



**EASTBOURNE
ESTATES**
GEORGINA, ONTARIO

(Reprinted with permission from
ArcelorMittal Dofasco Steel Design, 2008)



Eastbourne Estates, located in Georgina on the shores of Lake Simcoe, feature 223 to 371.6m² (2,400 to 4,000 sq. ft.) New England style, R-2000 EnviroHomes on 3/4 acre to 1-1/2 acre lots.

Design and Construction Team

Developer & Builder:

Fifthshire Homes
905-660-7415

Architect:

Watchorn Architects Inc.
416-385-1996

Consulting Engineer:

Adkins & Van Groll
416-489-7888

Light Steel Framing Supplier:

Bailey Metal Products
1-800-668-2154

Photos:

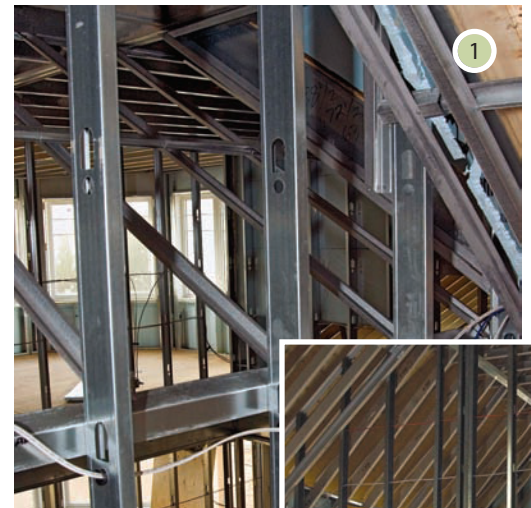
1. There are two major aspects to the EnviroHome from a steel perspective: 1) Improved indoor air quality because steel does not support the growth of mould or off gas. and 2) Steel's very high recycled content earns the highest LEED Platinum Points.

Fifthshire Homes Leaders in Environmental Construction – Light Steel Framing in the Building Environment

The EnviroHome initiative was established in 1994 by the Canadian Home Builders' Association and TD Canada Trust to recognize and support innovative new homebuilders who offer consumers homes that are better for the homeowner, the community and the environment. As Michelina DiCarlo, Executive Vice-President Fifthshire Homes, emphasizes, "The Eastbourne Estates EnviroHomes on Lake Simcoe represent a determination to provide the very best to consumers and to do our part to alleviate the impact that traditional home building tends to have on the environment and community."

If you can dream it, we can build it." That's the motto of Fifthshire Homes, a premier custom builder of steel framed registered R-2000 EnviroHomes. Over 18 years ago, Joe Vella, Vice-President, Fifthshire Homes, constructed the first all-steel R-2000 home in Canada. "R-2000 is one of the highest technical standards in the world for new housing that ensures homes are more comfortable and energy efficient with better indoor air quality and quality of construction," emphasizes Joe.

Over the years, Fifthshire has earned numerous awards for their leadership and



commitment to energy efficiency, including in June 2008, a Certificate of Recognition from Peter Love, Ontario's Chief Energy Conservation Officer for their EnviroHome project, Eastbourne Estates. Each year, the EnviroHome designation is given to a select number of new home projects across Canada. To qualify, each home must be certified to the R-2000 Standard and include additional air



Photos:

2. The exterior walls consist of structural 92mm (3-5/8") steel studs with a high-grade exterior insulated wall sheathing. More than 98.4% of the cavity wall is filled with Polyisocyanurate insulation, an environmentally safe material.
3. From the construction perspective the advantage of lightweight steel is that it allows for easier and more expeditious assembly and any scrap remaining is recyclable. It also has the strength to withstand some of the worst environmental conditions.
4. EnviroHomes feature leading design elements which include energy efficient products and materials.

quality and environmental features beyond what the R-2000 program requires.

There are five models, all constructed with light gauge steel framing, supplied by Bailey Metal Products. The subdivision will include 30 EnviroHomes and will be ready for occupancy in December 2008.

The EnviroHomes feature leading design elements, including energy efficient products and materials, such as steel, which allows greater flexibility during design, construction and remodeling. "Steel allows for more open space and larger rooms and is more energy efficient," comments Joe.

Light gauge steel framing was used to frame the floors, walls, ceiling joists and all the roof rafters of the homes in Eastbourne Estates. The basements feature steel beams and columns and the exterior doors and overhead garage doors are also made of steel. "The reason I use steel in my homes is that it gives our customers perfectly straight walls and quiet floors, in addition to the important aspect of improved indoor air quality because, steel is inert and does not offgas or support the growth of mould in higher moisture areas. "The use of exterior insulated sheathing R-10 with the 98% cavity filled with high expansion foam is used to reduce air leakage," explains Joe commenting on the construction techniques that contribute to the homes containing a more effective R-Value.

Steel also offers numerous advantages relating to the interior finishes. "There are no issues with nail pops and corner beads that crack, therefore the house won't need to be constantly repainted," says Joe. There is no



warping, splitting, creaking, cracking or rotting and the house is termite-proof, vermin-proof, ant-proof and it is fire resistant.

"I believe in steel framing and have built many large custom homes with steel. In addition to the Eastbourne Estates project, I am currently building four other large homes with steel," says Joe Vella who has served on the R-2000 Builders Advisory Committee and Technical Committee in the past.

**SPECIFICATIONS:****Floor Joists:**

254mm (10") stud 41.3mm (1-5/8")
flange 13.7mm (.054")
MPA340 (Grade 50)

Exterior Wall Studs:

92mm (3-5/8") stud 41.3mm (1-5/8")
flange 1.09mm (.043")
MPA340 (Grade 50)

Interior Wall Studs:

92mm (3-5/8") stud 41.3mm (1-5/8")
flange .84mm (.033")
152.4mm (6") stud 41.3mm (1-5/8")
flange .84mm (.033")
92mm (3-5/8") stud 31.75mm (1-1/4")
flange .457mm (.018")
All MPA230 (Grade 33)

Roof Framing Ceiling Joist**Roof Rafters:**

203.2mm (8") stud 41.3mm (1-5/8")
flange 1.09mm (.043")
254mm (10") stud 41.3mm (1-5/8")
flange 1.37mm (.054")
MPA340 (Grade 50)

**Canadian Sheet Steel Building Institute**

652 Bishop St. N., Unit 2A
Cambridge, ON N3H 4V6
Tel: (519) 650-1285
Fax (519) 650-8081
www.cssbi.ca

