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Revolutionizing Efficiency:

How Revit Propelled USAF Tinker AFB to Unmatched Success

Located in Oklahoma City, Oklahoma Tinker Air Force Base is at the forefront of creating innovative and sustainable architectural solutions for the United States Air Force. With a strong commitment to delivering high-quality projects, Matthew McLarty, USA Ret., Architect / Project Manager, TAFB 72 ABW/CEPD, and his team have established themselves as trusted names in this space.

However, like any project, there are challenges in managing and learning to use a complex design tool along with how to navigate collaborating effectively among various teams.

Recognizing the need for a more integrated and collaborative approach, Tinker Air Force Base decided to adopt Autodesk Revit®, a Building Information Modeling (BIM) software. McLarty believed that Revit's advanced features and central database would streamline the design process, promote cross-discipline coordination, and boost overall project efficiency.

"The transition with most technologies requires extensive training and workshops for the entire staff to ensure they are proficient in the software," he said. "[Revit] helps minimize the amount of lead time for those getting started."

Courtesy of Matt Detoy 72 ABW/CENPD

McLarty explained that Revit has enabled architects, engineers, fabricators, computational designers, and project managers to work together to achieve their design, construction, operations, and maintenance goals for buildings and infrastructure.

That's not all that Revit has empowered the team to do. Adopting Revit has led to impressive results and transformed the way Tinker Air Force Base approaches its projects:

Courtesy of Mason Hanger / Larson Design Group

1. Dialed in Estimates:

Revit's streamlined workflow resulted in critical time savings and cost savings for Tinker Air Force Base. With Revit, they're able to complete projects faster, optimize resources, and avoid costly revisions—overall helping minimize the question: 'Why do we need this?'

2. High-Quality Deliverables:

Thanks to Revit's comprehensive documentation capabilities, teams could be confident that construction documents were accurate, consistent, and met industry standards. This helped in obtaining approvals and permits more efficiently, further streamlining project timelines.

3. Keeping Teams on the Same Page:

Revit's centralized BIM model allows all stakeholders to work concurrently on the same project. This collaboration enables real-time updates and minimizes the changes of data discrepancies.

4. Enhanced Visualization:

With Revit's powerful 3D modeling capabilities, the firm could present its designs more effectively to key stakeholders. Enhanced visualization helped the team better understand the design intent, which in turn helped them make informed decisions—ultimately reducing the likelihood of costly design changes later in the process.

5. Delivering Better Buildings for Everyone:

Revit's intelligent clash detection facilitated effective collaboration between architects and engineers. This led to early identification and resolution of multiple elements taking up the same space before making it to the build stage, significantly reducing errors and rework during construction.

Courtesy of Offut AFB

With Revit, the 72 ABW/CE in-house charrette team has been able to save up to $400,000 per design of taxpayer dollars.

"By allowing us to do these designs in-house [we have] saved over 1 month of effort per in-house charrette and we are about to start our 4th in-house charrette," said McLarty.

Being able to pass along created Revit models to other teams like the Army Corps of Engineers has led to even more cost and time savings.

"We are also able to share our model with our installations and we have received Revit files from previous projects completed at other installations,"

McLarty said, adding that doing so helps with calculating current and local cost factors.

“This allows for more accurate numbers when it comes to referencing the budget that will be sent for review to Congress.”

As the team continues to leverage the power of Revit and embrace emerging technologies, Tinker Air Force Base has started to look at even more ways to incorporate Autodesk solutions into their processes so that they can continue leading innovation for the United States Air Force.

The success of implementing Revit has started to revolutionize the workflow at Tinker Air Force Base, setting a new standard for efficiency and collaboration with a team that can begin to be replicated and scaled for other bases.

“AI/Machine Learning, Revit Generative Design, and other Revit advanced solutions like Forma and Dynamo will allow us to better plan, program, design, and construct and manage our built infrastructure more effectively,” McLarty said.

Courtesy of Matt Detoy 72 ABW/CENPD