



Scope of Work

Address a Primary
Construction Project Failure
Point

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Overview

Project Scope of Work

A detailed, objective, and fully transparent Scope of Work (SOW) is critical to the success of any repair, renovation, maintenance, or new construction project and should be developed prior to procurement. It provides sufficient project definition to enable the creation of a granular (labor, material, labor and productivity for associated task) estimates for line-item and modular estimates.



Requirements



Present Scope



Validate Scope



Create Valid Local Market Estimates



TOC

1 - Project Objective

2 - Requirements Groups

3 - Deliverables

4 - WBS

5 - Scope Statement

6 - Exclusions

7 - Scope Validation

8 - Change Process



Objective

Create a SOW that supports the ability to develop valid granular local market construction cost estimates for any type of repair, renovation, maintenance, or new build activity.

Steps to creating a Scope of Work

- Assign roles
- Interview stakeholders
- Gather and document information
- List requirements
- Gain approval

- Interview stakeholders
 - Talk to the project stakeholders to find out what they want to achieve from this project and their goals to help take it to the finish line. Manage stakeholder expectations and be clear what requirements will be included in the project.

- Gather and document:
 - Document everything and analyze it to deduct the project requirements. Keep all documentation on hand for reference and regular updates.

- List requirements
 - Access all the gathered information and special requirements that align with the project's objectives. Define the individuals required to work on the project and draft a schedule showing how long the requirements will take to complete.

- Get approval

- To ensure approval, ensure all requirements are necessary, specific, understandable, accurate, feasible, and testable. **Approvals should occur prior to the estimate development.**

- Defining project scope requires meeting with stakeholders.
 - Initial SOW creation typically involves owner professionals.

- A detailed SOW involved both internal and external planning, procurement, and project delivery professionals.
- Certain elements of a SOW are considered critical, non-negotiable components. Every component needs to be assessed carefully if a change request comes in during validation.

Requirements are compiled, documented, and managed throughout the project through requirement management upon initiation of the project, through the scope management process, and are a critical metric for scope validation.

- Identify Project Objectives & Requirements
- Objectives must be specific, measurable, achievable, realistic, and bound by time and cost.
- A detailed SOW requires the participation both internal and external planning, procurement, and project delivery professionals.
- Certain elements of a SOW are considered critical, non-negotiable components. Every component needs to be assessed carefully if a change request comes in during validation.
- A WBC defines the tasks related to completing the deliverables per specification on time and on budget.

- A WBS is a deconstruction of project scope to a line-item task level. It defines the granular tasks related to completing the deliverables per specification on time and on budget.
 - Avoid vague expressions or unclear terms when writing the objectives and word them as statements.
 - Objective clarity will help decide scope exclusions later.
 - Be detailed with descriptive adjectives about time and capabilities.
 - Include all work necessary to finish a project, broken down into more minor, trackable activities.

The overall function of a work breakdown structure is to define all the tasks related to completing project deliverables on time and within budget.

SOW REQUIREMENTS – Efficient Delivery of Repair, Reno, Maintenance, and New Builds

SOW Creation, Modification, Acceptance/Rejection, Performance Monitoring/Management



01 Requirement 1
Owner and design-builder collaboration on an early and ongoing basis within a robust, compliant process. >>>

02 Requirement 2
Owner defines initial need and meets with design-builder. >>>

03 Requirement 3
Owner meets with design-builder & communicates sufficient information and approves the SOW to enable the creation of a granular detailed line-item estimate. >>>

04 Requirement 4
Line-item estimate is created using an industry standard WBS data architecture and common terms and definitions. >>>

05 Requirement 5
Owner and design builder review line-item estimate and make required changes. >>>

06 Requirement 6
Owner approves or rejects proposal. >>>

07 Requirement 7
If proposal is accepted project is mobilized and managed, including daily inspections. >>>

08 Requirement 8
Owner reviews performance against approved SOW upon project completion. >>>

DELIVERABLES



Component		Deliverable Name	Description	Party Responsible
	Planning – Form, Function, Metrics	Core physical requirements	Physical design elements	Owner/DB
		Core functional requirements	Functional design elements	Owner/DB
		Funding Availability	Source, amount, and timing of available funds	Owner
	Detailed Project Definition	Detailed Scope of Work	Description of requirements in sufficient detail to enable DB to create a line-item estimate	Owner/DB
		Work Breakdown Structure	Expanded CSI MasterFormat for line items and higher-level grouping as appropriate (trades, building systems/elements, delayed materials)	Owner/DB
		Detailed Proposal	Line-item cost estimate with all required tasks, quantities, including labor, material, equipment and productivity information	DB
		Reviews	Owner review proposal	Owner
		Changes	Owner discussed changes with DB	Owner/DB
		Proposal Approval	Owner accepts proposal and issues intent of notice to proceed	Owner
		Procurement	Procurement issues appropriate approval documents	Owner

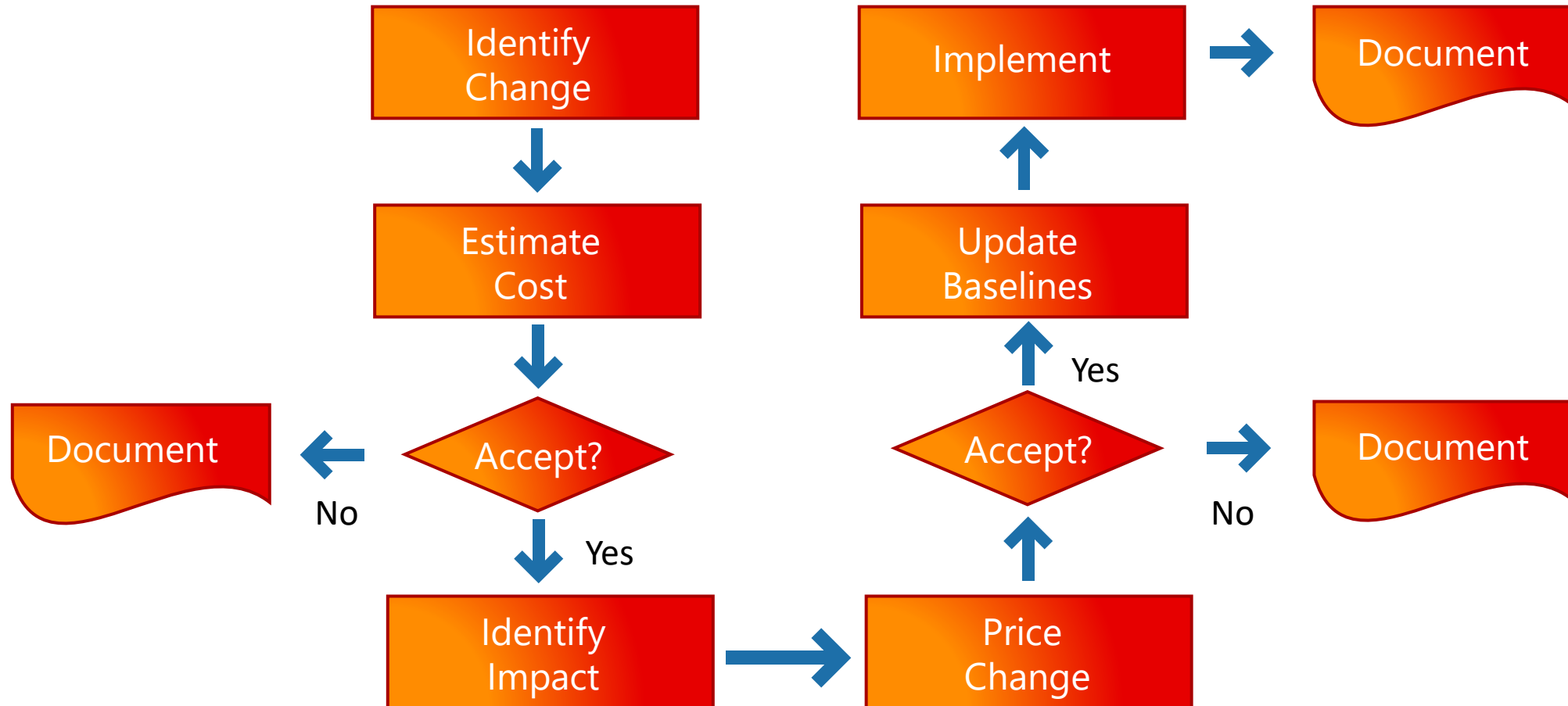
PROJECT SCOPE STATEMENT



Project Justification	Outdated nurse's stations	
Project Scope Description	Update nurse's station layout workstations and associate communications/computer equipment.	
Project Objective	Enable higher levels of information sharing, communications, responsiveness, and compliance.	
High Level Requirements	<ul style="list-style-type: none">➤ More efficient physical layout➤ Sub areas purpose built for specialized expertise	<ul style="list-style-type: none">➤ Updated communications, computer equipment, and ergonomic interfaces.
In Scope	<ul style="list-style-type: none">➤ Physical layout, including space design, chairs, desks, workstations, storage➤ Communications equipment➤ Computer and computer display equipment➤ All power and lighting requirements	
Out of Scope	<ul style="list-style-type: none">➤ Medical equipment	

SCOPE CHANGE PROCESS

Social Media Analytics Dashboard



Construction Cost Estimating FACTS

1

FACT 1

Current, detailed, line-item cost data is mandatory.

2

FACT 2

30%-40% of project costs involve line-item modifiers.

3

FACT 3

National average cost data, location factors, area cost factors, etc. do not provide adequate cost visibility.



FACT 4

Clear, reusable cost data must leverage expanded CSI MasterFormat.



FACT 5

Line-item notes are important.



FACT 6

Owners should create independent estimates to enable cost management.



FACT 7

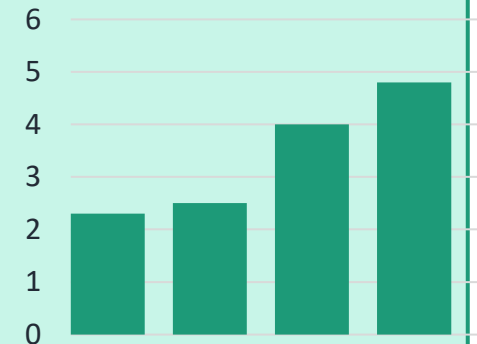
Estimates must be defensible and verifiable.

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Cost Estimating Aspects

1. Project Scope and Requirements:

Understanding the project's scope is fundamental to cost estimation: identifying the overall objectives, size, and complexity of the construction project. Clear project requirements, such as functionality, design specifications, and performance standards, are documented in as detailed a manner as possible to determine the level of resources needed.

2. Architectural and Engineering Drawings:

Detailed architectural and engineering drawings provide information about the project's layout, dimensions, and design features. These drawings enable estimators to perform quantity takeoffs (QTO) accurately and assess the labor, equipment, and materials required for each element of the construction when used with a local market granular construction task database.

3. Bill of Materials (BOM) and Specifications:

The Bill of Materials and detailed project specifications outline the specific materials, quantities, and quality standards required for construction. It serves as a basis for estimating material costs and provides insights into the project's technical requirements.

4. Site Visit and Assessment:

Conducting a thorough joint site visit (owner and design/builder) is essential to gain a comprehensive understanding of the existing conditions and potential challenges. Estimators can observe the site's topography, access points, utilities, any constraints that might impact construction costs and help identify potential risks and determine the need for specialized equipment or techniques.

Cost Estimating Methodology

Cost estimating methodologies are diverse and vary in diverse and vary reliability, and representation of local market conditions.

The selection of the appropriate method depends on the project's stage, available information, and desired level of cost visibility. Below are some common types of construction cost estimating methods.

1. Preliminary Cost Estimate:

A preliminary cost estimate is a high level “back of the napkin” view of the project's cost during the early planning stages. It is based upon limited information and the expertise of an experienced cost estimator. The latter will draw upon his/her knowledge of similar projects in similar locations. This type of estimate should not be used for even budgetary purposes and certainly not for services procurement.

2. Detailed Cost Estimate:

A detailed cost estimate is a comprehensive project of cost providing individual granular construction tasks and associated labor, material, equipment, productivity information based upon local market conditions. “National average cost data”, cost factoring, or historical costs do not provide sufficient cost visibility. Detailed cost estimates are valuable for establishing reliable budgets and issuing RFPs and contractor for construction services.

3. Assembly, Building Level, or Parametric Estimates

None of these levels of estimating should be used for establishing reliable budgets and issuing RFPs and contractor for construction services.

Value Considerations

Collaborative, multi-skilled teaming environment supported by higher management.

Robust process requires innovation and the involvement of stakeholders in the development of value propositions and activities.

Acknowledge the importance of innovation, benefit realization, lifecycle costs, asset management, projects, and an overall robust programmatic framework.

Outsourcing of planning, procurement, and project delivery management is not viable.

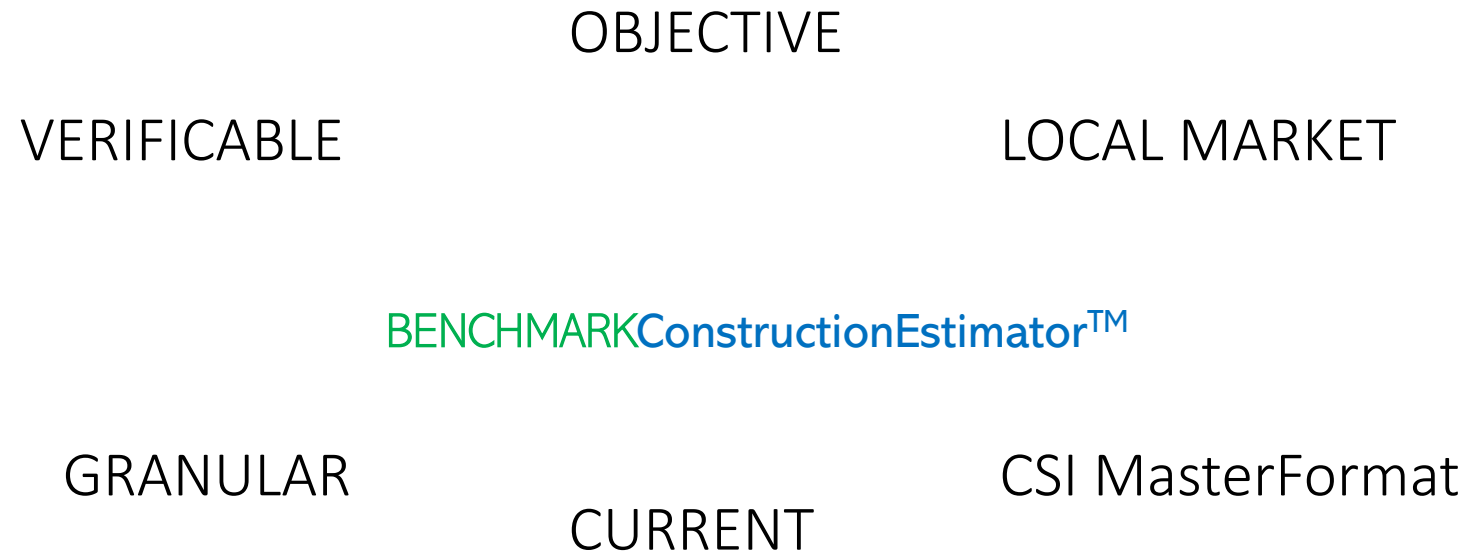
Value measurement must objective and consider cost, time, and functional aspects.

Mutual benefit to all participants and stakeholders must be a primary long-term consideration.

Focus upon outcomes, and the associated transformation of inputs to output on an early and ongoing basis.

A common data environment, inclusive objective local market granular labor, material, equipment construction task data is mandatory. Detailed Scope of Work development is a major determiner of project success or failure.

Process is shared across ALL projects from a programmatic perspective; however, team member activities and contributions are dynamic across the whole life process.



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