

“I think RISA is the best software on the market suitable for projects with complicated geometries. The simple interface and graphic display capabilities, in particular the ability to spin the model about any axis, are what makes RISA most useful.”



Project

Town & Country Center, a 22,040 S.F. three-building retail center complex in Riverside, Calif.

Challenges

- Importing 3D coordinates from AutoCAD and creating models in RISA-3D
- Managing roof design and designing girders for all three buildings
- Highly irregular shape of masonry shear walls
- Creating wall openings with different height and width

Solutions

Afshin Kianpour learned an old engineer can learn new tricks.

For years, Kianpour used proprietary spreadsheets and calculations developed over many projects to perform the analyses of the residential and commercial projects he’s designed.

This is because there was no commercial software available to model an entire mixed material building. With RISA’s latest

release, this masonry and wood building was easily modeled and designed all in one software: RISA-3D.

When tasked to design the Town & Country Center in Riverside, Calif., Kianpour, owner of Modern Millenium Design Inc. (Porter Ranch, Calif.) discovered a better way.

Kianpour used RISA-3D for the analysis and design of the 22,040 sq. ft. retail

QUICK FACTS

Structural Engineer

Millenium Modern Design Inc.
Porter Ranch, Calif.

Design Team

Afshin Kianpour

Size

22,040-sq.-feet

Completion Date

September 2010 (Expected)

Cost

\$3.5 million

Software

RISA-3D

“Unlike other software that I’ve worked with, RISA never crashed during the post processing or modeling (phase) or (while) performing the analysis.”

Afshin Kianpour, Millenium Modern Design Inc.

center, and in the process found out what he had been missing.

Kianpour used RISA’s spreadsheet capabilities for the first time and came away impressed.

“The spreadsheets are awesome,” Kianpour said. “I’ve worked with other software and the advantage of using RISA is the spreadsheet format and the flexibility.”

“You can easily manipulate the data and all the coordinates and loads. If you change your mind or want to revise a load on roof members, for instance, you can easily do it in the spreadsheet. In the other programs, you have to do it one-by-one. It’s not as flexible as RISA.”

For this project, Kianpour used RISA to study all three buildings under seismic

and wind loads, design masonry walls at different angles and heights, and design wood beams and girders as well as steel columns.

The design of the Town & Country Center specified wood to be used for the roof girders and contained highly irregular layouts for the masonry shear walls.

Each a separate challenge but all solved using RISA.

The stability of RISA was a factor unrelated to design of the structures but important to the overall work flow for Kianpour.

“I remember a couple designs I did with (other software) . . . the project was not as big (as the Town & Country Center) but we had problems,” Kianpour explains. “But we didn’t have those problems with

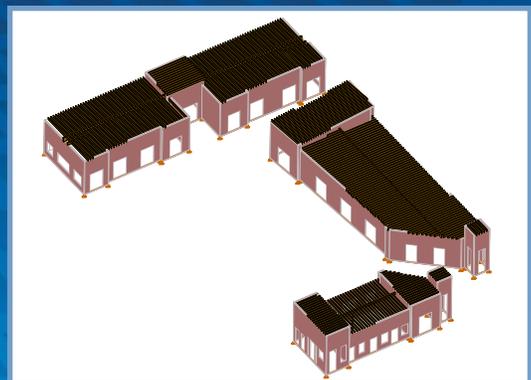
RISA. RISA never crashed during the post processing or modeling (phase) or (while) performing the analysis.”

This structure would’ve required hand calculations and spreadsheets (or multiple software models) previously.

With RISA’s new wood shear wall and diaphragm design this project was completed quickly and easily – all in just one model.

Although there have been individual software programs for wood, RISA has the first multi-material, full model design approach.

You can combine wood roof systems with masonry walls such as the T&C project. Having one model saves the engineer time and eliminates errors by maintaining one central source of information.



RISA Technologies has developed cutting-edge structural design and optimization software since 1987. With a well-trained team of engineers and software developers, we are working to meet the needs of our growing client base by implementing new design features and expanding the suite of software tools that we offer.

Our products are used by 24 of the top 25 U.S. design firms and in more than 70 countries for towers, skyscrapers, airports, stadiums, petrochemical facilities, bridges, roller coasters and everything in between.

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