Customer Success Story

Autodesk Building Solutions

Rendered by CadRender

Burt Hill Kosar Rittelmann Associates

For complex projects with tight deadlines, Burt Hill turns to Autodesk Revit

Building Information Model Drives Smarter Decisions

With Autodesk Revit Burt Hill created a fully coordinated model of the Carnegie Tower project, a major conversion of an aluminum wire factory into 17 stories of high-end condos. Using Autodesk Revit software, they were able to

- Easily import consultants AutoCAD® drawings
- Ensure consistent and accurate information across all project components
- Analyze many different building scenarios for safety, efficiency, and cost-effectiveness
- Generate high-quality demo sets directly from the Revit model
- Spend more time on design instead of on tedious coordination tasks

THE CHALLENGE

Burt Hill Kosar Rittelmann Associates has a tower to convert and redesign. For this complex project they chose Autodesk® Revit® software—the only design application created specifically for building information modeling (BIM). With 340 employees in seven locations and a 65-year history of delivering top-notch architectural and engineering solutions, this multidisciplinary firm was the logical choice for a Philadelphia-area developer who wanted to convert an abandoned aluminum wire factory into 190,000 square feet of high-end condominiums. Revit software simplified and accelerated the task by enabling designers to create a Revit model of the building that significantly increased design accuracy, improved productivity, and helped Burt Hill make smarter business and design decisions.

From Factory to Luxury High-Rise

The Carnegie Tower project involves conversion of existing structure and extensive new construction. Project Coordinator Mike DeOrsey explains, “We’re taking down five floors at the top and adding eight in their place, as well as another at the second level. It’s going to be a 17-story building with an additional 60,000 square feet of added area.”

Industrial-Strength Challenges

Kaiser Aluminum built the original tower to withstand heavy industrial use. “The first two stories are pretty much solid concrete with three-foot-thick walls,” says DeOrsey. To core the building out to meet residential standards, Burt Hill needed a cost-effective, fast way to determine which massive structures they could safely remove.

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THE SOLUTION

Burt Hill has been using modeling applications since the 1980s, but found it cumbersome to use the model to generate construction documents with other applications. In addition to providing smooth integration with AutoCAD software, Autodesk Revit enables designers to work on a single, integrated digital model. Revit automatically coordinates work on individual drawings and schedule views across the entire building model, right down to the construction documents. "It does a lot of the routine things we do in coordination and tracking information throughout a whole set of documents," says Mark Dietrick, CIO at Burt Hill. "It does that so well that we can concentrate more on design."

Fully Coordinated Views

The first major task was creating a digital representation of all the structural and reinforcing steel. "The owner wanted to know how to unitize the existing structure and convert it to condos," says Michael Schroeder, a graduate architect at Burt Hill. The Revit model enabled designers to

- Analyze and present multiple design scenarios
- Generate drawings on the fly to better understand building conditions
- Prepare fully rendered perspective views and walk-throughs
- Coordinate new HVAC systems
- Determine what steel they could safely remove
- Create high-quality 2D demo sets using 3D information

Intuitive and Accurate

Autodesk Revit software is easy to use. "Autodesk Revit helped us meet our deadlines—with fewer people on the team and with very little training," says DeOrsey. And because the software's powerful parametric technology means you can change anything, anytime, anywhere, while Revit coordinates the change everywhere, all design information is coordinated, consistent, and complete. Increased accuracy means less time spent double-checking, helping the firm increase productivity. "We would have needed at least two more people on the project had we been working in traditional 2D CAD to be as far as we are on the project," says DeOrsey.

Smarter Decisions

Autodesk Revit keeps designers informed, and informed designers make better decisions. When determining whether to excavate or demolish the existing structure, Burt Hill designers used Revit software to generate a cutaway from the 3D view that made the space constraints much more apparent. As a result, "they were able to make an informed decision at that moment," explains Dietrick.

THE RESULT

More Time to Design

Autodesk Revit software frees designers from the routine tasks that slow the design process and introduce error. Designers have more time to explore multiple scenarios, keeping clients coming back and increasing competitive advantage and repeat business.

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>
> Mike DeOrsey
> Project Coordinator

"Burt Hill fosters an innovative working environment that allows us to quickly evaluate complex construction and design," says Steven J. Brittan, Principal. "Autodesk Revit allows us to better serve our clients with accurate and completely coordinated design documentation and building information, giving us more time and better information to explore quality design solutions. Most of the value we bring to our clients is in the predevelopment planning stages. Revit provides a platform to create rapid solutions and test scenarios so we can make choices for clients and save them costly decisions down the road."

Learn More

For more information, go to www.autodesk.com/revit.

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