

EMPLOYING EFFICIENT AND COST-EFFECTIVE DELIVERY PRACTICES

Innovative management tools and contracting methods speed completion and control costs.

The OTIA III State Bridge Delivery Program is part of the Oregon Department of Transportation's 10-year, \$3 billion Oregon Transportation Investment Act. OTIA funds are repairing or replacing hundreds of bridges, paving and maintaining city and county roads, improving and expanding interchanges, adding new capacity to Oregon's highway system, and removing freight bottlenecks statewide. Based on 2008 dollars, about 14 family-wage jobs are sustained for every \$1 million spent on transportation construction in Oregon. Each year during the remainder of the OTIA program, we estimate that construction projects will sustain an average of 4,100 family-wage jobs.

Productivity-enhancing tools

- The Oregon Department of Transportation is working to tightly control and reduce design and construction costs for the OTIA III State Bridge Delivery Program.
- Responding to growing inflation in commodity pricing, in 2005 the bridge program's economics team created a Materials Market Forecasting Model that predicts key construction commodity escalation. Using the forecasting tool allows ODOT to perform a cost-risk analysis on bridge bundle contracts—allowing better estimates of construction costs and more concrete budget management. The model achieved 95 percent accuracy in the first year and 98 percent accuracy after the first two years.

Flexible contracting methods

- The bridge program is taking a corridor-based approach to repairing or replacing the bridges.
- Bridge construction projects are grouped in ways that maximize the participation of Oregon contractors. Grouping, or “bundling,” projects expedites construction time and produces economies of scale.
- A “get in, get the job built and get out” approach minimizes the effects that construction work zones can have on traffic flow and commerce.
- The bridge program is using alternative contracting methods to accelerate delivery while controlling costs.
 - › With design-build contracts, design and construction work can overlap under a single, seamless contract. Design-build contractors have the latitude to propose creative solutions that may address current needs, future needs or both. For example, ODOT contractors reused an entire detour bridge at multiple sites instead of building additional temporary structures, an innovative solution made possible by the flexibility of a design-build contract.



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- › In construction manager/general contractor contracts, ODOT, a designer and a builder partner to work on a bridge. The CM/GC method saves time and money because construction can begin before the design is complete. ODOT is using CM/GC for the first time on the Willamette River Bridge project.

Streamlined permitting

- ODOT worked with 11 state and federal regulatory agencies to streamline the environmental permitting process. The streamlined permitting sets environmental performance standards for the bridge program as a whole rather than for each individual bridge. This innovative permitting process helps reduce the program's construction schedule and design costs. As of November 2008, 142 bridges have used the streamlined permitting process and another 69 have initiated permitting or are in the process of being permitted.

