Tech Note

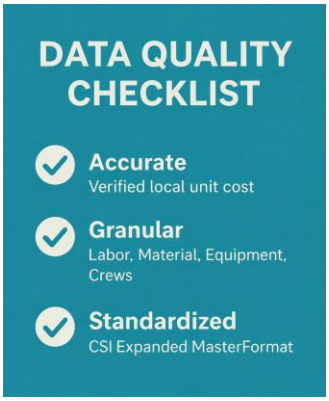
4BT Commercial Construction Cost Data

Understanding true local construction costs remains a persistent challenge in project planning, budgeting, procurement and execution.

Traditional cost books often rely on national average prices and location factors, which may support *budgetary estimates* but struggle to deliver the level of local market transparency required for *procurement-ready use*.

4BT Commercial Construction Cost Data is positioned as a response to this gap, aiming to deliver more accurate, location-specific information through detailed research and transparent methodology.

Key Advantages



More representative local costs

4BT compiles labor, material, and equipment pricing through targeted local market research rather than relying on national averages and creates construction task data based upon current commercial construction means and methods.

The use of traditional location multipliers can overlook regional and trade wage variation and logistical realities—factors that may contribute to significant estimation differences in some markets. (Note: Multiple independent sources have discovered cost variances, some of up to 200%. See References below.)

Granular and transparent line items

The 4BT database includes more than 90,000 individual construction task items organized according to expanded CSI MasterFormat. This enables precise scoping, detailed cost development, and more defensible control over estimates, as well as rapid data use and reuse. Separate preventive maintenance databases are also locally researched and include labor and material costs and checklists for each associated task frequency. Preventive maintenance tasks are organized using expanded UNIFORMAT.

Objectivity and auditability

Because the data is sourced and built from verifiable methods, it can be more defensible in public procurement, benchmarking and audit environments. This transparency may

strengthen trust between owners, design teams, and contractors. It also is in concert with public sector fiduciary and procurement requirements.

Current market reflection

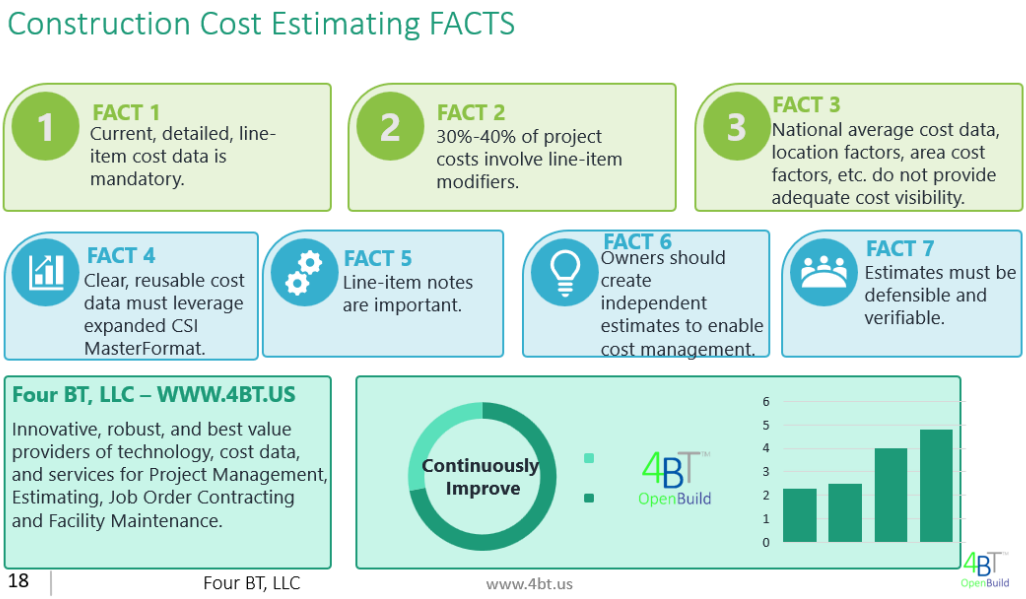
4BT updates are issued quarterly, allowing for alignment with recent price changes—particularly relevant in volatile material and labor markets where annual updates may lag real-world conditions.

Alignment with collaborative delivery methods

The approach is intended to integrate with LEAN construction, Job Order Contracting (JOC), and Integrated Project Delivery (IPD), supporting reduced disputes and clearer expectations across stakeholders.

Trade-specific labor accuracy

Labor rates are based on prevailing or Davis-Bacon wage research across more than 130 trades, with "open shop"-based price books also available. This level of detail can capture differences between, for example, electrical and mechanical labor costs, which single-factor regional multipliers may overlook. Material pricing also reflects real local supply chain considerations, including logistics and proximity to suppliers.



Conclusion

While traditional cost adjustment methods remain common for early concept budgeting, more detailed, locally validated research can provide greater precision and transparency for procurement and delivery. 4BT's approach—grounded in granular cost data, frequent updates, and trade-specific labor insights—highlights why local market representation is becoming central to modern construction estimating practices.

References

"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.)

"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)*

"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)*

4BT (2024) *4BT Commercial Construction Cost Data*. Available at: 4bt.us (Accessed: 8 December 2025).

CSI (2020) *MasterFormat 2020 Update*. Construction Specifications Institute.

U.S. Department of Labor (2024) *Davis-Bacon Wage Determinations*. Washington, DC: US DOL.

Lean Construction Institute (2023) *Lean Construction Overview and Principles*. LCI Publications.