Why Local Construction Cost Data Matters

Proven construction delivery methods are important to consistent achievement on time, on budget, and quality outcomes to the satisfaction of all stakeholders. A key activity is this regard is Owners and Design/Builders collaboratively building and mutually agreeing upon a detailed Scope of Work.

Detailed 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 completed prior to procurement of construction services.

A detailed SOW provides sufficient project definition to define granular construction tasks. (Note: Granular in this instance refers to individual labor, material, labor, and productivity components associated with discrete line-item demolition, repair, maintenance, or new build activities.) Learn more about creating a detailed SOW here.

Verifiable Estimates

The term “Accurate” gets thrown around too casually in our world. An estimate is a forecast, not a fact.

An estimate can (and should) be well-supported, well-founded, detailed, transparent, reliable, objective, current, verifiable, and clearly communicated using industry standard terms, definitions, and data architectures (example, expanded CSI Masterformat) and grounded in sound assumptions. Labelling a construction cost estimate accurate implies a precision that just isn't possible when predicting the future

That said, a construction estimate must reflect local market conditions. In other words, labor, material, and equipment cost components need to be current and locally researched. (Note: Independent studies have clearly demonstrated that use of historical data or national average cost data, locations factors, or economic indexes introduced significant errors.)

Rooted in sustainability, energized by knowledge

Location-specific conditions significantly impact cost estimates in construction and relying on "national average cost data" and location factors (e.g. City Cost Index/CCI, area cost factors…) can lead to significant inaccuracies. The importance of locally researched data to capture real-time market fluctuations and ensure actionable cost estimates cannot be overstated.

- **Local Market Fluctuations:**

Traditional cost databases often use national or regional averages and location factors, or

historical data which don't reflect the dynamic changes in local markets.

- **Dynamic Data Approach:**

4BT offers 90,000+ detailed line-item construction cost data that's locally researched, providing a more accurate representation of labor, material, and equipment costs specific to a location and is updated quarterly.

- **Benefits of Local Data:**

Locally researched data helps with more precise budgeting, cost breakdowns, and understanding the specific costs associated with labor, materials, and other project components.

- **Limitations of Location Factors:**

While location factors can be used in preliminary project evaluations, they are not recommended for higher-quality estimates.

  - **Labor Costs:** Vary significantly by location, including wages, benefits/fringes, and other factors.
  - **Material Costs:** Can be affected by factors like transportation, availability, and local regulations.

Dynamic, local market cost databases updated quarterly to reflect real-time fluctuations.

Stay in Touch

Reach out to learn more here.

- **Estimate project costs comprehensively** – Ensure budgets reflect the actual current local market labor, material, and equipment costs for successful project delivery.
- **Create detailed and realistic project timelines** – Identify key milestones, task dependencies, and critical paths.
- **Minimize risks associated with delays and budget overruns** – Provide a clear project roadmap and cost control mechanisms.
- **Enhance resource allocation and utilization** – Align resources and scheduling with budget constraints.

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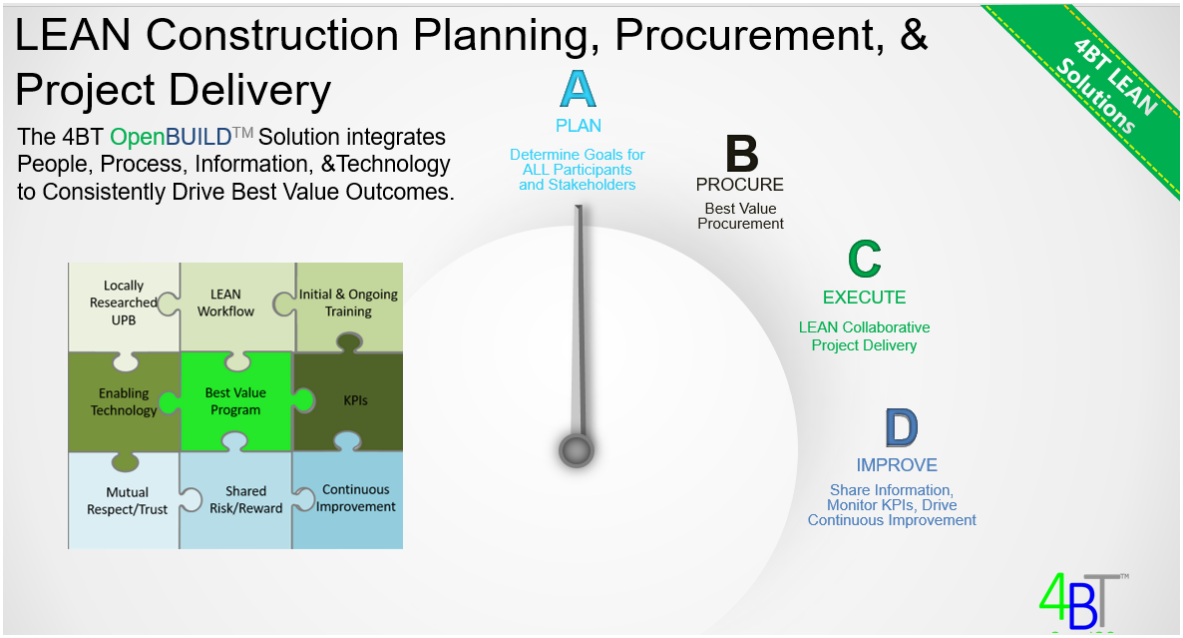

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Issues with “national average cost data” and location factors:

#1. - “Location factors are used during preliminary project evaluations. They are not intended to be used when preparing appropriation-quality estimates. They often are applied to conceptual estimates for identifying “go/no-go” projects at an early stage.” (Peitlock, B.A., ccc, *Developing Location Factors Using a Factoring Method,* International Cost Engineering Council, ICEC International Cost Management Journal (ICMJ), 1998.)

#2. "Location factors are primarily used in class 4 and 5 estimates and are not intended to be used for higher quality estimates, such as class 3, 2, or 1. The RSMeans city cost index (CCI) and the Department of Defense area cost factor (ACF) index are two primary examples of location factor publications." (Martinez, A., *Validation of methods for adjusting construction cost estimates by project location , University of New Mexico UNM Digital Repository, 2010)*

#3. "Despite its potential weaknesses, estimation by adjustment factors is a very common approach for all types of construction. A very common approach for performing quick-order-of-magnitude estimates is based on using Location Cost Adjustment Factors (LCAFs). The accuracy of cost estimates in the early phases varies within an expected range that spans from -100% to +200% " "Using the results of this study, various commercial entities (e.g., RS Means) could enhance their online tools by uploading publicly available socio-economic variables and allowing users to perform geostatistical analysis. As a result, a cost engineer could input the location of a project and obtain the most accurate location adjustment factor through a mix of interpolation and geostatistical prediction techniques." *(Migliaccio, G., Empirical Assessment of Spatial Prediction Methods for Location Cost Adjustment Factors,* J Constr Eng Manag. 2013)

#4. "Problems within the methodology, unfortunately, will continue to arise as standardized estimation tools (CCI) simply cannot account for the unique characteristics of individual states. Unfortunately, the accuracy of program-wide CCIs occasionally led to swings of ±20 percent after projects had gone through the bidding process. Additionally, no direct application of market or economic conditions existed in this conventional CCI process, which was theorized by FHWA to potentially be a significant influence on resulting project estimate accuracy. " (University of Colorado Denver College of Engineering and Applied Science Department of Civil Engineering, *Validation of Project-level Construction Cost Index Estimation Methodology, 2017*