

## Scheduling and Cost Estimating: From Inception through Project Completion

At IPS, we understand the importance of achieving a quality project with the lowest overall project cost in order to meet your business objectives. From Conceptual Engineering to Construction to Commissioning and Qualification, we keep a tight rein on cost and schedules. Our team utilizes Lean tools and techniques to reduce waste and build value at every opportunity. With today's concentration on creating affordable investment capital budgets, reliable cost forecasts are a vital component of successful project management team.

Our Conceptual Estimating Methodology is a proven method of cost estimating and providing accurate forecasts through project completion. Our clients know exactly what expenses have been incurred to date as well as forecasted costs to project completion. We value the importance of having a defined project plan that defines the execution of the project and satisfies the contractual scope of work. Our "cost-effective" approach includes schedule and plan development; identifying major tasks and roles and then monitoring timely execution. We pride ourselves on the sharing of information, overcoming challenges and enabling decision-making based upon "real-time" information.

Utilizing industry-leading tools such as Prolog, Primavera, Timberline and Microsoft Project, as well as Lean scheduling techniques, we work closely with the entire project team to provide a realistic cost forecast that spans the duration of the entire project life cycle. We keep a constant pulse on market conditions for more realistic pricing and recalibrate our unit pricing based on project location, union vs. non-union labor, complexity of the work environment and scheduling. By verifying and blending our estimated values based upon early-on pre-bidding, we are able to identify issues early and eliminate surprises during the construction phase. In addition, we support value-engineering activities; providing estimated operational and maintenance costs by analyzing life cycle costs, thereby ensuring a cost-efficient facility and maximizing the return on your capital investment.

Our approach with our subject knowledge expertise in construction management, engineering, commissioning and validation has been the cornerstone of our success. For over twenty years, IPS has delivered facilities with the high level of quality that exceeds the contractual expectations *and* the operational functionality required to effectively execute the client's overall project and business objectives.

Our Scheduling and Estimating services include:

### Scheduling

- Conceptual Scheduling
  - Milestone Schedule Activities
- Preliminary Scheduling
  - Proposed Construction
  - Proposed Start-up and Commissioning
- Detailed Construction Scheduling
  - Scope Change Analysis
  - Project Controls collaboration

### Estimating

- Cost Estimating
  - Guaranteed Maximum Estimate ( \$GMP)
  - Lump Sum Estimates
  - Time & Material Estimates
- Conceptual Budgeting
- Bidding / Procurement Support
- Value Engineering and Value Management
- Scope Change Costing and Verification

### Key IPS Value Add

- Results of our Estimating success is reflected in variance of within 10% from Conceptual Estimates to the final GMP Estimates and on average 5% variance on actual as constructed project completion values.
- Owners/Clients rely heavily on our Estimating Capabilities to provide Funding Request Estimates to budget and balance competing projects needs.

