



Ellis County Bond Oversight Committee
August 20, 2007

Construction Delivery System
Analysis & Recommendation

The 77th Legislature through Senate Bill No.510 authorized Governmental Entities to utilize several different methods for procurement of "vertical" construction contracts, (Local Government Code, Section 252.021, 71.113., Procurement Procedures). The passage of this bill made several new construction delivery systems available to Governmental Entities. This bill dramatically changed the construction delivery process from the old "hard bid" method to a variety of different delivery systems. The following is a list of the delivery systems available for counties to use;

- (a) *In entering into a contract for the construction of a facility, a governmental entity may use any of the following methods that provides the best value for the governmental entity;*
- (1) *competitive bidding(design-bid-build);*
 - (2) *competitive sealed proposals for construction services;*
 - (3) *design/build contract*
 - (4) *a contract to construct, rehabilitate, alter, or repair facilities that involves using a construction manager; or*
 - (5) *A job order contract for the minor repair, rehabilitation, or alteration of a facility.*

A Governmental Entity may utilize any of the stated methods the Governmental Entity deems to provide the **best value**. Section 71.113. Procurement Procedures does state that:

".....in determining to whom to award a contract, the governmental entity may consider;

- (1) *the purchase price;*
- (2) *the reputation of the vendor and of the vendor's goods or services;*
- (3) *the quality of the vendor's goods and services;*
- (4) *the extent to which the goods or services meet the governmental entity needs;*
- (5) *the vendor's past relationship with the governmental entity;*
- (6) *the impact of the ability of the governmental entity to comply with laws and rules relating to historically underutilized businesses;*
- (7) *the total long-term cost to the governmental entity to acquire the vendor's goods or services; and*
- (8) *any other relevant factor specifically listed in the request for bids or proposals."*

There is no single "best" method to deliver construction. Every delivery system has certain advantages and disadvantages depending on project variables. The following variables were used to determine which delivery system provides the best value and is best suited for Ellis County's bond project(s);

Schedule – Fast track, normal, phased, multiple projects at once

Scope – small addition, small interior remodel, total interior gut and renovation, phased demolition & remodel, addition & remodel, total new construction on existing site, or total new construction on new site with full site development package.

Size - \$25,000.00 - \$50,000,000.00, small interior remodel to new multi-story building.

Package – single project, multiple projects of different type and/or size, or multiple prototype.

The construction and design industry currently recognizes five project delivery methods. These methods principally differ in three ways;

- The number of contracts held by the governmental entity;
- Assistance by the contractor in the design phase; and
- Governmental entity participation in subcontract awards

The five delivery methods are:

- (1) Competitive Bidding
- (2) Competitive Sealed Proposals
- (3) Design/Build
- (4) Construction Manager
- (5) Job Ordering Contracting

Construction Delivery Systems

Competitive Bidding

Definition - Competitive bidding is a delivery method wherein the Governmental entity selects the Architect/Engineer to design the project. Once construction documents are fully complete, the Governmental entity request lump sum prices from general contractors to perform the work. Selection is based on the lowest price submittal and award is made to a single contractor.

This delivery method is best known as the “traditional” method and is the method with which most public agencies are historically most familiar with.

Delivery schedule is in three linear phases resulting in the longest time duration;

- Design
- Bid
- Construct

Advantages

- Lowest price possible

Disadvantages

- No design phase assistance from the contractor
- Longer schedule duration than other methods
- Price not established until bidding is complete
- Lack of flexibility for change (design/construction documents must be perfect)
- Sets up adversarial relationships
- The disadvantages of this delivery system are the reason why the state passed Senate Bill 510 to allow other construction delivery systems.

This delivery system is best suited for new construction projects that are not cost or schedule sensitive nor subject to change.

Competitive Sealed Proposals

Definition - Competitive Sealed Proposal is a delivery method similar to competitive bidding in that the governmental entity selects an Architect/Engineer to design the project. Once construction documents are fully completed, the Governmental entity solicits proposals from contractors to perform the work. Selection is generally based on a combination of price and other factors that the Governmental entity deems in its interest, such as project team personnel, schedule, contractor's past experience, etc.

This delivery method is similar to competitive bidding, but this delivery method allows flexibility to select a contractor on a basis of specific selection criteria which includes other factors other than price.

Delivery schedule is in three linear phases resulting in longer time duration than other methods;

- Design
- Select
- Construct

Advantages

- Contractor selection flexibility

Disadvantages

- No design phase assistance from the contractor
- Longer schedule duration than other methods
- Price not established until bidding is complete
- Lack of flexibility for change (design/construction documents must be perfect)
- Sets up adversarial relationships
- The disadvantages of this delivery system are the reason Senate Bill 510 allows other construction delivery systems.

This delivery system is best suited for new construction projects that are not cost or schedule sensitive nor subject to change.

Construction Management-at-Risk

Definition – Construction Management-at-Risk is a delivery method wherein the Construction Manager-at-Risk serves as the General Contractor assuming the risk of the construction guaranteed price and provides design phase consultation in evaluating cost, schedule, implications of alternative designs and systems and materials during and after design of the facility. Selection is based on criteria that combine qualifications, experience, and may involve fee and general conditions.

The CM-at-Risk contracts directly with the trades or subcontractors and has a single point of responsibility for the delivery of the project. The CM-at-Risk is normally selected at the same time, or shortly after the Architect/Engineer and provides assistance in evaluating cost, scheduling and constructability. The CM-at-Risk provides a Guaranteed Maximum Price (GMP) to fix the cost and competitively bids proposals from the trades contractors. The owner can speed construction by starting elements of the construction prior to the design being complete.

Delivery schedule is in three non-linear phases resulting in a shorter duration than any other method;

- Select/Design
- Construct

Advantages

- Contractor selection flexibility
- Design phase assistance
- Single point of responsibility for construction
- Team concept
- Faster schedule delivery
- Provides flexibility for change
- Eliminates adversarial relationships

Disadvantages

- Potential adversarial relationship with A/E. (*The Staubach Company is in place to mitigate this potential disadvantage*)

This delivery system is best suited for new construction or renovation projects that are cost sensitive, schedule sensitive, and subject to change.

Construction Management, Agency

Definition – Construction Management, Agency is a delivery method wherein the Construction Manager serves as an Agent for the Governmental entity providing administration and management services in lieu of a General Contractor. The CM, Agent provides design phase assistance, but holds no subcontracts nor provides project bonding for the construction. Selection is based on qualifications and experience.

The Construction Manager, Agent is characterized by the work divided into multiple packages and bid directly to the trades. The Governmental entity holds all trade contracts and the CM acts as the Governmental entity's agent in the management and direction of the work. The CM, Agent is normally selected at the same time as the Architect/Engineer or shortly thereafter and provides assistance in the design phase for cost, schedule, and constructability. This delivery system has been available to counties since September, 2001.

Delivery schedule is in four non-linear phases;

- Select/Design
- Bid/Construct

Advantages

- Selection flexibility
- Design phase assistance

Disadvantages

- No single point of responsibility
- No guaranteed price
- Governmental entity must manage all sub-contracts
- Governmental entity assumes all risk

This delivery system is best suited for minor new construction projects or renovation projects that are not cost sensitive, schedule sensitive, or subject to change.

Design/Build

Definition – Design/Build is a delivery method where a single entity is contracted to provide both design and construction. The Design/Build team consists of a builder, architect and engineer. The Design/Builder contracts directly with the subcontractors and is responsible for delivery of the project. Selection is based on a proposal offering the best value to the Governmental entity.

This method requires the governmental entity to be more knowledgeable and very closely involved with the process. The key component to success with this delivery system is a high degree of trust between the Governmental entity, Contractors, and Architect/Engineers.

Delivery schedule is in two non-linear phases;

- Select
- Design/Construct

Advantages

- Selection flexibility
- Single point of responsibility

Disadvantages

- Loss of financial check and balance
- More difficult to manage
- Potential adversarial relationship between the Governmental entity and the Design/Builder

This delivery system is best suited for minor new construction projects or renovation projects that are not cost sensitive, schedule sensitive, or subject to change.

Job Order Contracts

Definition – Job Order Contracting is a process of contracting for the minor construction, rehabilitation or maintenance type work on a facility when the work is of a recurring nature but the delivery times, type and quantities of work required are indefinite. Orders are priced based substantially upon pre-defined and pre-priced task contained in a Governmental entity specified Unit Price Book. The prime contractor bids a “coefficient” or multiplier which is applied to these unit prices to determine the actual rates. Selection is based on the combination of experience, qualifications, past performance, technical ability, financial stability, reputation, and price which provide the overall “best value”.

This method involves a long term partnering relationship between the Governmental entity and the JOC contractor. The projects are accomplished by the issuance of individual delivery orders. Fast response is possible because of the reduced up-front administrative and design requirements.

Delivery schedule consist of two non-linear phases;

- Joint Planning: determination of the scope of work, design and permit requirements, construction details, and applicable unit prices and quantities to produce a fixed price lump sum delivery
- Execution: design, construction, demolition, repair, replacement, alteration, renovation

Advantages

- Potentially fast response
- Reduced changes since scope of task is typically small

Disadvantages

- Requires high degree of trust and teamwork
- Not suited for large construction projects or medium projects that require two or more trades
- Requires a highly trained staff in house to manage
- Places risk with the Governmental entity

This delivery system is best suited for minor construction, repair or maintenance projects.

Recommendation

The Staubach Company and Ellis County's Engineer have reviewed all the delivery systems afforded by the State of Texas for governmental entities to deliver construction. The comparison of the delivery system was based on the following criteria;

- Size and scope of projects in Ellis County's Bond Program
- Schedule of projects in Ellis County's Bond Program
- Best Value for the Governmental entity
- Minimize risk to the Governmental entity
- Historically successful delivery system for other governmental entities with comparable project size and scope

After diligent comparison and consideration, The Staubach Company recommends Construction Management-at-Risk delivery system.

The CM at Risk provides a single point of responsibility for construction while providing consultation during the design phase. The CM at Risk is normally selected at the same time as the architect/engineer or shortly thereafter and provides assistance in evaluating cost, recommends sequencing and scheduling of the work, evaluates the implications of alternative designs, systems and materials. The CM at Risk provides the governmental entity either a Guaranteed Maximum Price (GMP) to fix the cost and competitively bids trades and subcontractors. The CM at Risk can accelerate the schedule by starting components of the work while the design is being completed.

Advantages of this delivery system include;

- Flexibility in selecting the construction manager that provides the Governmental entity the best value.
- Assistance during the design phase in evaluating costs, recommending sequencing and phasing of the construction schedule and evaluating alternative designs, systems and materials.
- The Governmental entity has a single contractor responsible for construction.
- The roles of the construction manager and architect/engineer are clearly defined and there is a working team relationship in the design phase.
- Starting certain components of the work before design is complete can shorten the project schedule.
- Scope changes can be made easier offering the Governmental entity greater flexibility.
- The Governmental entity has check and balance between the architect/engineer and the construction manager.
- The GMP can be established earlier.
- The Construction Manager assumes the risk of the construction cost, process and timely completion.

The traditional disadvantages of this delivery system are:

- Potential adversarial relationship between the architect/engineer and the contractor.

The Staubach Company's experience with team delivery concept and CM at Risk delivery system eliminates the disadvantages of this delivery system for the Governmental entity. The Staubach Company will act as an additional set of eyes and ears for the Owner during the entire process. This will provide accountability to the Owner from the Architect/Engineer Team and the Construction Manager that is typically not found in the CM at Risk delivery system.

Procurement

The procurement process for the CM at Risk can be a single step or a two-step process. The Staubach Company recommends the two-step process. The first step is the Request for Qualifications from which the Governmental entity would qualify the potential proposers. The second step is the request for proposals. The Governmental entity's advertisement must clearly state the selection criteria and the Governmental entity must evaluate and rank all proposals against the published criteria. Some Governmental entities, after evaluating the proposals elect to interview a select number of firms proposing to gain a more comprehensive awareness of their capabilities. From these interviews, the final selection is made.

Request for Proposal

The Request for Proposals should contain the following:

- A description of the project, the submission requirements and the selection process schedule.
- A questionnaire to be completed by the prospective Construction Managers. The questionnaire should be based on the AIA Contractor's Qualification Statement (A305) with additional questions related to construction management at risk and the special requirements of the project. A request of fees and general conditions is optional.

Selection Criteria

The Governmental entity should use the following criteria when considering information submitted in response to the Request for Proposals by prospective construction managers:

- Experience
- Governmental entity's Needs
- Cost Issues, Fees
- Organization
- Licensing
- Financial Information
- Personnel
- References

Schedule

The Staubach Company feels that the Construction manager can provide the best value when selected at the start of the design. Selection should be concurrent with the selection of the Architect/Engineer or shortly thereafter. Early involvement enables confirmation of budgets and schedule realities that can avoid revisions, rework and lost time.

Fee and General Conditions

Construction Management fees are individually stated for pre-construction and construction services and will vary based on the size, complexity and duration of the project. Fees for pre-construction services are normally a stipulated sum. Fees for construction services are normally started as a percentage of the work and include overhead, profit and home office labor and expenses.

General conditions normally include items such as equipment, job trailer, bonds, insurance, utilities, etc. and on-site field management and administrative personnel.

Contingency

The Staubach Company recommends two contingency funds. A contingency in the construction manager's guaranteed maximum cost to cover unanticipated costs, which might arise during construction. The second contingency should be in the total project budget for use by the Governmental entity to address issues regarding changes in scope. The Staubach Company will monitor these contingencies on behalf of the Owner and will not allow monies to be spent without prior approval from Ellis County.

Guaranteed Maximum Price (GMP)

A GMP is the amount that the CM at Risk guarantees (the sum of the Cost of Work and the construction manager's fee,) he will not exceed. This maximum is subject to additions and deductions due to changes in scope of work. All cost which exceeds the GMP and are not approved by change order is paid by the CM at Risk.

A GMP should be established when the design is sufficiently complete. The GMP may be established as early as completion of design development drawings or as late as completed construction documents. The Staubach Company will require the construction manager to establish a series of GMP's as the construction documents progress and become more defined.

Subcontractor Pre-Qualification and Bidding

The Construction Manager at Risk is responsible for developing subcontractor interest in the project and determining prior to receipt of bids, the qualifications of the subcontractors to perform the work. The construction manager should evaluate the subcontractor's experience and technical competence, capability to perform, financial strength, personnel, past performance and other factors as appropriate to determine qualifications. The Governmental entity and architect/engineer should have the opportunity to object to any subcontractor or supplier.

When the drawings and specifications are sufficiently complete, the construction manager will publicly advertise and solicit competitive bids from subcontractors and suppliers. Bids must be received and opened by the Construction Manager and the Governmental entity. The Construction Manager at Risk and the Governmental entity then determine with advice of the architect/engineer which bids will be accepted.

Project Savings

If at the completion of the project, the actual cost of the work plus the construction manager's fee is less than the GMP as adjusted by change order, savings will result. The Staubach Company recommends that 100% of the savings be returned to the Governmental entity.