

Masonry Institute of Iowa Adopts SmartWall Systems®

PROJECT

Masonry Institute of Iowa (MII) and SmartWall Team Up

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MASONRY UNITS

SmartWall High Performance Concrete Masonry Units
Manufactured by Masonry Institute of Iowa Members
(See Page 7)

LIGHTWEIGHT EXPANDED SHALE AGGREGATE PRODUCER
Buildex, Inc.

COMMERCIAL SPONSORS of "Fastest Trowel Contest"

- Croell Concrete Products
- Star Equipment, Ltd.
- Kings Material
- Marshalltown Co.
- SpecMix
- Buildex, Inc.

The Masonry Institute of Iowa Adopts SmartWall Systems®

Building the Case for SmartWall Systems®

by Jeffrey T. Patterson, Exec. Director, Masonry Institute of Iowa
(From MII Newsletter, "Masonry News," Vol.02, No.2, Winter 2002, pg.1)

Led by MII's masonry contractors, working together with MII's concrete block manufacturers, SmartWall is slowly becoming the standard of the masonry industry in Iowa. **Building the case for SmartWall seems pretty easy. If a stronger, lighter concrete block has been developed through better science and better technology, wouldn't everyone want to use it?**

Iowa's masonry contractors want to use it because it allows walls to be built 10-20% faster and makes finished walls look better with less tooling time, fewer chips and blemishes. Iowa's masons and laborers are happy lifting 1/3rd less weight in every block. At the end of the day our workforce, who may be working with concrete block up to 80% of the time, enjoys the difference.

Boosting productivity, improving ergonomics, and decreasing injuries for our workers is an easy call for our industry.



Jeff Patterson, Executive Director, Masonry Institute of Iowa

The SmartWall Systems program was developed by Buildex, Inc. and other members of the Expanded Shale, Clay and Slate Institute. Like other ESCSI members, Buildex produces their product, expanded shale, in a rotary kiln where it is fired to over 2,000 degrees Fahrenheit. Iowa's concrete block manufacturers have been working with expanded shale from Buildex for years. Recent developments have allowed some block manufacturers to increase compaction of the concrete mix in the block and "tighten" the face texture, to the point that it is



SmartWall High Performance Masonry Is 30% Lighter & Stronger than Regular Concrete Block

difficult to tell the difference between a SmartWall lightweight unit and normal concrete units.

“Not only does SmartWall look good, but the ESCS aggregate seems to work better with our machinery,” commented Gary Pribyl, Vice President of Kings Material in Cedar Rapids.

“Using an aggregate which produces a better, nicer-looking block which is easier on our equipment and our people, of course, we love it.”

SmartWall block can be made to surpass 2,800 psi net compressive strength testing requirements. Structural engineers are pleased to be calculating loads based on 2,800 psi block, compared to traditional CMU’s which are held to ASTM’s 1,900 psi standard. The higher strength allows a reduction in steel reinforcing and grouting requirements.

COST IS AN IMPORTANT ISSUE TO MASONRY CONTRACTORS

“When bidding a job, the fact that a SmartWall CMU can cost more is more than offset by the increase in worker productivity and the quality of the finish of the wall,” Mike Boucher, Vice President of Seedorff Masonry stated. “We are thrilled to see more specifications written calling for SmartWall.”

ARCHITECTS SPECIFY SMARTWALL IN THEIR DESIGNS

“Architects in the Cedar Rapids and Iowa City areas have been incorporating the specification for SmartWall into their designs recently,” Pribyl added. “If we could have every architect specify SmartWall in the State of Iowa, as is done in other parts of the country, I know we’d be building better walls and we’d be better off because of it.”



Rhino Material’s Marty Allspach, Plant Manager, and Neal Bunce, Vice President of Operations proudly display a SmartWall block fresh off their newly developed production and handling line.

THE RIGHT PRODUCT AT THE RIGHT TIME!

by Andrew Mackie, Buildex, Inc.



Buildex Vice President Andrew Mackie at a presentation to the architects at RDG Bussard Dikis in Des Moines

When Buildex offered the ESCSI-developed SmartWall Systems program to our regular block producing customers, virtually all agreed to become certified SmartWall Systems producers. In Iowa, Gary Pribyl of Kings Material in Cedar Rapids was especially enthusiastic, and we worked with him to develop a lightweight block texture that was very similar to his normal weight units. **His goal was not only to please the painters but to develop one inventory of specials that would work on both heavy weight and lightweight jobs.**

Brian Rockers with Buildex has our primary sales responsibility

for Iowa and he worked closely with Kings and other Iowa producers to introduce SmartWall into the market. The Masonry Institute of Iowa represents the industry well and is funded by labor, materials manufacturers and associate members. With the labor contribution they have a good budget for promotion and employ an able and effective Executive Director, Jeff Patterson, to see that things get done. MII is one of the most active and effective masonry promotion groups in Buildex's trade area.

As a part of this adoption, the Iowa block producers wanted the SmartWall specification "improved" in their state to require 2800 psi and 95 lb/cu ft, feeling that using a number already in the code tables (i.e. 2800 psi unit strength = 2000 psi prism strength) would simplify things for designers. The density adjustment was to accommodate the increased cement materials content. MII also specifies a fine/tight texture for the cmu. (see specifications on page 6)

So why did MII decide to adopt the SmartWall Program? Our belief is that SmartWall was the right product at the right time, and the mason contractors and block producers all recognized the need to do something significant to change the status quo.



Andy Ward, Vice President of Rhino Materials, explains how production of SmartWall block at their plant has been enhanced to produce a finer, tighter block face texture.

GETTING THE WORD OUT

MIl's adoption of the SmartWall system was just the beginning of the process of establishing the product on a statewide basis. The MII office e-mailed press releases to designers throughout the state announcing



It was standing room only for the architects and engineers in the audience at Frevert-Ramsey-Kobes Architects and Engineers. Andrew Mackie, the presenter, is in the upper, right-hand corner. (From MII's newsletter, "Masonry News," Vol 03, No.1, Summer 2003, pg. 11.)

SmartWall and providing a point of contact for more information on the product. To follow up, MII e-mailed the *Buildex SmartWall Systems In Iowa* brochure to their designers list. This brochure was developed specifically at the request of mason contractors, who had expressed a desire to see "everything about SmartWall" in one compact document.

At Buildex we feel that to be most effective, we need to take the message directly to the designer. Buildex presented a SmartWall Systems exhibit at the annual AIA Iowa convention and trade show. The ESCSI SmartWall Systems presentation was given at the February 2003 MII Spring Seminar in Cedar Rapids, Iowa, with over 200 designers in attendance. In cooperation with MII, we have begun presenting the ESCSI

SmartWall Systems program directly to designers in "box-lunch" format in their offices throughout Iowa. So far we have contacted approximately 200 more designers with the one-hour presentation, and provided them with one-hour of AIA Learning Units that qualify for Health, Safety and Welfare credits. We are pleased to have our block producer customers participate in the box-lunch presentations. Andy Ward of Rhino Material has brought his local block producer's perspective to several recent presentations in Des Moines. Andy's involvement makes the presentation even more effec-

tive, and we will continue to work with our local block producer customers in making these presentations whenever possible. Buildex is also pleased to have been a co-sponsor of the MII's "Fastest Trowel on the Block" competition, featuring SmartWall units.

I want to repeat my earlier statement that ESCSI SmartWall is the "right program at the right time." We appreciate the enthusiasm we have received from Iowa block producers and the mason contractors who have driven MII to adopt SmartWall. We also appreciate the energy and contributions of Jeff Patterson who has become a key ally in this effort. We know the program is effective – we are seeing more lightweight masonry units used in Iowa now that designers have begun to incorporate the SmartWall specifications into their projects.

FASTEST TROWEL ON THE BLOCK CONTEST

SmartWall Systems Featured at Iowa Competition
Comments by Jeff Patterson, MII

Combine 10 of the top bricklayers in Iowa, 1,500 SmartWall concrete block, nearly 200 cheering spectators, a public address system pumping stadium rock, and a beautiful sunny day at Hawkeye Downs Fair and you've got an idea of the setting of Iowa's first Fastest Trowel on the Block competition.

Twenty minutes is all that was allowed for these steel-wielding warriors to lay as many SmartWall block in their twenty-four foot walls. Each of these artists and athletes were assisted by two tenders who made sure the block, mortar, and words of encouragement were all in a plentiful supply.

As the final buzzer sounded, each of the competitors had lifted and laid over a ton of SmartWall block and SpecMix mortar. Even though SmartWall block is 30% lighter and nearly twice as strong as regular concrete block, weighing in at twenty-five pounds a piece and adding seven pounds of mortar, the challenge for competitors is significant. Not only were these men judged on speed, but they were also scored on workmanship issues such as a length, plumb, story and voids.

With 88.5 points, Dennis Scheer narrowly edged two second-place finishers to claim the first place. He walked away with \$500 cash, and a trip for two to the Mason Contractors Association of America's annual expo in Las Vegas next March, where he will compete in the national competition.



The title and honor of "Fastest Trowel on the Block" belongs to Dennis Scheer (left) of Atkins. Dennis, a supervisor with D & R Masonry of Cedar Rapids is shown above receiving a \$500 check for his efforts from Scott Ellingson

- See SmartWall Advantages on Page 5.**
- See MII/SmartWall Guide Specifications on Page 6**
- See Buildex SmartWall Producers on Page 7.**

SmartWall Systems® Advantages

by Buildex, Inc.

What is SmartWall?

*Stronger & Lighter
Masonry*

The SmartWall System is made with stronger, lighter, more energy efficient concrete masonry units, and was developed by members of the Expanded Shale, Clay and Slate Institute. Smartwall Systems **exceeds** ASTM C 90 requirements, increasing performance. The SmartWall specification was recently adopted by the Masonry Institute of Iowa (MII).

Why Specify SmartWall Instead of Normal Weight Units?

*SmartWall Pays for
Itself Through Energy
Savings*

SmartWall Systems has 52% less heat flow as compared to a normal weight concrete masonry wall. Life cycle energy cost saving amount to \$3.03 per 8" concrete masonry unit in Central Iowa when calculated over a typical thirty-year building life. Even over 10 years, the savings amount to \$1.22 per unit.

Efficient Installation

One-third lighter SmartWall units make masons more efficient, so jobs are completed sooner with less mason fatigue and fewer injuries. This provides further economic benefit.

Durability & Fire Resistance

SmartWall provides optimum durability and fire resistance. SmartWall units have better fire ratings than sand and gravel units. This makes it easier to meet design requirements

Structural Efficiency

32% lower installed wall weight means lower costs for foundations and supporting structural steel. In seismic areas, less grouting and reinforcing may be required, further reducing wall weight and improving overall thermal performance.

Why Specify SmartWall Instead of Regular Lightweight Units?

*SmartWall Still Provides
Significant Savings*

A regular lightweight units can weigh over 3 pounds more than a SmartWall unit. SmartWall provides 14% lower installed wall weight and 22% less heat flow. Utility savings over 30 years are still about 80 cents per unit in Central Iowa. The stronger, lighter, energy efficient SmartWall System allows the engineer to make more efficient structural designs with units that are available on the market and will be bid on the job.

This guide specification was recently adopted by members of the Masonry Institute of Iowa. It is based on the ESCSI SmartWall Systems specification and includes increased compressive strength and weight requirements and added texture requirements. The ESCSI SmartWall Systems specification is available at www.escsi.org.

MII/SmartWall Systems® Guide Specification

Guide Specification (Short Form): Sec 04810 - Unit Masonry Assemblies

SmartWall Systems walls shall be constructed using high performance concrete masonry units manufactured by a SmartWall Systems producer certified by the Expanded Shale Clay and Slate Institute, Salt Lake City, Utah. The concrete masonry units shall meet the requirements of ASTM C 90 Standard Specification for Load Bearing Concrete Masonry Units and the following additional requirements:

- The concrete masonry unit shall have a minimum net compressive strength of 2800 psi and a density not exceeding 95 lb/cu ft, determined in accordance with ASTM C 140 Sampling and Testing Concrete Masonry Units.
- The lightweight aggregate used in the manufacture of the concrete masonry units shall be structural grade expanded shale, clay or slate manufactured by the rotary kiln process, and shall meet the requirements of ASTM C 331 Standard Specification for Lightweight Aggregate for Concrete Masonry Units.
- Finish and appearance of faces of block shall be free of cracks and have a fine/tight texture as approved by the architect.

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