

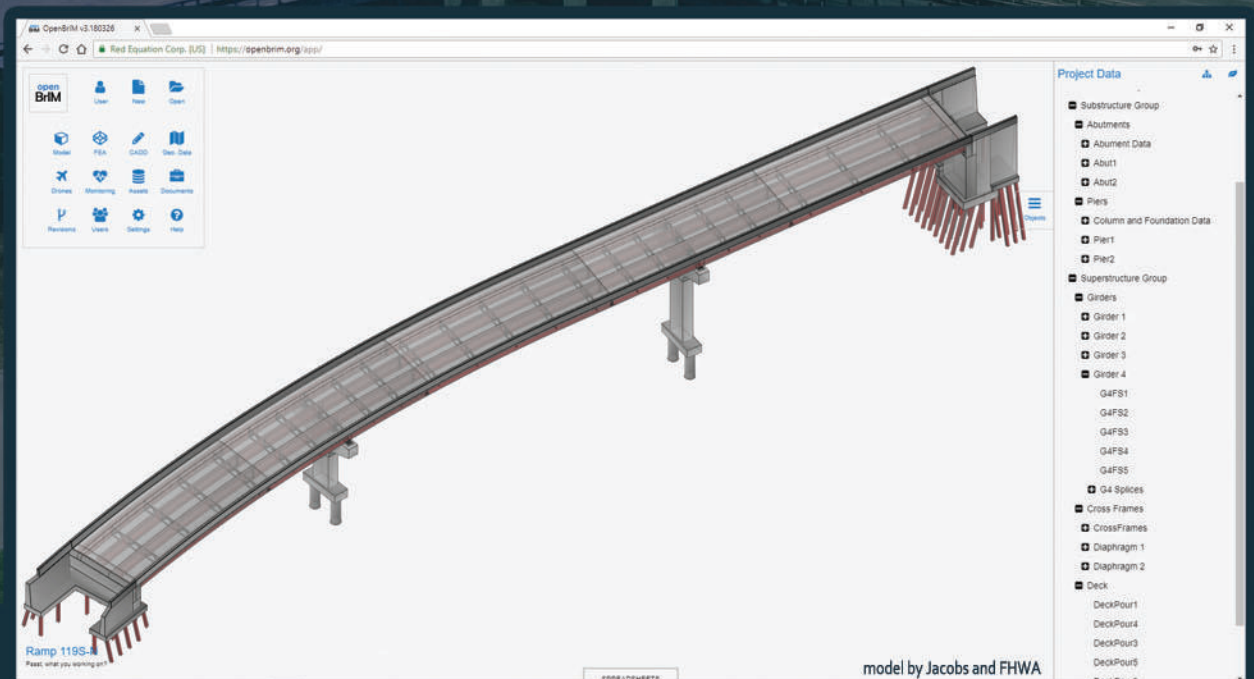
- Detailed 3D Modeling and 2D/3D Drawing Generation
- Full 3D Finite Element Analysis, Design and Load Rating Procedures
- Construction Management, Inspection Management, Health Monitoring
- Drone Automation, Augmented Reality and more... IN ONE PLATFORM...

BIM/BrIM DELIVERY

OpenBrIM Platform v3

- Quickly create/share detailed 3D models and 3D/2D drawings
- Deliver your projects accurately conforming to the latest BIM/BrIM standards
- Revision controlled secure repository for data management
- Available enterprise support and private cloud deployment
- Use pre-defined objects or create your own on OpenBrIM Incubator
- Review, communicate and verify objects on OpenBrIM Library
- Use OpenBrIM's built-in analysis, design and CAD engine
- or connect to applications of your choice using OpenBrIM Connect.

(connection to LARSA4D, SAP2000, STAAD.Pro, MicroStation, AutoCAD and more available)

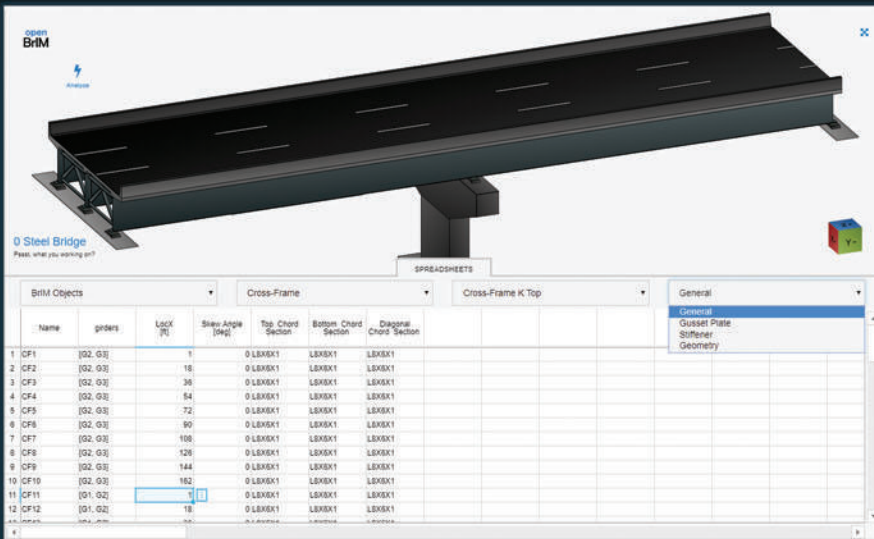


open
BrIM

collaborative, fully parametric, on-cloud information modeling platform

TO LEARN MORE ABOUT OPENBRIM, SCHEDULE A DEMO SESSION TODAY

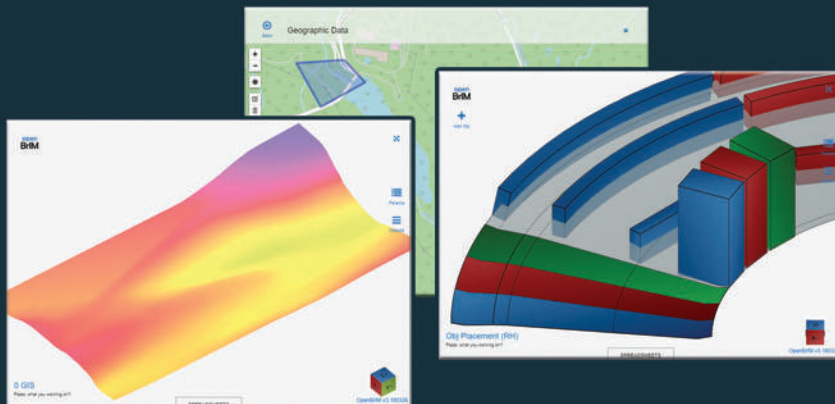
OPENBRIM.ORG 212.991.8956 1177 AVENUE OF THE AMERICAS NEW YORK CITY NY 10036



3D Detailed Parametric Modeling

By customizing the OpenBrIM objects, quickly model your structures on cloud, and share with others using a single link. In addition to the detailed 3D view, your OpenBrIM model includes analytical model, drawings, design procedures, documents, communications and reports.

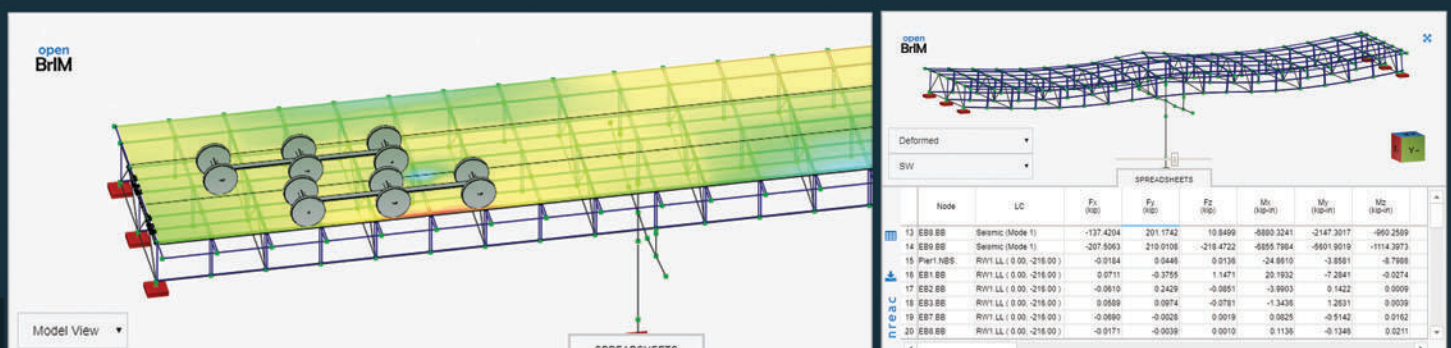
Mapping \ GIS \ Roadway Alignment You can create and mark maps and extract elevation data. Strong roadway alignment capabilities combined with alignment-aware objects allows your structure to conform to complex geometry.



Section Analysis and Design

Compute detailed sectional properties of arbitrary steel, composite, prestressed, reinforced concrete sections; including torsional constant and shear center. Perform moment curvature and axial-moment interaction analysis.

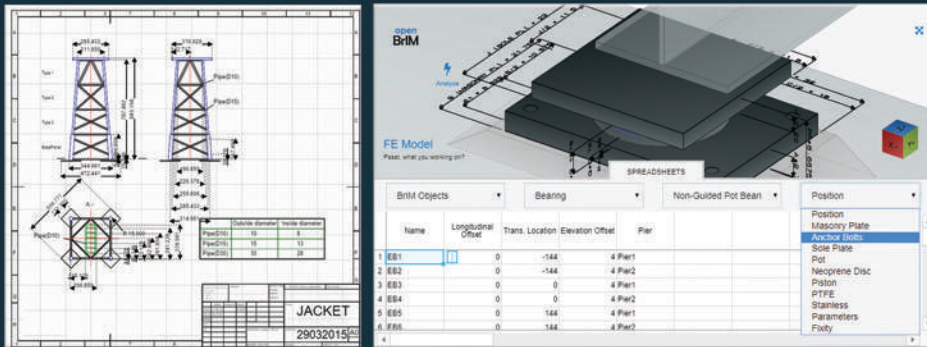
Linear/Non-Linear 3D Finite Element Analysis OpenBrIM comes with a powerful, built-in 3D finite element analysis engine so that you can run analysis directly within OpenBrIM App environment regardless of the device or platform you are on (support for Linux, Mac, Android, iOS and more). OpenBrIM FEA includes linear / nonlinear static, pushover, response spectra and influence surface based live load analysis. For your special analysis needs, connect to your favorite analysis package using OpenBrIM Connect, and compare your results side by side.



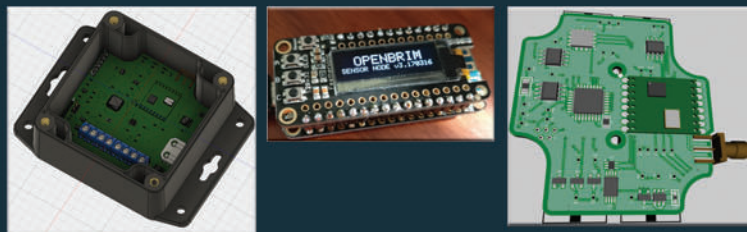
Code Check / Design / Load Rating OpenBrIM Platform comes with a wide variety of code check and design procedures that are implemented parametrically in OpenBrIM Library (AASHTO LRFD, AISC, ACI and Eurocode are available). With auto-generated, fully detailed reports, you can be sure of the transparency of the process as well as the assumptions and procedures followed. Similarly, load rating procedures are implemented parametrically providing rating results with a single click (or touch).



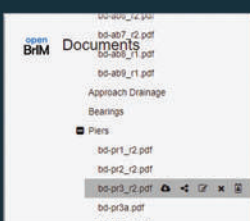
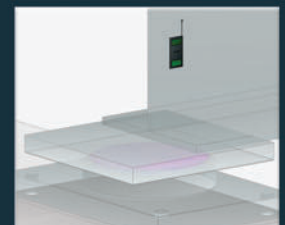
CAD Drawings Your detailed parametric model includes detailed 3D drawings. Generate, create or extend 2D drawings directly from your 3D models. Using OpenBrIM connect, link your models with 2D drawings in MicroStation and/or AutoCAD.



Drone Management \ SfM \ AR You can setup missions for your drones, have captured data automatically uploaded, processed and managed on OpenBrIM Platform. Your structures, together with captured 3D environment, can be viewed on VR/AR environments for presentation or inspection purposes. Support for HoloLens and Meta2 are available.



Structural Health Monitoring Manage sensors directly on 3D models. Set alerts, generate reports and integrate with FEA to analyze sensor data. Using OpenBrIM's Open Hardware Initiative, create power efficient, task specific sensors that are directly connected to OpenBrIM big data network.



Document Management \ Digital Signatures Store, manage and track your documents Using OpenBrIM email integration and communication service, your documents are safe to share for both internal and external collaboration.

=(\$G\$214*1000/\$G\$16)/(\$G\$214*1000/\$G\$200*\$G\$209/\$G\$27)/(\$G\$211)*1000000*\$G\$29/\$G\$27									
B	C	D	E	F	G	H	I	J	K
Stage-2: Girder subjected to slab weight + Diaphragm									
Moment, M_2					8026 kN-m				
Allowable stress, f_t					18 MPa	0.43%			
Allowable stress, f_c					1,202 MPa	0.13*sqrt(f_c)			
Effective prestressing force					7924 kN				
Incoming stress at top, f_t					-18.18 MPa	OK			
Incoming stress at bottom, f_c					-3.63 MPa	OK			
Stage-3: Composite section (Moment of composite Section-Wearing course)									
Moment for Footpath-Wearing/Wearing Course etc					706 kN-m				
Allowable tension					1,202 MPa	0.13*sqrt(f_c)			
Allowable compression					18 MPa	0.43%			
Free of pore					4.29 MPa	OK			
Factor of pore					-0.38 MPa	OK			
Stage-4: Composite section (Moment of composite Section-Wearing course+live Load)									
Live Load Moment+Impact Moment					2409 kN-m				
Free of pore					-0.81 MPa	OK			
Factor of pore					-2.87 MPa	OK			
Allowable tension(0.13*sqrt(f_c))					1,202 MPa	0.13*sqrt(f_c)			
Allowable compression(0.43%)					18 MPa	0.43%			
Actual force per tendon is OK									
Group: Losses of Prestressing Group: Stage 2 Calculations $M_{p2} = M_{C2} + M_{C2} + M_2 + \text{WorkLoadS2} = 2182.9947$ $F_2 = \text{ForceAfterTransfer} = 4796$ $f_{t2} = -F_2 \cdot \frac{1000}{\text{ModArea}} \cdot \frac{F_2 \cdot 1000 \cdot \text{ecc} \cdot \text{ModC}_2}{\text{ModI}_y} + (M_{p2} \cdot 1000000) \cdot \frac{\text{ModC}_2}{\text{ModI}_y} = -17.4619$ $f_{c2} = -F_2 \cdot \frac{1000}{\text{ModArea}} + \frac{F_2 \cdot 1000 \cdot \text{ecc} \cdot \text{ModC}_2}{\text{ModI}_y} + (M_{p2} \cdot 1000000) \cdot \frac{\text{ModC}_2}{\text{ModI}_y} = -2.047$ Group: Stage 3 Calculations $M_{p3} = M_{p2} + M_{p3} + M_{p3} + M_{p3} + M_{p3} - \text{WorkLoadS2} + M_{p2} = 2416.6783$ $F_3 = \text{ForceAfterTransfer} = 4796$ $f_{t3} = -F_3 \cdot \frac{1000}{\text{ModArea}} \cdot \frac{F_3 \cdot 1000 \cdot \text{ecc} \cdot \text{ModC}_3}{\text{ModI}_y} + (M_{p3} \cdot 1000000) \cdot \frac{\text{ModC}_3}{\text{ModI}_y} = -10.5796$ $f_{c3} = -F_3 \cdot \frac{1000}{\text{ModArea}} + \frac{F_3 \cdot 1000 \cdot \text{ecc} \cdot \text{ModC}_3}{\text{ModI}_y} + (M_{p3} \cdot 1000000) \cdot \frac{\text{ModC}_3}{\text{ModI}_y} = -0.1384$ Group: Stage 4 Calculations $M_{p4} = \text{MLLTot} + M_{p4} = 3718.2871$ $F_4 = \text{ForceAfterLoss} = 4796$ $f_{t4} = -F_4 \cdot \frac{1000}{\text{ModArea}} \cdot \frac{F_4 \cdot 1000 \cdot \text{ecc} \cdot \text{ModC}_4}{\text{ModI}_y} + (M_{p4} \cdot 1000000) \cdot \frac{\text{ModC}_4}{\text{ModI}_y} = -10.2823$ $f_{c4} = -F_4 \cdot \frac{1000}{\text{ModArea}} + \frac{F_4 \cdot 1000 \cdot \text{ecc} \cdot \text{ModC}_4}{\text{ModI}_y} + (M_{p4} \cdot 1000000) \cdot \frac{\text{ModC}_4}{\text{ModI}_y} = -3.3069$ Group: 5.8.3.4.3 - Simplified Procedure for Prestressed and Nonprestressed Sections Group: Deflection Calculations									

Parametric Markup Language (ParamML) is at the core of all OpenBrIM services and applications. This new innovative language allows OpenBrIM to be customizable yet easy to use. Similar to the way Microsoft Excel works, a ParamML document is composed of parameters (cells) and objects (worksheets) allowing any information that can be represented as a number, text, reference or formula to be created, managed and communicated in a collaborative on-cloud environment.

OPENBRIM EDITIONS

COMMUNITY ACADEMIC PROFESSIONAL CORPORATE ENTERPRISE

apps & services	incubator create, manage, and communicate BIM/BrIM objects in a collaborative, on-cloud environment.	✓	✓	✓	✓	✓
	library get access to certified objects that are ready for modeling, analysis, design, construction, rating and BIM/BrIM delivery.		✓	✓	✓	✓
	app create BIM/BrIM models -- collaborate, model, analyze, design, construct, manage, rate, inspect and monitor your structures.		✓	✓	✓	✓
support	email get fast, accurate email support directly from the developers whose first priority is to see your project succeed.		✓	✓	✓	✓
	phone support is just a phone call away right when you need it.				✓	✓
enterprise	corporate workspace get a managed private workspace separated and secured just for your organization.				✓	✓
	enterprise cloud run OpenBrIM services within your private cloud tightly integrated with your services (ex. users login with your auth. service)					✓

CONTACT US FOR MORE INFORMATION ON OPENBRIM SERVICES, CAPABILITIES AND PRICING.

PHONE: 212-991-8956 EMAIL: INFO@OPENBRIM.ORG

open
BrIM