

Bentley®
Advancing Infrastructure



OpenBridge Modeler

Bridge Software for Intelligent 3D Parametric Modeling

OpenBridge Modeler provides intuitive capabilities for 3D parametric bridge modeling with intelligent objects. OpenBridge Modeler features advanced interoperability, allowing access to Bentley's civil application data, as well as a seamless connection to Bentley's bridge design and analysis applications.

OpenBridge Modeler Produces Intelligent Models

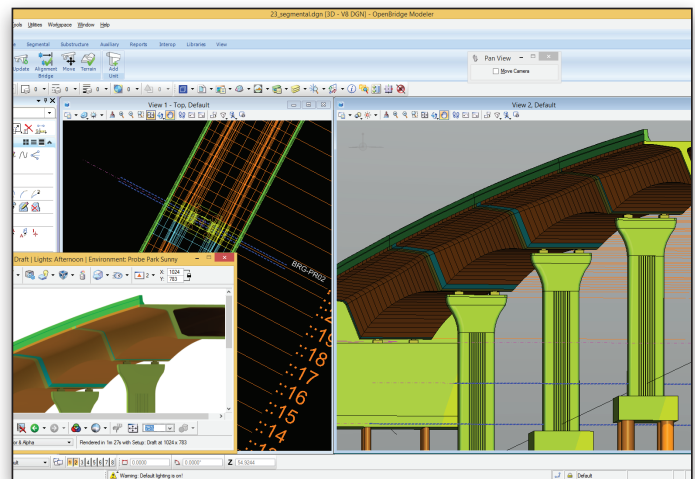
OpenBridge Modeler produces intelligent models with engineering content properties for various bridge components. These include concrete compressive strength, structural steel grade, standard beam designations, and more. OpenBridge Modeler reuses data from various stakeholders thus maintaining relevant and up-to-date geometry within a single model. OpenBridge Modeler unifies roadway engineers, bridge engineers, and contractors from the outset of a bridge project through design revisions and beyond. Referencing existing conditions allows models to be accurate and readily used for design and analytics without duplicate data entry. The multi-discipline, consolidated view of the project makes evaluating design decisions and identifying constructability issues and conflicts early in the workflow possible.

Project team members can take the conceptual model into the design stage and move through the workflow by performing analysis and design including evaluation of construction work stages using Bentley's LEAP® and RM. They can also reference the civil data to remain in sync with the roadway team and existing conditions to quickly respond to project changes. Create various alternatives for evaluation in order to determine the optimal solution for all stakeholders.

Integrated Bridge Solution Accelerates Performance

Bentley is committed to providing applications that help engineering professionals design and deliver high-quality, sustainable infrastructure.

The integrated direct exchange of bridge geometry among various stakeholders improves decision making for design and construction while connecting and enhancing workflows. OpenBridge Modeler brings various disciplines together for analysis, design, detailing, documentation, construction engineering and load-rating. Engineers can also perform detailing with Bentley's ProStructures, visualize soil boring data with Bentley's geotechnical reporting software gINT®, and store and query bridge inspection reports with Bentley's InspectTech. Users can take advantage of Bentley apps to monitor construction and inspection in the field.



Create 3D bridge models easily and accurately.

OpenBridge Modeler works seamlessly with ProjectWise®, Bentley's platform for connecting people and information across project teams. By using OpenBridge Modeler with ProjectWise and Bentley Navigator, project team members can continuously share, reuse, and repurpose data, gaining the benefits of real-time collaboration – working across multiple locations and time zones, among numerous contributors, companies, and stakeholders. Information exchange throughout the lifecycle of the bridge project among various stakeholders is accomplished with i-models. Users enjoy the full benefits of a real-world solution for delivery, maintenance, and operation of bridge systems – improving the return on investment at every step of the bridge lifecycle.

Civil Integration

OpenBridge Modeler allows direct referencing of DGN models for highway alignments, profiles, and ground information created with Bentley's OpenRoads, as well as LandXML files. If reference data changes, the parametric and rule-based bridge model responds to those changes automatically.

Data Reuse Saves Time and Reduces Errors

OpenBridge Modeler helps eliminate the time spent on data entry by reusing data and reduce operator error – particularly as design modifications are made to respond to changes throughout the entire bridge project. This allows team members to focus on complex engineering issues and perform more analyses and code checks to refine designs.

System Requirements

Processor

Intel® Pentium®-based or AMD Athlon®-based processor 2.0 GHz or greater

Operating System

Windows 10 (64-bit), Windows 8 (64-bit)

Memory

8 GB minimum, 32 GB recommended

Disk Space

10 GB minimum free disk space

Video

1GB of video RAM or higher recommended

Find out about Bentley at: www.bentley.com

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3D Visualization Enhances Model Verification

Modeling in a 3D environment allows users to rapidly verify the bridge geometry. The bridge is viewed in plan, elevation, and cross-section views. Solid and transparent viewing options aid in the exploration of areas with complex geometry. Use the Dynamic View feature to create 2D views of superstructure and substructure components, with dimensions, for producing preliminary drawings. Users can also specify the construction sequence and schedule and view a time-lapse construction animation as well as perform clash detection with other structures, objects, and underground utilities to eliminate problems before they occur. OpenBridge Modeler also helps users measure vertical and horizontal clearances.

Leverage lifelike renderings to evaluate the full scope of the project including corridors, utilities, and other existing structures before it begins. Use 3D visualization and rendering to gain stakeholder approvals.

Construction Engineering

Improve construction planning with real-time traffic simulation, and virtually drive through the 3D corridor model to inspect it for any design deficiencies or physical conflicts. Integrate with Bentley Navigator for design review, construction simulation, and automated clash detection. Interoperate with RM to evaluate the feasibility of construction sequencing.

Drawing and Reporting Capabilities Automate Deliverables Production

Create annotated plans, elevations, and sections using MicroStation®'s Dynamic View feature. Generate a variety of reports such as deck elevations, beam-seat elevations, material quantities, cost estimates, and Input Echo report to facilitate the evaluation of multiple bridge alternatives, construction sequences, costs, and more. Easily publish project information with a variety of report generation options. Reports can be printed to 3D PDF, saved as HTML files, or exported to spreadsheets. Generate i-models to convey rich project information to stakeholders.

OpenBridge Modeler At-A-Glance

Ease of Use

- Familiar MicroStation environment
- U.S. customary and metric (SI) units
- Comprehensive 3D physical bridge modeling
- 2D views, with dimensions using Dynamic Views
- User customizable libraries
- Variety of reporting formats
- Intuitive dialogue driven workflows
- Cross-section template for complex geometry
- Catalog of appurtenances

Powerful Modeling and Visualization Capabilities

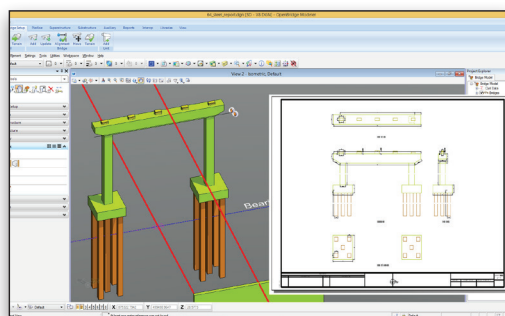
- Superstructure and substructure modeling
- Bridge Types:
 - » Precast prestressed girder
 - » Cast-in-place, concrete slab, multi-cell box, T-beam
 - » Segmental: span by span, cantilever
 - » Steel I-girder
- Bridge Components:
 - » Deck slab
 - » Girders, steel - built up or rolled, concrete
 - » Abutments
 - » Piers: Cap, Column, Footing, Piles
 - » Variable columns and caps
 - » Wing walls
 - » Bearings and beam seats
 - » Light poles
 - » Crash barriers
 - » Medians
 - » ...and more
- Parametric, intelligent bridge components
- Intuitive, dialogue-driven workflows
- Rule-based and constraint-driven modeling
- Clash detection and clearances
- Solid and transparent views
- Lifelike rendering
- Reference roadway information and ground data
- Construction scheduling and animation using Bentley Navigator

Versatile Reporting Options

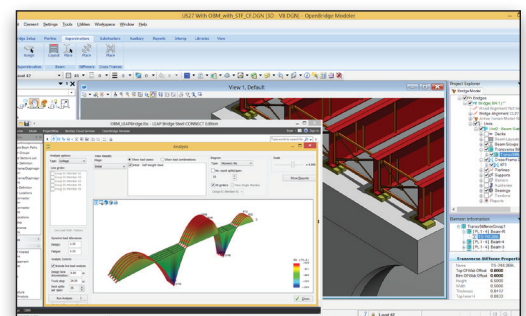
- Deck elevations report
- Beam-seat elevations report
- Material quantities report
- Cost estimate report
- Input Echo report
- Formats:
 - » 3D PDF
 - » HTML
 - » Microsoft Word
 - » Microsoft Excel

Integration with Other Software

- Bentley software:
 - » OpenRoads
 - » LEAP
 - » RM
 - » ProStructures
 - » ProjectWise
 - » Navigator Mobile
 - » gINT
 - » InspectTech
- Google Earth
- Tablet access (using Navigator Mobile)



Generate bridge project deliverables.



Interoperate with bridge analysis applications.