.
- **Document Tracking and Filing:** Maintain a record of all versions and iterations of the bid document, including supporting documents and correspondence related to the bid. Properly file and organize these documents for future reference, audit purposes, or potential contract negotiations.

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The progress of the tender development should be evaluated prior to submission to ensure that the tender documents are complete, accurate, and compliant with all relevant regulations. This includes reviewing the following:

- The scope of work
- The schedule
- The budget
- The bidding requirements
- The evaluation criteria
- The contract terms and conditions

The evaluation should also consider the progress of the tender development process, such as whether all required approvals have been obtained and whether all relevant stakeholders have been consulted. By evaluating the progress of the tender development, the procuring entity can ensure that the tender documents are ready for submission and that the tender process is fair and transparent.

The progress of tender development can be evaluated by considering the following factors:

- **Timeliness:** Has the tender been developed within the agreed-upon timeframe?
- **Completeness:** Does the tender include all of the required information, such as the scope of work, the schedule, the budget, and the bidding requirements?
- **Accuracy:** Is the information in the tender accurate and up-to-date?
- **Clarity:** Is the tender clear and concise, and easy to understand?
- **Compliance:** Does the tender comply with all applicable regulations?
- **Feasibility:** Is the tender feasible and achievable?
- **Cost-effectiveness:** Is the tender cost-effective?
- **Responsiveness:** Does the tender respond to the needs of the procuring entity?
- **Fairness:** Is the tender fair and transparent?

5.4 Documentation Review

Tender documentation

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The content of the tender documentation will vary for particular projects according to factors such as project size, complexity and delivery method. The documents will contain the evaluation criteria, the evaluation procedures and the proposed timing of the evaluation process.

Tender Documentation released to the market should ensure tender participants clearly understand what the Agency is seeking to procure and promote fair and efficient competition. Tender Documentation should provide tender participants with the information needed to submit a responsive tender.

Tenders documents will vary depending on the nature, size and complexity of the contract, but tender documents for the main construction contract typically include:

- A letter of invitation to tender.
- The form of tender (a formal acknowledgement that the tenderer understands and accepts the terms and conditions of the tender documents and any other requirements that are stipulated).
- Preliminaries: including pre-construction information and site waste management plan (if required).
- The form of contract, contract conditions and amendments.
- A tender pricing document (or contract sum analysis on design and build projects).
- Employer's information requirements for BIM. Defining the information that will be required by the client from suppliers for the development of the project and for the operation of the completed built asset.
- Design drawings, and perhaps an existing building information model.
- Specifications describing the products, materials, and work required.
- Tender return slip.

The tender documents should be prepared in a clear and concise manner. They should be free of errors and ambiguities. They should also be consistent with the project's goals and objectives.

The following list describes the components of the Tender Documentation and the purpose they serve.

Tender Notice:

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- Tender Notice:
- Project overview and purpose of the tender.
- Eligibility criteria for bidders.
- Location to access tender documents.
- Optional pre-bid meeting for clarification.
- Requirements for bid submission.
- Deadline for bid submission.
- Evaluation criteria for bid assessment.
- Confidentiality of bidder information.
- Contact details for inquiries.
- Important dates: release, submission, and award.
- General information: organization's rights and bidder responsibilities.
- Disclaimer: tender notice is an invitation, not a contract guarantee.

Conditions of Tender:

- Eligibility: Only bidders who meet the specified eligibility criteria are eligible to participate in the tender process. These criteria may include qualifications, experience, financial stability, and any other requirements outlined in the tender documents.
- Tender Documents: Bidders must obtain the tender documents from the designated source, adhering to any specified procedures and timelines. The tender documents provide detailed information about the project, scope of work, technical specifications, terms and conditions, and evaluation criteria.
- Pre-Bid Meeting: Bidders may be required or given the option to attend a pre-bid meeting. The purpose of this meeting is to provide clarification on the tender requirements, answer questions, and address any concerns raised by the bidders. Attendance at the pre-bid meeting may be mandatory or optional, as specified in the tender documents.
- Bid Submission: Bidders must submit their bids in accordance with the specified format and requirements outlined in the tender documents. This includes providing all requested information, documents, and supporting evidence as per the instructions provided. Bids

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must be submitted within the specified deadline, and late submissions may not be accepted.

- **Bid Validity Period:** Bidders are required to specify the validity period of their bids, indicating the duration for which their bid prices and conditions remain binding. The specified bid validity period should be clearly stated in the submitted bid documents.
- **Confidentiality:** All information provided by bidders during the tender process should be treated as confidential. Bidders should refrain from disclosing any confidential or proprietary information related to their bid to third parties without prior written consent from the tendering organization.
- **Evaluation Process:** Bids will be evaluated based on the criteria and methodology specified in the tender documents. The evaluation process may involve technical, financial, and commercial assessments, as well as considerations of compliance with legal and regulatory requirements. The tendering organization reserves the right to accept or reject any bid, and its decision is final.
- **Contract Award:** The contract will be awarded to the successful bidder(s) based on the evaluation results and in accordance with the terms and conditions set forth in the tender documents. The tendering organization may enter into negotiations with the successful bidder(s) to finalize the contract terms before awarding the contract.
- **Costs and Expenses:** Bidders are solely responsible for any costs or expenses incurred in the preparation and submission of their bids. The tendering organization will not be liable for reimbursing any costs associated with the bidding process, regardless of the outcome.
- **Compliance with Laws and Regulations:** Bidders must comply with all applicable laws, regulations, and standards throughout the tender process. Any non-compliance may result in disqualification of the bid or termination of the contract, if awarded.
- **Amendments or Addenda:** The tendering organization reserves the right to issue amendments or addenda to the tender documents at any time before the bid submission deadline. Bidders are responsible for checking and incorporating any updates or changes into their bids.
- **Governing Law and Jurisdiction:** The tender process and subsequent contract are governed by the laws and regulations of the jurisdiction specified in the tender

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documents. Any disputes or claims arising from the tender process or contract will be subject to the exclusive jurisdiction of the designated courts or arbitration panel.

Tender Form and Schedules:

- **Tender Form:** The tender form is a document that bidders must complete and submit as part of their bid. It typically includes sections for providing essential information such as the bidder's name, address, contact details, and any required certifications or licenses. The tender form may also require bidders to acknowledge their acceptance of the terms and conditions stated in the tender documents.
- **Schedule A:** Schedule A is a section or attachment to the tender form that requires bidders to provide detailed pricing information. It typically includes a breakdown of costs, pricing structure, and any applicable taxes or fees. Bidders may need to provide unit prices, quantities, discounts, and any other relevant pricing details as specified in the tender documents.
- **Schedule B:** Schedule B is a section or attachment to the tender form that focuses on technical specifications and requirements. Bidders are required to provide information regarding their proposed technical solution, including equipment, materials, methodologies, and any other technical details relevant to the project. This schedule may also require bidders to provide evidence of their technical capabilities or references to similar projects they have completed.
- **Schedule C:** Schedule C is a section or attachment to the tender form that pertains to contractual terms and conditions. It outlines the specific terms and clauses that will govern the contract between the tendering organization and the successful bidder. Bidders may need to review and acknowledge their acceptance of these terms and conditions by signing or initialing in Schedule C.
- **Schedule D:** Schedule D is a section or attachment to the tender form that deals with any additional schedules or attachments required by the tendering organization. These schedules may include specific deliverables, project milestones, payment terms, quality assurance requirements, or any other contractual obligations that need to be addressed in the bid.

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- Submission of Schedules: Bidders should carefully complete all relevant schedules and attachments as required by the tender documents. These schedules, including the tender form, should be submitted along with the bid within the specified deadline. Bidders must ensure the accuracy and completeness of the information provided in the schedules and should review them thoroughly before submission.

Specification:

- Depending on the type of delivery model chosen, this document may be a project brief or a detailed description of the Works or Construction Services. The specification sets out the performance and technical criteria

Drawings:

- The number and standard of drawings provided is dependent on the chosen delivery method

Additional information:

- Additional information concerning the project may include geotechnical investigations, Environmental Impact Study reports and working papers and other documents relevant to the project.

Be careful when developing and checking Tender Documentation because it can create a legally binding process contract or leave the Agency liable for misleading or deceptive conduct.

Ensuring Tender Documentation is accurate and reflects the way in which the Agency will conduct the tender is not just an efficiency or probity consideration, there are potentially legal and financial consequences for the Agency for not adhering to the terms set out in the Tender Documentation.

The documentation is reviewed to ensure that the tender is finalized in standard industry format for the client. This is important to ensure that the tender is clear, concise, and easy to understand for all stakeholders.

The following are key things to consider when reviewing the documentation:

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- **The format of the tender:** The tender should be formatted in a way that is consistent with the standard industry format. This will make it easier for contractors to understand and respond to the tender.
- **The content of the tender:** The tender should include all of the key information that contractors need to know, such as the scope of work, the schedule, the budget, and the bidding requirements.
- **The clarity of the tender:** The tender should be written in clear and concise language that is easy to understand. Avoid using jargon or technical terms that may not be familiar to contractors.
- **The accuracy of the tender:** The information in the tender should be accurate and up-to-date. This will help to ensure that contractors are bidding on a realistic project.

5.5 Appraisal of Final Documentation

The final tender documentation is appraised for completeness prior to submission. This is to ensure that the tender is complete and ready for submission.

The appraisal process typically includes the following steps:

- **Reviewing the tender documentation:** This includes checking that all of the required information is included and that it is accurate and up-to-date.
- **Identifying any gaps or omissions:** If any gaps or omissions are identified, they should be corrected or clarified.
- **Getting feedback from others:** The tender documentation should be reviewed by others, such as technical experts or legal advisors, to get their feedback.
- **Making any necessary changes:** Any necessary changes should be made to the tender documentation before it is submitted.

By following these steps, you can ensure that the final tender documentation is appraised thoroughly and that it is ready for submission.

Questions that can be asked during the appraisal process:

- Does the tender documentation include all of the required information?
- Is the information in the tender documentation accurate and up-to-date?

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- Is the information in the tender documentation consistent with the standard industry format?
- Are there any gaps or omissions in the tender documentation?
- If so, how can they be corrected or clarified?
- Have others reviewed the tender documentation and provided feedback?
- If so, what was their feedback?
- Are there any necessary changes that need to be made to the tender documentation?

Once the tender submission deadline has passed, the tendering organization will proceed with the appraisal of the final documentation submitted by the bidders. This appraisal process involves a comprehensive evaluation of the bids received to determine the most suitable bidder for the project. The key points regarding the appraisal of final documentation:

- **Review and Verification:** The tendering organization will carefully review and verify all the submitted documentation to ensure compliance with the specified requirements and instructions outlined in the tender documents. This includes a thorough examination of technical proposals, financial information, supporting documents, and any other relevant materials provided by the bidders.
- **Evaluation Criteria:** The appraisal will be carried out based on the predetermined evaluation criteria specified in the tender documents. These criteria may encompass various aspects such as technical competency, experience, financial stability, proposed pricing, compliance with specifications, and any other factors deemed crucial for project success. Each criterion will be given a specific weightage or scoring system to facilitate the evaluation process.
- **Evaluation Panel:** An evaluation panel, comprising qualified individuals or experts with relevant expertise, may be established by the tendering organization to assess the bids. The panel members will impartially review the documentation, apply the evaluation criteria, and make recommendations based on their findings.
- **Clarifications and Additional Information:** During the appraisal process, the evaluation panel may seek clarifications or request additional information from the bidders to ensure a comprehensive understanding of their bids. This may involve seeking explanations, supporting evidence, or any necessary details that are crucial for the evaluation.

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- **Comparative Analysis:** The evaluation panel will conduct a comparative analysis of the bids received, considering the strengths, weaknesses, and overall suitability of each bidder in relation to the project requirements. This analysis will help determine the bidder that best meets the evaluation criteria and aligns with the project objectives.
- **Recommendation and Approval:** Based on the evaluation results, the evaluation panel will prepare a recommendation report highlighting the preferred bidder(s) for the project. This report will be submitted to the designated authority within the tendering organization for final approval. The authority will review the recommendation and make the final decision regarding the selection of the successful bidder.
- **Notification to Bidders:** Once the final decision has been made, all bidders will be notified of the outcome. The successful bidder will be informed about their selection, and any unsuccessful bidders will be notified accordingly. The tendering organization may also provide feedback to unsuccessful bidders upon request, outlining the reasons for their decision.

Tender Evaluation

Given the following Bid Opening Data, Evaluate their offer; that is, determine the Least Evaluated Tender for Award Recommendations and Write the Tender Evaluation Report.

Project: X - Y Project

Date of Invitation: Sept. 30, 1995 E.C

Engineer's Estimate: Birr 20,877,188 ETB Procurement Method: ICB

No. of Bid Sold: 8 No. of Bids Submitted: 6

Bid Submission Date: Nov. 15, 1996 E.C Bid Validity Period: 45 Cal Days

Rate for Evaluation: 1 USD = Birr 6.31 Selling Ex. Rate: 15 days before

1 USD = Birr 6.30 Selling Ex Domestic Preference Margin = 7.5%

$i = 0.05$ % per day = 1.5 % per month for Completion Time: 645 cal. Days

Completion Time;

$i = 0.04$ % per day for Advance Payment computations

No	Bidders	Cat	Tender offer TO	Tender security (TS)		Perf. Security	Adv Req'd	Comp. Time	Foregin ex. Req'd	Rebate
				Amount	Type					
1	DCM	F	17,630,915.00	31,746	CPO	20%	20%	645	55%	

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				USD					Birr	
2	CGTS	L	22,145,153.10	260,000 USD	CPO	10%		705		
3	CGCS	L	18,146,822.49	250,000 USD	CPO	10%		705		3 %
4	CECCS	F	21,236,399.00	40,000 USD	CPO	20%		705	50% Birr	
5	CGCA	L	24,110,160.00	300,000 USD	CPO	10%	20%	705	15% Birr	
6	CBAS	L	22,766,237.75	250,000 USD	CPO	10%	20%	705		

Required minimum tender security = 1% of TO: F=foreign company and L= local company

Tender offer after arithmetic check was found as

Tenders	DCM	CGTS	CGCS	CECCS	CGCA	CBAS
Tender Offer	17,695,206.70	21,200383.60	18,1633,88.91	2,229,994.11	23,885,300.33	20,953,625.22

Turnover of Companies For last Five years

Tenderers	DCM	CGTS	CGCS	CECCS	CGCA	CBAS
1991	361,275,260.40	----	---	2,259,278,000.00	----	4,571,118.00
1992	338,197,052.30	----	----	1,663,141,000.00	----	9,377,632.00
1993	432,79,201.30	343,796.00	-----	2,187,401,000.002	-----	12,680,696.00
1994	550,511,109.90	6,659,457.00	-----	2,416,035,000.00	---	18,377,772.00
1995	---	22,068,798.00	63,160,062.88	----	54,145,000.00	18,099,520.00
Currency	Egyptian pound	Birr	Birr	USD	Birr	Birr
Ex. Rate **	1 USD = 2.21	6.25	6.25	1.00	6.25	6.25

Required turn over = 5mil. USD taking their maximum turn over the five years
** Exchange rate used is selling price at their maximum within the last five years

Tender Evaluation

Tender for the project X - Y was floated by the of FDRE on the 5th of Oct, 1995. Its invitation was made on widely covering Newspaper in Ethiopia and through Ethiopian Embassies worldwide; namely, the Ethiopian Herald.

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As a result, eight bidders bought the tender document and six of them submitted their offer. The Bid was opened on 1st of December, 1995 and basic data were recorded in the presence of the Employer tender committee, Regulatory bodies representatives and bidders who choose to attend. Besides, Consecutive Coding from A to F were assigned for each tenderers for evaluation purposes.

Preliminary Evaluation

Preliminary evaluation covered two major parts; Eligibility Responsiveness and Arithmetic Review. For Eligibility Responsiveness, the six tender offers were critically examined and Table below has summarized the findings. Valid provision of Bid Security / Bond and Turnover Requirements are separately computed and presented. Accordingly, all bidders except B and F were found responsive for eligibility requirements and considered for remaining evaluation processes.

Eligibility Requirements	A	B	C	D	E	F
Valid and UP to date trade and professional license	R	R	R	R	R	R
Valid and Up to date membership to financier organizations	R	R	R	R	R	R
Completeness and submittals of all required documents	R	R	R	R	R	R
Power of attorney, signature and sealing Requirements	R	R	R	R	R	R
Appropriate invitation, packaging and submission Requirements	R	R	R	R	R	R
Valid provision of bid security or Bond **	R	R	R	R	R	R
Turnover requirements fulfilled **	R	NR	R	R	R	NR

For Arithmetic Review, the tender offer of four responsive bidders is checked and their tender offer after arithmetic check and any additions or reductions due to rebate and alternative offers are tabulated in below table.

Valid Tender Offer

Tenderers	A	C	D	E
Tender Offer	17,630,915.11	18,146,822.49	21,236,399.00	24,110,160.00
TO after Arithm. check	17,695,206.70	18,163,888.91	21,229,904.11	23,885,300.33

% change	0.36%	0.1%	0.03%	0.93%
Rebate	----	3%	----	-----
TO after Rebate	17,695,206.70	17,618,972.24	21,229,904.11	23,885,300.33

Detail Evaluation

Detail evaluation covered two major parts; Commercial and Equivalent Financial Offer Comparisons. For Commercial offer comparison, benefit forgone due to Completion Time;

Additional Costs(AC) due to differences in Foreign Currency Exchange and Advance Payment requirements; and Provisions of Domestic Preference Margins. The additions due to commercial offer Comparison and their effects to the Tender Offer for evaluation on equal bases is computed and summarized in Table below.

Summary of Commercial Offer Comparisons

Tenderers	A	C	D	E
TO after Arithm. Check	17,695,206.70	18,163,888.91	21,229,904.11	23,885,300.00
BF due to Completion Time Variation	----	516,909.82	622,848.26	700,782.94
AC due to advance payment Variation	452,668.15	-----	---	660,657.28
AC due to foreign exchange variations				
On bid closing Date	77,858.91	----	83,919.62	28,662.37
On Date of decisions	93,430.69	-----	101,903.54	34,394.85
Domestic preference (7.5%)	1,327,140.45	-----	1,592,242.81	-----
TO for evaluation				
On bid closing Date	19,552,874.21		23,528,914.80	25,275,402.92
On Date of decisions	19,568,445.99	18,680,798.73	23,546,898.72	25,281,135.4

Financial Offer Comparisons

The summary in table above considered impacts due to different commercial offers and determined Tender Offer of each Bidder for evaluation purpose. Hence, this part checks whether front loading is exercised by tenderers or not. To compares each tender value along acknowledged group of trades of works with Engineers Estimates, Average Tender Offers and

4. What is the purpose of monitoring and controlling the schedule during tender evaluation?

- A) To ensure accurate resource allocation C) To review and update the project scope
B) To track progress and identify deviations D) To assign responsibilities to team members

5. What is the role of proofreading and editing in bid document development?

- A) Assigning resources to each task D) Conducting regular check-ins and progress meetings
B) Tracking progress and identifying deviations
C) Reviewing the bid document for errors and presentation

Say True or False:

1. Sequencing tasks involves identifying dependencies between tasks.
2. Regular check-ins and progress meetings are not necessary in bid document development.
3. Document control measures are not required for bid document accuracy and consistency.
4. Proofreading and editing involve reviewing the bid document for errors and presentation.
5. The progress of tender development should be evaluated after submission.

Matching:

Match the following terms with their corresponding descriptions.

A	B
1. Work Breakdown Structure (WBS)	A. Reviewing the bid document for accuracy and completeness
2. Estimating Task Durations	B. Assigning resources to each task
3. Proofreading and Editing	C. Hierarchical representation of project deliverables
4. Document Control	D. Determining the time required to complete each task
5. Quality Assurance	E. Implementing measures to ensure accuracy and consistency

Operational Sheet:

Operational Sheet: Bid Evaluation

Operation Title: Bid Evaluation

Purpose: The purpose of this operational sheet is to guide the evaluation process of bid documentation for a tender. It provides instructions, precautions, tools and requirements, procedures, and quality criteria to ensure a comprehensive and effective bid evaluation.

Instructions:

- Review the bid documentation thoroughly to understand the requirements and objectives of the tender.
- Follow the specified compliance checklist to ensure that all necessary compliance elements are addressed in the bid documentation.

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- Conduct a risk assessment to identify and evaluate potential risks associated with the project.
- Evaluate the technical approach and methodology presented in the bid documentation.
- Perform a financial evaluation, considering factors such as pricing accuracy, cost competitiveness, and value for money.
- Assess the qualitative aspects of the bid documentation, including the bidder's experience, qualifications, and added value.
- Pay attention to the document formatting and presentation to ensure clarity, organization, and professionalism.
- Review the bid documentation for confidentiality and security measures, protecting sensitive information and intellectual property.
- Follow the review and approval process, collaborating with the evaluation team and addressing any discrepancies or clarifications.
- Evaluate bid documentation for compliance with ethical standards and business conduct.
- Capture lessons learned from the bid evaluation process for continuous improvement.

Precautions:

- Ensure that all evaluators understand the evaluation criteria and guidelines.
- Maintain confidentiality and handle bid documentation securely.
- Avoid any conflicts of interest during the evaluation process.
- Use objective and unbiased judgment when assessing the bids.
- Document evaluation findings accurately and transparently.

Tools and Requirements:

- Bid documentation and related tender documents.
- Compliance checklist.
- Risk assessment template.
- Evaluation criteria and scoring mechanisms.
- Scheduling tool or software for managing the review and approval process.

Procedures:

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1. Familiarize yourself with the bid documentation and tender requirements.
2. Use the compliance checklist to verify that all compliance requirements are addressed.
3. Conduct a risk assessment by identifying and evaluating potential risks associated with the project.
4. Evaluate the technical approach and methodology presented in the bid documentation.
5. Perform a financial evaluation, analyzing pricing accuracy, cost competitiveness, and value for money.
6. Assess the qualitative aspects of the bid documentation, considering experience, qualifications, and added value.
7. Pay attention to document formatting and presentation, ensuring clarity and professionalism.
8. Review bid documentation for confidentiality and security measures.
9. Collaborate with the evaluation team to review and approve bid documentation.
10. Evaluate bid documentation for compliance with ethical standards and business conduct.
11. Capture lessons learned from the bid evaluation process for future improvements.

Quality Criteria:

- Compliance with the specified compliance checklist and tender requirements.
- Thorough identification and evaluation of potential risks associated with the project.
- Alignment of the technical approach and methodology with project requirements.
- Accurate financial evaluation, considering pricing accuracy, cost competitiveness, and value for money.
- Assessment of qualitative aspects, such as experience, qualifications, and added value.
- Clear, organized, and professional document formatting and presentation.
- Adequate confidentiality and security measures to protect sensitive information.
- Effective collaboration, feedback, and consensus among the evaluation team.
- Compliance with ethical standards, including anti-corruption measures and adherence to applicable laws and regulations.
- Documentation of lessons learned and suggestions for process improvement.

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