SEMI-RIGID DIAPHRAGMS
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OVERVIEW

• Lateral Load Path
• Diaphragm Behavior
• Diaphragms in RISA
• Example Models
LOAD PATH ILLUSTRATED
RIGID DIAPHRAGM
FLEXIBLE DIAPHRAGM
SEMI-RIGID DIAPHRAGM

1. \( W/4 \sim \)
2. \( W/2 \sim W/3 \)
3. \( W/3 \)
4. \( W/3 \)
5. \( W/3 \)
6. \( W/3 \)
HOW DOES RISA SYSTEM WORK?

**FL** | **RISA Floor** | **RISA Calculates** | **3D** | **RISA-3D**
---|---|---|---|---
Gravity Loads

**Automated Diaphragms:**
- Semi-Rigid: Concrete Floor
- Flexible: Beam Supported
- Rigid: Beam Supported, Concrete Floor
HOW DOES RISA SYSTEM WORK?

3D RISA-3D

Automated Diaphragms:
Rigid
RIGID DIAPHRAGM – LOAD APPLICATION

Plan View

Internally- Rigid Links

Elevation View
FLEXIBLE DIAPHRAGM – LOAD APPLICATION

Wind Loads in Z direction (WLZ)

Wind Loads in X direction (WLX)

Transient Distributed Loads
SEMI-RIGID DIAPHRAGM – WIND LOAD

Wind Loads in +X direction (WL+X)

Wind Loads in +Z direction (WL+Z)

Wind Loads in -X direction (WL-X)

Wind Loads in -Z direction (WL-Z)
SEMI-RIGID DIAPHRAGM – EARTHQUAKE LOAD

Earthquake Loads in ELX

Earthquake Loads in ELZ
SEMI-RIGID LATERAL LOADS
MODELING TIP - RIGID
MODELING TIP - SEMI

Model
All Framing!
LET’S REVIEW SOME MODELS
QUESTIONS?

Please let us know if you have questions

• We will answer questions for the next 5 minutes
• Once the webinar is closed, we will post all Q&A’s at risa.com
• For further information, contact us at info@risa.com