



No Change Order Design-Build Process for Mechanical Systems



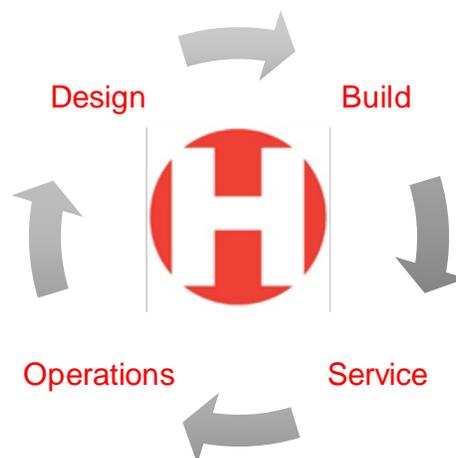
Design Build Executive Summary

At Huckestein, we believe that an integrated approach to designing and constructing projects leads to high quality, cost effective, and timely outcomes. As an integrity-driven contractor, we value customer relationships. Our word is our bond. Fulfilling our promises and commitments to customers always takes priority over making money.

The only way we can deliver on these commitments is to be the single point accountable to our customers for the outcome of our work. In the case of mechanical renovation or replacement projects, we take complete responsibility for the scope of every proposed project. In fact, we are the single point of contact, from first appointment to project completion. ***Our brand promise is that, under no circumstances will there be change orders within the agreed upon scope of work for any Huckestein project.*** This no-change order, design-build model allows us to keep our brand promise and delivers enhanced project quality, increased project delivery speed, and tightly managed, predictable costs. When we commit to implementing a project at a set price, we execute that project for that price without asking customers for change orders to cover errors, omissions, needed "value added" changes, and all but a few unforeseen conditions. This is a major contrast with typical ways of working in our industry. It's also an approach that is greatly appreciated by our customers. For us, it's the way we do business. For our customers, it's peace of mind delivered through real budget and schedule control.

Another building block of our culture is the value we place in long-term relationships. Win-win relationships truly make the difference, as we work with customers in a collaborative, partnership approach. That relationship begins and ends with a trust and reputation that must be earned, and it is earned every single day by following through on our promises, being dependable, and keeping commitments over time. Our in-house design and delivery team assures a seamless process, and a true one-stop-shop for project accountability.

Since 1978, Huckestein has been partnering with our customers to help them increase the return on their building investments. Our focus on HVAC system life-cycle costs allows us to provide value throughout the design – build – service– operations continuum. In most cases over the past 40 years we have installed the HVAC system, serviced it over its life, and replaced it when it reached the end of its useful life. We expect to live with the quality of our design and workmanship and to stand behind it, over the entire life of the system.



Why Low-bid does Not Mean Lowest Cost

Design-build, design-bid-build and construction management are the three construction project delivery systems most commonly employed in North America. Over the past 15 years, use of design-build has greatly accelerated in the United States, making this delivery method one of the most significant trends in design and construction today.

Design-build is where one entity, the design-builder, enters into a single contract with the owner to provide both design and construction services. In all other project delivery systems, there are separate contracts for design and construction. The single contract for both design and construction is the design-build distinction. And a single contract changes everything. ***If there is more than one contract, it is not design build.***

By contrast, in all other systems of project delivery, the owner must manage two or more separate contracts, one for design and one for construction. The owner becomes the middleperson and potentially becomes engaged in disputes between the designer and the contractor(s). The frequency and intensity of those disputes are often exacerbated by the contractual nature of traditional design-bid-build project delivery. Architects and engineers provide design services under the legal concept of a Standard of Care. They prepare plans and specifications to the best of their abilities, but do not warrant those documents to be perfect and free of human error. The designer then presents the completed plans and specifications to the owner, who in turn, distributes those documents to the contracting industry in the form of an invitation for bids. The Spearin Doctrine is a legal concept that goes into effect when the owner requests bids from contractors and eventually enters into a contract for construction of the project. Under the Spearin Doctrine, when the owners give the designer's documents to the contractor, they do so with an implied warranty of sufficiency; in essence, a promise by the owner that the plans and specifications contain information entirely sufficient for the contractor to bid and build the project. (Source: Design Build Institute of America - DBIA)

It is not uncommon, however, that the information provided is not sufficient to bid and build the project. When this happens, disputes, claims, and change orders are often the result, with the owner caught in the middle of the finger-pointing between the designer and contractor. Blame for cost overruns, plan and specification changes, and design disconnects can be passed around, sometimes for months. There is no single point of complete responsibility and accountability. Budgets, schedules and the customer's own credibility can be at risk. (DBIA)

Why is Design Build so Good for Owners?

Construction projects run through a true design build model have a number of advantages for owners, including but not limited to:

Singular Responsibility — accountability for cost, schedule and performance - construction team is the design team, so there is no finger-pointing.

Faster Delivery — collaborative project management means goals are established sooner and work is completed faster with fewer problems.

Continuity — design-build team involved from start to finish, adding inherent efficiency, with the chances for things to fall through the cracks being greatly diminished.

Cost Savings — an integrated team is geared toward efficiency and innovation.

Better Quality — design-builders meet performance needs, not minimum design requirements, often developing innovations to deliver a better project than initially imagined.

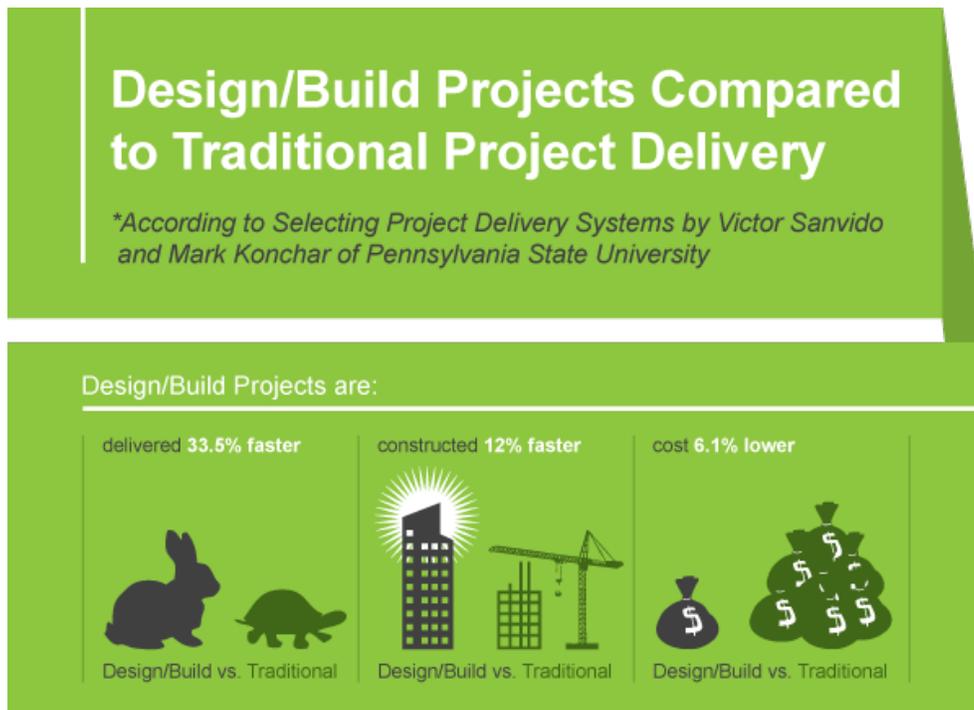
Integrated Solutions — the early-stage collaboration and an integrated design results in buildings that perform better now and into the future.

Decreased Administrative Burden — owners can focus on the project rather than managing disparate contracts.

Reduced Risk — the design-build team assumes additional risk away from the owner.

Reduced Litigation Claims — by closing warranty gaps, owners virtually eliminate litigation claims.

Motivation Shift to Innovation and Efficiency – project success is measured by improved project delivery time, efficient constructability, and mutual cooperation.



How does the Design Build Process work with Huckestein?

Huckestein’s mechanical designers make certain that we know the project in very thorough detail before we price it. We collaborate closely to pursue a clear and shared objective: the right solution for every customer. Our approach means walking the corridors, climbing in ceilings, crawling through steam tunnels, and many meetings listening and sharing. In short, getting to know our clients’ challenges as well as they do. Then we begin the design process, frequently going through many iterations before settling on the solution that best serves our clients’ needs. So, by the time we

quote, we have a complete understanding of what we're quoting. Nothing is left to assumptions or chance. We believe that developing a truly accurate scope of work only comes from applying our favorite philosophy: **measure twice and cut once**.



Our integrated design and delivery model is a highly collaborative, fully integrated process built on trust, mutual respect, teamwork, innovation and creative problem solving. Design-build unleashes the power of team to deliver projects faster, better and for optimum cost – best value for the money, time and effort invested. Owners find that when design-build is done right, their level of engagement with the entire team is more meaningful than is experienced with other delivery methods. And, most important, they remain firmly in control of expected outcomes.

Huckestein’s Design Build Process is Clear and Easy to Follow

Initial meetings w/ potential client	We meet with you to discuss the scope of your project. During these meetings we will give you an appraisal of the projected cost range of your project. You will determine if you would like to proceed.
Professional Services Agreement	If you decide to move forward with us, we sign a professional services agreement which defines the terms and scope of our initial design services.
Program Definition and Site Analysis	Our design team works with you to develop a detailed program of your needs and an analysis of the existing site conditions as well as potential site development challenges.
Initial Design	Our design team develops our first conceptual designs based on the defined program
Design Review	At this step we review our initial concept with you. Discussing the options and implication for redesign
Redesign	Based on our design review we redesign as needed. We then go back through design review and redesign until we have a design that meets your requirements.
Client Design Approval for Pricing	At this point you approve a design that will be used for pricing.

Commence Pricing	This is the step where we “hard” price your project. We price the project as conceptualized as well as create a “Chinese Menu” of options for you to choose. This menu has both additions and deletions and is meant to assist in the fine tuning of your project.
Financing Considerations	We recognize that mechanical upgrades can represent a significant out-of-pocket expense to our customers, therefore we have several financing options available to our customers. Most customers qualify with no guarantee (only the equipment is used as collateral). You borrow for your mechanical upgrades and pay off the project over time at a low interest rate and a term that works for you.
Pricing Proposal to Client	We present the “hard” price to you and review all the options.
Pricing Evolution	Together you and our design team fine tune the “hard” cost to come up with a final hard contract price.
Sign Construction Contract	We now sign the official construction contract.
Agreed Upon Scope Finalized	To keep the process streamlined and orderly, we implement a cut off. All changes after the agreed-upon scope is finalized are tracked through the change order process. This keeps the paper trail clean and easy to follow.
Working Drawings Prepare	We create the final drawings needed for locality approval of your project.
Working Drawings Submitted to Locality for Approval	We submit the plans for locality approval. This can be a time consuming and frustrating process. Each locality has different requirements and interpretation of the building code. This process is a give and take between our team and the locality, but final approval requires us to go through this dance.
Drawings approved by locality	We receive final approval to proceed from the locality.
Bonding (if required by locality)	Some projects require a posting of a bond or a letter of credit in order to receive final approval to proceed. If this is required you will know this very early in the process, but the final amount of the bond will not be known until the locality has approved the drawings.
Adjust Pricing to Locality Approved Drawings	During the pricing process we will carry a contingency to cover any changes required for locality approval. Once the final approval is received we “zero” out this contingency by applying it to any locality required changes, returning any remaining amount to you.
Locality Approved Documents Compiled and Signed	The final locality approved drawings and specifications are reviewed with you and our design team and signed by both.

Pre- Construction Conference	We have a “pre-con” with you and our construction team prior to breaking ground to review the project. Many times this is combined with the previous step into one long meeting.
Scheduled Walkthroughs	We have pre-set walkthroughs with you to review your project.
Final Walkthrough	Pre-scheduled walkthrough of project. We orient you to your new building and systems and create a final “punch” list for your project.



Design-Build Resources

National Institute of Building Sciences, National BIM Standards (NBIMS) Committee many related articles on Integrated Project Delivery (IPD), Building Information Modeling
<http://www.facilityinformationcouncil.org/bim/publications.php>

U.S. General Services Administration

the Nation's largest facility owner and manager's program to use innovative 3D, 4D, and BIM technologies to complement, leverage, and improve existing technologies to achieve major quality and productivity improvements.
<http://www.gsa.gov/bim>

The American Institute of Architects

Integrated Practice information: www.aia.org/ip_default

The American Institute of Architects, California Council resources related to Integrated Project Delivery (IPD) including Frequently Asked Questions: www.ipd-ca.net

Associated General Contractors of America

BIM Guide for Contractors: <http://agc.org/>

Design Build Institute of America What is Design-Build: A Design Build Done Right Primer:
www.dbia.org

Construction Users Roundtable (CURT)

owners' views on the need for Integrated Project Delivery: <http://www.curt.org>

McGraw-Hill Construction

source for design and construction industry information regarding Integrated Project Delivery (IPD)
<http://www.construction.com/NewsCenter>

LEAN Construction Institute

a non-profit corporation dedicated to conducting research to develop knowledge regarding project based production management in the design, engineering, and construction of capital facilities. <http://www.leanconstruction.org/>