

# I-405 Sepulveda Pass Improvements Project

## Design-Build Fact Sheet



**Metro**



**Currently the largest budget design-build highway project in Southern California, the I-405 Sepulveda Pass Improvements Project breaks the model used to build highways in the state. Rather than using the traditional design-bid-build method, the I-405 project works to deliver a major highway renovation with potentially lower costs and reduced schedule, while maintaining high quality.**

“To be understood, the design-build process should be compared to design-bid-build,” explains Michael Barbour, the project manager for the \$1.034-billion reconfiguration. “Using design-bid-build, you design something, complete the design, send the design to contractors as part of the competitive bid process, and when the contractor’s on board, you build the project as designed.”

The Federal Highway Administration describes the design-build model as “an innovative construction technique that allows a single procurement for the design and construction of projects.”

For residents and businesses neighboring the I-405 project, Barbour sees design-build’s biggest advantage as reducing schedule and giving communities input in elements of the design.

The Community Advisory Committee’s input on the project’s Visual Quality Concept Plan, which includes the landscaping plan and the aesthetics of the reconstructed bridges, sound walls and retaining walls, is one example of this advantage.

From the public’s viewpoint, however, one disadvantage of design-build grows from the fact that construction will begin on one part of the project before design of the entire project is complete. In answering questions from the public, more than one project team member has had to respond, “We’re still defining that.”

Since 1990, however, encouraged by the Federal Highway Administration, some transportation agencies have experimented with design-build, trying to reduce the costs and time required to complete highway projects. (Metro has used the design-build model to construct several of its transit projects.)

Barbour has used the design-build model to construct projects in Iraq, Taiwan, Sacramento, San Diego and Washington State. Those included high-speed rail and airport projects.

“You ask the contractor, who is the builder, to collaborate on the design to streamline the process. The contractor also becomes responsible for the design,” Barbour says.

Because the contractor has the ability to modify the design, the design-build theory expects the contractor to work efficiently and bring its practical knowledge to the process. With fewer surprises awaiting in the design, contractors can more accurately price and schedule the work required to complete the project.

According to the Federal Highway Administration, while the contractor benefits from increased flexibility, the contractor must also assume greater responsibility and risk. In theory, with design and construction performed under the same contract, claims for design errors, delays or other types of claims are greatly reduced.

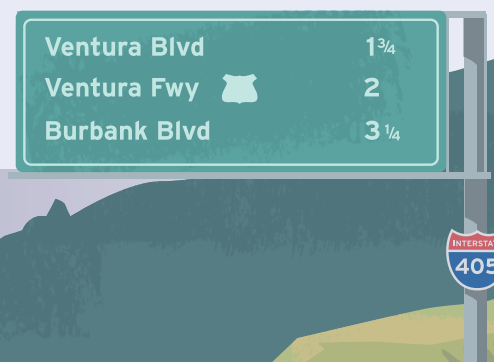
Barbour sees a major misunderstanding of the design-build model, specifically the idea that the contractor has control over everything. “Actually, the contractor has to work within the guidelines of the agency it is working for, in this case, Caltrans,” he points out.

For a project with as tight a schedule as the I-405, he sees the main advantage as speeding the work, but that acceleration can create other problems.

“It’s definitely different because you’ve got design and building at the same time,” Barbour notes. “You’re designing while you obtain permits and approvals from various agencies and procure your materials. I would say it’s more demanding.”

The demands of design-build require a management team able to weigh the contractor’s needs with the requirements of the job, Barbour has learned. “You need a full staff because the project moves so fast,” Barbour says. “You have to be reasonable with the contractor, but you can’t spend too much. Then you have to get it right and build something worthwhile.”

Barbour has found that using the design-build model accelerates the already fluid nature of construction. “The contractor is more cautious because he is designing and building at the same time,” Barbour says. “He has the game plan, but it is open to change. He is adjusting as he goes.”



For questions concerning the construction of the I-405 Sepulveda Pass Improvements Project, please contact the Community Relations team at 213.922.3665 or visit [metro.net/I-405](http://metro.net/I-405).