

Autodesk®  
Revit® Architecture

Design without compromise



Autodesk®

# Definitive Design

From conception to construction documentation, design projects within an intuitive environment.

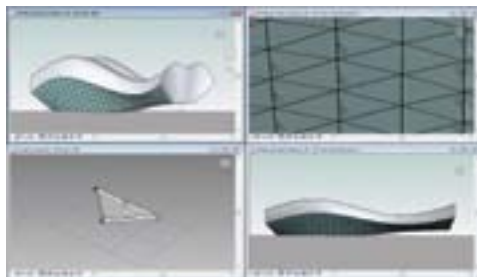
Building information modelling and Autodesk Revit Architecture are key components of our larger strategy to provide a much more comprehensive and integrated service to our clients.

—Riaan de Beer  
Senior Project Manager  
Reno C. Negrin Architects

Built for Building Information Modelling (BIM), Autodesk® Revit® Architecture software helps you to capture and analyse your most innovative design concepts and maintain your vision through documentation. The information-rich models that the software provides support decision-making for sustainable design, clash detection, construction planning and fabrication, while helping you to work collaboratively with engineers, contractors and owners. All design changes along the way are updated automatically throughout your evolving design and documentation, making for more co-ordinated processes and reliable documentation.

### Complete Projects, One Environment

Autodesk Revit Architecture software's conceptual design features provide easy-to-use tools for free-form modelling and parametric design, enabling you to analyse designs from the earliest stages of development. Sketch freely, create 3D forms quickly and manipulate forms interactively. Prepare your models for fabrication and construction with built-in tools for conception and clarification of complex forms. Autodesk Revit Architecture automatically builds a parametric framework around forms as you design, offering you greater levels of creative control, accuracy and flexibility. Take your design from concept model all the way to construction documents, all within one intuitive environment.



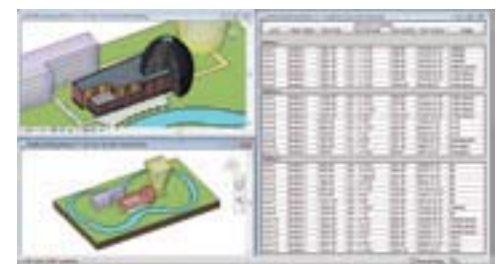
### Authoritative Decisions, Sooner

Autodesk Revit Architecture software supports early analysis of your building forms so your team can make better informed decisions earlier in your project. Use this capability to clarify areas and volumes, perform daylighting and energy analysis and gain insight into manufacturing viability and early construction material takeoffs.



### Functional Forms

The Building Maker feature in Autodesk Revit Architecture helps you to transform your conceptual forms into fully functional building designs. Select and add faces to design walls, roofs, floors and curtain systems. Extract important building information, including gross area per floor. Bring conceptual massing concepts from applications such as AutoCAD® software and Autodesk® Maya® software as well as AutoDesSys form•Z, McNeel Rhinoceros®, Google™ SketchUp® and other ACIS®- or NURBS-based applications into Autodesk Revit Architecture as mass objects, and begin schematic design.



# Co-ordinated, Accurate Design Information

Autodesk Revit Architecture software is built to work in the way architects and designers think about buildings. Work naturally, design freely and deliver efficiently.

Autodesk Revit Architecture generates every schedule, drawing sheet, 2D view and 3D view from a single foundational database, co-ordinating changes automatically as your project develops and evolves.

## Bi-directional Associativity

A change anywhere is a change everywhere. In Autodesk Revit Architecture, all model information is stored in a single, co-ordinated database. Revisions and alterations to information are updated automatically throughout the model, minimising errors and omissions.



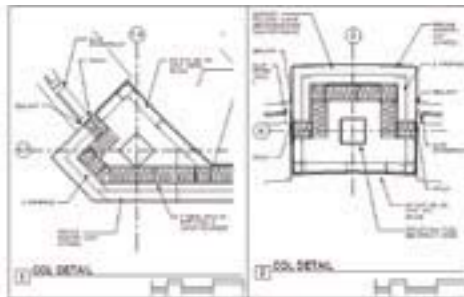
## Schedules

Schedules provide another view of the comprehensive Autodesk Revit Architecture model. Changes to a schedule view are reflected automatically in all other views. Functionality includes associative split-schedule sections and selectable design elements via schedule views, formulae and filtering.



## Detailing

The extensive detail library and detailing tools provided within Autodesk Revit Architecture enable extensive presorting, easing alignment with the CSI format. Detail libraries can be created, shared and tailored to better accommodate your office standards.



## Parametric Components

Parametric components, also known as *families*, are the basis for all building components designed in Autodesk Revit Architecture. These components offer an open, graphical system for design thinking and form making, while providing the opportunity to adjust and express design intent at increasingly detailed levels. Use parametric components for elaborate assemblies, such as cabinetry and equipment, as well as for elementary building parts, such as walls and columns. Best of all, no programming language or coding is required.



## Material Takeoff

Calculate detailed material quantities with Material Takeoff. Ideal for better calculation of material quantities on sustainable design projects and cost estimates, Material Takeoff helps to smooth the material quantity tracking process. As projects evolve, the Autodesk Revit Architecture parametric change engine updates material takeoffs.

## Interference Check

Use interference checking to scan your model for collisions between elements.

## Task-Based User Interface

The Autodesk Revit Architecture user interface offers desktop organisation through a large drawing window and access to the tools and commands you need. Tools are organised into a collection of tabs and panels to represent architectural workflows such as creation, annotation or collaboration.



# Better Designs, More Satisfied Clients

Deliver higher-quality designs and gain a competitive advantage through increased client satisfaction.

## Design Visualisation

Create and capture photorealistic design ideas and contextual environments to help you experience your project even before it is built. Integrated mental ray® rendering software is easy to use and delivers high-quality output, faster render times and a striking design presentation.



## Collaboration

Worksharing tools help you to improve collaboration on projects containing linked files by giving you the ability to apply view filters and tag elements and to control the visibility of worksets in linked files.

## Revit Server

Revit Server helps project teams in different locations to collaborate more easily on shared Revit models across a wide-area network (WAN). Help to maintain an integrated collection of Revit central models on a single server that can be accessed from local servers. Built-in redundancy helps to provide protection in case of WAN connectivity loss.

## Performance

Enjoy a smoother experience when working on large projects. More multi-threaded operations result in faster project open and load times. Native 64-bit support helps to improve performance and stability for memory-intensive tasks such as rendering, printing and model upgrading as well as file importing and exporting.

## Sustainable Design

Conceptual energy analysis tools\* help you to make every design more sustainable. Use cloud-based analysis tools to compare the energy consumption and lifecycle costs of design alternatives quickly right from within Autodesk Revit Architecture software. Analysis results are presented in a highly-visual, graphical format for easy interpretation.



Export building information, including materials and room volumes, to gbXML (green building extensible markup language). Perform more in-depth energy analysis using Autodesk® Green Building Studio® web-based services\* and study building performance with Autodesk® Ecotect® Analysis software. Autodesk® 3ds Max® Design software can be used to conduct indoor lighting analysis in support of LEED® 8.1 certification.

## Autodesk Revit Architecture Success Story

### HNTB Corporation

Since adopting Autodesk Revit Architecture software, the HNTB Corporation has been able to complete dozens of BIM projects successfully, including the \$183 million U.S. Army Human Resources Center of Excellence (HRCoE), the largest construction project ever undertaken at Fort Knox.

To meet the challenge, HNTB teamed up with Turner Universal, a well-known construction company and together the two firms chose to implement a design-build project delivery method supported by Autodesk BIM solutions.

HNTB and Turner Universal developed the Fort Knox HRCoE initial design in only 60 days, a notable feat given the project's scope. "One of the biggest advantages of using Revit Architecture was that we could change the design in one place and the software would automatically update the rest of the model," says Marwan Bakri, HNTB BIM federal technology manager. "That helped us to see the impact of our changes immediately and take a new course of action if necessary."

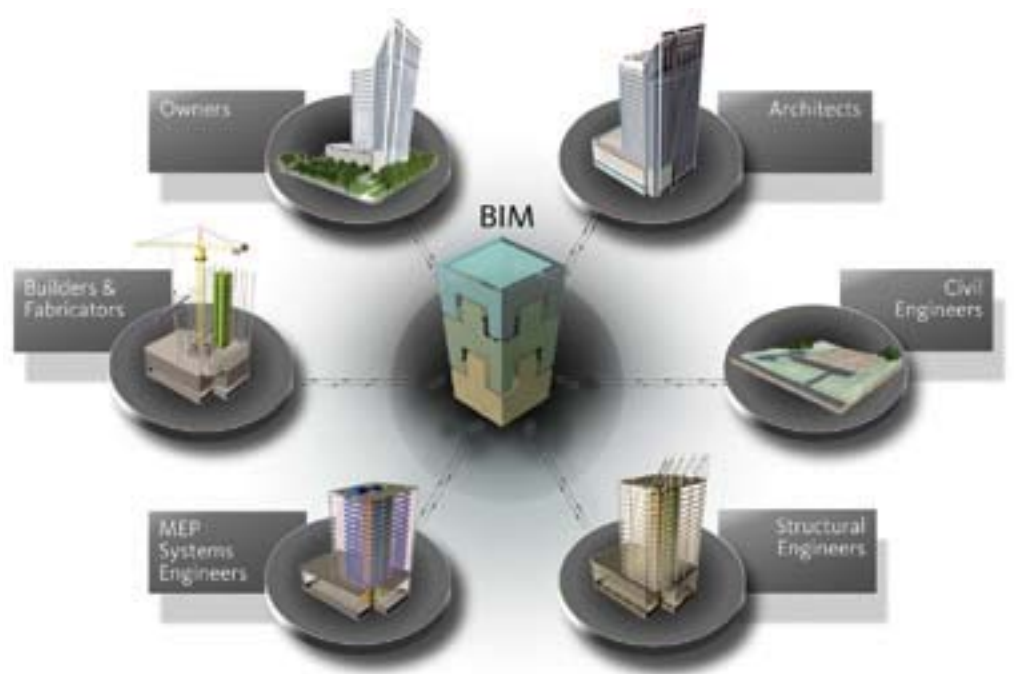
Even given the constraints of the fast-track design-build process, HNTB delivered tremendous design value and flexibility. "Using the Revit platform, we worked more efficiently and with a much greater degree of co-ordination," says Bakri. "BIM helped us to give more, even with the restrictions of the schedule."

# BIM – Simply a Better Way of Working

Deliver projects faster and more economically while minimising environmental impact.

## AutoCAD Revit Architecture Suite for Maximum Flexibility and Competitive Advantage

AutoCAD® Revit® Architecture Suite software includes AutoCAD® software, AutoCAD® Architecture software and Autodesk Revit Architecture. Using this suite helps you to move to BIM while protecting your legacy software, training and design data investments. Autodesk Revit Architecture delivers a powerful competitive advantage by facilitating analysis for sustainable design, automatically delivering co-ordinated, consistent documentation and helping to speed up creative design work. Support ongoing work in either AutoCAD or AutoCAD Architecture while you make the switch to BIM with Autodesk Revit Architecture at your own pace.



### Built for BIM

Autodesk Revit Architecture is built for BIM, an integrated process built on co-ordinated, reliable information about a project from design through to construction and into operations. By adopting BIM, architecture firms can use this consistent information throughout the process to design and document innovative projects, visualise appearance accurately for better communication and simulate real-world performance for better understanding of cost, scheduling and environmental impact.

### The BIM advantage

BIM helps building professionals to stay competitive in an increasingly complex business climate by giving them the ability to better predict the outcome of a building before it is built. By using BIM, architects and designers can create more sustainable, accurate designs with fewer errors and less waste, thus helping to achieve higher profits and more satisfied clients. BIM also optimises team collaboration, enabling architects to communicate design intent more clearly and reliably to engineers, contractors, manufacturers and owners.

The confidence the BIM approach provides is a major benefit. We are really starting to reap the productivity benefits of Autodesk Revit Architecture software. It is very exciting.

—Michael Parrott  
Vice President and Senior Project Manager  
Nacht & Lewis

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