

“AutoCAD MEP is an integral part of the path to our continued success as a solid firm offering a full range of A/E services and relying on advanced technologies. In fact, it is now our primary project development and construction documentation production tool.”

Andre Zoldan
Director of Advanced Design Technologies
Albert Kahn Associates, Inc.

First choice for systems design.

Albert Kahn Associates, Inc., improves project design and documentation coordination, streamlines collaboration, and finishes projects faster and more efficiently with AutoCAD® MEP software.

Project Summary

Albert Kahn Associates, Inc. (AKA) is one of the largest and most successful planning, design, and management firms in Michigan. AKA has made numerous contributions to architectural and engineering design technology, won dozens of awards, and completed more than 45,000 projects. Today, its team of architects, engineers, and support staff serve customers in a variety of markets, including health care, commercial, financial, industrial/automotive, government, education, research, and technology. One factor in the firm's success is its commitment to finding new ways to work smarter. “There is no question that the AEC industry is ready—or perhaps starving—for intelligent tools that will help increase productivity and decrease cost,” says Andre Zoldan, Director of Advanced Design Technologies. “The industry is also increasingly competitive. We wanted a tool that would help us remain leaders in our profession.” After a rigorous search, AKA chose to standardize on AutoCAD MEP, the AutoCAD®-based design and documentation solution for mechanical, electrical, and plumbing engineers, designers, and drafters.

The Challenge

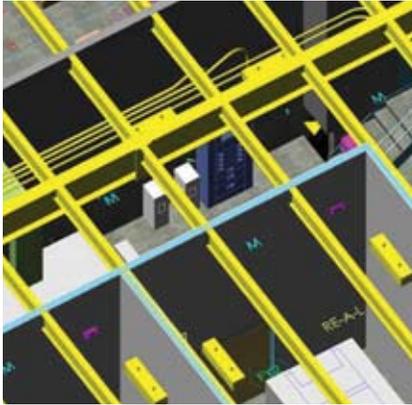
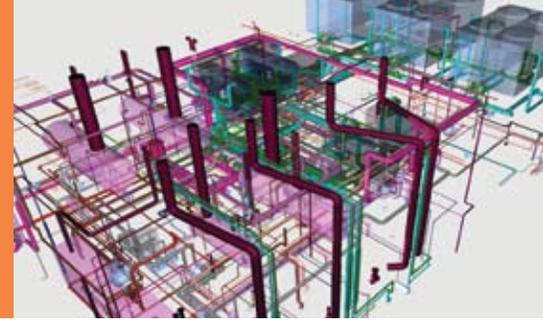
One of the firm's first—and largest—projects with the new technology was providing engineering services for the Henry Ford West Bloomfield Hospital, located amid woodlands in West Bloomfield, Michigan. This \$310-million, master-planned health park integrates, fitness, education, and research facilities to promote both wellness and the treatment of disease.

Twenty-First-Century Design

AKA incorporated state-of-the-art technologies into the 600,000 square-foot, 300-bed facility that includes an intensive care unit, a diagnostic and treatment center, and a three-story energy center. “Energy centers, in particular, tend to be very complex and dense,” says Zoldan. “There are a lot of coordination challenges.”

Complex Design Challenges

“For example, one tunnel was about twelve feet high and roughly eighteen feet wide,” says Samer Agha, a mechanical engineer at AKA. “It was literally packed with electrical equipment and mechanical pipe. It's not impossible to lay that out with traditional methods, but it takes a lot of time.”



Using AutoCAD MEP software, the engineering design team at Albert Kahn Associates was able to

- *Increase efficiency by reducing tedious drafting tasks, such as calculating duct dimensions*
- *Spend less time on construction documentation and more time on design*
- *Improve the accuracy of construction documentation*
- *Streamline the design process through greater accuracy*
- *Work effectively with the extended design team for increased coordination*

The Solution

Based on AutoCAD software, AutoCAD MEP is a building design and construction documentation solution for mechanical, electrical, and plumbing engineers, designers, and drafters that can significantly improve productivity, accuracy, and coordination. “Using AutoCAD MEP with its powerful visual design coordination capabilities, we were able to lay the tunnel out and automatically—almost instantly—know whether there was an interference,” says Agha. “It was also a lot easier for us to coordinate the piping from one storage area to another.”

Spend Less Time on Construction Documents

And because AutoCAD MEP automatically produces construction documents as the engineering team designs, there is no need for a separate process and workflow for engineering and construction documentation.

Spend More Time on Design

“That means we’re able to spend a lot more valuable time developing ideas and design,” says Zoldan. “Instead of throwing away hundreds of hours generating a rendering, we’re able to invest those hours in thinking our designs through.”

Build It Right

“AutoCAD MEP also enables us to place systems much more accurately in our design,” says Zoldan. “Using traditional methods, a line may represent a three-foot-wide duct or a large pipe. In the field, someone will need to figure out exactly where it needs to lie. But AutoCAD MEP forces us to locate and route building components the way we expect them to be constructed. We’re much more accurate.”

Work Effectively with the Extended Design Team

AKA has also standardized on other Autodesk productivity tools, such as AutoCAD® Architecture, an AutoCAD-based design and documentation application specifically tailored for architects. “Our architects use it to build the architectural design model, enabling our mechanical, electrical, and plumbing engineering disciplines to then reuse that same design model information, facilitating better coordination,” says Zoldan. “It saves a lot of time.” In addition, the firm also uses Autodesk® 3ds Max® and Autodesk® VIZ software for visualization.

Learn from the Source

AKA has benefited from the services of Autodesk Consulting. “We learned which implementation path was most suitable for our needs, as well as which mistakes to avoid,” says Zoldan. As a result, AKA staff members who work with AutoCAD MEP are fast becoming expert-level users.

The Result

Since standardizing on AutoCAD MEP, AKA has completed two projects and is scheduled to complete the Henry Ford project in 2008. “AutoCAD MEP is an integral part of the path to our continued success as a solid firm offering full range of A/E services and relying on advanced technologies,” says Zoldan. “In fact, it is now our primary project development and construction documentation production tool. All projects initiated by our engineering services groups are based on these tools.”

Learn More

To learn more about AutoCAD MEP, visit www.autodesk.com/autocadmep.