INTRODUCTION TO DESIGN-BUILD

BARBARA WAGNER, CLARK CONSTRUCTION
DBIA-WPR BOARD MEMBER

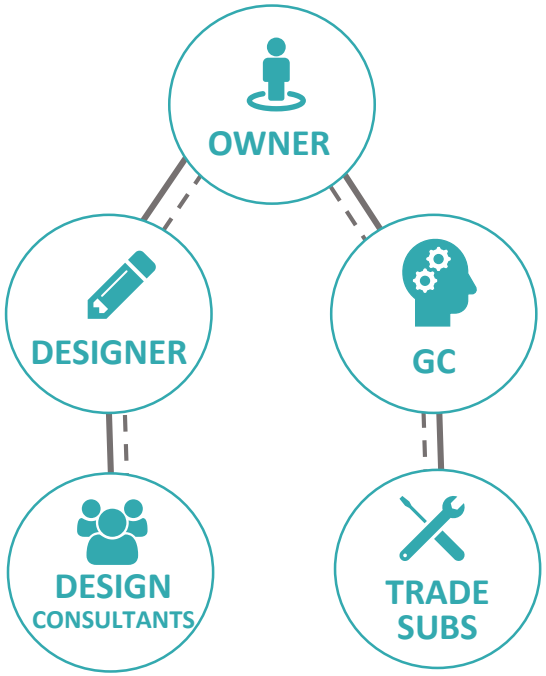
OWNERS COUNCIL WEBINAR
THURSDAY, FEB. 8TH 2018

AGENDA

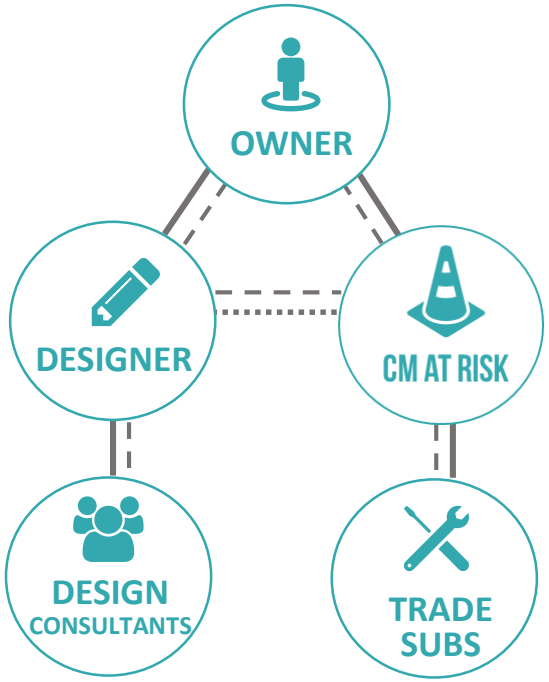
1. INTRODUCTION TO DESIGN-BUILD
2. BENEFITS OF DESIGN-BUILD
3. WHO USES DESIGN-BUILD
4. HOW A DESIGN-BUILD ENTITY IS SELECTED
5. TYPES OF CONTRACTS
6. CAVEATS: CAUTION FOR THE OWNER
7. FINAL THOUGHTS

INTRODUCTION TO DESIGN-BUILD PROJECT DELIVERY

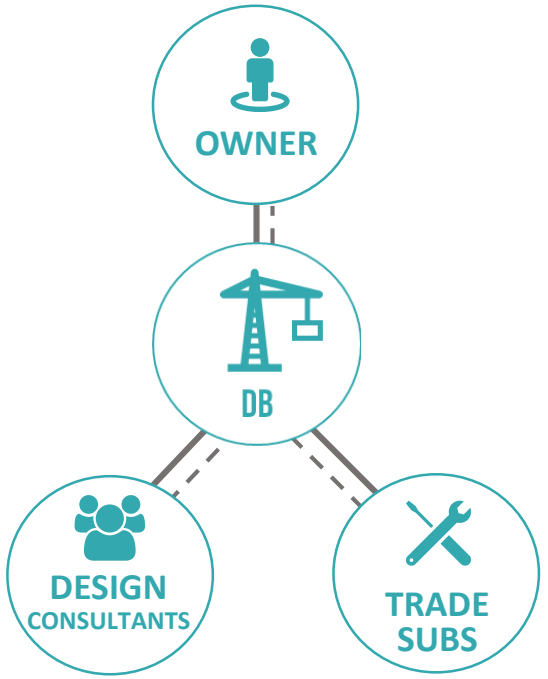
COMMON PROJECT DELIVERY SYSTEMS



DESIGN-BID-BUILD



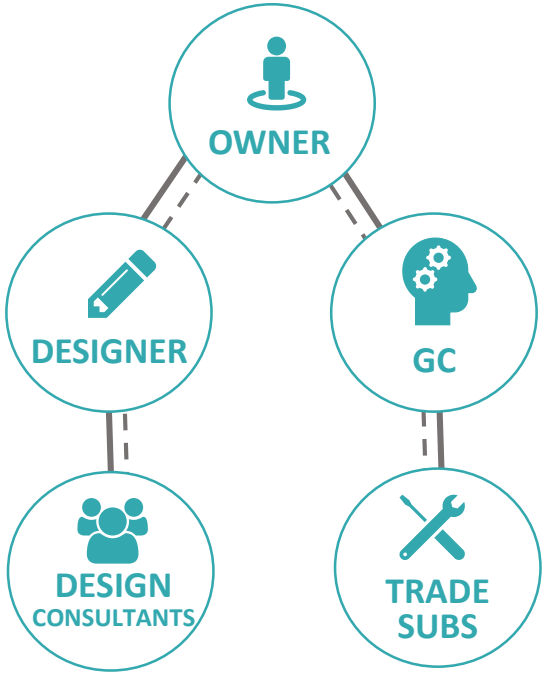
CONSTRUCTION MANAGER AT RISK



DESIGN-BUILD

Contracts
Communications
Contractual Coordination Requirements

DESIGN-BID-BUILD



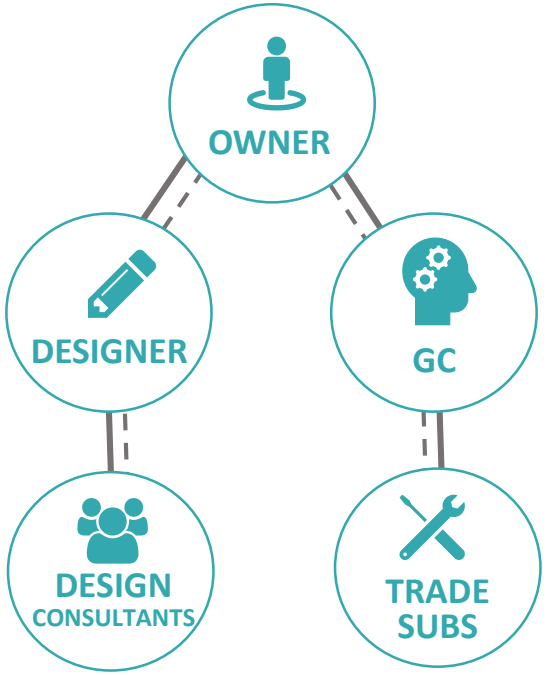
DEFINITION

"Traditional" project delivery approach where the owner commissions an architect or engineer to prepare drawings and specifications under a design services contract, and separately contracts for construction, by engaging a contractor through competitive bidding or negotiation.

DESIGN-BID-BUILD

ADVANTAGES

- Widely used
- Competitive bid process
- No legal barriers



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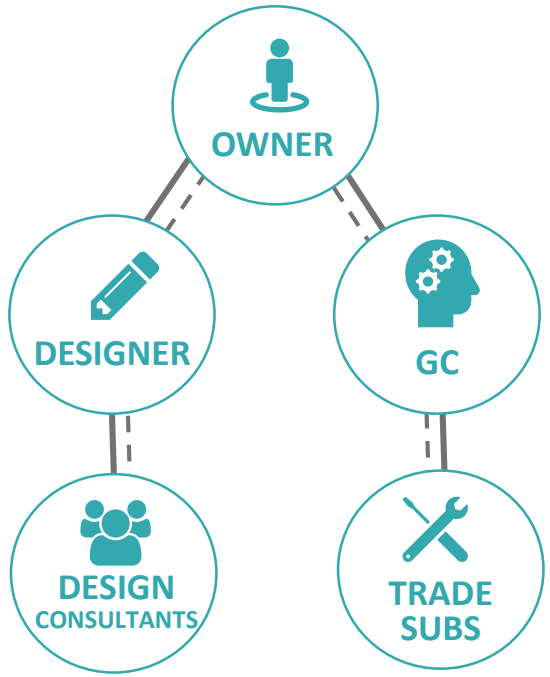
DESIGN-BID-BUILD

ADVANTAGES

- Widely used
- Competitive bid process
- No legal barriers

DISADVANTAGES

- Lack of communication/input from the build team
- Potential for inadequate project budgets
- Owner owns design risks errors and omissions



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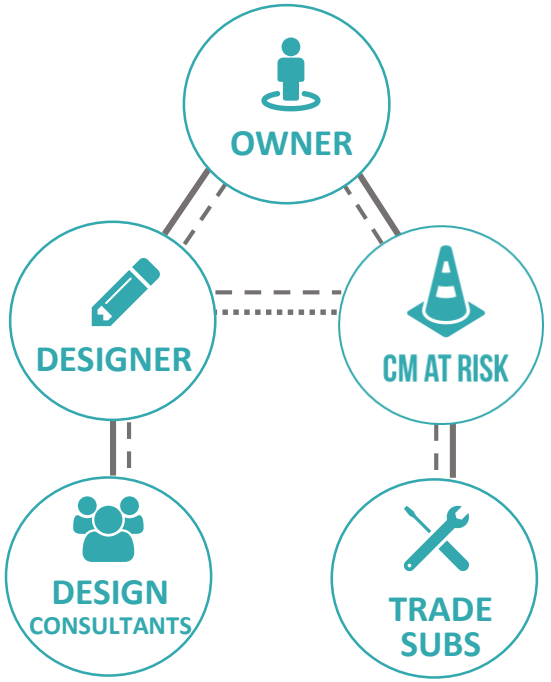


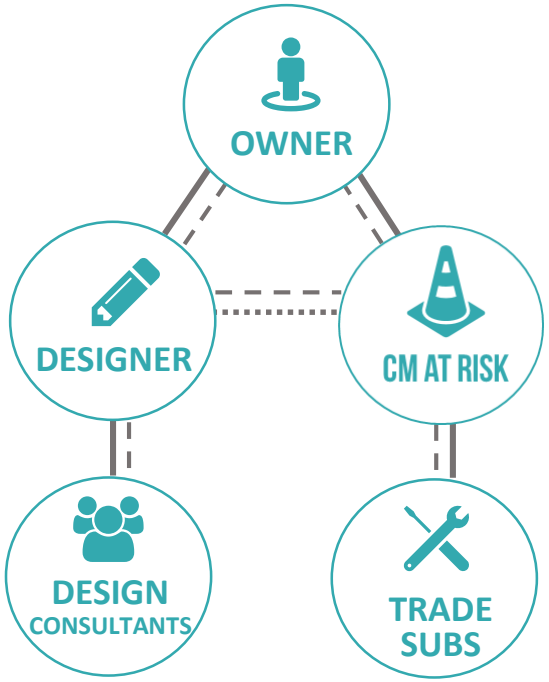
DEFINITION

Hybrid form of Construction Management combining both preconstruction and construction management services under the general contractor's contract.

CONSTRUCTION MANAGER AT RISK

ADVANTAGES

- Early contractor involvement (cost and schedule)
- Faster project delivery through phased construction
- Assurances design is buildable and cost effective



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CONSTRUCTION MANAGER AT RISK

ADVANTAGES

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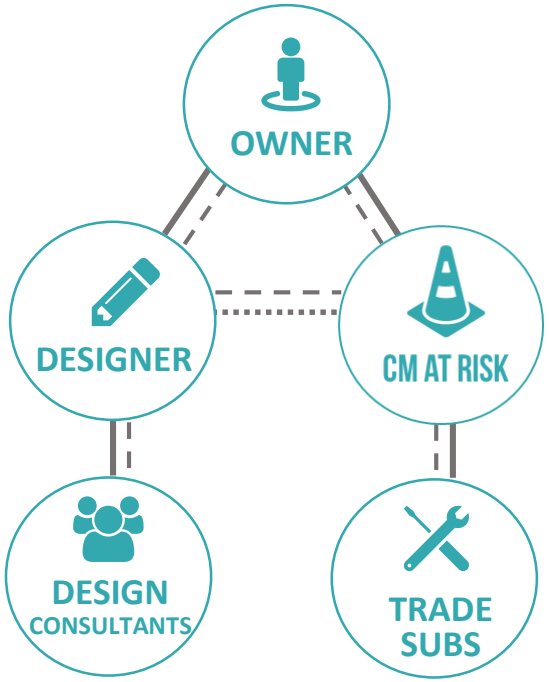
DISADVANTAGES

- Increased administrative burden—owner needs to be experienced and knowledgeable and manage multiple entities



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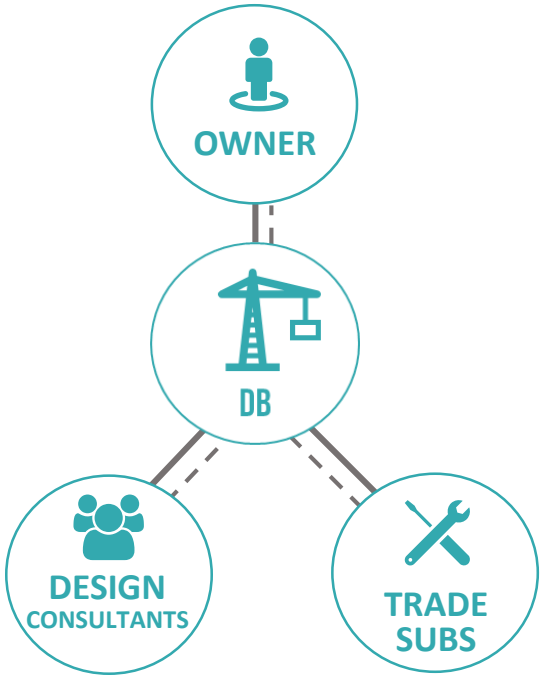


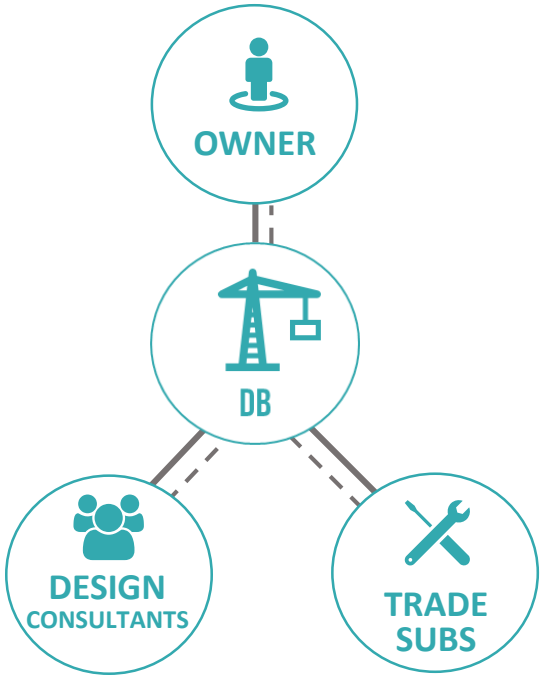
DEFINITION

The system of contracting under which one entity performs both architecture/engineering and construction under a single contract with the owner. Also known as “design-contract” or “single responsibility.”

DESIGN-BUILD

ADVANTAGES

- Single source responsibility
- Speed to market, faster delivery
- Project cost identified early



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DESIGN-BUILD

ADVANTAGES

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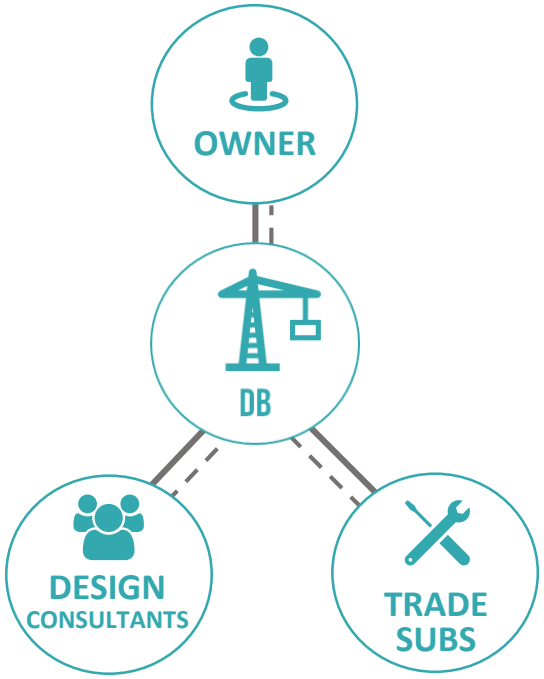
- Project cost identified early

DISADVANTAGES

- Experience in Design-Build procurement
- Requires timely decision making due to faster delivery
- Restricted procurement regulations for Public Entities



DEFINITION

The system of contracting under which one entity performs both architecture/engineering and construction under a single contract with the owner. Also known as “design-contract” or “single responsibility.”

OWNER CONSIDERATIONS FOR USING DESIGN-BUILD

Interest in saving time and money.

Re-alignment of responsibilities and risks on a project.

Owner-driven demands for better quality and continuous improvement.

Desire to avoid the legal entanglements of adversarial relationships.

Collaboration and innovation.

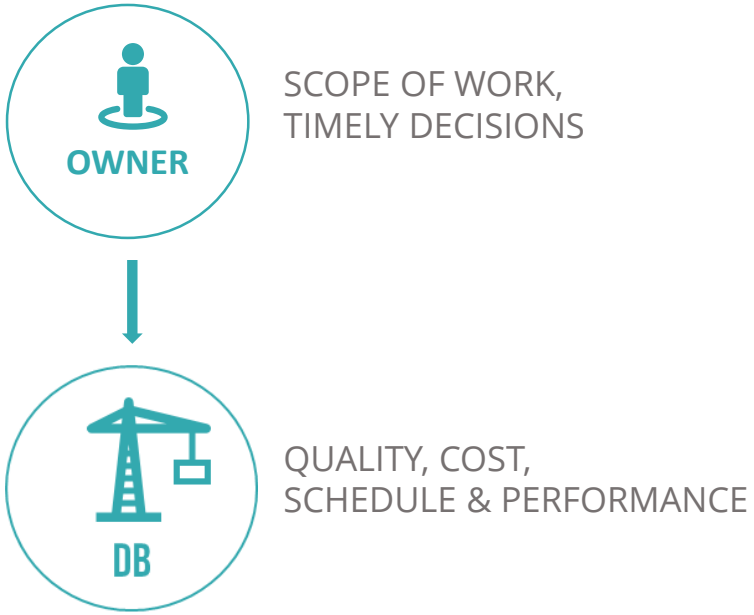
BENEFITS TO DESIGN-BUILD

INTRODUCTION TO DESIGN-BUILD

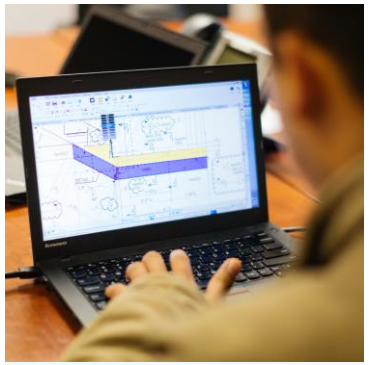
DESIGN-BUILD BENEFITS

SINGLE POINT OF RESPONSIBILITY

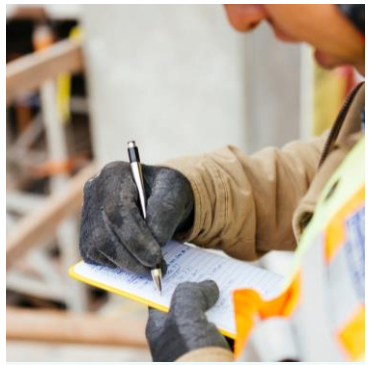
Design-Build: Owner executes a contract with a single entity (design-builder)



DESIGN-BUILD BENEFITS



QUALITY



COST SHARING

TIME SAVINGS

DESIGN-BUILD BENEFITS

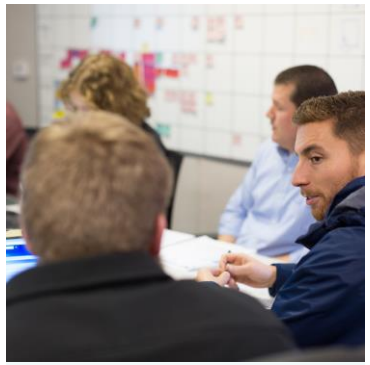
RESEARCH

COMPARISON OF PROJECT DELIVERY METHODS

METRIC	DESIGN-BUILD VS. DESIGN-BID-BUILD	DESIGN-BUILD VS. CM@RISK
UNIT COST	6.1% LOWER	4.5% LOWER
CONSTRUCTION SPEED	12% FASTER	7% FASTER
DELIVERY SPEED	33.5% FASTER	23.5% FASTER
COST GROWTH	5.2% LESS	12.6% LESS
SCHEDULE GROWTH	11.4% LESS	2.2% LESS

Source: Construction Industry Institute (CII)/Penn State research comprising 351 projects ranging from 5,000 to 2.5 million square feet. This study includes varied project types and sectors.

DESIGN-BUILD BENEFITS



REDUCED ADMINISTRATIVE BURDEN

EARLY KNOWLEDGE OF FIRM COSTS

OTHER INHERENT BENEFITS

EARLY INVOLVEMENT OF KEY PARTICIPANTS

ENHANCE EXPERTISE AND CREATIVE THINKING

ADDS VALUE BY SUBSTANTIALLY REDUCING CONFLICTS

CALTRANS 7

COMPETITIVE SELECTION PROCESS

- 1.2M SF
- 29 months from Award to Completion
- Best Practices utilized—Design Excellence, Short listing, Co-location
- Third Party Peer Reviews

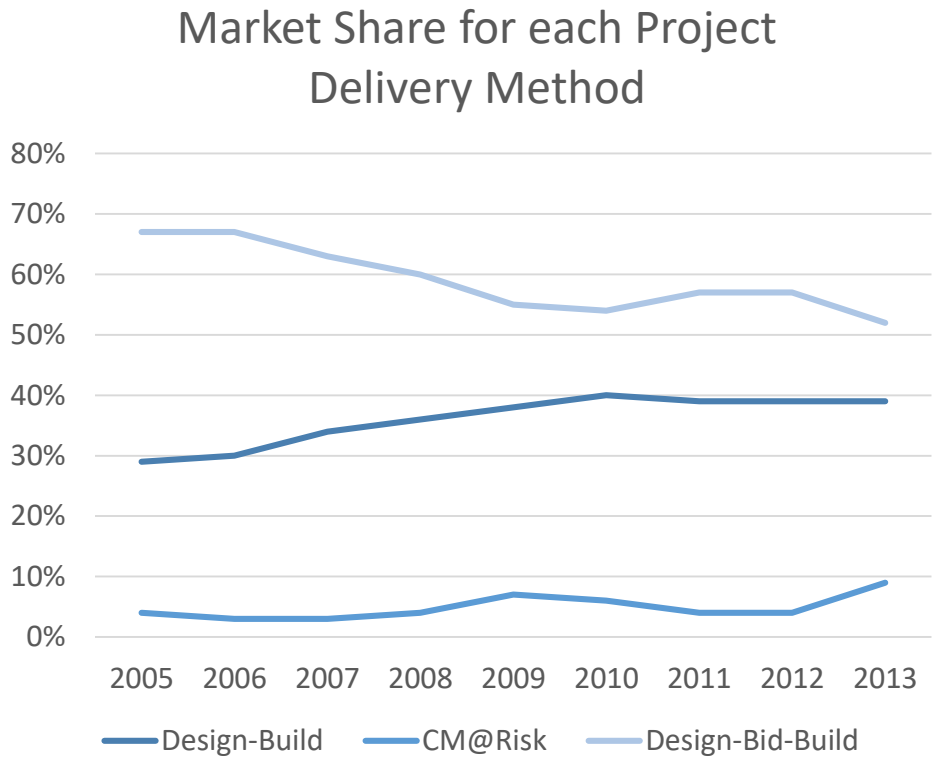
WHO USES DESIGN-BUILD

INTRODUCTION TO DESIGN-BUILD

GROWTH OF DESIGN-BUILD

2014 R.S. MEANS STUDY

- Increasing trend on the use of Design-Build project delivery.
- Design-Build is most prevalent on the West Coast.
- 59% of construction dollars spent in California are on Design-Build projects.

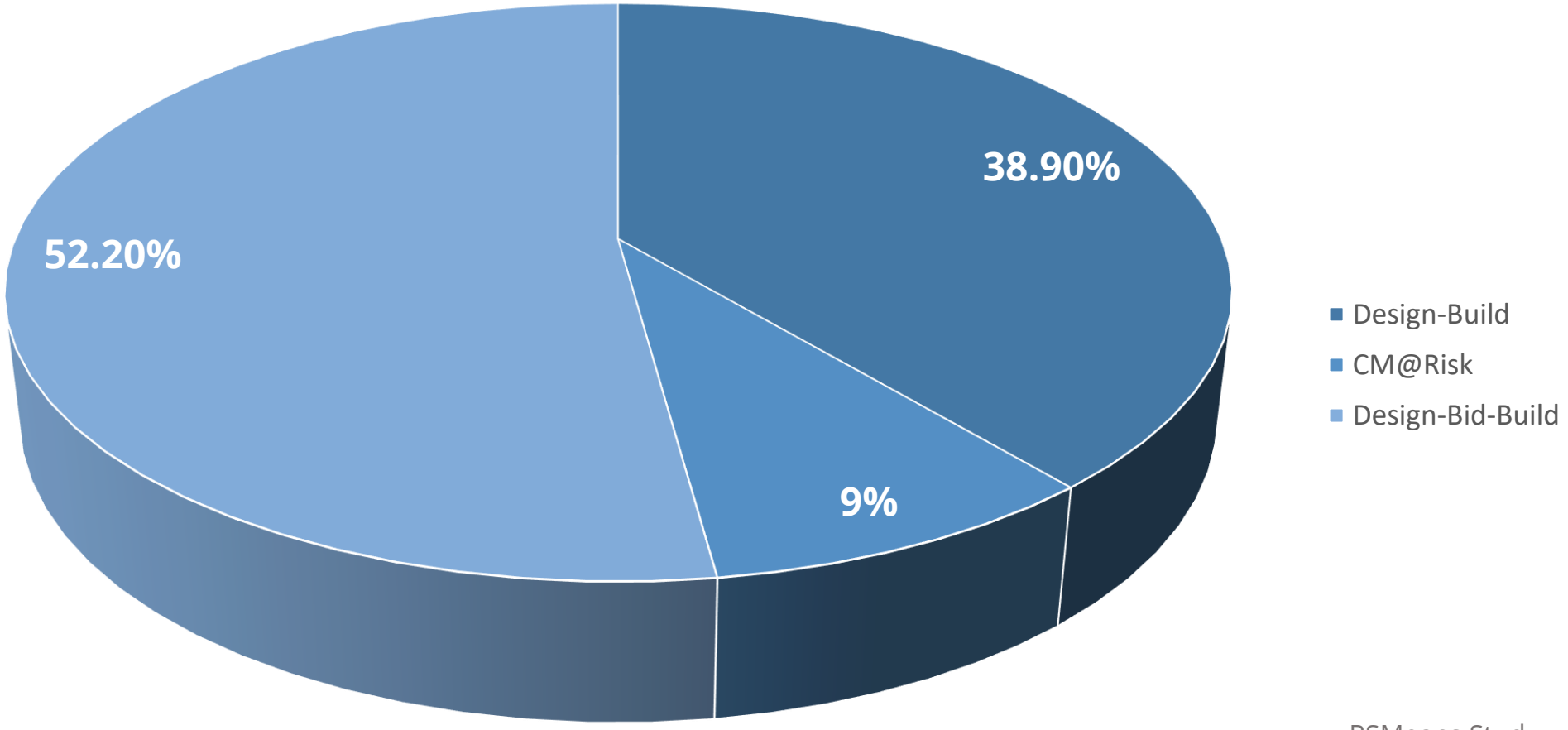


PROJECT DELIVERY METHOD MARKET SHARE FOR NON-RESIDENTIAL CONSTRUCTION

Source: http://www.designbuilddoneright.com/research-finds-continued-growth-of-design-build-throughout-united-states/

WHO USES DESIGN-BUILD

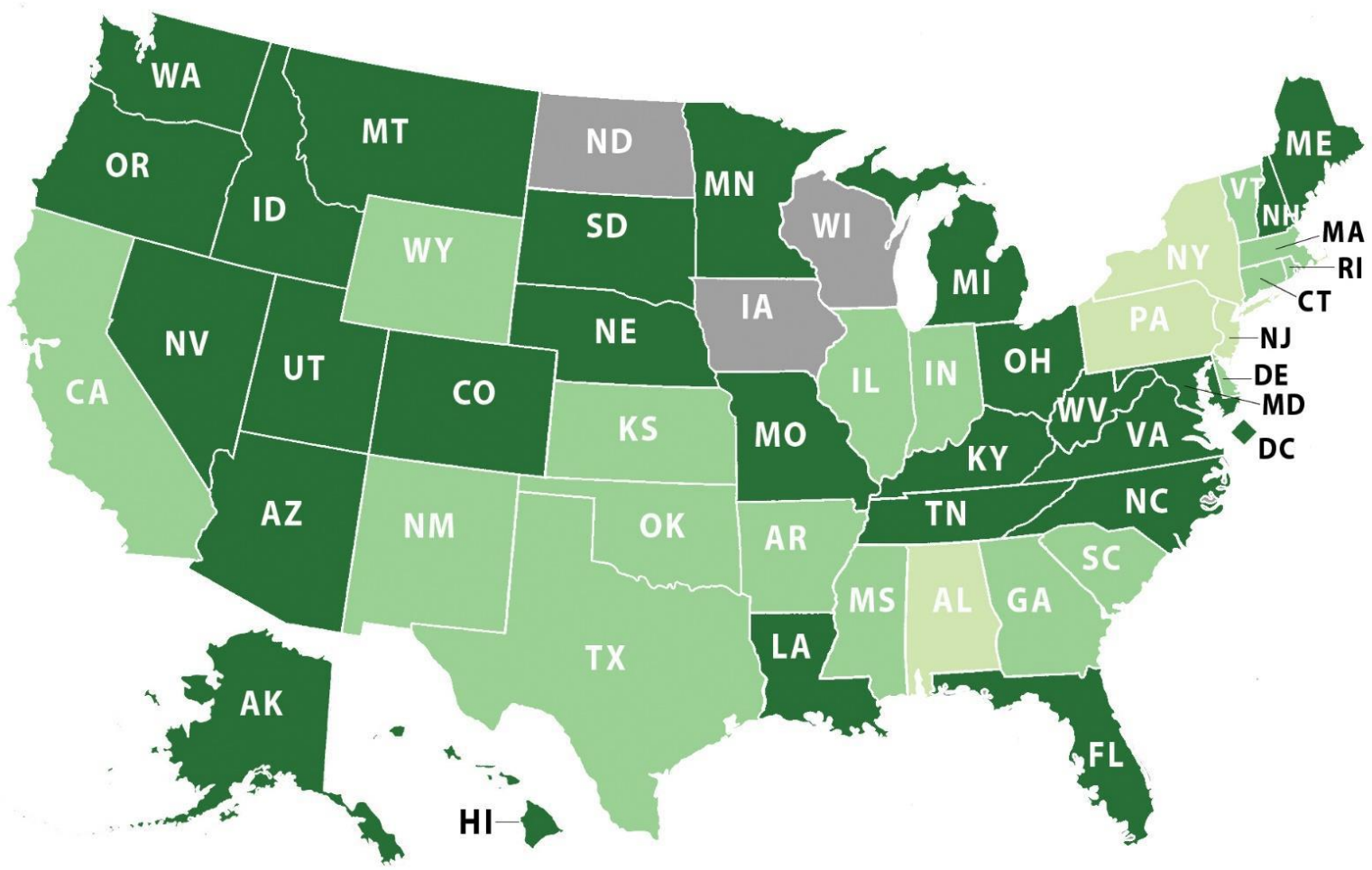
PROJECT DELIVERY MARKET SHARE FOR NON-RESIDENTIAL CONSTRUCTION BIDS FOR 2013



RSMeans Study

2017

Design-Build State Authorization

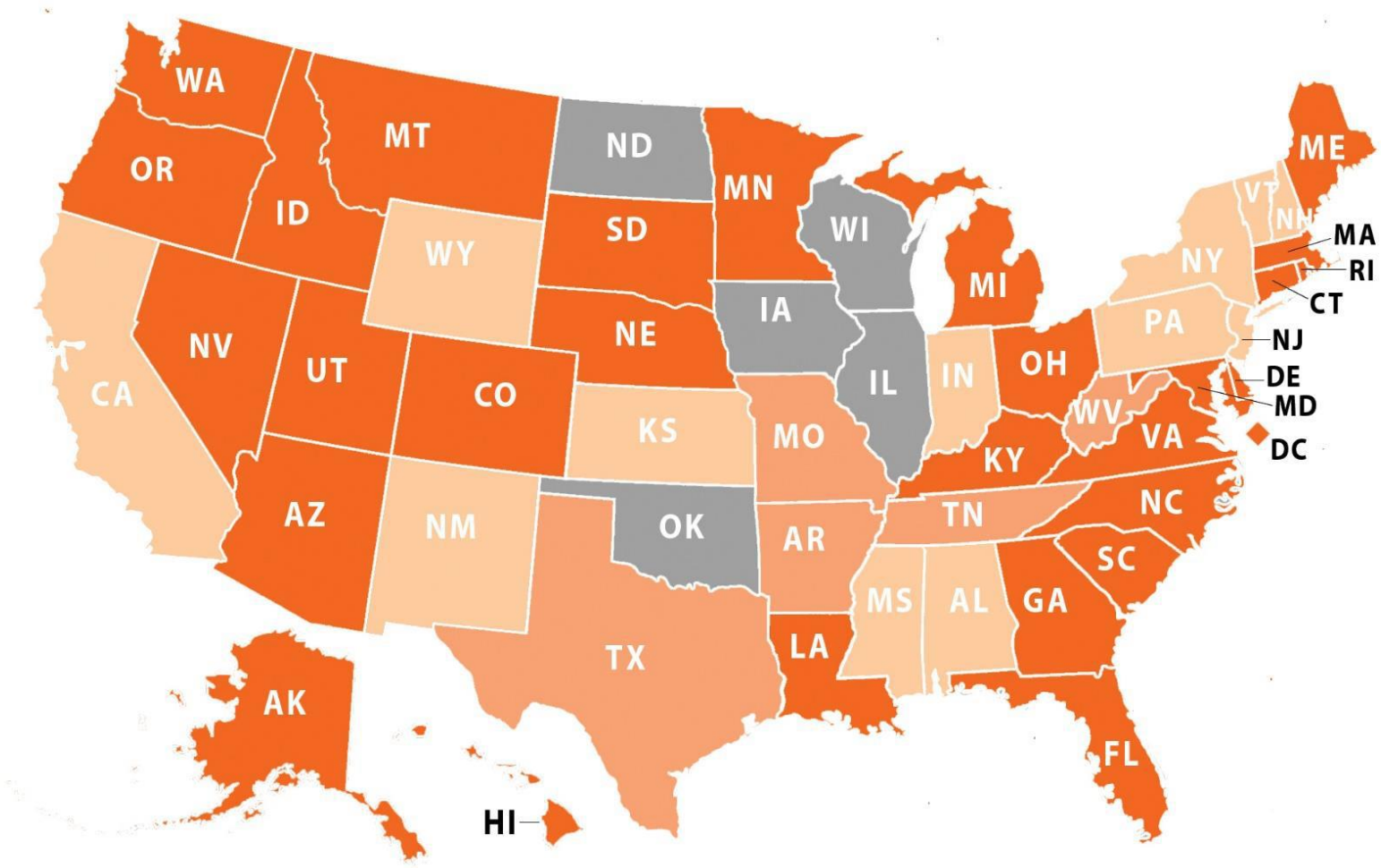


- Design-build is limited to one political subdivision, agency or project
- Design-build is a limited option
- Design-build is widely permitted
- Design-build is permitted by all agencies for all types of design and construction

As of August 2017

2017

Design-Build Authorization for Transportation



Design-build is not specifically authorized

Design-build is widely permitted

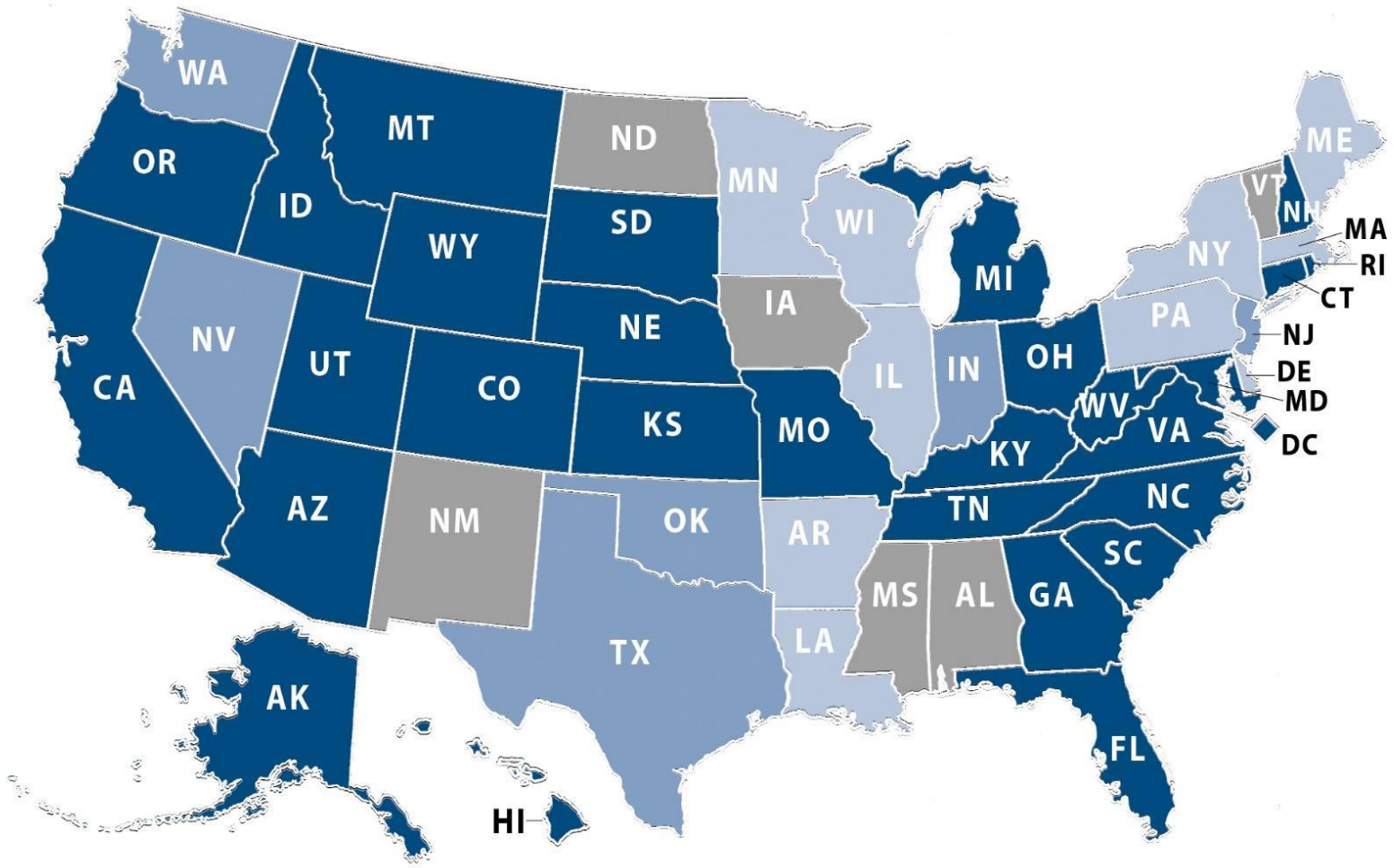
Design-build is authorized with certain limitations

Design-build is fully authorized

As of October 2017

2017

States Granting Local Design-Build Authorization



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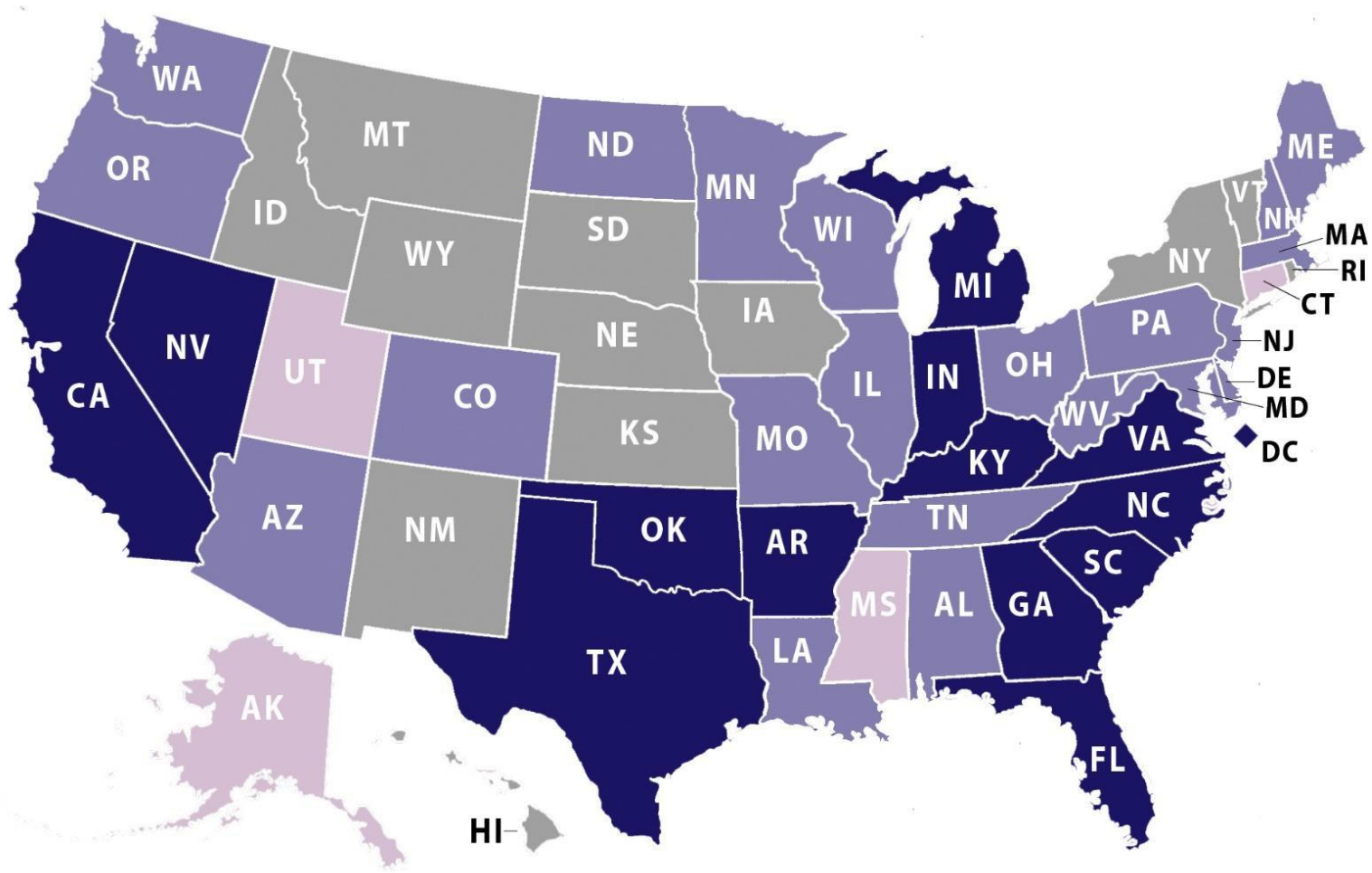
As of October 2017

2017

Public-Private Partnership (P3) State Laws



P3s are not authorized

P3s are limited or project specific

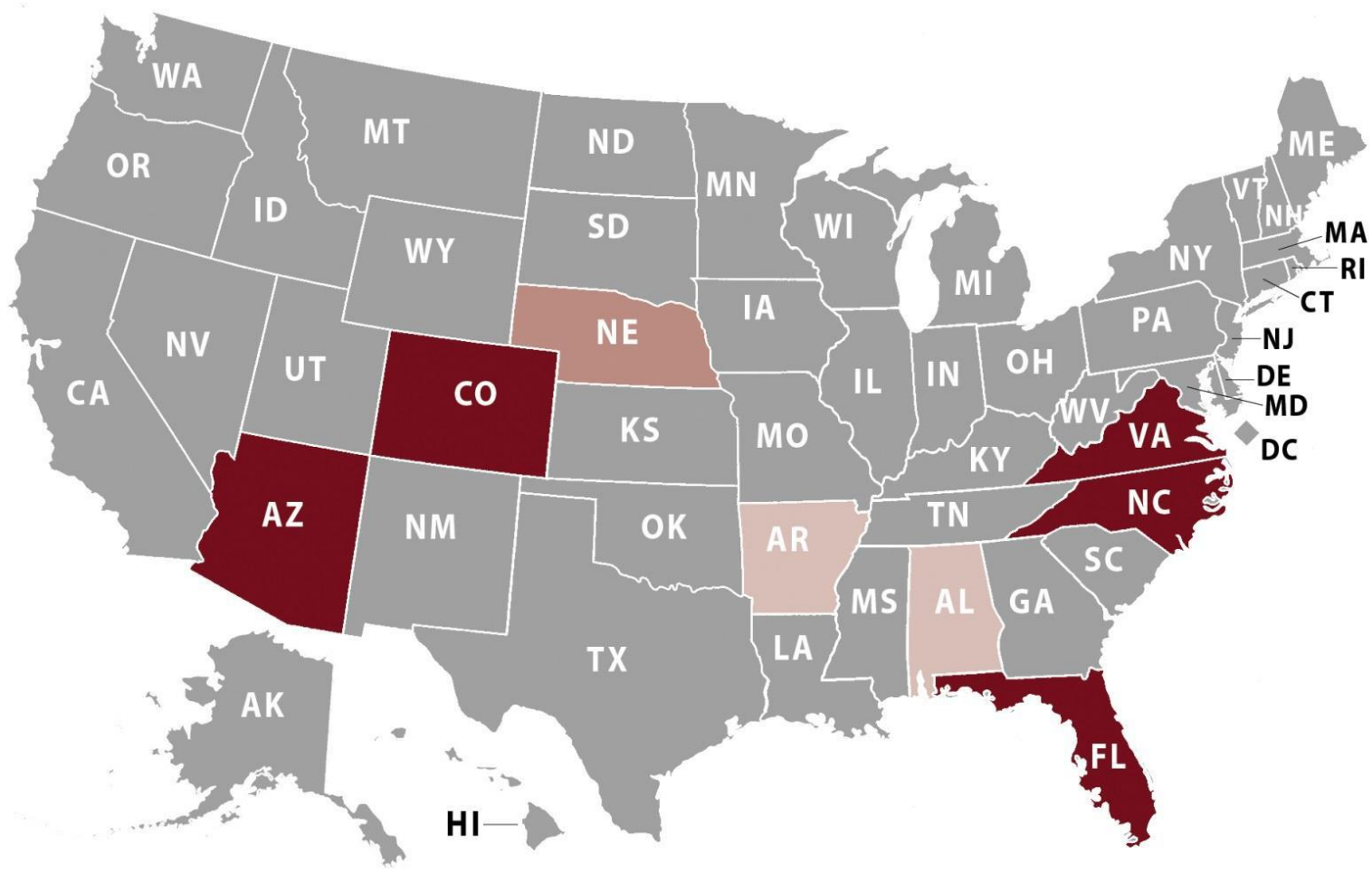
P3s are authorized in one primary sector

P3s are widely authorized

As of August 2017

2017

States With Design-Build Qualifications Based Selection



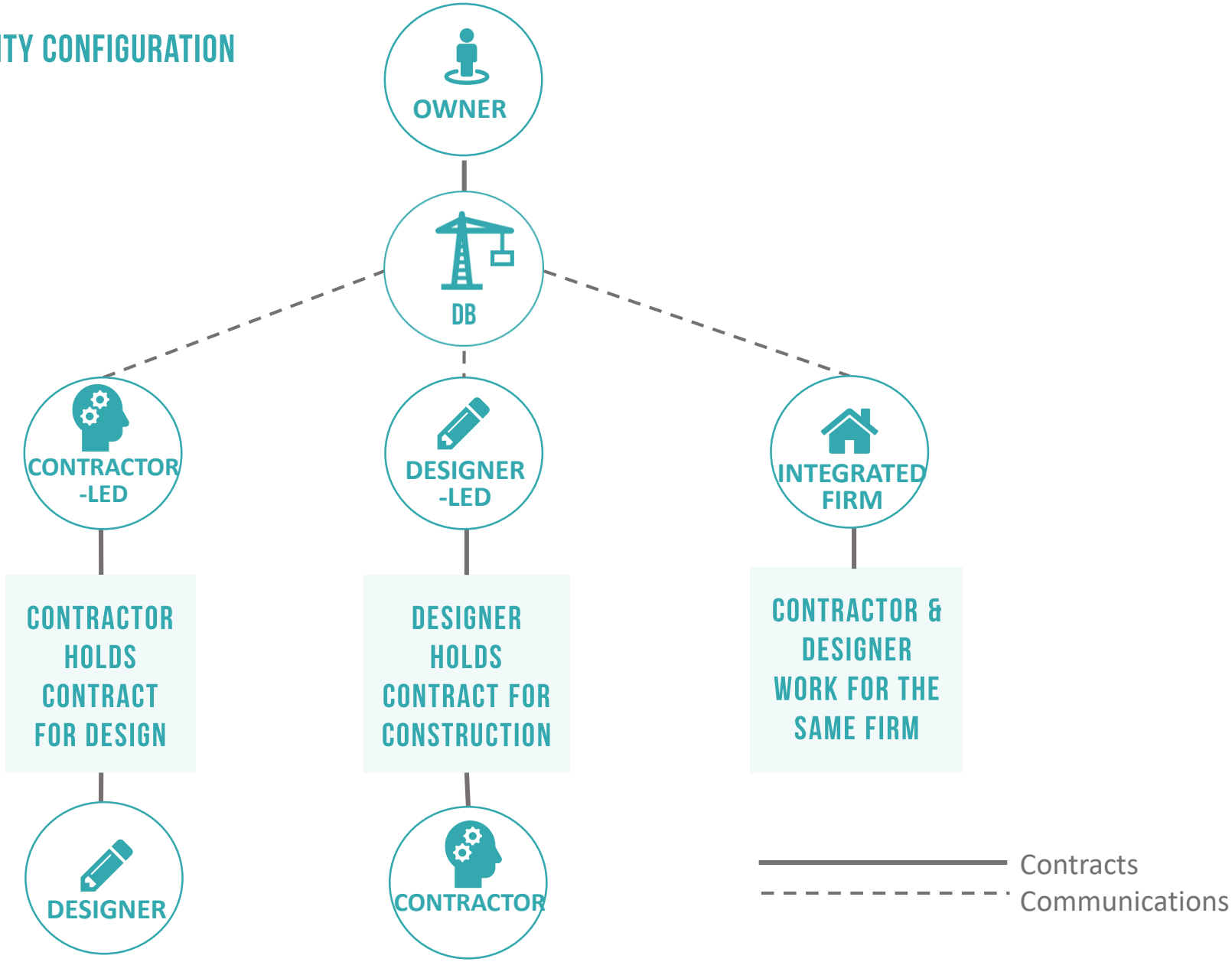
- Qualifications-based selection is not authorized
- Qualifications-based selection is authorized with certain limitations
- Qualifications-based selection is limited to one specific agency
- Qualifications-based selection is widely permitted

As of January 2017

HOW A DESIGN-BUILD ENTITY IS SELECTED

INTRODUCTION TO DESIGN-BUILD

DESIGN-BUILD ENTITY CONFIGURATION



PROCUREMENT DEFINITIONS

REQUEST FOR QUALIFICATIONS

RFQ

The document issued by the owner prior to an RFP that typically describes the project in enough detail to let potential proposers determine if they wish to compete; and forms the basis for requesting Qualifications Submissions in a "two phase" or shortlisting process.

QUALIFICATIONS SUBMISSION

A written submission by interested design-build offerors used by an owner for prequalification of shortlisting.

PRE-QUALIFICATION

The process in which an owner, based upon financial, management and other qualitative data, determines whether a firm is fundamentally qualified to compete for a certain project or class of projects (Pre-qualification should be distinguished from shortlisting).

TWO-PHASE SELECTION PROCESS

A procurement process in which the first phase consists of shortlisting and the second phase consists of preparation and submission of complete design-build proposals are evaluated.

SHORTLISTING

Narrowing the field of offerors through the selection of the most qualified proposers on basis of qualifications.

REQUEST FOR PROPOSALS

RFP

The document that describes the procurement process, forms the basis for final proposals, and may potentially become an element in the contract.

PROCUREMENT DEFINITIONS

CRITERIA PACKAGE

The facility program, design criteria, performance specifications and other project-specific technical material sufficient to provide the basis for best value proposals.

PERFORMANCE SPECIFICATIONS

A specification expressed in terms of an expected outcome or acceptable performance standard.

PRESCRIPTIVE SPECIFICATIONS

The traditional method of specifying materials or techniques found in design-bid-build documents. The range of acceptable products, manufacturers, and techniques, to be adhered to by the builder is stipulated in detail.

TWO-STEP PROPOSAL

Any selection process in which qualitative proposals are submitted separately from price proposals with price proposal remaining sealed until qualitative proposals are evaluated.

MANAGEMENT PROPOSAL

That portion of a design-build proposal which contains the management plan including project approach, personnel, organization, schedule, affirmative action plan, etc.

PRICE PROPOSAL

The portion of a best value proposal which stipulates the price at which the offeror will provide design and construction of the project.

PROCUREMENT DEFINITIONS

TECHNICAL PROPOSAL/ DESIGN PROPOSAL

That portion of a design-build proposal which contains design factors, usually including function, layout, materials, aesthetics and specifications.

BEST VALUE

Also known as “greatest value,” any selection process in which proposals contain both price and qualitative components, and award is based upon a combination of price and qualitative considerations.

DELIVERABLES

The drawings, specifications commentary, models, etc., prepared by the offeror in response to a Request for Proposal.

WEIGHTED CRITERIA PROCESS

A form of best value selection in which maximum point values are pre-established for qualitative and price components, and award is based upon high total points earned by the proposers from both components.

STIPEND (OR HONORARIUM)

A stated amount sometimes paid to unsuccessful offerors in consideration of preparing a design-build proposal.

DESIGN EXCELLENCE

Meeting the owner’s needs and functional requirements while harnessing innovation and creativity.

SOURCE SELECTION

MOST COMMON COMPETITIVE PROCUREMENT CHOICES ARE:

DIRECT SELECTION/
QUALIFICATION
BASED SELECTION

COMPETITIVE
NEGOTIATION

COST/DESIGN
COMPETITIONS
(BEST VALUE)

COST COMPETITIONS

DIRECT SELECTION/QUALIFICATIONS BASED SELECTION (QBS)

- Design-Build Experience
- Past Performance/Reputation
- Financial Strength
- **Team!** – Qualifications of Individual Team Members
- Evidence of Design and Construction Excellence
- Other Technical and Managerial Qualifications

DIRECT SELECTION

A negotiated selection process in which the design-builder is identified and selected by the owner most often on the basis of prior experience, and contract scope, terms, and price reached through negotiation.

QUALIFICATIONS-BASED SELECTION

A form of selection based upon qualifications of the offeror for the project, selection being followed by negotiation to determine contract cost.

COMPETITIVE NEGOTIATION

- Technical and Managerial Qualifications
- Preliminary Design Solutions
- Fees, Budgets
- Personnel
- Schedule

COST/DESIGN COMPETITIONS (BEST VALUE)

- Qualified Shortlist
- Deliverables Include a Qualified Proposal and Firm Price
- Selection based upon “Best Value”

ADJUSTED LOW BID

A form of best value selection.

FIXED PRICE/BEST DESIGN

A form of best value selection in which contract price is established by the owner and stated in the RFP. Design proposals and management plan are evaluated and scored, with award going to the firm offering the best qualitative proposal for the established price.

VENTURA COUNTY MEDICAL CENTER

COLLABORATIVE PLAN REVIEW WITH OSHPD

- 230,000 SF
- LEED for Healthcare
- Design Excellence
- Alignment of Goals and Expectations:
  - A healing environment welcoming to patients and community
  - Operational efficiency and sustainability
- Expedited design and construction schedule from program

COST COMPETITIONS

- Highly Detailed Design Concepts
- Eliminates Innovation of Design-Build Team
- Award Based on Low Bidder

BRIDGING/DRAW-BUILD

1) Design-build process utilizing criteria package and best value selection
2) Process in which a criteria professional completes design to such an advanced stage that the design-builder's role is limited to completion of construction documents, and construction; the design-builder is selected on the basis of price.

EQUIVALENT DESIGN/LOW BID

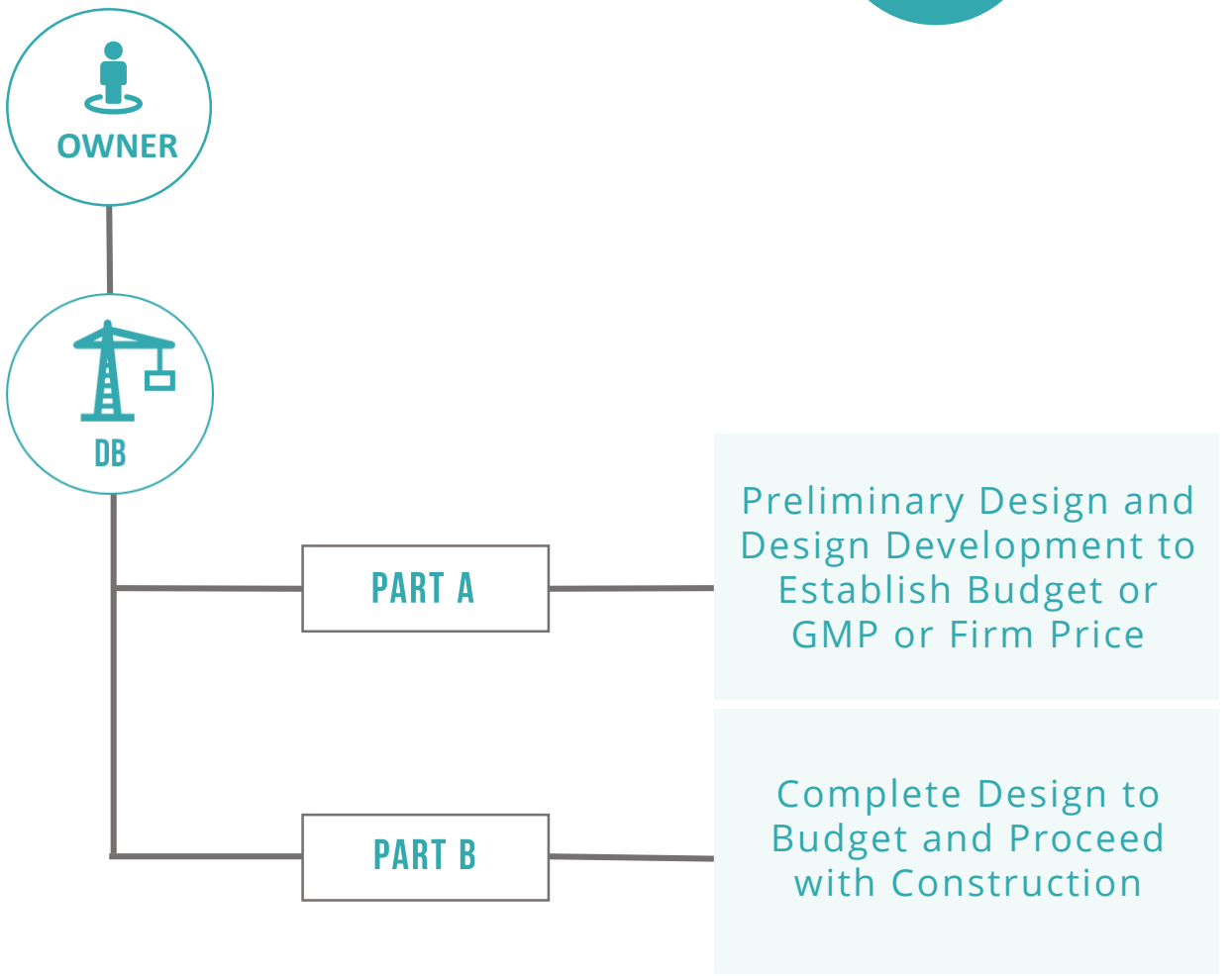
Form of best value selection in which technical proposals are by critique rather than scoring. Award is made on basis of lowest price because the proposal critique creates equivalency of designs.

TECHNICAL LEVELING

A part of the Equivalent Design to create technical equivalency across all proposals.

PROGRESSIVE DESIGN-BUILD

- Hybrid Version of the QBS Method
- Design-Builder Selected on Qualifications
- Design-Builder and the Client Enter into a Two-Part Contract that is Implemented in Stages



DESIGN-BUILD DONE RIGHT: BEST PRACTICES

- Owners should consider the level of effort required by the proposers and limit the deliverables to only those needed to differentiate among the proposers.
- Owners should develop reasonable budgets when determining a fixed price.
- Minimize prescriptive/maximize performance requirements to allow innovation and creativity of the design builder.
- Procurement process that focuses heavily on qualifications rather than price—reward teams on their demonstrated history of collaboration.
- Shortlisting provides the best opportunity to obtain high quality competition.
- Owners should offer a reasonable stipend when the proposal preparation requires a significant level of effort.
- Two Phased Selection Process: Limit the technical requirement to the second phase where the list of proposers has been reduced.

Document based on input from DBIA members & AEC industry
https://www.dbia.org/resource-center/Pages/Best-Practices.aspx

DESIGN-BUILD DONE RIGHT: BEST PRACTICES

1. POSITION PAPERS

- Sustainability
- Federal, State and Municipal “Lowest Price Technically Acceptable” Procurement
- Design Excellence
- Principles of Best Value Selection
- Qualification of Best Value Selection
- Organization of the Design-Build Entity
- Use of Stipends
- Integrated Project Delivery
- Progressive Design-Build *(coming soon)*

Position Papers found at https://www.dbia.org/resource-center/Pages/Best-Practices.aspx

2. RESEARCH REPORTS

Research Reports found at https://www.dbia.org/resource-center/Pages/Research.aspx

TYPES OF CONTRACTS

INTRODUCTION TO DESIGN-BUILD

WHAT TYPES OF CONTRACTS ARE USED?

MOST COMMON CONTRACT FORMS:

Two-Part Contract
(Negotiated Procurements, Progressive Design-Build)

Single-Part Contract
(Best Value)

Design Build Operate Maintain
(DBOM)

CAVEATS: CAUTION FOR THE OWNER

INTRODUCTION TO DESIGN-BUILD

CAVEATS: CAUTION FOR THE OWNER

COMPLEXITY OF THE PROCESS

- Experienced personnel to administer the process

CONVERTING OWNER NEEDS TO PERFORMANCE BASED LANGUAGE

- Design criteria package
- Approach provides flexibility and fixes responsibility

POTENTIAL FOR CONFLICTING INTEREST

- Minimize/eliminate through best practices
- Reputation and integrity of the Design-Build team

STRUCTURING APPROPRIATE REWARDS

- Fees/Incentives to reward increased value and greater risk

FINAL THOUGHTS

INTRODUCTION TO DESIGN-BUILD

FINAL THOUGHTS

- Owners should do a thorough assessment and consider the project goals and objectives, constraints and limitations, and other impacts prior to selecting a project delivery model.
- Overall success of a project directly correlates with the quality of the acquisition planning and appropriateness of the source selection and the procurement model.
- The Owner should determine their level of involvement when deciding which delivery model suits them best.
- Acquiring Design-Build services require proper preparation and an effective strategy.
- The key to a successful Design-Build project is an Owner who can allow the Design-Build team flexibility and creativity.

CONTACT US

MICHAEL MEREDITH

OWNER'S COUNCIL DIRECTOR

Design-Build Institute of America
Western Pacific Region Board

MICHAEL.MEREDITH@DGS.CA.GOV

Capital Outlay Program Manager
Department of General Services
Project Management &
Development Branch

BARBARA WAGNER

BOARD MEMBER

Design-Build Institute of America
Western Pacific Region Board

BARBARA.WAGNER@CLARKCONSTRUCTION.COM

(714) 427-2843 (DIRECT)

Senior Vice President
Clark Construction Group
Western Region
Healthcare Executive

ANY QUESTIONS?

DESIGN-BUILD DEFINITIONS

INTRODUCTION TO DESIGN-BUILD

ADJUSTED LOW BID

A form of best value selection.

BEST VALUE

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BRIDGING/DRAW-BUILD

1) Design-build process utilizing criteria package and best value selection
2) Process in which a criteria professional completes design to such an advanced stage that the design-builder’s role is limited to completion of construction documents, and construction; the design-builder is selected on the basis of price.

CRITERIA PACKAGE

The facility program, design criteria, performance specifications and other project-specific technical material sufficient to provide the basis for best value proposals.

CRITERIA PROFESSIONAL

A design professional who develops the criteria package.

DELIVERABLES

The drawings, specifications commentary, models, etc., prepared by the offeror in response to a Request for Proposal.

DESIGN-BID-BUILD

"Traditional" project delivery approach where the owner commissions an architect or engineer to prepare drawings and specifications under a design services contract, and separately contracts for construction, by engaging a contractor through competitive bidding or negotiation.

DESIGN-BUILD

The system of contracting under which one entity performs both architecture/engineering and construction under a single contract with the owner. Also known as "design-contract" or "single responsibility."

DESIGN-BUILDER

The entity contractually responsible for delivering the project design and construction.

DIRECT SELECTION

A negotiated selection process in which the design-builder is identified and selected by the owner most often on the basis of prior experience, and contract scope, terms, and price reached through negotiation.

DRAW-BUILD

A variation of the design-build process in which a criteria professional develops documentation to such an advanced stage that the design-builder's deign role is reduced to preparation of detailed working drawings and specifications.

EQUIVALENT DESIGN/LOW BID

Form of best value selection in which technical proposals are by critique rather than scoring. Award is made on basis of lowest price because the proposal critique creates equivalency of designs.

FAST TRACK CONSTRUCTION

Any process in which design and construction activities overlap.

FIXED PRICE/BEST DESIGN

A form of best value selection in which contract price is established by the owner and stated in the RFP. Design proposals and management plan are evaluated and scored, with award going to the firm offering the best qualitative proposal for the established price.

MANAGEMENT PROPOSAL

That portion of a design-build proposal which contains the management plan including project approach, personnel, organization, schedule, affirmative action plan, etc.

OWNER

The entity for which the project is being designed and built and with whom the design-builder will be in privity of contract.

OWNER'S CONSULTANT

A consultant/consulting firm that is employed or engaged by an owner to organize and administer the design-build selection process. Is often the criteria professional who develops the facility program, performance specifications and other RFP components.

PERFORMANCE SPECIFICATIONS

A specification expressed in terms of an expected outcome or acceptable performance standard.

PRE-QUALIFICATION

The process in which an owner, based upon financial, management and other qualitative data, determines whether a firm is fundamentally qualified to compete for a certain project or class of projects (Pre-qualification should be distinguished from shortlisting).

PRESCRIPTIVE SPECIFICATIONS

The traditional method of specifying materials or techniques found in design-bid-build documents. The range of acceptable products, manufacturers, and techniques, to be adhered to by the builder is stipulated in detail.

PRICE PROPOSAL

The portion of a best value proposal which stipulates the price at which the offeror will provide design and construction of the project.

QUALIFICATIONS-BASED SELECTION/ NEGOTIATED SELECTION

A form of selection based upon qualifications of the offeror for the project.

QUALIFICATIONS SUBMISSION

A written submission by interested design-build offerors used by an owner for prequalification of shortlisting.

QUALITATIVE

As applied to a proposal, the non-price factors that characterize an offeror or its proposal.

REQUEST FOR PROPOSALS

RFP

The document that describes the procurement process, forms the basis for final proposals, and may potentially become an element in the contract.

REQUEST FOR QUALIFICATIONS

RFQ

The document issued by the owner prior to an RFP that typically describes the project in enough detail to let potential proposers determine if they wish to compete; and forms the basis for requesting Qualifications Submissions in a "two phase" or shortlisting process.

SHORTLISTING

Narrowing the field of offerors through the selection of the most qualified proposers on basis of qualifications.

STIPEND (OR HONORARIUM)

A stated amount sometimes paid to unsuccessful offerors in consideration of preparing a design-build proposal.

TECHNICAL LEVELING

A part of the Equivalent Design to create technical equivalency across all proposals.

TECHNICAL PROPOSAL/ DESIGN PROPOSAL

That portion of a design-build proposal which contains design factors, usually including function, layout, materials, aesthetics and specifications.

TURNKEY

1) A blanket term for single responsibility of design-build
2) A variation of design-build in which the design-builder also provides real estate services which may include land purchase and interim financing.

TWO-PHASE SELECTION PROCESS

A procurement process in which the first phase consists of shortlisting and the second phase consists of preparation and submission of complete design-build proposals are evaluated.

TWO-STEP PROPOSAL

Any selection process in which qualitative proposals are submitted separately from price proposals with price proposal remaining sealed until qualitative proposals are evaluated.

VALUE ENGINEERING

A procedure, integral to design-build, in which the design-builder, through an investment in additional architectural and engineering design, reduces price or increases scope, or both, enhancing value by determining the most cost-effective means of achieving the owner's objectives.

WEIGHTED CRITERIA PROCESS

A form of best value selection in which maximum point values are pre-established for qualitative and price components, and award is based upon high total points earned by the proposers from both components.