

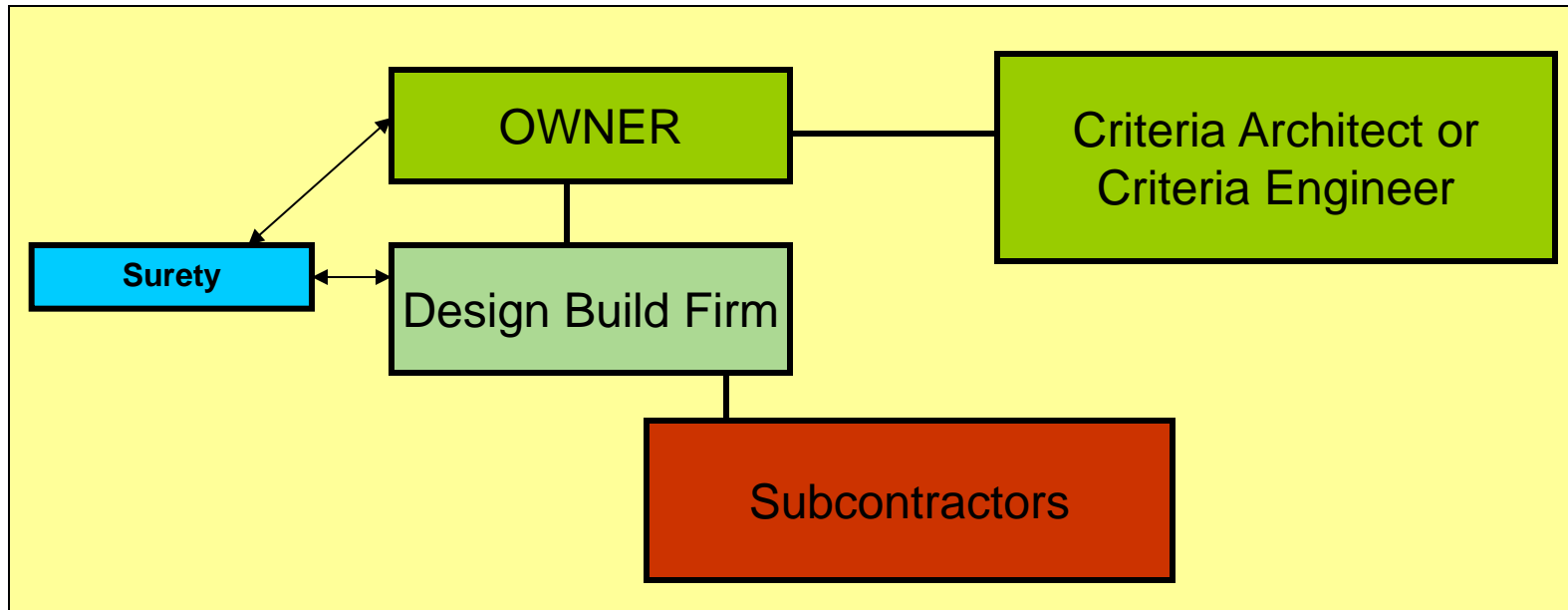
Design/Build in a Treatment Plant Setting

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Design-Build Model



Design-Build

Benefits

- Single Point of Responsibility (Risk Mgmt.)
 - If there are any problems with design or construction, the owner can look to the design-builder to correct the problem
 - The owner is not caught in the middle of disputes between contractors
 - The owner is not caught in the middle of disputes between the architect and contractors

Design-Build

Benefits

- Speed of Delivery
- Good Match for Some Projects
 - Especially with clear performance standards, easily defined and measured
 - Aesthetics less important

Design-Build

Benefits

- Other
 - Greater collaboration between designer and builder throughout the project should lead to:
 - More accurate budgeting during project design
 - Fewer change orders during project construction

Design-Build

Risks

- Cost
 - Fees (overhead & profit) charged by design builders are traditionally greater than fees charged by contractors, construction managers and architects
- Control
 - Owner will not be in direct contract with the individual architect and trade contractors so all communications and directives need to run through the design-builder
- Quality
 - Owner may need independent monitor

Design-Build

Risks

- Permitting Problems
 - Tension between early detail needed for PTI and desire to let design/builder actually design.

Step One

- Public authority must engage a criteria architect or engineer to assist in process
 - QBS process
 - May use an employee of the public authority

Selecting the Design-Builder

- Request for Qualifications
- Request for Proposals

Design-Build Firm Selection Process: RFQ

- General description of the project
- Advertise for as many days as you wish

Design-Build Firm Selection Process: RFQ

- The RFQ may also request information on:
 - Competence of DB to perform services
 - Workload and availability of key employees
 - Past performance
 - Financial ability to perform project, bonding
 - History of meeting inclusion and diversity goals
 - Other qualifications that are consistent with the scope and needs of the project

Design-Build Firm Selection Process: RFQ

- Selection Coordinator (new reqm't.)
- Evaluation Committee:
 - Composition is at public entity's discretion
 - Other advisors and consultants can be involved as nonvoting members
 - Usually about five members

Design-Build Firm Selection Process: RFQ

- Upon receipt of the responses, evaluation committee shall:
 - Select no fewer than 3 firms
- Exception: Can determine in writing that fewer than 3 qualified DB firms are available

RFP

- Sent to the short-listed firms
- Ask for:
 - Pricing proposal
 - Technical proposal
- Stipend optional

RFP

■ Project Information:

- The design criteria produced by the criteria architect or engineer
- A preliminary project schedule
- A description of any pre-construction services and the proposed design services
- A description of a guaranteed maximum price elements, including the estimated level of design on which it is based, and
- The contract (lock in the terms)

RFP

- Pricing Proposal:
 - Design services fee
 - Preconstruction fee
 - Design-build services fee
 - General conditions
 - Contingency
 - If applicable, **Guaranteed Maximum Price**

RFP

- Technical Proposal:
 - Proposed project schedule
 - Approach to the work, including any anticipated self-performed work
 - Work sequence
 - Plan for anticipated difficulties
 - Design concepts

RFP

- Technical Proposal (continued):
 - List of key personnel and consultants for the project
 - Plan to meet diversity and inclusion goals

RFP

- Interviews
 - Purpose is to clarify and respond to questions regarding the proposals

RFP

- Public Authority's Selection Requirements
 - Performance proposal shall be evaluated separately from the pricing proposal (score).
 - Rank the DB firms

Now What?

- Enter into Contract with the DB firm whose pricing and technical proposal the public authority determines to be the “best value.”
- One Part Contract: if GMP is in proposal.
- Two Part Contract: if no GMP yet.

Now What?

- Design/Builder publicly bids subcontracts and prays the project comes in under the GMP.

Lessons Learned

- \$28 million WWTP upgrade and expansion
- \$8.5 million CSO Elimination (60-in. TBM)
 - 2500 l.f.
 - 21 months from RFQ to finish
- \$22 million WWTP

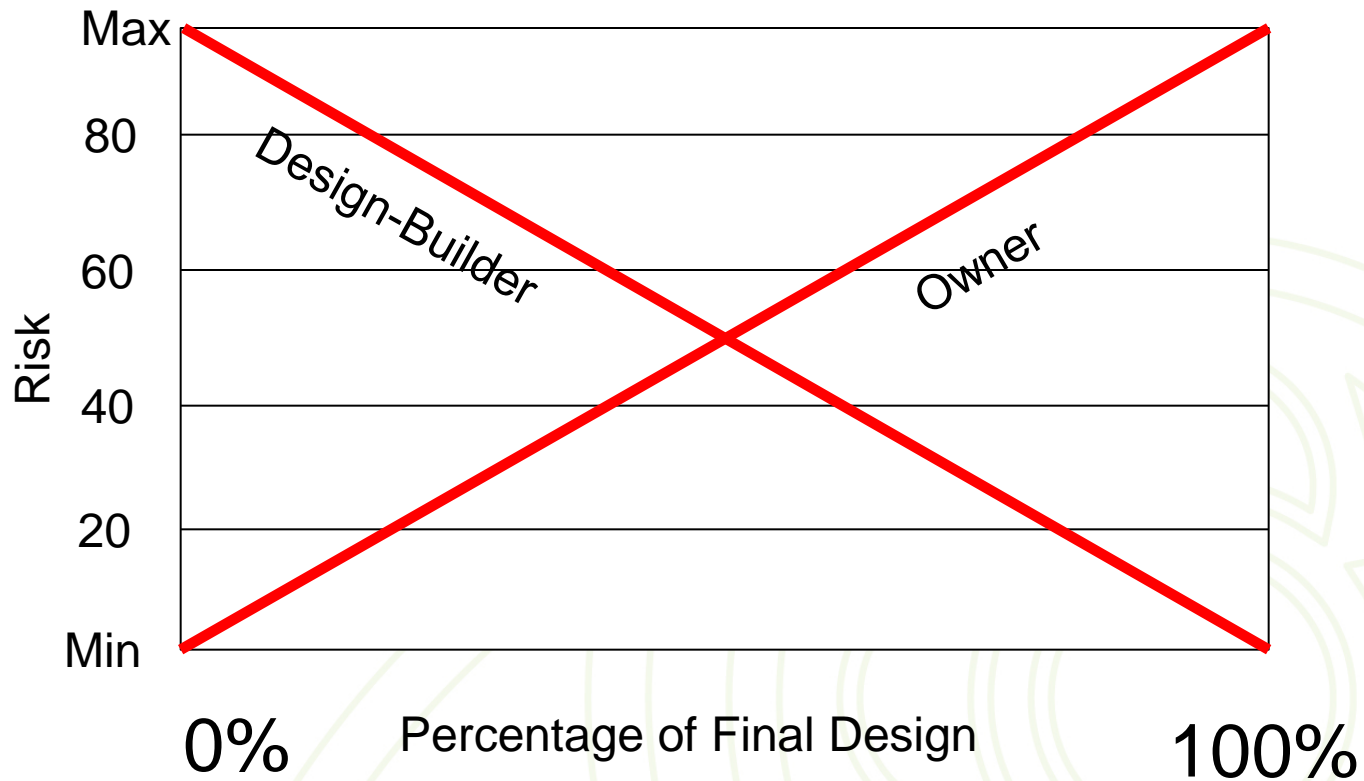
When to Get the GMP?

- With Proposals or after more design?
- GMP submitted with proposals:
 - Has occurred frequently in first two years of CR
 - Requires a relatively complete design
- GMP submitted after selection of DB:
 - 50% to 100% complete documents
 - DB has greater familiarity with project before providing a GMP

Problems with Owner Overdesigning

- Prescriptive design v. performance design
 - More detail = Less creativity by DB and more liability for owner
 - Less detail does not mean less control over design
- Owners are beginning to see benefit of performance design criteria

Early Detail v. Risk



Shared Savings

- When $GMP > \text{Actual Cost} + \text{Fees} + \text{GCs}$
- All over the map:
 - 50% – 50%
 - 60% – 40%
 - 80% - 20%
 - Owner keeps 100%

Joint Ventures

- Many design-build projects are performed by joint ventures that are formed solely for the design-build project and dissolve when the project is complete
- If there are problems after the project is complete, the owner may have limited remedies and recourse to correct those problems
- This issue can be addressed with proper contract language

Other Considerations

- Consider stipends to candidates
- Additional role for criteria engineer
- GMP, what GMP?
 - Still have cost risks e.g. differing site conditions

Questions?

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