

## Attachments for Reference:

1. Design Estimating Process
2. Scheduling Process Goals and Definition of Project Team Roles

## *Design Estimating Process*

### Design Estimates (r4)

#### **What is a Design Estimate?**

- A Design Estimate is a Major Projects "opinion of cost" for INSIDE DESIGN / INSIDE CONSTRUCTION Projects based on the best information that we have at the time.
- It is a service that is provided only after an actual Project has been created.
- It evolves over time with new information.

#### **What is the purpose?**

- To inform the customer of expected costs at the earliest possible time according to the best information available at the time.
- To better prepare Scheduling for potential man-hour requirements of Projects that are not fully designed or funded.

#### **How do we do it?**

- Steve Claar will be the point of contact for Design Estimating within our office.
- A formal scoping meeting will be held for each project requiring this service. The Project Leader, Design Leader, and Estimator will attend.
- A Basis of Design will be developed, agreed upon, and distributed to the above team.
- An estimator will prepare an estimate based on this information that is intended to be plus or minus 30% of actual project costs.
- The estimate will be updated following completion of preliminary drawings. The intent at this point is to produce an estimate that is within plus or minus 20%.
- A validating estimate will be provided following completion of design, and anytime a change in scope occurs.
- A final detailed estimate for construction is provided.
- (An estimate of manpower will be pushed to the schedule at the completion of each phase of the final estimate)
- Design Leader is responsible for communicating any changes to the PE

#### **Who is responsible for coordinating this effort?**

- The Project Leader is responsible for coordination including the following items.
  - Scheduling of initial scoping meeting.
  - Written communication of Basis of Design.
  - Distribution of drawings at 30%, 60% and 90% completion of design.
  - Communication of scope changes.

### **Process: 3/08**

- The Supervisor of Planning and Estimating will request a meeting with the DL's who have been assigned projects meeting the criteria for the current stage of implementation of this service, and provide an overview of the DE process and goals.

(We are currently targeting projects that are inside design / inside construction where the funding is relatively secure, the scope is relatively simple, and where Reno Services is traditionally the contractor. Classroom and office renovations are good examples. This is not to say that other projects will not be considered.)

### **Process 7/08**

- The Manager of Renovation Services will notify the PE Supervisor of projects that have been selected for inside design and inside construction by sending via email the .pdf version of the Project Request. (We are now including all projects with either inside or outside design and inside construction, excluding those that are competitively bid.)
- The PE Supervisor will generate an email requesting the PL to notify the Senior Design Estimating PE of the time and date of the initial scoping meeting.

### **Process 10/08**

- Initial Scoping Meeting Request is now in the form of a "routing slip" email.

# Scheduling Process Goals and Definition of Project Team Roles

## Overall Goals/Benefits

- Improve communication between project team members (internally and externally).
- Gain a better understanding of the project requirements and time frame early on.
- Produce a better project schedule and expectations upfront based on more detailed information.
- Provide a more solid estimate to our customers upfront so decisions can be made earlier reducing the amount of effort that goes into projects that are cancelled because of insufficient funding, etc.
- Get a better picture of the manpower requirements and construction time frame. Enhance our ability to shop load. Allows us to allocate resources for project construction earlier. We will be able to look beyond 3 months so that we can make better decisions as to whether the work can be handled by inside or outside resources and provide input to staffing decisions.
- Project reports on the Riviera web-site keep support personnel (design review, contracts, Area Services) up to date on schedule expectations and impact on their work unit.
- KPMs can be developed from the Primavera schedules without requiring data to be fed to another system to handle KPMs

## Definition of Project Team Roles

### **Project Leader:**

- Set up and hold scoping meeting with:
  - Customer
  - Design Leader
  - Planner/Estimator
- Prepare preliminary schedule in Primavera based on information obtained from scoping meeting.
- Keep project schedules updated weekly to make sure project team members are working with the same schedule expectations.

### **Design Services:**

- Attend scoping meeting, document the original agreed upon scope. Determine number of interim cost estimates required for the project.
- Review preliminary schedule provided by the Project Leader and determine if the design can be completed within the time frame established.
- If the design cannot be completed within time frame given discuss options with the Project Leader and update the project's design completion date in Primavera.
- Assign design staff to complete the design, including any work load leveling with outside resources.
- Provide Project Leader with an estimate of design services costs and statement of target completion date for the design.
- Keep track of and document any scope creep throughout the design process.
- Request/obtain required permits.
- Complete design on time.

### **Planner/Estimator:**

- Attend scoping meeting.
- Prepare scoping estimate in Timberline based on information obtain from scoping meeting and enter into Primavera.
- Do planning in Primavera (ie; 4 techs rather than 2)
- After Scheduling has changed the project status from design estimate to design estimate scheduled, submit estimate and proposed schedule to the Project Leader for approval and funding.

- Update the estimate for each estimate agreed to at the initial scoping meeting, and enter into Primavera.

### **Scheduling:**

- Determine if the construction can be completed within time frame provided by the Planner/Estimator after the design estimate is entered into Primavera for preliminary scheduling.
- If the construction cannot be completed within the time frame provided, discuss options with the Planner/Estimator and Project Leader and revise plan.
- If the construction can be completed within in the time frame provided change the project status from design estimate to design estimate scheduled so that the Planner Estimator can forward the estimate to the Project Leader to obtain customer approval and funding.
- Provide feedback bar from TS Scheduling to the Project Leader's project schedule after each estimate change is entered into Primavera.

### **Internal Forces:**

- Order Materials so that the construction can start when scheduled.
- Provide weekly feedback to Scheduling on materials and manpower requirements and availability.
- Complete project on time.
- Complete close sheet and submit to the Project Leader within 1 week of the project completion.