



### **Rip Ride Rockit tops the list for Universal Studios Orlando**

*First-place winner: Unique Application Submitted by Bliss & Nyitray, Inc., Coral Gables, Fla.*

Rip Ride Rockit is a themed attraction ride realizing the owners need to cross-market Universal Music's brand with Universal Studios' theme park entertainment. Constructed at Universal Studios Orlando in Florida, the project has two main components: a roller coaster with advanced sound, video, and lighting features; and an outdoor concert pavilion. The roller coaster facilities convey the energy, excitement, and attitude appropriate to the music industry, while the performance space evokes a nostalgic note with inspiration from the classic Hollywood Bowl amphitheater. A strict budget was the ultimate control on this project. Remaining in budget and working with the limited site required tight layout programming more evocative of ship design. Visual interest was derived from the direct expression of structure and building shape, not by covering the building with adjunct elaborate facades, show sets, and props.

**What makes this project interesting** — The facilities on this project include very strong architectural features that encourage an immediate emotional connection or response. The most prominent of these features are the roof lines. The owner encouraged an open structure to emphasize tight site restrictions creating a sense of size and space.

**Advantages of the chosen structural system** — The buildings have structural steel roof systems that utilize custom arched open-web joists. Bliss & Nyitray, Inc., was able to get the desired roof shapes, even applying custom rigging loads, while taking advantage of the cost savings afforded by the joist construction. This system allowed the contractor to bring the roof in on budget while maintaining the vision developed by the owner's creative design team.

### **Project team**

*Structural engineer:* Bliss & Nyitray, Inc.

*Owner:* NBC Universal

*Architect:* BRPH Companies

*General contractor:* PCL Construction Services, Inc.

*Steel joist manufacturer:* CMC Joist & Deck

*Steel detailer, fabricator, and erector:* Steel Fabricators, LLC

### **Project details**

*Project construction cost:* \$18 million

*Joist cost, including fabrication and erection:* \$360,000

*Size (square feet):* 22,476

*Roof area using joists (square feet):* 13,000

*Joist area (square feet):* 13,000

*Joist engineering to delivery:* 30 days

*Joist erection:* 30 days

**Please see the November 2009 issue of Structural Engineer for the complete article:**

**<http://www.gostructural.com/toc--.html>**