

## QuickRWall 1.5 Free Upgrade!

Here is the new math:

$$1.5(\$345) - 1.0(\$295) = \$0.00$$

For those of you who invested in version 1.0 of **QuickRWall**, you can check the equation yourself at the [online order form](#). But then, don't bother because this a **Free Upgrade**. You do not need to order anything, just use the built-in update command:

[Help](#) | [iesweb.com](#) | [Update QuickRWall](#).

### Stability

- ✓ Sliding (restrained)
- ✓ Overturning (supported, not checked)
- ✗ Bearing pressure (max/allowable = 1.853)
- ✗ Bearing resultant location (Under footing)

### Stem

- ✓ Min  $A_s$
- ✗ Shear (max  $V_u/\phi V_n = 1.260$ )
- ✓ Positive Flexure (max  $M_u/\phi M_n = 0.383$ )
- ✓ Negative Flexure (max  $M_u/\phi M_n = 0.828$ )
- ✗ Development into base
- ✗ Bar cutoffs

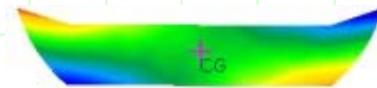
For those of you still using some lesser Retaining Wall Design product, or trying to design walls in bits and pieces with complex FEA meshes and compression-only springs, it is time you tried **QuickRWall 1.5**.

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## Whatever Floats Your Boat

Students at universities around the country are designing concrete boats. **Is this some sort of joke?** We never think twice about steel barges, but who ever heard of making a **Concrete Canoe**?



## Well It's No Joke

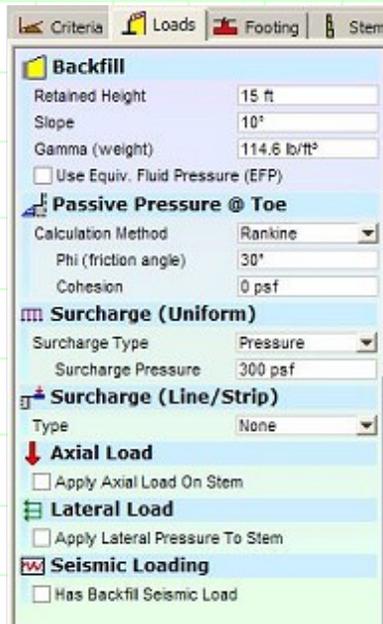
These students are trying to apply cutting edge concrete design and manufacturing principles in such a way that they can get from point A to point B faster and without *spalling, shrinking, or cracking*. No small feat when you are trying to get your 21 ft, 350 lb canoe to fly.



## We are the Champions!

In the recent Pacific Northwest regional competition MSU (No, not *that* MSU, the **Montana State University!**) team managed to show off their *mix* of athletic *ductility*, and shear *strength*. They *crushed* the competition!

We extend lesser congratulations to the



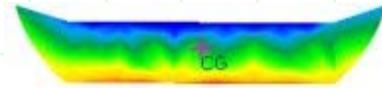
The improvements have all been **customer-directed** and **customer-tested!** The new **QuickRWall 1.5** offers superior wall design capabilities with the following benefits:

-  Comprehensive Building Code Support:
  - IBC 2003,
  - Concrete ACI 318-02,
  - Masonry** MSJC 2002
  - Canadian** CSA A23.3-94
-  Easy, Fast, and Graphical Interface
-  A Powerful Feature Set, Including:
  - Multi-tiered stems
  - Seismic Loading**
  - Line or Strip **Surcharges**
  - Multiple Materials
  - Precision Design Options
  - Basement** Walls (propped)
-  Incredible Reporting
  - Professional **2 Page Summary** Report
  - Sketch of Final Design (to **DXF** out!)
  - Transparent **Equations** (for checking)

other teams who'll have to face MSU at Nationals:

-  Fairmount State College
-  Western Kentucky University
-  Clemson University
-  Michigan Tech
-  U of Alabama Huntsville
-  McNeese State

The national competition will be held in Washington, D.C. from Thursday, June 17 to Sunday, June 20. Follow the link for more information about the ASCE sponsored competition.



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### Ask Dr. Dan

#### Bad Statics Check?

I have a project with all plate pressure loads in the Y direction. After analysis, the statics check shows that I have some small loads in the X and Z directions. Is this a bug or numerical round off?



**Caution: Theory Zone Ahead!**

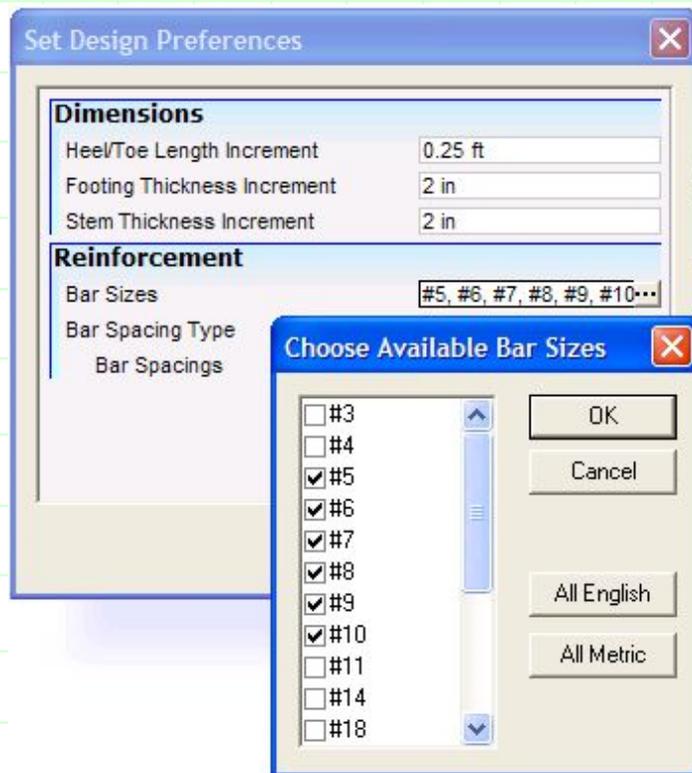
#### Dr. Dan Replies:

Neither. When we do the statics check we use the deformed element position for evaluating the element applied loads. If the elements have rotated out of plane they have small components that are in the X and Z directions. The transformation matrix for the element therefore shows that the normal to the plate has very small X and Z direction components and the pressure loads go in those directions.

#### Skewed Spring Supports?

A customer sent in a VA 5.0 model with spring supports that were 'infinitely stiff' and slightly skewed. The springs were modeling battered piles. The results were not so nice and there was a question of numerical instability or round off playing too big a part.

#### Dr. Dan's Comments:



We have updated the **QuickRWall** 1.5 web pages with an on-line animated demo, you may also download the [free-trial version](#) and use it for 30-days (unless you tried version 1.0). Invest in the quality of your retaining wall designs at just \$345 for a single-user license. [Order it today!](#)

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### 1994: IES Virtual Headquarters

"Thanks for calling IES", Melinda spoke pleasantly to the first caller into IES US Headquarters.

Melinda was (and is) the office manager extraordinaire at [Creekside Veterinary Hospital](#) in Bozeman, MT. For an all-too-brief period between 1994 and 1997 she was also the complete and total "IES Headquarters" staff. She had two phones on her desk (one for the hospital) and a host of dogs and cats to deal with. We give Melinda lots of credit for making our first customers, **loyal** customers! Melinda probably knew you by name and your dog's name too!

### DOS Rules!

It was June of 1994 when the first sale took place. Ironically, it was a copy of AnalysisGroup *for DOS* that we sold first. Ironic because we had really wanted to be a Windows outfit and we had added AnalysisGroup for DOS as just a quick way of having two products instead of just one. That product was discontinued a year later when we released the pseudo Windows version. AnalysisGroup for Windows was a thin veil over the old script-based program, but it really got us out of the DOS world for good.

The problem is certainly numeric in nature. If the springs are changed from infinite stiffness to some numeric value (12 k/ft was my default) the results appear much more reasonable.

I get better results with his model if I change the inclined spring support to a vertical spring and horizontal infinite spring. I think the bottom line here is that inclined infinite supports should really be put on infinitely stiff in both directions as two springs.

*[Editor's Note: Dr. Dan has since modified VisualAnalysis 5.1 so that it detects this condition and will automatically use multiple spring elements internally to help avoid this class of numerical problems. Just one more reason to upgrade!]*

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### VisualAnalysis 5.10.0008 is Dead

We are sorry to report the passing of "VA 5.10 Package, Build 8", which came into this world under severe developer duress and did not survive through the birth of its younger sibling Build 9.

We apologize for any download inconvenience this may cause you. If you attempt to update a Build 8 installation it will fail, so **you must uninstall Build 8** in order to install Build 9 or any future updates.

Fortunately, the new build appears to have a much more promising future: it actually works.

### VisualAnalysis Change Log:

[www.iesweb.com/news/build-notes.htm](http://www.iesweb.com/news/build-notes.htm)

### VisualAnalysis Updates:

[www.iesweb.com/install.htm](http://www.iesweb.com/install.htm)

If you have Build 5, 6, or 7 installed, you may update normally to Build 9 with a minimal download.

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### Support Update

IES is busy *fixing bugs* and *tweaking features* to make it faster, stronger,

In those early years, Dan and Terry were both working their regular jobs at the university and IES was just a hobby. We set up the virtual office telephone number and the ability to forward calls in case anyone had a technical question. **No email. No web site. No office!** Just a couple of magazine ads (see last month's VirtualWork) to get the word out and a cheery voice on the phone.

### It worked

IES software started going out the door to happy customers. Every day Dan would go home and package up the demo requests and orders; sitting at his computer feeding it floppy disks every 1 minute and 32 seconds. He would deliver them to the post office on his way to work the next day.



Terry handled technical support calls in his spare time. As a graduate research assistant (with too many years of school under his belt and too few degrees to show for it) that spare time occupied most of his day! But with only a dozen customers, the technical support duties were fairly light. Most of the questions in those first years were regarding how to do things in a "Windows way". Everyone kept looking for the command line way of creating members in VisualAnalysis!

### Discovering the Business Model

Most of our time was spent in the lab trying to make the software easier to use while adding features that customers started requesting right away. Many of our customers were impressed by the interface but disgruntled by the lack of power they were used to in the \$4000 packages they had used in the past.

It really wasn't engineering power that was lacking back then, but *practical power*. We had not really put our software to the test with real-world sized problems. So it was little things like: 200 page reports, or 15 minutes to scroll through a list of members that upset practicing engineers. In talking to a few upset customers, though, we discovered the secret to our success.

### Next Month

Read about the secret of IES success the [next issue](#) of *VirtuaWork*.

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leaner, and more friendly. In recent weeks we have updated [ShapeBuilder 3.0](#) and [VisualAnalysis 5.1](#), not to mention the new release of [QuickRWall 1.5](#) (did we mention it was a **free** upgrade for 1.0 users?)

The [IES web site](#) is also undergoing organizational changes and there is a new installation and update page for customers:

[www.iesweb.com/install.htm](http://www.iesweb.com/install.htm)

This provides a great place to visit if you wish to install a **new product**, install an **update**, **reinstall** the latest update (for technical reasons) or just to find out what IS the latest version!

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### Quick Links:

[Upgrade Information](#)  
[Product Information & Pricing](#)  
[Latest Updates](#)  
[Secure Order Form](#)  
[Online Technical Support](#)  
[Send Email to IES Support](#)  
Sales phone: 800-707-0816