

BETTER Builder

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THE Renovation ISSUE

Making the Old
New Again

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Back to School

In the HGTV “home porn” era,
how much of the responsibility of teaching
home owners what’s truly important
in their projects falls to builders?

Pink Floyd was rarely, if ever, wrong. But when it wrote “We don’t need no education” in its 1979 classic, “Another Brick in the Wall, Part II,” it clearly wasn’t referring to home owners.

Because, let’s face it: Home owners, left with few options to edify them-

selves outside of the home porn that HGTV serves up, definitely need to be educated in the ways of energy-efficient home building and retrofitting.

Worse yet, constructors – who tend to pay lip service to being green – often don’t introduce these options to their clients, either because they worry

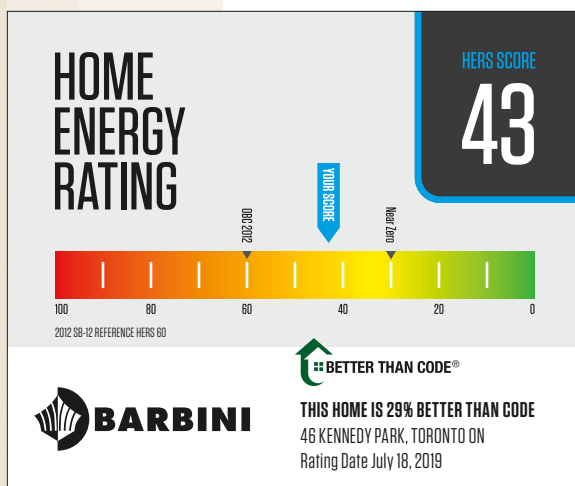
about sticker shock or perhaps because they assume home owners simply aren’t interested.

We’re left with a disproportionate desire among home owners for granite countertops and hardwood flooring as key elements of a reno, while the true difference makers – a tight envelope, energy-efficient building techniques and systems, and a general approach designed to reduce the home’s carbon footprint – are eschewed or ignored.

What HGTV fails to mention is that you can add that countertop any



PHOTOS COURTESY BARBINI CORP



on the home, see the “Tech Specs”) sidebar, page 19.)

Barbini said the couple were very interested in the sustainable energy conservation and consumption elements of the project, so naturally they were very receptive to the idea of having a home energy consultant come in, as ClearSphere’s John Godden did. In fact, they opted to employ virtually every item on Godden’s checklist of recommendations.

Flynn says they were very conscious about sustainability heading into the project, and actually felt guilty about the amount of waste the demo portion generated. “But the house itself was very inefficient. You would put your hand on the wall and it would be freezing,” she says. As a result, she and Mark welcomed this approach.

“It’s all about what are you going to put into your home that’s not just visible countertops, but something that is going to: first of all, make it a more comfortable home; second of all, make it more cost efficient; and third of all, really have much less carbon footprint” while providing enhanced air quality through the home, Barbini explains of his approach. It’s what he likes to call “stealth comfort.”

Of course, this type of innovation is nothing new to him.

Barbini launched his business in 1975. Over the years, he grew his business into a full-service design-build firm, and it wasn’t long before he needed a bigger boat to fit all his employees and accolades. Barbini transcends being a mere home builder/renovator; he specializes in what he terms “environment creation.”

time, but once the walls are up, good luck trying to improve the building envelope. The truth is, in the world of reality TV renovations, a vapour barrier can’t hold a candle to the sexiness of hardwood.

But in the real world, guess what’s sexy? Saving money on your utility bills and having a home that’s extremely comfortable to live in, not to mention the satisfaction of knowing you’ve done something to help save the planet by reducing your carbon footprint.

This is what makes a recent reno in High Park by Barbini Design Build so remarkable: the home owners were amenable to being schooled in the art of energy efficiency and are now reaping the rewards.

The work Amedeo Barbini and his team did for Katie Flynn and her husband, Mark, was a total renovation, including lowering and underpinning the basement while extending the house at the back (including the basement). Hydronic heating was added to the ground floor as well. (For more



He's always offered a home owner educational component as part of his offerings, and he believes it's really the duty of all builders to do so for their clients. Unfortunately, in many cases, the builders themselves need to go to school, Barbini suggests. "Builders have to be educated. Builders have to put a value on this kind of stuff, and if builders operate just on a monetary level, they're not going to [push this] until they're forced by the Building Code."

His energy-efficient offerings are

like a shopping cart, he says: "people can put in that cart what they feel they can afford, what they feel they'd be interested in, and we offer that as a component to the renovation."

Having said that, it's not always an easy sell, he adds. "You have to have a consumer that's interested in contributing to a better environment for their family and a better environment [for the planet]."

Flynn and her husband fit the bill, and she recognized how lucky they were to work with Barbini. "It's a great

team because they have a good leader. He gets right in there and I can call him or text him anytime," she says. Flynn lauded his passion and constant pursuit of new ideas that he could bring to the table.

Flynn agrees that it's the builder's responsibility to inform their clients and present these types of options because she says, even with her education, "I wouldn't know about vapour barriers."

Her advice to builders is to present a business case for energy-efficient

features. Show the consumer what the initial investment is, discuss the benefits, present the projected return on investment in savings and then let the home owners make an educated decision.

The amazing thing is, renovating a house in this manner only adds about 2% to 3% to the total costs, Barbini says – a pittance when you consider the return from a savings, environmental and comfort standpoint. “You’re not going to see that money anywhere, but it’s going to be experienced,” he says. (Actually, that’s not entirely accurate: home owners will see a return on that investment in lower utility costs.)

He believes that Katie and Mark understand what they received, given how educational Godden’s meetings were. “They were very good students,” Barbini says.

“It’s a different thing,” Flynn adds. “It’s not like ‘oh, this granite top will increase your house value because people will like it’ – it’s more like we know that we’ll pay less over time.”

What Flynn really appreciated about working with Barbini – who had done work previously with her sister and aunt – was his “open book” approach. She said he was completely transparent with them about quotes and pricing. “I never felt like I was being sold to; I just felt like I was being educated and we made the decisions on which ones we would use,” she adds.

Having gone through the process, does Flynn see the value of consumers educating themselves about what’s inside the walls? “Yes, and I’m surprised how people are kind of ignorant about it,” she says.

Flynn’s experience has put her in



Third floor addition during construction (top) and finished view from the rear.

Tech Specs

Partway through the process, Katie and Mark realized they would require more space, so a third floor was added, and Barbini had to go back to the Committee of Adjustment to get approval for this change.

On that top floor, two bedrooms and a bathroom were added, while the attic space was used for three large closets.

“We basically built a new house inside the masonry walls,” Barbini says.

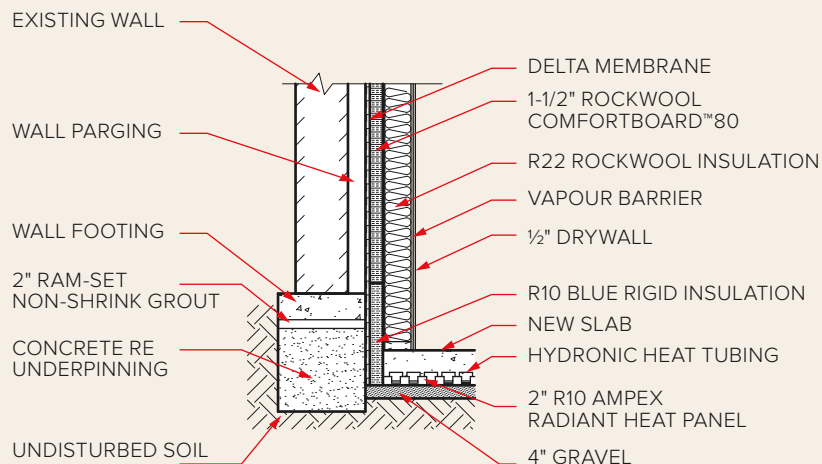
The basement was completely moisture proofed, and Flynn was thrilled with the result: “The basement now feels just as fresh as every other part of the house, with no moisture.”

In the end, the house is 59% better than before, taking it to 29% above Code with a HERS score of 43.

Among the energy-efficiency features added were:

- a 95% efficient boiler with storage tank to provide space heating and domestic hot water heating;
- a 16 Seer air conditioner;
- an energy recovery ventilator (ERV) providing 75% efficiency with exhausts ducted to adjacent bathrooms;
- a Greyter greywater system offering 42% drain water heat recovery on two showers; a reduction of 20–25% in water use;
- 90% compact fluorescent lights for energy-efficient lighting;
- quiet Panasonic WhisperGreen high-static exhaust fans;
- high-performance, low solar heat gain windows for passive cooling; and
- ROCKWOOL stone wool insulation throughout, including basement (read about better basement strategies on pages 20 and 26).

BARBINI'S BEST PRACTICE FOR FINISHING EXISTING BASEMENTS



BASEMENT EXISTING HOUSE UNDERPINNING/LOWERING TYP. SEC.

Delta Membrane: Air gap membrane used as moisture barrier and drainage layer on inside of existing foundation wall. Exterior basement wall is not damp-proofed on the outside and there are no weeping tiles.

Rockwool COMFORTBOARD™80: Used as a secondary drainage layer and continuous insulation layer at R6, reducing thermal bridging and keeping wood framing high and dry.

R22 Rockwool Insulation: Fills cavity of the standoff framed wall and provides insulation at R4 per inch. As it is non-combustible, the basement wall could remain without drywall or wiring. The combination of two layers of Rockwool insulation gives an effective R-value of 24.

a unique position to offer advice to home owners embarking on a similar journey: “Don’t be afraid to get a John Godden or that type of a consultant and encourage your contractor to look into that and support that, because

it makes sense economically and environmentally.” She adds: “If the house is gutted, it’s not that much more expensive to get the proper materials, so it really is a no-brainer.”

For her part, she can’t understand

why HGTV doesn’t spend any time educating consumers about the benefits of energy-efficient home building. Could it be that the drama of doing things wrong is more entertaining than doing things right?

BARBINI DESIGN BUILD : 46 KENNEDY PARK ROAD ENERGY MATRIX

COMPONENT	EXISTING (2300 SQ FT)	PACKAGE A1 (3824 SQ FT)	DESIGNED (3824 SQ FT)
Ceiling With Attic	R20	R60	R60
Ceiling Without Attic	R12	R31	R31
Walls Above Grade	D.B brick	R22	R22+5 ci
Walls Below Grade	R4	R20	R22 (2x4)+5ci
Below Grade Slab > 600mm BG	—	—	R10
Below Grade Slab < 600mm BG	R10	R10	R10
Insulation Grade	III	III	II
Windows & Glass Doors (U value) < 17% glazing/wall	U = 3.7	U = 1.6	U = 1.4
Space Heating	60% AFUE boiler	96% AFUE	95% boiler
ASHP	—	—	HSPF = 8.5
Cooling	13 SEER	13 SEER	16 SEER
Minimum HRV/ERV Efficiency	Exhaust Fan	75%	75% ERV
Domestic Hot Water Heater (EF)	0.5	0.8	95% boiler w/ storage tank
Drain Water Heat Recovery	None	42% (2 showers)	42% (2 showers, greywater)
Energy Efficient Lighting	—	—	90% CFL
Solar PV	—	—	—
ACH Modelling	6	3	3.4
HERS Score	144	50	43
Design Heat Loss (Btu/h)	47100	39200	33300
Annual Energy Consumption (kWh)	65788	37756	26761.3 (29% BTC)
% Better Than Existing	—	43%	59%
% Better Than Code	—	—	29%

“HGTV and the house renovation culture media does not prioritize it, and that’s too bad,” Flynn says. She thinks the government should offer tax credits for home owners to help encourage more people to pursue this type of renovation.

She might be onto something here. Because if consumers are insistent on focusing on sexy things when they renovate, what could be hotter than the government making it rain in the form of money back in people’s pockets?

The fact that they’d be doing right by the planet is just the cherry on top. **BB**



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AIRMAX high velocity air distribution system with three zones, complete with steam injection humidifier.



Combination boiler with indirect storage tank for radiant floor distribution in basement.

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