Design-Build (DB) Considerations for Project Team

(DSC Project Manager/Project Specialist (PM/PS) & Architect/Engineer (A/E) Teams)

National Park Service (NPS) - Denver Service Center (DSC) | 6-13-22

*On this document:*

[DB Basics](#_Design-Build_(DB)_Basics)

[DB Comparison with DBB](#_Design-Build_(DB)_Comparison)

[Considerations for PD, SD, RFP for Design Project Teams](#_Considerations_for_Predesign,)

[Conclusion](#_Conclusion)

# Design-Build (DB) Basics

* A DB Project Contract is a Construction Contract.
* Initial costs of a DB Contract may be higher than a Design-Bid-Build (DBB) Contract. This is not a secret….it is simply a known issue when evaluating construction contracting methods.
* The DB contracting method **may** save time, and it may not.
* The analogy of Time, Cost, and Quality, combined with Risk, defines the critical components that need to be defined, communicated, and understood by the Project Team.
* DB and DBB are just two of multiple types of methods for contracting and performing work. It is critical to identify consistent contracting process and procedures that coincide with Government laws and regulations.
* DB seeks to maximize design flexibility and to facilitate innovation which requires controls over specifics be lessened. Ultimately, if the project can be broken into phases, it is feasible to start construction before the next design phase is completed. This is a simple aspect of DB focus in the construction industry. It is not all inclusive, nor is it a requirement. It is simply pointed out in case it speaks to a specific project.
* Trust is a necessity. DB projects can succeed and fail because of lack of trust. Trust will be gained by defining procedures, Park needs, and defining what is known, what is not known, what is expected.
* Complexity of work is a key component in defining the needs. (Complexity meaning historical significance, location restrictions, access and significance of location influence, visitor impact, etc.) Complexity can either tilt a project towards a DB process for innovation, or away from the DB process due to risk.

# Design-Build (DB) Comparison with Design-Bid-Build (DBB)

* Evaluation of scope and needs is the first step, and a process, that has to occur before a project contracting approach is discussed. The scope and needs are what factor into the risk evaluation process for determining if DB is an option. **This is the Predesign (PD) and Schematic Design (SD) part of the project.**
* In the NPS process, PD/SD serves to define scope and identify concerns and issues that can affect time and cost; minimize risk of cost and time overage; identify fatal flaws in approach. PD/SD exists for both DBB and DB projects.
* Scoping and initial Park interaction is the same for any project. Establishment of “needs”, is critical in any project. Once those pieces are understood, the decision to pursue a project as a DB can be made. Project management restrictions are still required, regardless of the Contracting method. Limits of work, staging, parking, stockpiling, Contracting Officer trailer, salvage, access, working and holiday hours, public access, hazardous materials, sole sources, historical preservation, conservation and wetlands, compliance issues, all need to be addressed in the Request for Proposal (RFP). These are the same issues that apply for any project but they need to be addressed prior to the RFP so the DB Construction Contractor can bid the project.
* Regardless of project approach, Scope is the most important part of the work. Identifying knowns and unknowns, expectations, and limitations for the project are the backbone of the work.
  + The NPS system currently provides the framework for this to occur in both DB and DBB. A/E contracts seek to identify the issues.

# Considerations for Predesign (PD), Schematic Design (SD), Request for Proposal (RFP) for Design Project Teams

* **Scope** is critical. The “three-legged stool” discussion applies: Time, Cost, Quality. Ultimately one of these must be the defined as the focus. The Park and the DSC must decide who, and what, controls the primary needs of the work as the scope is determined.
* **PD is a necessary phase.** It provides the first boundaries of the project and seeks to define the scope. This time should be spent working together with the project team and the Park as well as the existing conditions. This phase is the same for all projects in NPS.
* **SD is a necessary phase.** It takes the comprehensive information from the first phase, the comments information that was underway and not completed, and combines the information to identify next steps in refining the scope, identifying unknowns, continuation of working with the park on refining the impacts and minimizing visitor impact if possible, and providing further investigation. This phase may take iterations…or months to complete. This phase is the same for all projects in NPS.
* **Compliance is an issue in itself and is an integral part of both PD and SD.** This aspect of NPS work needs to be remembered and is one of several of the primary investigations for all projects. Compliance can greatly affect timing, cost, and legality of projects.
* **Permitting is an issue in itself and is also an integral part of both PD and SD.** This aspect of NPS work needs to be a part of every project as it can greatly impact time, cost, and legality for all projects.
* **The PD and SD phases can lead to additional investigation, revised budgets, scoping and funding issues/appropriating, Park coordination changes, etc.** If these issues are manageable withing funding and timing, the RFP can be generated.
* **The RFP, as a document, is simply a scaled down version of the standard NPS DSC Division 1 Specifications requirements as well as a similarly scaled down version of a design scope of services.**
  + The RFP can be used combined with the standard Division 1 Specifications, or portions thereof, to create the solicitation documents.
  + Simply delete lines that are covered in the Division 1 Specifications or refer to the Division 1 Specifications sections included in the solicitation.
* **Information from the PD, SD, and RFP investigations can be included in the solicitation for Construction Contractor reference in the solicitation.** Generally, this information is provided as appendices. The goal of the solicitation is to provide the proper information to define the proper scope, within the estimate. All of this is done in the NPS environment, understanding that these projects support one-of-a-kind locations and facilities that belong to the United States of America.
* **The NPS DSC Workflows website provides the information which essentially provide the guardrails for all design and construction within NPS.**
* **Project teams need to remember that all design is performed outside of NPS.** With this in mind, there may be what is known as a Title 3 Contract that will perform much of the support services and approval/acceptance for design items. This information is not a secret...it is simply a statement of how the DSC performs work. With this in mind, the RFP and supporting documentation that makes up the DB solicitation, is simply the start of a project. There are many steps after the DB contract has been awarded. This simple paragraph may also clarify some mental questions about how the project progresses. There will be circumstances where specific material/process/equipment is needed and will be part of the RFP. There will also be circumstances where there are not a lot of specific restrictions on the project. The review of the submittals is a critical portion of the work and the PD and SD A/E team generally may be considered for providing this service.
* **As a general topic, please consider that most documentation and information within NPS DSC Workflows is designed as a start, for editing, as they are intended for all projects within the NPS portfolio which includes the United States, territories, and overseas.**

# Conclusion

* Using DB as a Contracting method is not very complicated. It is simply a method for performing a project.
* The entire project team needs to embrace and understand the environment and expectations for the project, which are essentially the same for both DB and DBB.
* NPS has a system in place. There are key inclusions and revisions that can be made after process and requirements are defined.