

Arun Prakash

From: Stetler, Molly A <molly@purdue.edu>
Sent: Wednesday, February 20, 2013 9:23 AM
To: ce-structural-grad-list@ecn.purdue.edu
Cc: Arun Prakash (aprakas@purdue.edu)
Subject: CE 691S Seminar on Tuesday, Feb. 26th FW: Temple Medical Building - Model
Attachments: Temple Medical.dwg; Temple Medical.pdf; Temple Medical.ifc

Hello:

David Ruby from Ruby + Associates will be giving the seminar (abstract shown below). He has sent the attached models and the questions (below) for his seminar. Please review these beforehand as the presentation will be with audience participation.

Seminar Announcement:

PURDUE UNIVERSITY
SCHOOL OF CIVIL ENGINEERING

STRUCTURAL ENGINEERING SEMINAR CE 691S

IT WORKED IN THE MODEL

By

DAVID I. RUBY, P.E., S.E.
SECB, F.ASCE, PRINCIPAL
RUBY + ASSOCIATES

Tuesday, February 26, 2013

HAMP 1144
4:30 pm

ABSTRACT

Technology has allowed structures to be conceived, analyzed; design drawings generated and proposals issued that are significantly more complicated and inherently less stable than the norm of 25 to 30 years ago. There may be exceptions, but the norm has changed. Modeling software encourages our imagination to go beyond reason and logic, beyond Lincoln logs and erector sets; Legos and computer games have encouraged unlimited possibilities, but BIM allows us to dare to model. Technology and its realistic visual representations demonstrate on a regular basis that anything is possible. But is it?

The computer model can and will solve any structure we generate, it will compensate for lack of load path, it will redistribute loading based on stiffness and it will provide you with final sizing of the members. Wonderful is not the work for it. Scary would be a better choice.

We will explore several projects that “Worked in the Model” and hopefully create an environment for understanding that the computer is just a tool, nothing more, nothing less. As designers, we must learn to utilize the computer otherwise you will be abused by it!!..

Bio:

David Ruby, PE, SE, SECB, F. ASCE, is Chairman of the Board and Founder of Ruby+Associates, Inc. His extensive experience spans over 50 years and covers all aspects of structural design and construction engineering. Through Ruby+Associates, Inc, Mr. Ruby has provided service to the steel construction industry through erection and stability analysis, value engineered solutions and constructability reviews on such projects as: Bradley Center (Milwaukee) Grand Rapids Arena (Grand Rapids, MI), Conseco Arena (Indianapolis), Quest Center (Omaha), Ford Field (Detroit), US Cellular Field (Chicago) and Phoenix Cardinal’s Stadium (Glendale, AZ). In addition, Mr. Ruby has left his mark on John Hancock Center, Sears Tower and AON Tower (Chicago), Renaissance Center (Detroit), Bonaventure Hotel (Los Angeles), Embarcadero Center (San Francisco) and Peachtree Center (Atlanta). Mr. Ruby has also lectured at Wayne State University (Detroit), Lawrence Technological University (Southfield, Michigan) and Purdue University. David has a BSCE from Rensselaer Polytechnic Institute, Troy, NY, is registered in 33 states and is a member of AISC’s Committee on Research, Partners in Education and is presently authoring a Design Guide on Constructability.

Questions related to seminar presentation

Areas to be reviewed by the students for discussion on the model.

1. Review the columns that rest on transfer girders at the 3rd floor.
 - a. Are they framed accurately?
 - b. Does the potential for differential deflection of the 3rd floor girders and floor exist?
 - c. What options exist for correction?
 - d. What provides lateral bracing for the girders?
2. Review the lateral-load-resisting system.
 - a. Is the system defined sufficiently?
 - b. Relative stiffness of the various braced bays,
 - c. Is the arrangement subject to torsion? How could this be corrected?
3. Define the lateral and gravity load paths
 - a. Consider slab, floor beams and bracing
4. Is the structure stable without the floor slab?
5. Are there any other serviceability issues?
6. Please outline an issues you see that might impact the erector.