



Meet Structural WorkSuite

Reach Beyond the Ordinary

Powerful 3D Structural Analysis and Design Software

Bentley[®]

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Structural Engineering Challenges

Today's structural engineers must find cost-effective solutions that don't compromise safety or quality and oversee the project from the initial stages of planning, all the way through design and construction. They are under tremendous pressure to help reach project goals within the given budget and time frame.

Engineers face growing challenges, including:



**Tight Deadlines and
Being Overworked**



**Complex Code
Requirements**



**Material Optimization and
Reducing Carbon Emissions**



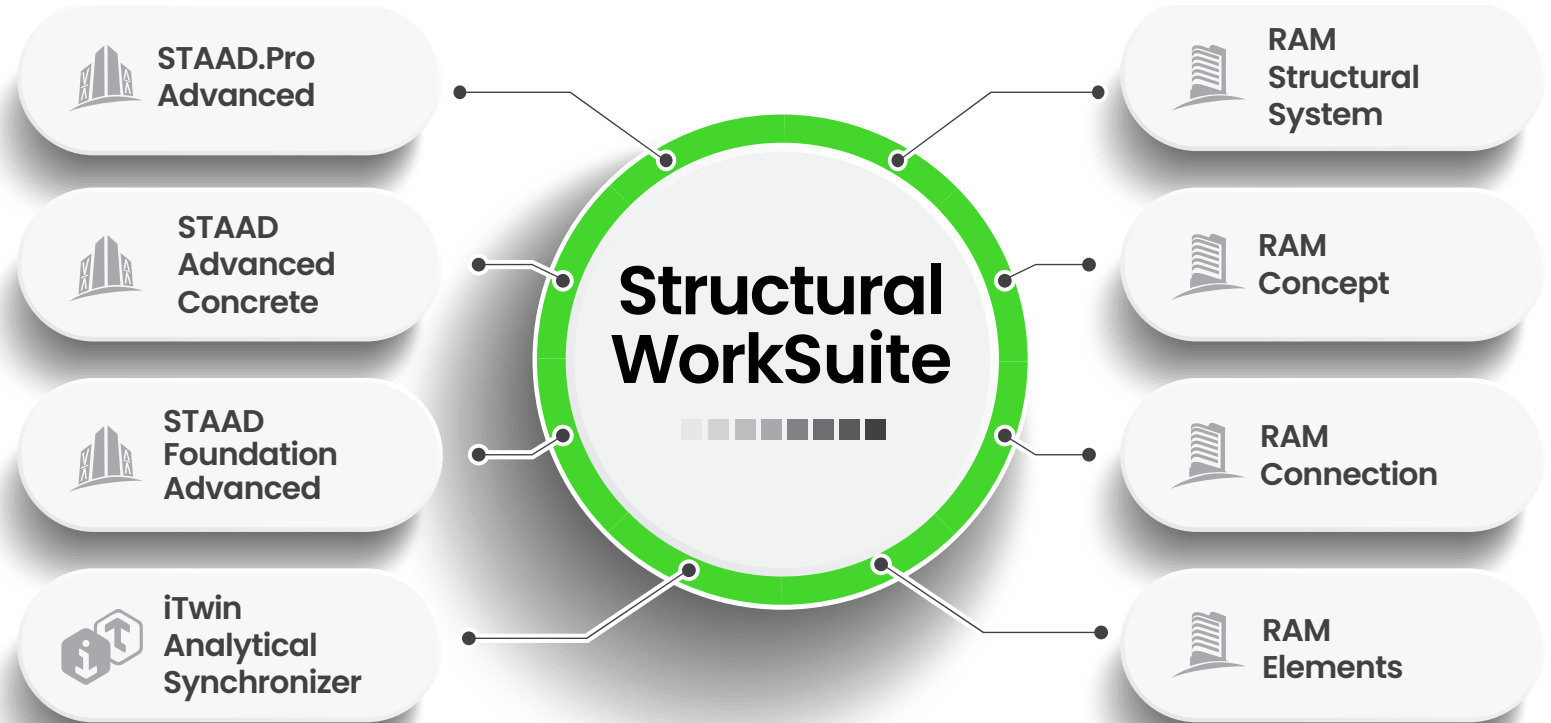
**Advanced Analysis and
Design Requirements**

Engineering great structures requires the best tools. Structural WorkSuite helps engineers to meet these challenges and reach beyond the ordinary.

Meet Structural WorkSuite

Structural WorkSuite is the leading collection of structural engineering tools in a single cost-effective license. Take your project from the planning stage to completion with STAAD and RAM. You can avoid the hassle of individual product licensing with our bundle of applications.

Take advantage of a comprehensive structural analysis portfolio for a fraction of the cost of the individual software offerings. Structural WorkSuite includes STAAD.Pro Advanced, STAAD Advanced Concrete, STAAD Foundation Advanced, RAM Structural System, RAM Concept, RAM Elements, RAM Connection, and iTwin Analytical Synchronizer.



The Structural WorkSuite Difference

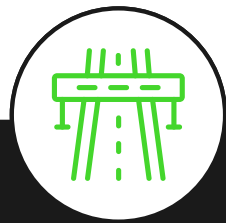
Structural WorkSuite helps engineers on tight schedules by providing comprehensive tools to simplify your most complex engineering tasks – from optimizing concrete slabs and walls, to designing steel or composite framing and connections. Working seamlessly together, these popular tools cover all aspects of structural engineering with the advantage

of using purpose-built software for critical and time-consuming tasks. Structural engineers can use Structural WorkSuite for various project types, including water and wastewater, roads and highways, power, rail and transit, buildings, hydraulic and stormwater, and plants.

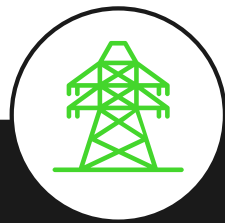
You can use Structural WorkSuite for a variety of project types:



**Water &
Wastewater**



**Roads &
Highways**



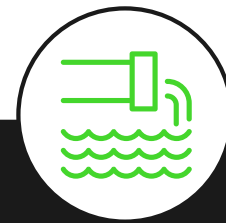
Power



**Rail &
Transit**



Buildings



**Hydraulic &
Stormwater**



Plants

See the benefits of Structural WorkSuite for yourself!

**Make it simple
with a single, cost-
effective license**

**Invest in a suite
that includes
STAAD.Pro
Advanced and
RAM Structural
System**

**Increase flexibility
by integrating
the software and
interoperability
with many other
applications using
standard formats**

**Drive efficiency
with applications
that help optimize
designs in the most
practical manner**

**Access training
or services to suit
your specific needs**



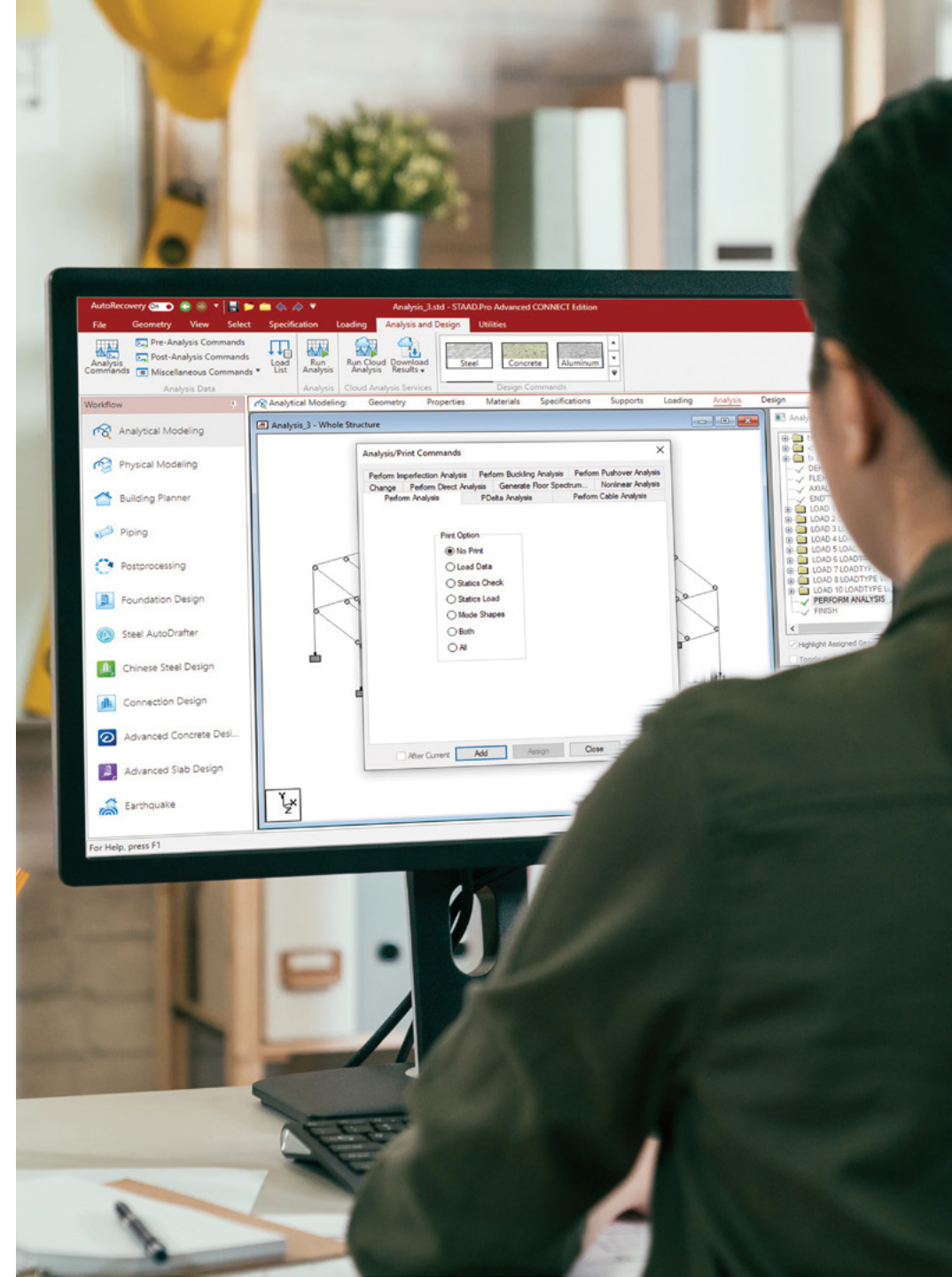
STAAD.Pro Advanced

STAAD.Pro Advanced is the structural engineer's top choice for comprehensive structural finite element design and analysis. The software can be used for any structure exposed to static, dynamic, wind, earthquake, thermal, and moving loads.

STAAD.Pro Advanced helps structural engineers perform 3D structural analysis and design for steel and concrete structures. A physical model created in the structural design software can be transformed into an analytical model for structural analysis. Many design code standards are incorporated into STAAD.Pro Advanced to help you make sure that your structural design complies with local regulations.

Key Features

- ◆ Design and analyze for a wide array of projects
- ◆ Model in a very flexible environment
- ◆ Utilize a broad range of design codes
- ◆ Access interoperability and open architecture
- ◆ Take advantage of configurable post processing





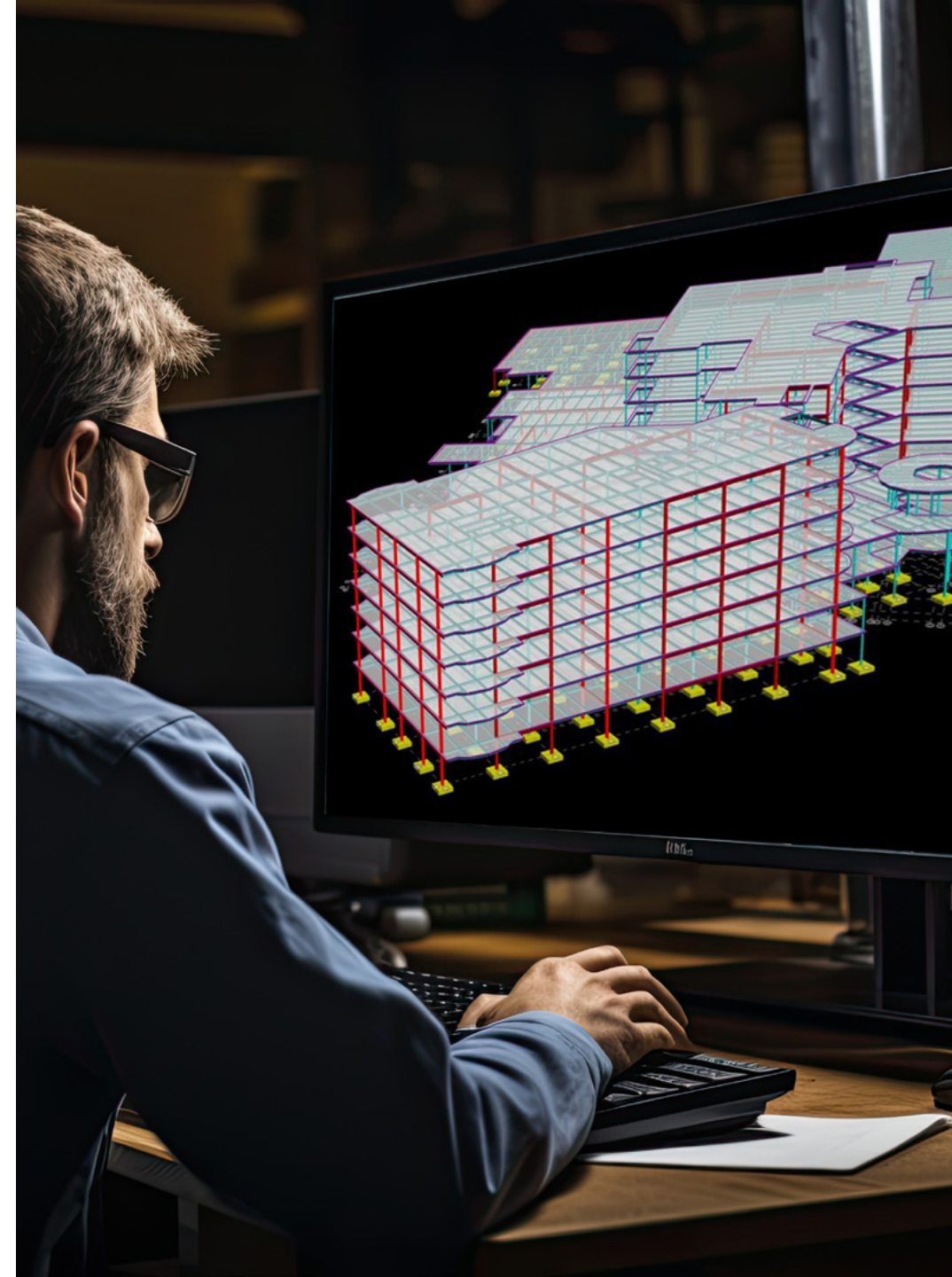
RAM Structural System

RAM Structural System is powerful and versatile special-purpose software for the analysis and design of building structures. It is used primarily in the design of commercial, institutional, and industrial buildings.

Automate your most time-consuming tasks while designing steel and concrete structural framing and foundations.

Key Features

- ◆ Optimize steel beams based on the surface loading and deck, including composite beam design and deflection control
- ◆ Optimize steel column design, including the effects of connection eccentricity and live load reduction
- ◆ Automatically apply wind and seismic loads and checks for drift
- ◆ Design lateral systems for special seismic code provisions
- ◆ Design and detail concrete beams, columns, walls, and foundations
- ◆ Produce detailed reports for every design step, as well as CAD files of the final design
- ◆ Tightly integrate with RAM Concept for slab design and RAM Connection for steel connections





STAAD Advanced Concrete Design

STAAD Advanced Concrete Design takes the creation of your concrete structures to the next level. Developed by practicing engineers who understand your workflows, STAAD Advanced Concrete Design adds onto the power of Bentley's STAAD.Pro analytical engine with robust concrete capabilities.

Key Features

- ◆ Design many concrete elements, including columns, walls, beams, foundations, slabs, and tank components
- ◆ Access international design standards
- ◆ Comply with seismic requirements
- ◆ Create comprehensive quantity takeoffs
- ◆ Produce concrete drawings and schedules





STAAD Foundation Advanced

STAAD Foundation Advanced is a comprehensive structural foundation design and analysis software that includes specialized features for foundations of many types. You can perform isolated, combined, pile cap and mat foundations, or more complex foundations including horizontal vessel foundations, tank annular ringwall, lateral analysis of pile/drilled piers, and vibrational analysis for machine foundations.

Key Features

- ◆ Access an integrated environment for foundation design
- ◆ Optimize foundation design
- ◆ Integrate with STAAD, iTwin, and Microsoft Excel
- ◆ Use finite element method (FEM) analysis for mat foundations
- ◆ Generate plan, elevation, and section drawing views



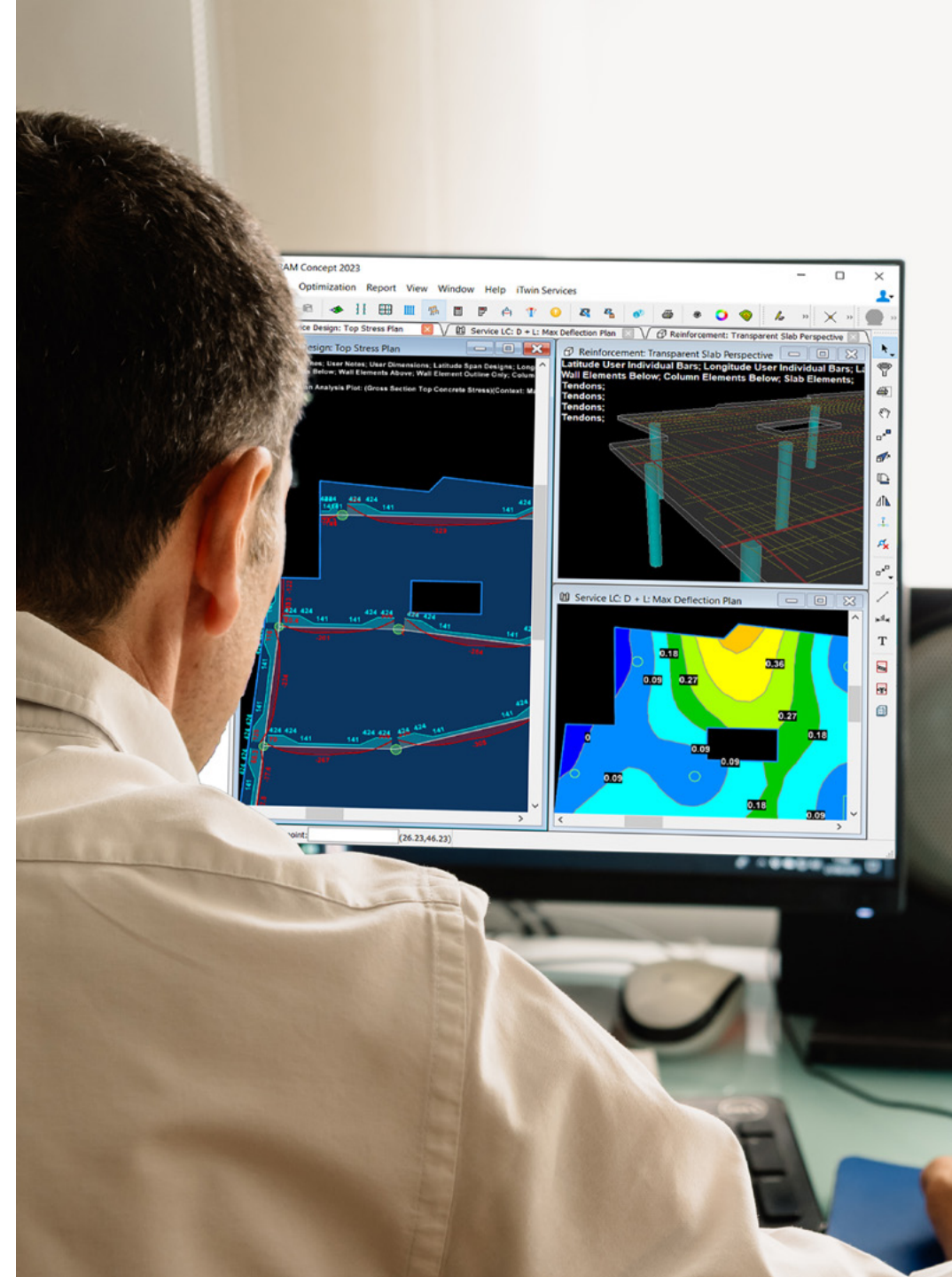


RAM Concept

RAM Concept is the ultimate structural designer's solution for post-tensioned (PT) and conventionally reinforced slabs, mats, and rafts. RAM Concept empowers structural engineers to design floor systems more cost effectively than with other applications, and with exceptional visibility into the compliance, efficiency, and practicality of the design.

Key Features

- ◆ Automate the layout of tendons, design spans, and column and middle strips
- ◆ Reduce design time with optimized slab and post-tensioning design
- ◆ Access realistic tendon modeling with virtually any profile
- ◆ Rely on accurate punching shear analysis and design
- ◆ Analyze long-term slab deflections considering the effects of creep, cracking, and shrinkage





RAM Elements

RAM Elements is a simple to use program for a variety of structural design tasks. Within the Structural WorkSuite, RAM Elements is often used for the design of components that may be complicated to perform in other programs. RAM Elements includes specialty modules for these common design tasks so you can quickly design trusses, continuous beams, and frames of all types, as well as retaining walls, masonry walls, tilt-up concrete walls, and footings.

You can also use RAM Elements to model complete structures in 3D using any combination of linear members and shells. A variety of tools and tables makes model generation easy, and you can import a structure from CAD, RAM Structural System, or STAAD.Pro.

Key Features

- ◆ Quickly model and modify structures in any configuration using spreadsheet data entry
- ◆ Apply loads to nodes, members, or shells, or use load areas
- ◆ Quickly design structural elements such as walls or trusses
- ◆ Direct integration with RAM Connection
- ◆ Interoperability with other Structural WorkSuite applications





RAM Connection

RAM Connection is steel connection analysis and design software with an extensive library of standard connection types. You can easily optimize or verify connection designs in seconds, with comprehensive calculations and output, including seismic provisions compliance. Generate CAD files of complex connections for fabrication. RAM Connection is proven to increase productivity with optimized workflows and full integration with 3D design models in STAAD.Pro, RAM Structural System, or RAM Elements.

Key Features

- ◆ Automate industry-standard connection design
- ◆ Design shear connections, moment connections, or combined end plates and base plates
- ◆ Design gusset plate connections with precise configuration of the members
- ◆ Easily compare the economy and practicality of connection options
- ◆ Take advantage of included AISC (ASD and LRFD with seismic provisions), EC3, IS, GB, and BS specifications
- ◆ Update and make changes easily and automatically





iTwin Analytical Synchronizer

iTwin Analytical Synchronizer is the engineer's gateway into the world of digital twins, interoperability, and collaboration. It enables engineers to move their design data into a digital twin.

Key Features

- ◆ Leverage bidirectional synchronization of design between various applications
- ◆ Choose a file-based workflow or keep your models in the cloud
- ◆ Enable teams to use the same source of truth
- ◆ Access discipline-specific review tools
- ◆ Review and collaborate on analytical design results



Reach Beyond the Ordinary with Structural WorkSuite

Structural WorkSuite is your single, cost-effective bundle of our most popular structural applications. It has all the capabilities that a structural designer needs. Help eliminate concerns about product-by-product licensing. Simplify your software portfolio and leverage Bentley's multiproduct interoperability at the same time.

Make your structural engineering projects easier with Structural WorkSuite.

Curious to learn more? Speak to one of our experts to better understand how we can meet your project needs.

Let our infrastructure experts help you get started today.

[Chat with an Expert >](#)

[Learn More >](#)

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