> Autodesk BIM 360 Glue helps us deliver the 3D information that the entire project team is looking for. By giving our subcontractors faster access to the latest BIM data, it's easier to bring everyone to the table.
>
> —Weston Tanner
>   Virtual Construction Manager
>   The Walsh Group

All together now.

Autodesk BIM 360 Glue helps The Walsh Group accelerate collaboration among subcontractors.
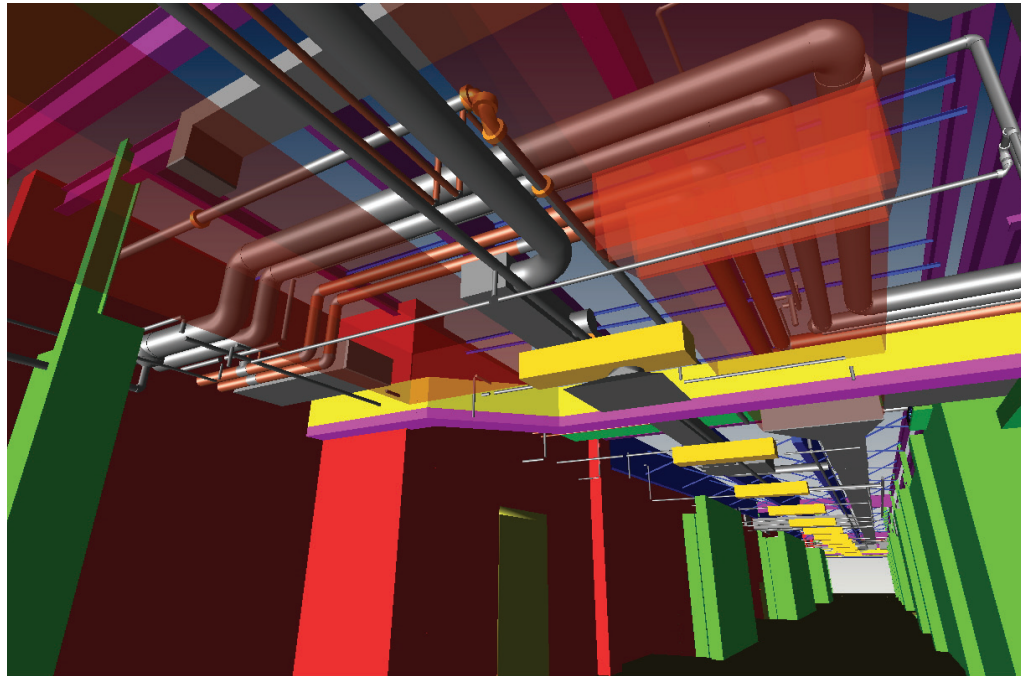
Project Summary

Founded in 1898 by Matthew Miles Walsh, The Walsh Group is a Chicago-based general contracting, construction management, and design-build firm. One of the nation's top 20 contractors, the company has expertise with a diverse range of building, civil, and transportation projects. From water treatment plants to educational facilities to office buildings, the Walsh Group is known for its commitment to the highest quality construction services.

The Walsh Group was one of the first general contractors in the industry to move away from traditional 2D construction drawings and embrace virtual 3D models created with Building Information Modeling (BIM) technology. By exploring virtual project models before physical construction begins, the firm's project teams can identify and optimize complex construction issues during the design phase. As a result, The Walsh Group has been able to bring projects to completion with faster schedules, reliable costs, and less waste. And now they have expanded their use of BIM to the cloud to bring more project stakeholders into the process and improve project outcomes.

The Challenge

In early 2012, Archer Western, a member of The Walsh Group, was selected by the United States Army Corps of Engineers to completely renovate two military barracks facilities located in the Southern United States. The budget was tight, requiring the construction team to do more with less. One project consisted of two 500,000-square-foot buildings. The other was a complex of eight smaller buildings. As complete rebuilds, the projects included new architectural features, electrical, plumbing and environmental systems, offices, and furniture.

The barracks projects involved collaboration and coordination with a multidisciplinary team of subcontractors. "Collaboration and coordination is an important part of the BIM design and build process," explains Weston Tanner, virtual construction manager at Archer Western. "It's critical that we get all of the players—from the electrical engineers to the fire prevention experts—involved in decision making."

The Archer Western team had initially coordinated the design review process by having the subcontractors submit updated BIM models every week. Tanner then aggregated the models and ran clashes. The entire project team would then go through the updated BIM model at a weekly conference call.

Autodesk®

More timely, efficient BIM collaboration.

"There was a bottleneck in the process," says Tanner. "Before I could aggregate the information, I had to collect and review sometimes as many as twelve separate models from all the different parties."

The Solution

To accelerate the BIM design review process and collaborate more effectively, Tanner and his team gave all the subcontractors real-time access to the virtual 3D design through the cloud with Autodesk® BIM 360™ Glue, one of the Autodesk® BIM 360® cloud-based services. Instead of waiting days for the latest updates, all parties on the design-build team are now able to easily download the most recent BIM model and quickly view design changes.

"Since it's in the cloud, they don't need a powerful computer," he explains. "Autodesk BIM 360 Glue makes it easy for our subcontractors to go into the model and look at it, spin it around, save a view of a problem area, and easily send that view back and forth with Internet links."

According to Tanner, having a BIM model accessible through the cloud has encouraged better communication between the subcontractors and streamlined the decision making process. Weekly coordination meetings are more productive with everyone looking at a live 3D model at the same time. For example, when the team was coordinating how to fit a large conduit rack, piping, and fire protection elements into a tight space that went along the length of a building, all of the stakeholders were able make decisions on the spot. The electrical engineer downloaded the most recent BIM model, measured how far the conduit rack needed to move, and gave those measurements to other subcontractors, who could also access real-time BIM data to ensure that the changes accommodated their requirements.

## A Faster 3D Design Review Process

Tanner estimates that Autodesk BIM 360 Glue has saved a notable amount of time each week that was previously spent managing BIM models from all the subcontractors. "With our previous workflow, the electrical subcontractor would have shifted the conduit rack over and resubmitted the models to me," explains Tanner. "Then everyone would have reviewed the new model. That would have taken two days. Now with Autodesk BIM 360 Glue, everyone is able to look at a live BIM model and visualize updates in real time."

Having access to the BIM model via the cloud gets more stakeholders involved in the design review process. "Autodesk BIM 360 Glue gives everyone ownership and involvement in the process," states Tanner. "Getting involvement in virtual construction and the BIM world is going to be imperative for general contractors, because it saves an incredible amount of labor and time in the field. Autodesk BIM 360 Glue helps us figure out these problem areas during design—before anybody has started building anything."

"If subcontractors don't have ownership, if they don't feel like they're responsible for the BIM model, then it doesn't get used," he adds. "We can sit here and do coordination all day long, but if those guys aren't involved in the process—actually making design decisions based on the BIM coordination—then it's worthless."

Real-Time Collaboration in a 3D World

Between the weekly meetings, the design and build collaboration is still going strong—thanks to the cloud. As subcontractors make design changes, they are more quickly made available to the entire design-build team through Autodesk BIM 360 Glue. Team members can more efficiently coordinate design changes by sending each other hyperlinks to a navigable 3D model of the concerned area.
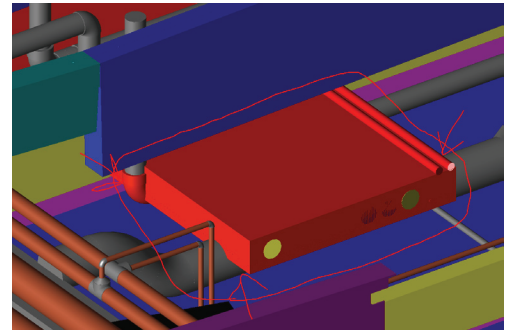
"Autodesk BIM 360 Glue helps us deliver the 3D information that the entire project team is looking for," says Tanner. "By giving our subcontractors faster access to the latest BIM data, it's easier to bring everyone to the table. We've been able to streamline our workflow and coordinate design decisions more effectively, improving the overall project outcome."

The Result

Currently, the two barracks projects are in the construction phase and progressing on schedule and within budget. Tanner believes that their success is due, in part, to a more productive design review workflow with Autodesk BIM 360 Glue. "It gives us the ability to tighten up schedules and save time," he asserts. "Time is money, especially in the construction world, and every owner wants more value for their money. Autodesk BIM 360 Glue is a key tool that helps us accomplish that."

Learn More

Learn more about Autodesk BIM solutions at **www.autodesk.com/bim360**.
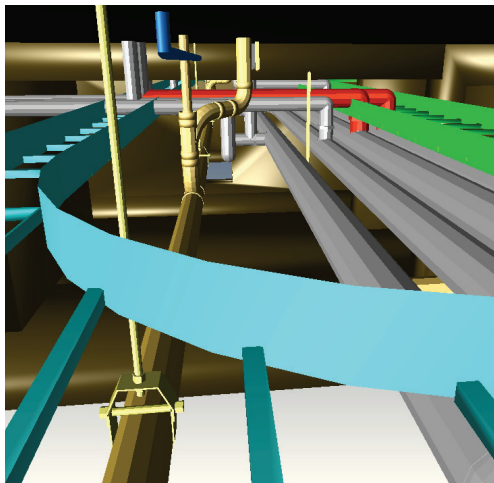
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