



Town of Payson
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MEMORANDUM

DATE: February 2, 2007

TO: Mayor Bob Edwards
Town Council Member
Fred Carpenter, Town Manager

FROM: LaRon Garrett 
Public Works Engineer

SUBJECT: C. C. Cragin Water Resource Development Project

We are now at the point where a decision needs to be made concerning what method of construction will be used for the C. C. Cragin Water Resource Development Project. For several years there was only the traditional Design-Bid-Build delivery method available to local governments. Today there are four project delivery methods allowed by the Arizona Revised Statutes. They are:

- Design-Bid-Build
- Construction Manager at Risk
- Design-Build
- Job Order Contracting

Each of the available delivery methods have advantages for certain projects. The most used option is still the traditional Design-Bid-Build. However, the other methods are being used more all the time. The Construction Manager at Risk and Design-Build methods use more of a "Team Approach" than the Design-Bid-Build" method. The Town of Payson has used the Design-Bid-Build and Construction Manager at Risk methods previously.

Following is a brief description of each of the delivery methods:

DESIGN-BID-BUILD

In this method the Owner contracts with a design firm to prepare the design plans and specifications. The design firm can be either selected directly or through a “Qualifications Based Selection” process. When that contract is complete, the owner then uses the prepared plans to bid the project. Normally the lowest bid is selected and the owner enters into a contract with that low bidder to construct the project in accordance with the plans. The contract price is normally a lump sum or a bid-cost per item.

CONSTRUCTION MANAGER AT RISK

In this method the Owner has a contract with a design firm and a construction manager simultaneously. The design firm can be either selected directly or through a “Qualifications Based Selection” process and the construction manager is selected through a “Qualifications Based Selection” process. Once the design firm and construction manager are selected, the owner negotiates a scope and fee with each. These negotiations can include a pre-construction phase and a construction phase. If multiple phases are included, a separate contract must be negotiated for each phase. Having the design professional and construction manager on board at the beginning of the project is beneficial in having a design that is easily constructable and cost efficient. The fee for the construction manager is normally an “open book” guaranteed maximum price.

DESIGN BUILD

In this method the Owner has a contract with a design-build firm. The design-build firm is selected through a “Qualifications Based Selection” process. Once the design-build firm is selected, the owner negotiates a scope and fee. These negotiations can include a pre-construction phase and a construction phase. If multiple phases are included, a separate contract must be negotiated for each phase. The design-build firm assembles the design and construction team to work with the owner through the design and construction process. The fee for the design build can either be an “open book” guaranteed maximum price or a lump sum.

JOB ORDER CONTRACTING

Job Order Contracting is basically designed to simplify the award of multiple small projects without having to bid each one separately. It really is not appropriate for a project such as the C. C. Cragin Water Resource Development Project. Therefore, it will not be discussed here.

Traditionally, a design firm designed the project in a vacuum under the direction of the owner. Also, contractors wanted 100% complete plans before they would bid a project. Then the contractor would make the construction fit in the field. On a lot of projects, this approach works just fine. However, on the more complex projects it is very helpful to have input from all three entities involved, the owner, designer and contractor, up front.

Benefits of the Team Approach to Design and Construction include the following:

- Establishment of common goals and objectives at the beginning of the project.
- Increased value for each dollar spent.
- Shorter project schedules.

- Improved construction quality.
- Improved service response to owner.
- Reduced number of change orders the owner is responsible to pay.
- Fewer Warranty Issues.
- Fewer Legal Entanglements.

In any all of the above project delivery methods the Town will be provided with the typical bid, performance and payment bonds as required the Arizona Revised Statutes.

The Town is now beginning the NEPA process to determine the environmental issues involved in transporting water from Washington Park to Payson. The exact route and transport method have not been determined at this time. However, we do know that the transport system will include a major pipeline and water treatment system. Due to the complexity of the C. C. Cragin Water Resource Development Project, it is appropriate to use an alternative project delivery method. Staff is currently evaluating whether the Design-Build or Construction Manager at Risk delivery method will be most beneficial to the Town of Payson.