



# Engineer Markus Leschanz

**Company:** Ingenieurbüro ste.p ZT-GmbH

**Position:** Design Engineer

**Responsibilities:** Construction of plans and models for the infrastructure of buildings.

**Mr. Leschanz, you are currently creating your first BIM-project in Revit with the aid of the SOFiSTiK Bridge Modeler. Please tell us a little about it.**

The project concerns itself with a twin-span bridge spanning over several presently existing ÖBB rails and a considerably busy street in the south of Vienna. Two ÖBB rails, along with a pedestrian pavement on the side, are built on the overpass structure. The first span of the bridge over the existing trainline consists of an arched steel structure and a reinforced concrete deck panel. The second span over the existing street consists of an integral reinforced concrete frame, in which the load-bearing structures of the railway and the pavement are separated but founded on the same substructure.

**What were the challenges of this project? How did you overcome them?**

The tender planning was already completed using AutoCAD – the detailed planning on the other hand was to be done for the first time with the use of Revit. Prior to this, we did not have any experience with Revit which was our biggest challenge. Workshop planning of the steel structure was done by the construction company who then provided us with a 3D-model. The Substructure

was modeled using standard Revit tools, whereas the two reinforced steel support structures were modeled using the **SOFiSTiK Bridge Modeler** (SBM). In their longitudinal direction, the underface of these support structures is arched vaultlike.

The abutments are sloped when looking at them in the floor plan. Meaning, the cross sections of the reinforced concrete support structures were no “normal” standardized cross sections. They had to thus be modeled as families in Revit and were then able to be placed with the Bridge Modeler; this worked fantastically.

All cuts were directly derived from the model and only a few additional details were added manually in 2D within Revit. AutoCAD planning was then renounced altogether.

**Are there experiences that you want to share with like-minded colleagues?**

Never give up and hang in there.



**„Revit can also be used to create proper detailed plans and is more than just a tool for 3D-Pictures.“**

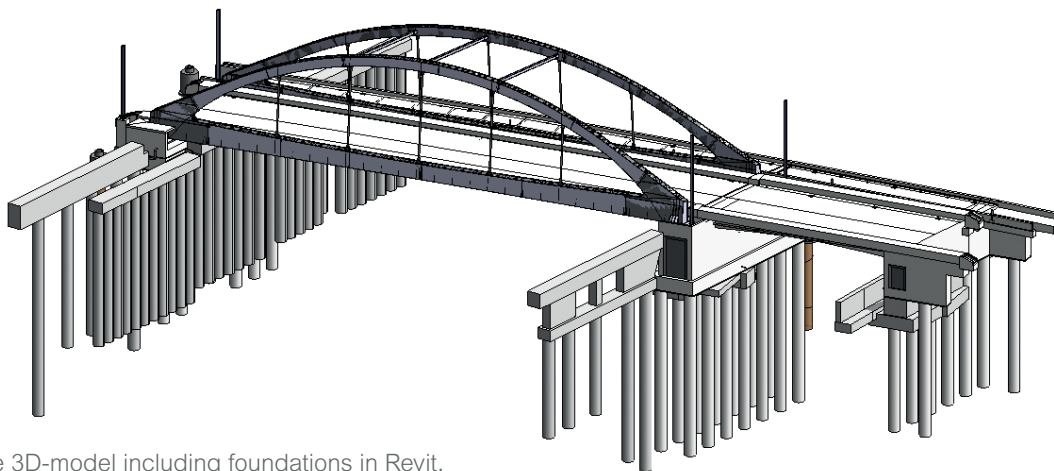
**In which way did the use of Revit and SOFiSTiK Bridge Modeler change your usual working methods?**

We see working on a Model that not only contains all the necessary information, but also allows us the possibility to create section drawings, as a major quality improvement.



*„Additionally, we are interested in the upcoming features of the program such as determining mass, adding information to components like positioning etc., and getting all that information in the form of a simple schedule as this will be highly beneficial to us in the future.“*

**As far as we know, you were also looking into other software solutions. Why did you choose to work with Revit and the SOFiSTiK Bridge Modeler?**



The entire 3D-model including foundations in Revit.

For now, we want to stay with the Autodesk product line.

**What do you think of BIM? Do you think it will take over the infrastructure sector?**

Yes.

**Thank you for the pleasant and informative interview and we wish you all the best and continued success Mr. Leschanz.**



Complete support structure after successful construction.

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