

ICF Systems

of Massachusetts Building Products, Inc.



We appreciate your interest in Insulated Concrete Forms and Massachusetts Building Products. As the leader in the supply and installation of Insulating Concrete Form systems (ICF's) since 1986, our mission is to provide environmentally responsible building solutions for commercial and residential construction by using the best products and offering reliable customer service and education.

Our experience and knowledge of ICF's and getting them installed is unparalleled. We will: work with you and your architects from the design stage to get your project designed in the most cost effective way; provide you with accurate estimated costs for your ICF project; and provide your code officials with necessary information on Reward ICF's.

Insulated Concrete Forms can be used for Frost Walls, Foundations, Above Grade, Fire/Separation Walls, Retaining walls, Curved Walls, Residential and Commercial. Insulated Concrete Forms, are forms for poured concrete walls that stay in place as a permanent part of the wall. The forms are made of expanded polystyrene insulation, formed into interlocking blocks connected with plastic ties. The left-in-place forms not only provide a continuous insulation and sound barrier, but also a backing for drywall on the inside, and any type of siding on the outside.

Benefits of Insulated Concrete Forms (ICF's):

- **Savings:** 50% to 80% in heating and cooling cost, lower insurance rates and fewer maintenance cost
- **Safety:** Endure winds of more than 200 mph, Withstand fire up to 4 hours and ensure excellent seismic performance
- **Unlimited Flexibility:** Curved walls and archways, any size or shape windows, any finish, including stucco, lap siding, drywall or paneling.
- **Comfort:** Locks out mold and moisture, eliminates outside allergens and blocks outside noise
- **Lasting value:** Greater resale value and more comfortable living space below grade, adding to the square footage of your home.
- **Environmentally Friendly:** Good for you and good for the environment. Reward uses less of our precious natural resources in construction and even enables homeowners to heat and cool their homes using fewer fossil fuels.

Residential and commercial customers throughout the region know that we provide unmatched product know-how and more than 60 years combined general contractor experience. As builders, we have the advantage of helping you use the ICF's in the most cost effective means possible. We will make the transition from your current form of building **as easy as going from level's to laser's.**

We provide installations, training, free price estimate's, unsurpassed building knowledge and service is our priority. For additional information, or to discuss your project, please contact me at (413) 218-5471. **For information on Builder Shows, downloads and to view some of our projects, visit our web site at www.massicfsystems.com.**

Sincerely,

Richard Demetrius

Toll Free: 800.509.1186
Web site: www.massicfsystems.com

Office: 413.436.7786

Fax: 413.825.9158
Email: kdemetrius@massicfsystems.com

See what our customers are saying about us....

I've appreciated working with you and am impressed by your communication and support during the project. Looking forward to another Lego wall.

-Brian - Amherst MA

Two Guys.
Two days.
The walls are up.
We pour next week.
The product is spectacular!

- Damon - N.Kingston RI

After researching ICF's my conclusion was why would anyone build any other way. After meeting Richard Demetrius, there was no need to look any further.

- Wayne—Wakefield RI

I appreciate your help. Rich's knowledge is so extensive, he should write a book on ICF's.

-Larry - Worcester, MA

Rob and I wanted to let you know how well the installation of the forms went. Everything was installed and the concrete poured last week. Everyone was psyched on the whole process! Thank you for the great customer service and great product.

Take care and please pass this info along to Rich for us.

Kindest wishes,

- Sarah & Rob - York ME

Thank you for all of your assistance in the construction of our house. With all of our scurrying around, I don't remember if I ever thanked you for everything. You have let us put a lot of sweat equity into the construction and along with that lots of step by step advise. You always there to answer even the most mundane questions and we appreciate it. Without you it would be impossible. Thank you again for everything.

Fondly,

- Cynthia - N. Stongington CT

FREE PRICE ESTIMATE

The following information is needed to give you a price estimate

It will help us give you the information you are looking for

Name: _____ Date: _____

Mailing Address: _____

Project Address: _____

Phone: _____ Fax: _____

Email: _____

Questions/ Items needed:

How did you hear about us?

When do you need this price estimate by?

Type of Project:	Addition	New Home	Other:
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When do you plan on building

Do you have a plan to enclose yes no

If you don't have a plan, please submit a sketch with dimensions of your project

Please attach a window/door schedule,

If you don't have a window & door schedule, please submit rough openings for windows & doors

What will the backfill height be?

What type of fill?

We recommend that you backfill with sand

Do you have a preference for Waterproof?	Peel & Stick	Wrap n Drain	Either
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Peel & Stick is a 60mil thick - Wrap n Drain is a drainage mat type

Do you want a price on Labor	yes	no	
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If using ICF above grade, what type of floor system are you using?	Engineered Lumber	Standard Framing
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Are you the builder or homeowner?	builder	homeowner
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If homeowner, are you going to GC the project?	yes	no	
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What parts-sections of your project to you want an estimate on?

For each section of your project (that will be ICF), please circle yes and list the ceiling height

			Ceiling Heights	Notes
Foundation	yes	no	_____	_____
Frost wall (garage, breezeway etc...)	yes	no	_____	_____
Main level of the project	yes	no	_____	_____
2nd level of the project	yes	no	_____	_____
Gable ends if applicable	yes	no	_____	_____
Above grade for the garage?	yes	no	_____	_____
Other:	yes	no	_____	_____

Please use additional sheet for any additional items that you think might help us with your quote

Submit this form with your plan to: ICF Systems of Mass Building Products Inc

Via fax: 413.825.9158 - Via email: kdemetrius@massicf.com - Via mail: PO Box 507 Brimfield, MA 01010



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Green Building And LEED™ Fact Sheet

Description:

Green building means design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and building occupants. Green buildings provide healthy environments for occupants, promote employee productivity, use energy and water efficiently and minimize the impact to the environment.

LEED™ (*Leadership in Energy & Environmental Design*) is a point system or standard of measurement to determine how "green" a building is. All components of the building are evaluated to determine the LEED points. The whole-building approach encourages an integrated design and construction process to achieve the highest level of sustainability, energy efficiency and resource economy possible.

Benefits of Green Building

Environment: Reduce the impact of natural resource consumption

Health and Safety: Enhance occupant comfort and health

Community: Minimize strain on local infrastructures and improve quality of life

Economic:

- Competitive first costs
- Reduced operating costs
- Increased building valuation
- Decreased vacancies; improved retention
- Optimized life-cycle economic performance
- Improved productivity
- Reduced absenteeism and turnover—providing a healthy workplace improves employee satisfaction
- Reduced liability
- Increased retail sales with daylighting

Four Levels of LEED

Certification—69 Possible Points

LEED Certified	26-32 points
Silver Level	33-38 points
Gold Level	39-51 points
Platinum Level	52+ points

Energy Efficiency:

- Actual R-value of concrete & iForm: 22
- Effective R-value of concrete, iForm, air infiltration, and thermal mass: 32+
- Air changes per hour -- .04 - .09
- Saves 50-80% on heating and cooling costs

Environmental Friendliness:

- No HCFC's or CFC's emitted during manufacturing process
- No off-gassing, fumes, odors, toxins or formaldehyde
- Plastic tie inserts are made from 100% recycled material
- Forms are 100% recyclable—no waste to the environment
- EPA Energy Star® Partner
- Sound Transmission Class range from 41 to 65

Safety:

Fire Safety—

Omega Point Laboratory Tests (ASTM E84/ASTM E119)

- Toxicity – 24 / Flame Spread – Less than 25 / Smoke Development – Less than 450
- Self-extinguishing
- Fire ratings: 9" = 1 & 2 hrs.; 11" = 3 hrs.; 13" & 15" = 4 hrs.

Storm Safety—

- Withstands winds up to 200 mph Performs well in seismic zones
- Preferred product for safe rooms, basements and storm shelters

Evaluations & Associations

ICC ES Legacy Report	NER-604
<i>Note: The NES Report documents compliance to the UBC, SBC, NBC, IBC, IRC and the International One & Two Family Dwelling Code</i>	
Wisconsin	200246-I
Miami-Dade County	03.1112.05
City of NY	MEA 116-03-M
Florida Product Approval	FL1743
City of LA	RR25418
AIA/CES	Registered Provider #J143
CCMC	13107-R
ASTM	E119 & E84

LEED Categories and Reward ICFs

1. **Sustainable Site** – No contribution

2. **Water Efficiency** – No contribution

3. **Energy and Atmosphere**

- Prerequisite energy performance standards
- Optimized energy performance: Up to 10 points. iForm provides superior air tightness, insulating value and thermal massing.

4. **Materials and Resources**

- Construction waste management: Up to 2 points. iForm reduces waste on site and is 100% recyclable—no waste to the environment.

- Recycled contents: Up to 2 points. iForm contains approximately 20% post-industrial recycled content.

- Regional materials: Up to 2 points. iForm is manufactured regionally in the U.S. and Canada.

5. **Indoor Environmental Quality**

- Thermal comfort: 1 point. Tight construction reduces air infiltration; thermal mass insulates against surface temperature swings of walls, floors and ceilings; proper materials prevent accidental humidification and condensation within the building.

LEED and Reward ICFs: Reward's iForm™ does not provide any points for LEED certification on its own.





Flat Wall Insulating Concrete Forms



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www.rewardwalls.com

Description:

Universal—no top or bottom; no left or right corners. The iForm is constructed with two opposing panels of expanded polystyrene (EPS), held together with polypropylene ties. The flat configuration of the concrete within the forms provides walls that are straight, true, square and plumb. The ties are positioned every 6 inches, and serve as furring strips, top to bottom, recessed 1/2" below the surface of the EPS. The ties allow for rebar to be snapped in place in five different locations within the wall, two deep and with a loose fit that eliminates rebar strain.

Application:

iForm is designed for use both above and below grade. The majority of all construction today is to the eaves in multi-story use in commercial and residential construction.

xLerator™ Rapid Reinforcement

A galvanized welded wire reinforcement piece that simply drops into the pre-formed reinforcement slot in the ledge form to provide maximum strength in every corbel.

Energy Efficiency:

Actual r-value of concrete & iForm: 22
Effective r-value of concrete, iForm, air infiltration, and thermal mass: 32+
Air changes per hour -- .04 - .09
Saves 50-80% on heating and cooling costs

Safety:

Fire Safety—

Omega Point Laboratory Tests (ASTM E84/ASTM E119)

- Toxicity – 24 / Flame Spread – Less than 25 / Smoke Development – Less than 450
- Self-extinguishing
- Fire ratings: 9" = 1 & 2 hrs.; 11" = 3 hrs.; 13" & 15" = 4 hrs.

Storm Safety—

- Withstands winds up to 200 mph
- Performs well in seismic zones
- Preferred product for safe rooms, basements and storm shelters

Environmental Safety—

- No HCFC's or CFC's emitted during manufacturing process
- No off-gassing, fumes, odors, toxins, or formaldehyde
- Forms are recyclable
- EPA Energy Star® Partner
- Sound Transmission Class range from 41 to 65

Evaluations & Associations

ICC ES ESR-1552
Note: The ICC ES Report documents compliance to the UBC, SBC, NBC, IBC, IRC and the International One & Two Family Dwelling Code
Wisconsin 200246-I
Miami-Dade County 03.1112.05
City of NY MEA 116-03-M
Florida Product Approval FL1743
City of L.A RR25418
AIA/CES Registered Provider #J143
CCMC 13107-R
ASTM E119 & E84

iForm Specifications

All iForms are 16" high, weigh approximately 5.5 lbs., and contain ties 6" on center

STRAIGHT	LENGTH	CONCRETE WIDTH	RETURN	SURFACE AREA	CONCRETE VOLUME 1 YARD FILLS
9" FORM	48"	4"	N/A	5.33 SQ. FT.	15.1 FORMS
11" FORM	48"	6"	N/A	5.33 SQ. FT.	10.0 FORMS
13" FORM	48"	8"	N/A	5.33 SQ. FT.	7.5 FORMS
15" FORM	48"	10"	N/A	5.33 SQ. FT.	6.0 FORMS
STANDARD 90° CORNER	OUTSIDE LENGTH	CONCRETE WIDTH	OUTSIDE RETURN	SURFACE AREA	CONCRETE VOLUME 1 YARD FILLS
9" FORM	25"	4"	13"	4.22 SQ. FT.	25.0 FORMS
11" FORM	27"	6"	15"	4.67 SQ. FT.	15.7 FORMS
13" FORM	29"	8"	17"	5.11 SQ. FT.	11.0 FORMS
15" FORM	31"	10"	19"	5.54 SQ. FT.	8.3 FORMS
EXTENDED 90° CORNER	OUTSIDE LENGTH	CONCRETE WIDTH	OUTSIDE RETURN	SURFACE AREA	CONCRETE VOLUME 1 YARD FILLS
9" FORM	31"	4"	19"	5.55 SQ. FT.	17.8 FORMS
11" FORM	33"	6"	21"	6.00 SQ. FT.	11.3 FORMS
13" FORM	35"	8"	23"	6.44 SQ. FT.	8.1 FORMS
45° CORNER	OUTSIDE LENGTH	CONCRETE WIDTH	OUTSIDE RETURN	SURFACE AREA	CONCRETE VOLUME 1 YARD FILLS
9" FORM	22"	4"	10"	3.55 SQ. FT.	25.5 FORMS
11" FORM	22"	6"	10"	3.55 SQ. FT.	16.5 FORMS
13" FORM	22"	8"	10"	3.55 SQ. FT.	12.2 FORMS
LEDGEFORM	LENGTH	CONCRETE WIDTH	RETURN	SURFACE AREA	CONCRETE VOLUME 1 YARD FILLS
11" FORM	48"	6"+ 4-1/2" LEDGE	N/A	5.33 SQ. FT.	7.7 FORMS
13" FORM	48"	8"+ 4-1/2" LEDGE	N/A	5.33 SQ. FT.	6.1 FORMS
TAPER TOP	LENGTH	CONCRETE WIDTH	RETURN	SURFACE AREA	CONCRETE VOLUME 1 YARD FILLS
11" FORM	48"	6"+ 1-7/8" LEDGE	N/A	5.33 SQ. FT.	9.1 FORMS
13" FORM	48"	8"+ 1-7/8" LEDGE	N/A	5.33 SQ. FT.	7.0 FORMS





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STRAIGHT

	A	B	C
9" — iForm	9"	4"	2.5"
11" — iForm	11"	6"	2.5"
13" — iForm	13"	8"	2.5"
15" — iForm	15"	10"	2.5"

LEDGE FORM

	B	C	D	E
11" — Ledge Form	15.5"	6"	7"	2.5"
13" — Ledge Form	17.5"	8"	7"	2.5"

45° CORNER

	A	B	C	D	E
9" — 45° Corner	9"	4"	2.5"	22"	10"
11" — 45° Corner	11"	6"	2.5"	22"	10"
13" — 45° Corner	13"	8"	2.5"	22"	10"

TAPER TOP

	A	B	C
11" — Taper Top	11"	6"	2.5"
13" — Taper Top	13"	8"	2.5"

90° CORNER

	A	B	C	D	E
Standard 9" — 90° Corner	9"	4"	2.5"	25"	13"
Extended 9" — 90° Corner	9"	4"	2.5"	31"	19"
Standard 11" — 90° Corner	11"	6"	2.5"	27"	15"
Extended 11" — 90° Corner	11"	6"	2.5"	33"	21"
Standard 13" — 90° Corner	13"	8"	2.5"	29"	17"
Extended 13" — 90° Corner	13"	8"	2.5"	35"	23"
15" — 90° Corner	15"	10"	2.5"	31"	19"

Reward iForm® Basement Performance the Best

Two leading Canadian research agencies, the Canada Mortgage and Housing Corporation (CMHC) and the National Research Council's (NRC) Institute for Research in Construction (IRC) has determined that an ICF basement, like one built with Reward's iForm®, has the lowest life-cycle energy costs.

These two agencies updated a study conducted in 1999 on the Economic Assessment of Basement Systems. The new study took into consideration the sharp rise in price of fossil energy fuels and the increase of construction costs. The study showed the value of energy conservation in basements, full-height basement insulation and basements with higher levels of thermal insulation.

"The economic assessment performed by the CMA and the NRC is one more indication of the bright future in store for ICF systems like the Reward iForm," said Hank Pfeiffer, Reward Wall Systems' Chief Operating Officer. "Whether it's energy efficiency, natural disaster resistance, green/building science or healthy indoor environments, the current cultural, scientific and political trends continue to point to the scientific benefits offered by ICFs."

The study evaluated different insulated basement systems using different types of energy fuels in five Canadian cities (Toronto, Ottawa-Gatineau, Halifax, Edmonton and Victoria). It also evaluated both large and small size basements with full and partial-height insulated basements, as well as un-insulated basements.

The full-height insulated basement was found to be the most cost-effective for all cases. Subsequently, measures that are cost effective in small basements are even more cost-effective in larger basements. The basements insulated internally to full-height with five and one half inches of glass/mineral fiber had the lowest life-cycle costs with an R-value of R-20.

Overall, the most energy cost-effective basement is a full-height, ICF basement having an R-value of 22 or greater. The larger the basement, the more cost effective it becomes. According to the report:

"For all types and sizes of basements assessed in this study, the lowest life-cycle energy cost was associated with basements constructed using insulating concrete forms (ICFs)."

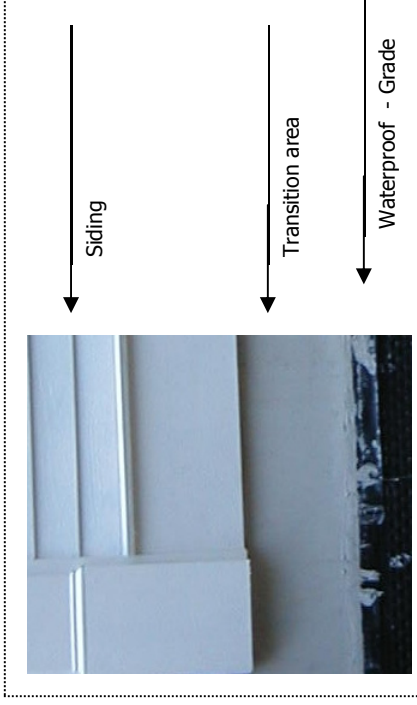
Although this study was based in Canada, the results can easily be applied to the United States. The value of energy conservation would not be affected by climactic differences.

You can access the full report from the CMHC website at www.cmhc.ca.



Transition Area

With ICF construction there will almost always be a transition area on the wall where the EPS foam is exposed above grade. No EPS foam can be left uncovered, so this area must be covered with some compatible finish. Some common materials used to finish the EPS foam in the transition area include Seal Skin, Protector Wrap, acrylic or Portland cement based stucco or parping material. (We carry Wall-Bond, Transition Wrap and you can make your own.)



Wall-Bond ICF

Non-cementitious Foundation Transition coating

Wall-Bond ICF is a non-cementitious, pre-mixed, 100% acrylic polymer foundation damp-proofing, specifically designed for use with Insulated Concrete Forms. It is a ready-to-use material, requiring no additional cement or water. Once cured, it forms a high performance water-repellent parge coat. It trowels easily, filling and leveling irregular surfaces, yielding a durable flexible surface.

Once properly mixed, is easily applied using a trowel or brush.

If you would like the Technical Data & application guidelines, please contact our office.

Transition Wrap

Used in the transition area between grade and the first course of siding. The sticky back easily adheres to expanded polystyrene. The front has the finished appearance of a smooth trowel applied sand stucco. It is 70 mils thick polymer coating that is mold & mildew resistant and easy to apply.

If you would like additional information, contact our office and we can send you a small sample and informational sheet.



Make your own

The inexpensive method, but not as user friendly as the other methods.

You will need Masonry sand (brick sand not concrete sand), Mortar and Fiberglass mesh.

Contact our office for instructions.



For additional information: www.massicfsystems.com or call toll free 800.509.1186

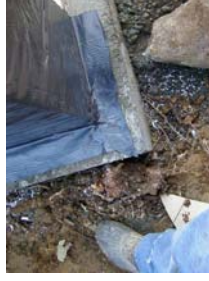
Water Sealant System

It is a requirement for Reward Walls to be covered with a water sealant system on below grade applications. Do NOT use any solvent, ketone, ester or petroleum based water sealant products. Make sure that the product used is compatible with EPS. Reward recommends either the air gap, peel and stick or drainage type systems. Reward does not recommend the spray, brush, trowel on waterproofing systems as they typically do not work as well. Other Standard waterproofing techniques such as proper flashing, drainage, grading & sealing are required.

Below is the information on the two types of Waterproof material that we carry.
Contact us if you would like additional information, such as "How to Apply".

Peel & Stick

**Self-adhering sheet 60 mil (1.5 mm) membrane,
for below grade waterproofing.
Provides a high-performance, extremely durable
waterproofing barrier.**



Wrap N Drain

**Wraps around the foundation and, held in place
near the top of the roll with
plugs and fasteners, hangs
like a curtain.**

Easy to cut, bend and fold.

**Forms a watertight yet flexi-
ble barrier between the
ground and basement wall.**



For additional information: www.massicfsystems.com or call toll free 800.509.1186