Showcasing DOE Efforts

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Resource Center

- Add user feedback?
- Footprints
- State code Database
- Where we have been

BECP Code Compliance Tools

Prescriptive Approach

- Simple, fast and easy
- Generally most stringent

- Requires minimum input
- Based on climate and WWR
- Uses a prototype building

Trade-off Approach

- Trade-off between components
- Provides design flexibility

- Requires area & U/R-factors
- Uses UA calculation (RES*check*) & regression equations (COM*check*)

Residential

1. Prescriptive Tables & Printed Guides

RES*check*

1. RES*check* desktop software for Windows and Mac with AreaCalc tool

Web-tools

Commercial

1. Prescriptive Tables / Printed Guides

COM*check-EZ*

1. COM*check*-EZ desktop software for Windows

Web-tools

Where have we been?

- MECcheck (1995)
- MECcheck 2.0 (1997)
- MECcheck 3.0 (1999)
- REScheck 3.6 1e (2004)

- COMcheck 1.1 (1997)
- COMcheck 2.0 (1999)
- COMcheck 2.5 1a (2004)

REScheck™

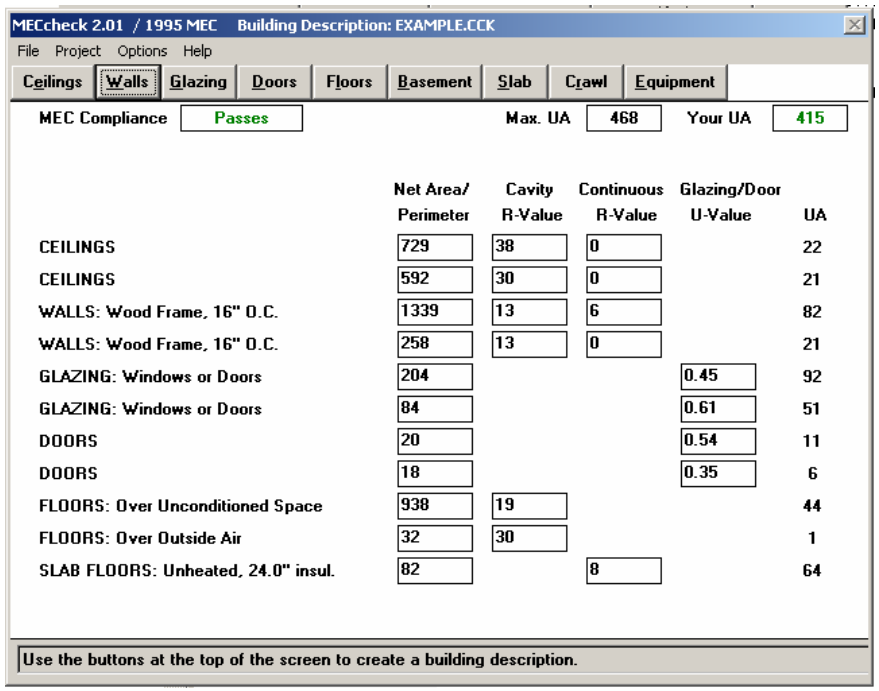
COMcheck•EZ™

RES

COMcheck•Web™

Where have we been?

- **REScheck 2.0 (1995)**


MECcheck 2.01 / 1995 MEC Building Description: EXAMPLE.CCK

File Project Options Help

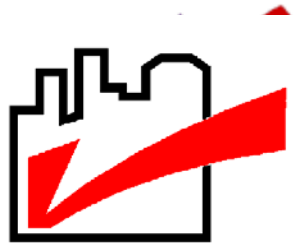
Ceilings | Walls | Glazing | Doors | Floors | Basement | Slab | Crawl | Equipment

MEC Compliance: Passes Max. UA: 468 Your UA: 415

	Net Area/ Perimeter	Cavity R-Value	Continuous R-Value	Glazing/Door U-Value	UA
CEILINGS	729	38	0		22
CEILINGS	592	30	0		21
WALLS: Wood Frame, 16" O.C.	1339	13	6		82
WALLS: Wood Frame, 16" O.C.	258	13	0		21
GLAZING: Windows or Doors	204			0.45	92
GLAZING: Windows or Doors	84			0.61	51
DOORS	20			0.54	11
DOORS	18			0.35	6
FLOORS: Over Unconditioned Space	938	19			44
FLOORS: Over Outside Air	32	30			1
SLAB FLOORS: Unheated, 24.0" insul.	82		8		64

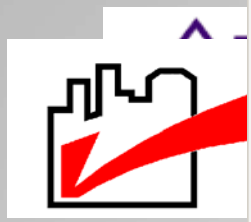
Use the buttons at the top of the screen to create a building description.

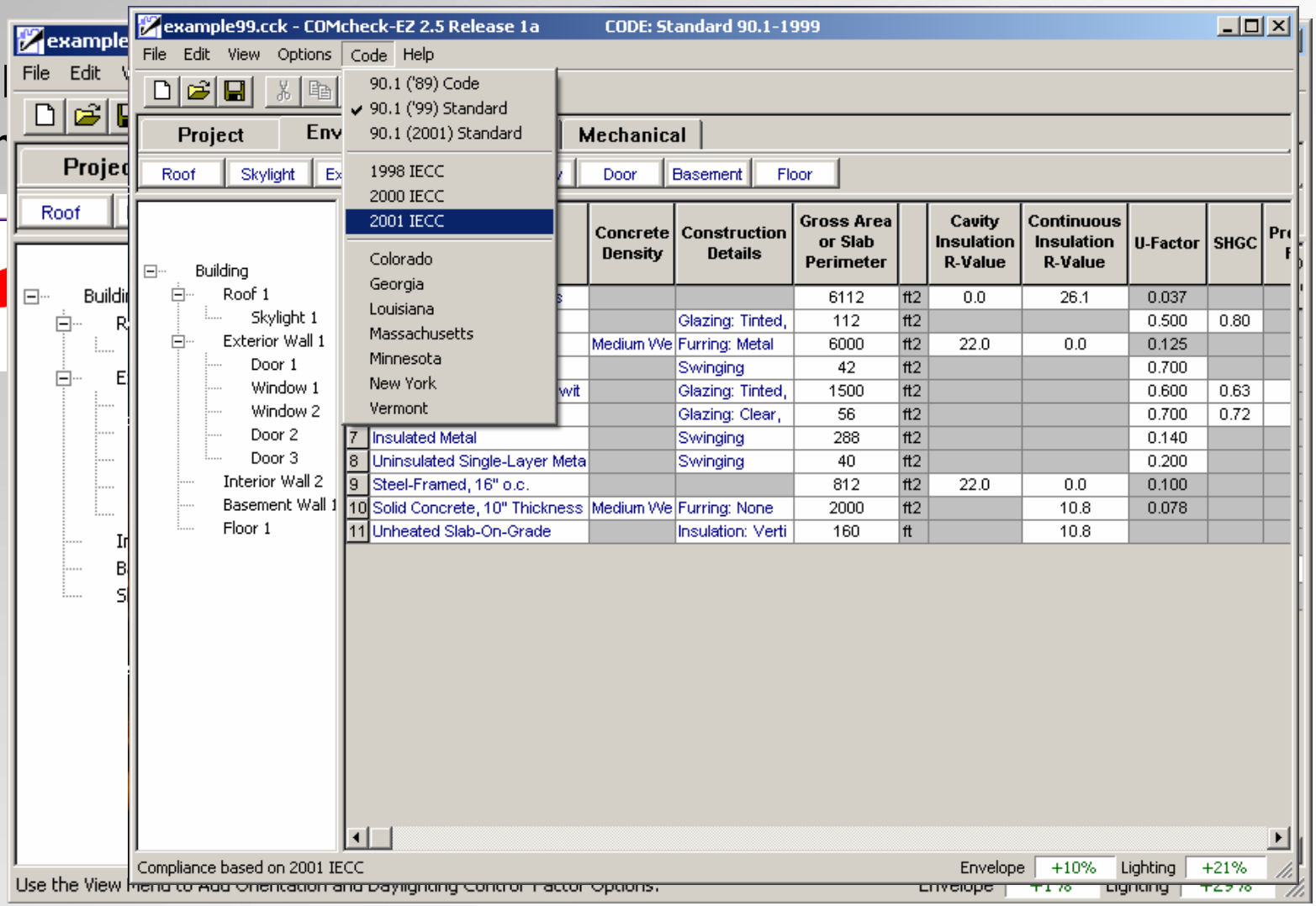
- **COMcheck 1.1 (1998)**



Where have we been?

- COMcl
- RESch





Resource Center

- **Resource Center** (deployment before 10/2004)
  - Content management and portal technology
  - Re-useable content at paragraph and graphic level

- **Technology:**
  - Cocoon (opensource) performs pipeline transformation
  - Lucene (opensource) search engine
  - mySQL (opensource) database for external links, content management, and graphics
  - XML tags for database calls, content (textblocks), and pdf generation
  - ImageMagik (opensource) for graphic transformations

Resource Center

Key Features

- Residential content
- Search navigation
- Browse navigation
- DOE and external materials centrally located
- Generate pdfs for distribution

- Over 700 illustrations and photos
- Over 900 external materials, videos, articles

- Submit your state materials
- Advanced searching

Web-Compliance

- **REScheck Web** (live since 2003)
- **COMcheck Web** (coming soon)

- **REScheck Package Generator** (live since 2003)
- **COMcheck Package Generator** (live since 2003)

- **Technology:**
  - Java applications running the common code engine
  - Tomcat servlet based
  - Client side java makes the applications run quickly for slow modems

Web-Compliance

- **New Features in RES*check* Web**
  - State codes for compliance
  - New look for compliance report
- **Planned Features**
  - Delete saved projects

Web-Compliance

- **New Features in COM*check* Web** (coming soon)
  - State codes for compliance
- **Planned Features**
  - Delete saved projects

Web-Compliance

- **New Features in COM*check* Web** (coming soon)
  - State codes for compliance
- **Planned Features**
  - Delete saved projects

Online Permitting

- **In the process of implementation in all the web-applications**
  - Allows compliance to be completely digital
  - Allows jurisdictions to easily collect reports and data
  - Allows users to avoid trips to the office

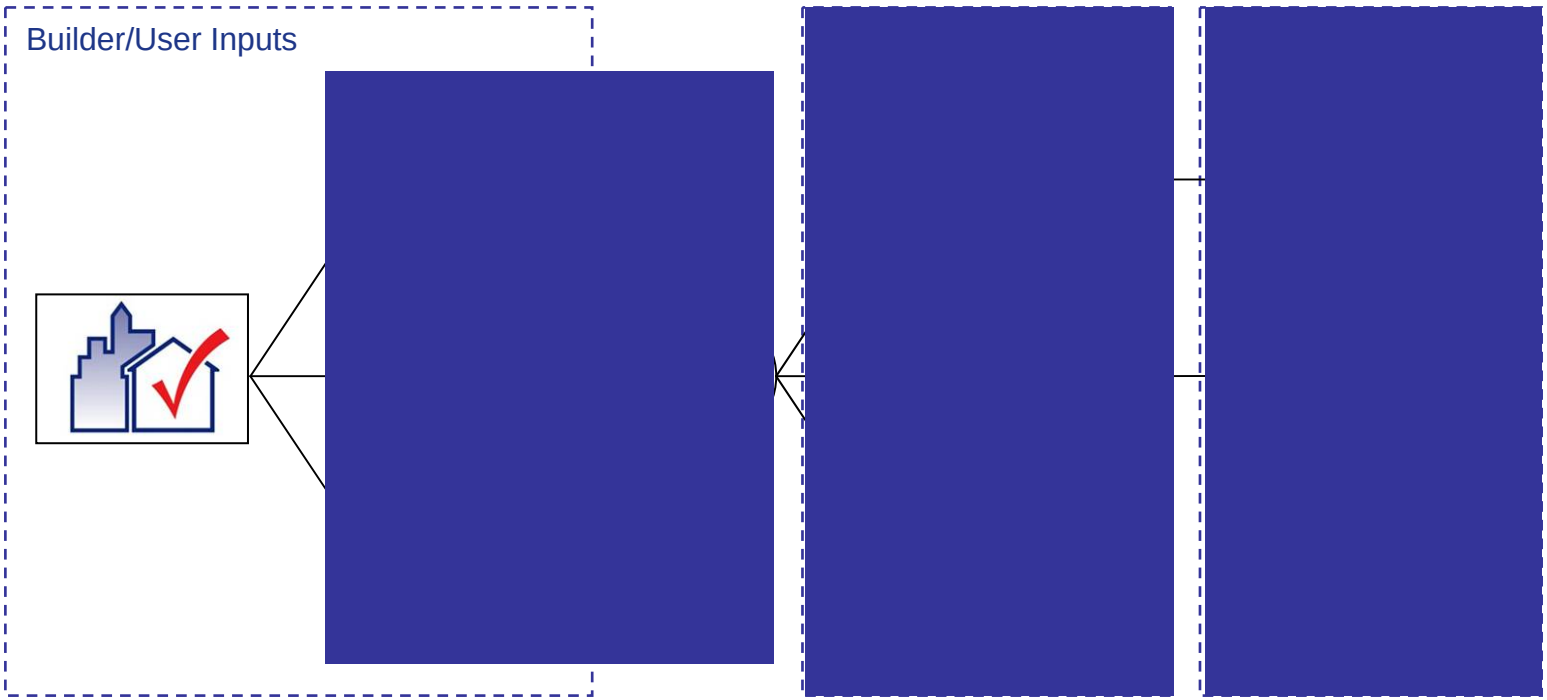
- **Technology:**
  - XML tags can be distributed via email for a jurisdiction database (user requested)
  - XML is used to generate the pdf compliance reports
  - Digital signatures and PDAs are on the horizon

Online Permitting

Key Features

- Requires software registration
- Generates a compliance form
- Emails the (pdf) form of the report to the jurisdiction/code official
- Emails data packet (xml) to the jurisdiction/code official
- May be coupled with state or city website to provide seamless electronic compliance

Builder/Jurisdiction Interaction Paths



Online Permitting

- **In the future**
  - Implementation in web-based tools (in progress)
    - RES*check* –Web
    - COM*check* -Web
    - RES*check*-Package Generator
    - COM*check*-Package Generator
  - Implementation in desktop tools
    - COM*check*
    - RES*check*

Above Code Advisor

- **In the process of implementation in desktop applications**
  - Allows users to “troubleshoot” independently with the web
  - Enhances user ability to find above code information
  - Toggle option to turn the advisor on/off

- **Technology:**
  - Basic html pages distributed with the application
  - If the user has a live internet connection, application will link directly to articles in the resource center

Above Code Advisor

example.rck - REScheck 3.5 Release 1d Code: 1995 MEC

File Edit View Options Code Tools Help

Project | Envelope | Mechanical

Ceiling | Skylight | Wall | Window | Door | Basement | Floor | Crawl Wall

	Component	Assembly	Gross Area or Slab Perimeter		Cavity Insulation R-Value	Continuous Insulation R-Value	U-Factor	UA	Dept Insul (f
	Building								
1	Ceiling 1	Flat Ceiling or Scissor Tru...	729	ft2	38.0	0.0	0.03	22	
2	Ceiling 2	Flat Ceiling or Scissor Tru...	592	ft2	30.0	0.0	0.035	21	
3	Wall 1	Wood Frame, 16" o.c.	1647	ft2	13.0	6.0	0.061	82	
4	Door 1	Glass	84	ft2			0.61	51	
5	Window 1	Vinyl Frame, Double Pane...	204	ft2			0.45	92	
6	Door 2	Solid	20	ft2			0.54	11	
7	Wall 2	Wood Frame, 16" o.c.	276	ft2	13.0	0.0	0.082	21	
8	Door 3	Solid	18	ft2			0.35	6	
9	Floor 1	All-Wood Joist/Truss, Ov...	938	ft2	19.0	0.0	0.047	44	
10	Floor 2	All-Wood Joist/Truss, Ov...	32	ft2	30.0	0.0	0.033	1	
11	Floor 3	Slab-On-Grade:Unheated	82	ft		8.0	0.779	64	2
12	Crawl 1	Click here to select Assem...	0	ft2	0.0	0.0	0.316	0	0

- Solid Concrete or Masonry
- Masonry Block with Empty Cells
- Masonry Block with Integral Insulation
- Wood Frame
- Insulated Concrete Forms
- Other

Compliance alid Area(s) Max. UA 467 Your UA 415 11.1 % Better Than Code

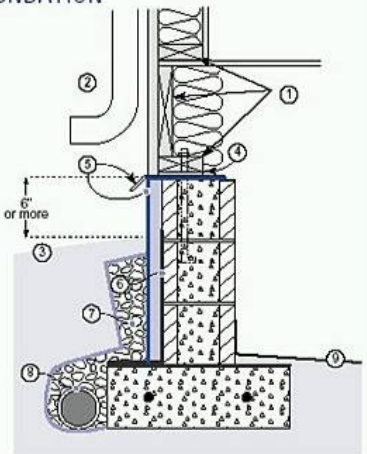
Click the Assembly fields to display a list of assembly choices. "Other" assembly types are editable.

Above Code Advisor

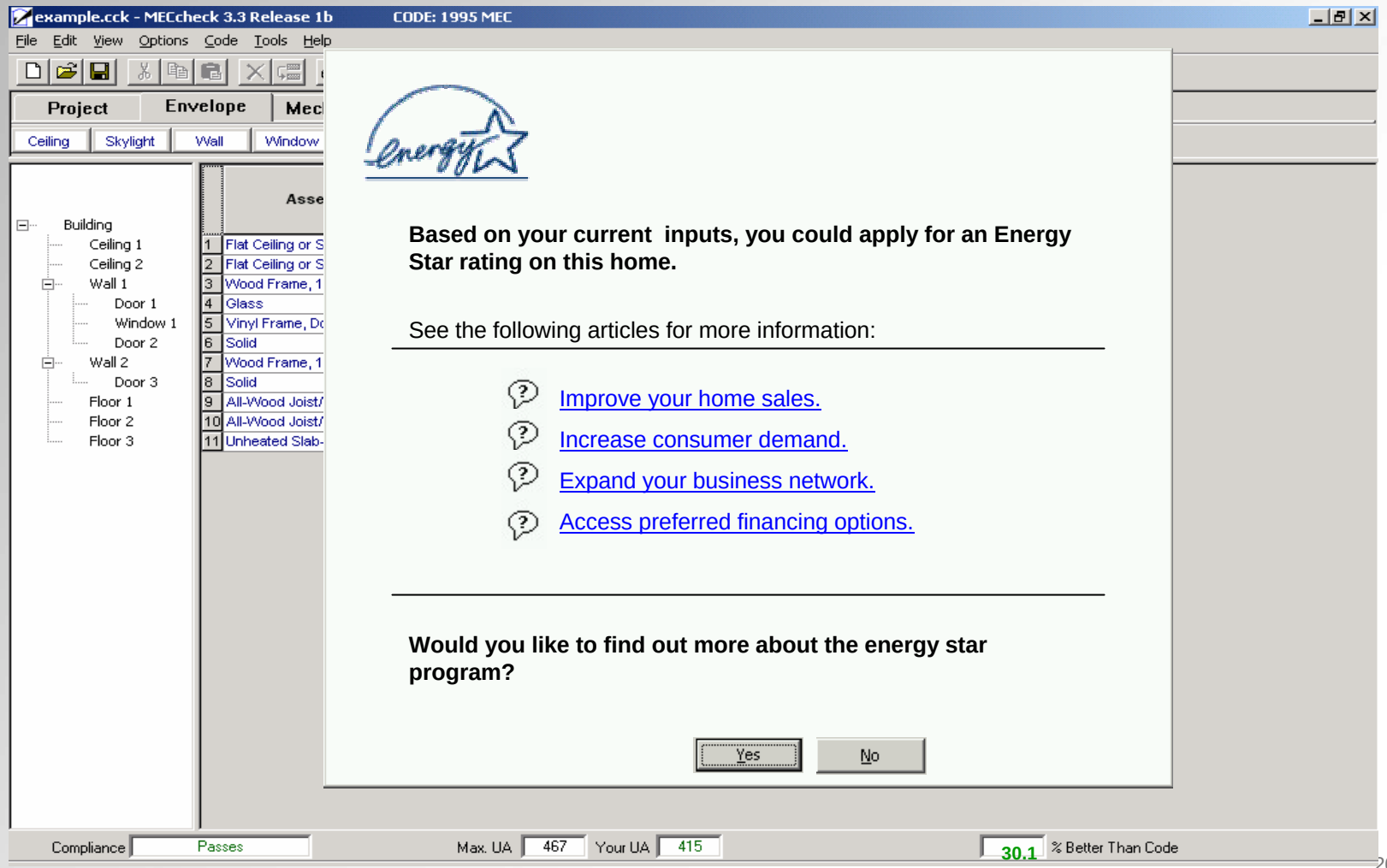
Building a water managed crawlspace foundation offers improved moisture and energy benefits.

See Resource Center Article #118

WATER-MANAGED CRAWLSPACE FOUNDATION



RES*check* Energy Star Link



Suite of Compliance Tools Summary

- Resource Center (coming soon)
- Online Permitting (coming soon)
- Above code tools in RES*check* (coming soon)
- Web-based applications
  - RES*check*-Web
  - COM*check*-Web (coming soon)
  - RES/COM-Package Generator

4,800 registered users	Average 3,000 visits per month
	Coming soon
	Average 1,500 visits per month

- Desktop Applications
  - RES*check*
  - COM*check*

47,686 registered users	Average 5,000 downloads per month
31,163 registered users	Average 3,000 downloads per month