Construction Cost Estimating Methods

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Method	When to Use	Example	Estimate Type
Analogous Estimating	Early project stages for a quick ballpark figure with limited details	Using the cost of a previous similar house renovation to estimate a new one	Conceptual Estimate
Parametric Estimating	When key metrics such as cost per unit are known and moderate accuracy is needed	Calculating the cost of a building based on \$200 per square foot	Preliminary Estimate
Bottom-Up Estimating	For detailed project budgets when scope and specifics are well-defined	Estimating the cost of a home kitchen remodel by breaking it into tasks such as cabinetry, flooring, and appliances	Bid Estimate / Detailed Estimate
Three-Point Estimating	When there are many uncertainties or risks to account for multiple scenarios	Estimating the cost of landscaping a yard with best-case, worst-case, and most-likely scenarios for weather and labor availability	Risk Assessment Estimate
Expert Judgment	For unique or unconventional projects, especially when data is scarce	Consulting a veteran contractor to estimate the cost of restoring a historical landmark	Conceptual Estimate
Resource-Based Estimating	When resource requirements are clear and granular cost management is needed	Estimating a residential build by calculating labor, materials, and equipment costs individually	Control Estimate
Historical Data Estimating	For projects with repetitive elements or where past project data is reliable	Referring to past road construction projects to estimate the cost of paving a new highway	Feasibility Estimate
Production Rate Estimating	For routine tasks with consistent productivity data such as labor or equipment output	Estimating the cost of painting a warehouse by using the rate of square feet covered per hour	Control Estimate
Capacity Cost Factoring	During feasibility studies for industrial or manufacturing projects scaling capacity	Scaling up costs for a factory expansion using the six-tenths rule	Feasibility Estimate
Model-Based Estimating (BIM)	For large, complex projects requiring integration of design and cost data	Creating a detailed estimate for a hospital using 3D BIM software to model materials and costs	Detailed Estimate / Engineer's Estimate
Probabilistic Estimating	For projects with high uncertainty, leveraging scenarios to explore cost ranges	Using Monte Carlo simulations to predict the cost range for a large infrastructure project	Estimate at Completion (EAC)
Delphi Method	For novel or high-stakes projects, relying on collective expertise for accuracy	Gathering a panel of experts to refine cost estimates for an experimental building design	Negotiated Bid
Value Engineering	During the design phase to find cost-saving opportunities without compromising quality	Revising a school design to use more cost-effective materials while maintaining quality	Value Optimization
Modular Estimating	For modular or prefabricated construction projects with repeatable elements	Estimating the cost of a modular hotel by calculating the cost of one unit and multiplying by the total number of units	Prefabricated Estimate
Lifecycle Cost Analysis (LCCA)	For projects where long-term costs such as maintenance and operation are critical	Analyzing the lifetime cost of a solar panel installation, including maintenance and energy savings	Lifecycle Estimate
Ratio Estimating	During early planning for a broad breakdown of costs into major categories	Breaking down a housing development budget into 40 percent labor, 30 percent materials, and 30 percent equipment	Budget Estimate

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