McStain Neighborhoods

Can Sustainability Sustain a Profit?

Rocky Mountain Land Use Institute

March 8, 2007

Eric A. Wittenberg
President and CEO
What were those green builders thinking?
Who we are…

- Residential developer and homebuilder along the front range of the Rockies and key Denver infill locations in Colorado
- We are a Mission and Values driven company
- Strategic differentiation/competitive advantage:
  - National leadership in sustainable development and building practices
  - Four-sided and authentic Architectural Design
  - Award winning Community Design
  - Passionate dedication to outstanding customer service
  - Ownership Culture
Who we are...

- Operating over 40 years
- 350 to 400 home sales annually
- Diversified by risk, location and product in our markets
- Developing in four key Denver area redevelopment projects – Lowry, Stapleton, Belmar and Gates
- Strong culture of giving back
- Good Weird
- Not Perfect
Building a Better World

We are a mission and values driven company committed to:

- Designing and building visionary communities that integrate the aesthetic, physical and emotional needs of our customers

- Developing and building in a sustainable partnership with the natural environment

- Treating each other, our clients, associates, and the broader community we serve with respect and integrity
Values

- Commitment to our Customers
- Operational Excellence
- Fiscal Responsibility
- Human Spirit
- Innovation
- Continuity
McStain Neighborhoods
Discovery House
High Performance Building Envelope

The American Houses are designed to be high-performance, zero-energy, net positive energy homes. They are constructed using state-of-the-art materials and techniques to ensure maximum energy efficiency and sustainability. The houses feature insulated walls, double-glazed windows, and solar-powered heating and cooling systems.

Responsible Material Use

Evoking the idea of a “healthy house,” the American Houses are designed to be responsible in their use of materials. The houses feature recycled and renewable materials, such as bamboo flooring and cork insulation, to minimize their environmental impact. The houses also feature low-VOC (volatile organic compounds) finishes and paints to create a healthy living environment.

State-of-the-Art Heating System

The houses feature a state-of-the-art heating system that utilizes solar energy to heat the home. The system includes a solar panel array that captures the sun’s energy and transfers it to a storage tank. The stored energy is then used to heat the home, providing a cost-effective and sustainable heating solution.

Passive Solar Design

The American Houses are designed to be passive solar, meaning they are designed to maximize the use of natural light and heat. The houses feature large south-facing windows and insulated walls to capture the sun’s energy and keep the home warm in the winter and cool in the summer.

Structural Basement Floor with Radiant Heat

The American Houses feature a structural basement floor with radiant heat. The floor is constructed with a radiant heating system that distributes heat evenly throughout the floor. The system uses a combination of water and electricity to heat the floor, providing a comfortable and energy-efficient heating solution.
Our Communities

- Build where people want to live, where there is a sense of place
- Design and build visionary communities
- Build in a sustainable partnership with nature
- Provide for social infrastructure
Our Homes

- Build aesthetically pleasing and functional high quality homes
- Provide for extensive personalization
- Authentic 4-sided architecture
- Resource efficiency
- Energy efficiency
- Indoor air quality
Energy Star IAP Homes
Differentiated

True Love

Brand loyalty

Undifferentiated

It'll do

Commodity Pricing

Premium Pricing

preference = profit

McStain Neighborhoods
Why Sustainable Development as a Business Strategy?

- **Moral Imperative** – It’s the right thing to do.

- **Regulatory Imperative** – We will all have to do it.

- **Market Imperative** – Consumers will pay more for it and will ultimately demand it.
The Tipping Point

- 75% of Americans consider themselves “environmentalists”
  - Source: The Wall Street Journal Survey

- 87% of Americans say they are “concerned” about the environment
  - Source: Environmental Research Associates
Green Living
Is Sustainability the New Luxury?
Riding the GREEN Machine
TerraCycle's Tom Szaky and Imperium Renewables' Martin Tobias

Plus:
CE Leadership Summit: The Global Imperative
What Does It Take to Stay at the Top?
What's Ahead for CEOs in 2017
COLORADO HOMES & LIFESTYLES™

ECO-CHIC
STYLISH DESIGN & GREEN SOLUTIONS

REAL ESTATE REPORT:
Denver’s new light-rail communities
FINALLY, A VEHICLE THAT CAN
TAKE YOU TO THE VERY PLACES YOU’RE
HELPING TO PRESERVE.

Escape Hybrid
We’re all for reducing emissions.

ExxonMobil refineries capture steam that would otherwise be wasted and use it in the refining process. Recent energy-saving initiatives like this have had a dramatic effect on emissions: the equivalent of taking well over a million cars off the road, every year. Exxonmobil.com
Top Four Reasons Home Buyers Want to Buy a New Home

- Better Floor Plans
- Less Maintenance
- New Home Warranty
- Energy Efficiency

Sources: Genesis Homebuyer Survey 2006
Will Homebuyers Do More Than Talk the Talk?

Energy Efficiency

- 64% of home buyers would pay more!
- 75% of home shoppers want energy efficiency.

Sources: Genesis Homebuyer Survey 2006
Premium Building Practices

- Resource Efficiency
- Material Efficiency
- Energy Efficiency
- Indoor Air Quality
- Comfort
- Durability
Benefits / Benefits / Benefits!

- It's good for the earth
- Reduces energy consumption, verified by 3rd party testing
- Preserves and conserves natural resources
- Reduces waste
- Homeowner education and awareness
- Healthier indoor environment
- Enduring value
- Your buyers will appreciate it
- A more comfortable home
Benefits / Benefits / Benefits!

- Availability of and lower cost insurance
- A more durable home
- Lower HOA capital reserves
- Lower warranty costs
- Opportunities for PR and marketing
- Premium Pricing
- Happier Customers
- Brings us opportunities
- Strategic Differentiation
Our Market Today
Antelope Ridge
at Crystal Valley Ranch
Brand New Models Now Open!

- Secluded hillside location
- 1/4 acre homesites available
- From the upper $200s

Free 3-Car
$7500 design center allowance
2% toward financing & closing costs
Free Microwave
Zero Down & Zero Closing Costs

Free Landscaping

Like the idea of a new Centex home but need to sell your existing home? Ask us about.

303-660-8981
Keep driving and save $50,000

St. Vrain Ranch in Firestone
From the $180s
Smokin' Deals

UP TO $80,000† IN TOTAL VALUE
on your new [redacted] home!

Building homes for all the times of your life.
Telling The Story
If it makes you feel better, you can spend your weekends renovating a friend’s house.

New homes in old neighborhoods.
lowry • stapleton • belmar • platt park
www.mcstain.com
everything should be recycled.

Especially land.
At McStain Neighborhoods, we believe that the best and smartest kind of growth is regrowth. One use giving way to another.

And one of the best examples in the country is Stapleton.
We’d like to congratulate Forest City for their vision in transforming Denver’s former international airport into a brand new neighborhood.

We’re honored to be a part of it.

For more than 35 years, we have focused on creating neighborhoods of enduring value where people feel connected to each other and to the natural environment.

- 2005 Green Building Project of the Year Award from the National Association of Home Builders Research Center
- 2003 Most Energy Efficient Home of the New Millennium Award from Energy Star
- 2005 Energy Star Partner of the Year Award

303.494.5900  www.mcsstain.com
THE STORY OF BRAZILIAN LYPTUS HARDWOOD

You will see in McStain's new Home Studio both cabinet and flooring samples made from an imported Brazilian hardwood lumber called Lyptus. We think that there's a really interesting story here that will help explain why this particular wood product represents a unique example of sustainable forestry and responsible wood use.

To begin, the Eucalyptus tree, from which Lyptus is a natural hybrid, is an exotic species originally imported from Australia, and not native to the natural tropical or subtropical forests of South America. It was first introduced in Brazil in the 19th century and currently represents one of Brazil's primary commercial species grown in tree plantations. Indeed, the Southern Hemisphere has emerged as a center of plantation forestry, in itself a growing phenomenon in wood fiber production all over the world. Given the tremendous surge in worldwide demand for wood products, over 40% between 1970 and 1990, tightening global timber supplies and rising concerns over the loss of natural forests, global forestry is in a tremendous state of transition, moving from a reliance on old-growth, natural forests, to resources based on both reforestation and the conversion of degraded lands into high-yield plantations.

Some of the most impressive plantation forestry is taking place in Brazil by companies like Araucua, the manufacturer of Lyptus hardwood. Araucua has shown that fast-growing, highly-productive plantation forests are an important way to meet society's need for wood and paper products. Eucalyptus has phenomenal growth rates, typically hair-vested between 15-18 years of age, when compared with species from natural forests. The high levels of productivity associated with plantation forestry result from the tremendous gains made over time in Brazilian silviculture. With higher yields from these tree plantations, the area impacted by forestry is smaller and more concentrated. This leaves more room for other kinds of forests and relieves pressure on more sensitive natural areas. Eucalyptus has also been established on lands that have been deforested in the past, thereby making degraded lands productive once more.
Ask us why our studs are stronger
(No, seriously)
Buy a McStain home.
Get a year of wind-generated electricity and a Vespa® Scooter.

After 40 years of earth-friendly homebuilding, we're having an earth-friendly anniversary celebration. Every new McStain home purchased between now and September 30, 2006, comes with 12 months of free wind-generated power and a new Vespa LX 50 Scooter. It will make you feel good every time you turn on a light switch ... or scoot down the block.

DENVER
Lowry • Platt Park • Stapleton

LOVELAND
High Plains Village

LAFAYETTE
Hedgerow

LAKewood
Belmar

This is a limited offer.
Learn more at www.mcstain.com
What one McStain Home does for the WORLD

15 trees are left in the forest.

8,000 square feet of construction waste don’t go to the landfill.

1,200 lbs of newspaper get re-used in cellulose insulation.

4.7 tons of carbon dioxide (a greenhouse gas) don’t get put into the atmosphere.

290 kilowatt hours of electricity don’t get used.

750 therms of natural gas don’t get burned.

$750 gets saved on utility bills.

5,000 plastic pop bottles get re-used as carpet.

$190 gets contributed to Colorado non-profit organizations working to support the environment.

*On average compared to the typical new home. Energy savings based on 50.27/kwh and 2.33/kwh.
Testimonials
Testing

Performance testing for air tightness - the blower door
Home Energy Rating Certificate

Uniform Energy Rating System

<table>
<thead>
<tr>
<th>Star Level</th>
<th>Energy Efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Star</td>
<td>1 Star Plus</td>
</tr>
<tr>
<td>1 Star Plus</td>
<td>2 Stars Plus</td>
</tr>
<tr>
<td>2 Stars Plus</td>
<td>2 Stars Plus</td>
</tr>
<tr>
<td>3 Stars Plus</td>
<td>3 Stars Plus</td>
</tr>
<tr>
<td>4 Stars Plus</td>
<td>4 Stars Plus</td>
</tr>
<tr>
<td>5 Stars Plus</td>
<td>5 Stars Plus</td>
</tr>
</tbody>
</table>

HERS Score: 91.2

General Information

- Conditioned Area: 2080 sq. ft.
- Conditioned Volume: 23271 cubic ft.
- Bedrooms: 3
- House Type: Townhouse, end unit
- Foundation: More than one type

Mechanical Systems Features

- Water Heating: Conventional, Natural gas, 0.59 EF
- Heating: Fuel-fired air distribution, Natural gas, 92.1 AFUE
- Duct Leakage: Total: 0.00 CFM @ 50 Pascals
- Ventilation System: Supply Only: 91 cfm, 0.0 watts
- Programmable Thermostat: Heating: Yes, Cooling: Yes

Building Shell Features

- Ceiling Flat: R-38
- Vaulted Ceiling: R-30
- Infiltration: Low E. 35/35
- Above Grade Walls: R-13, R-21
- Foundation Walls: R-11.0
- Rate: Htg: 1520 Cig; 1520 CFM
- Stab: R-0.0 Edge, R-7.0 Under

Lights and Appliance Features

- Interior Incandescent Fixtures: NA
- Clothes Dryer Fuel: Electric
- Exterior Incandescent Fixtures: NA
- Refrigerator Efficiency: NA
- Exterior Energy Efficient Fixtures: NA

Estimated Annual Energy Cost

<table>
<thead>
<tr>
<th>Use</th>
<th>MMBtu</th>
<th>Cost</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating</td>
<td>35.0</td>
<td>$354</td>
<td>37%</td>
</tr>
<tr>
<td>Cooling</td>
<td>0.0</td>
<td>$0</td>
<td>0%</td>
</tr>
<tr>
<td>Hot Water</td>
<td>25.1</td>
<td>$255</td>
<td>26%</td>
</tr>
<tr>
<td>Lights/Appliances</td>
<td>$354</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Photovoltaics</td>
<td>$0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Service Charges</td>
<td>$0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$964</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

This home meets the minimum criteria for all of the following:

- EPA Energy Star Home
- 2001 International Energy Conservation Code

HERS Provider

BuiltWright, Inc.
3222 Tejon Street, Unit D
Denver, Colorado, 80211
Phone: 303-477-1620
Fax: 303-477-1144
www.builwrightinc.com

Certified Energy Rater
## Energy Efficiency

**Single Family Home 2868 sq. ft.**

<table>
<thead>
<tr>
<th>Features</th>
<th>Annual Savings</th>
<th>Cost premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced framing 2”x6”</td>
<td>$117</td>
<td>$900</td>
</tr>
<tr>
<td>Windows w/ low emissivity argon-fill</td>
<td>$175</td>
<td>$400</td>
</tr>
<tr>
<td>92.1% direct vent furnace</td>
<td>$145</td>
<td>$900</td>
</tr>
<tr>
<td>Water heater –sealed combustion</td>
<td>$31</td>
<td>$400</td>
</tr>
<tr>
<td>Advanced insulation system</td>
<td>$148</td>
<td>$1600</td>
</tr>
<tr>
<td>Infiltration/advanced air sealing - (2.5 sq. in. /100 sq. ft.)</td>
<td>$262</td>
<td>$710</td>
</tr>
<tr>
<td>Sealed conditioned Crawl space</td>
<td>$64</td>
<td>$110</td>
</tr>
<tr>
<td>Engineered duct distribution system</td>
<td>$112</td>
<td>$920</td>
</tr>
<tr>
<td>• All ducted system, inside conditioned space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Set back digital thermostat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fireplace w/ Electronic ignition</td>
<td>$72</td>
<td>$0</td>
</tr>
<tr>
<td>Downsize furnace/AC</td>
<td>$85</td>
<td>-$750</td>
</tr>
<tr>
<td>Mechanical ventilation</td>
<td>-$12</td>
<td>$300</td>
</tr>
<tr>
<td>3rd Party verification and energy commissioning</td>
<td>$0</td>
<td>$580</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1199</strong></td>
<td><strong>$6070</strong></td>
</tr>
</tbody>
</table>

*compared to Model Energy Cod, HERS 89.7*
# Indoor Air Quality, Natural Resource Conservation, Durability

Single Family Home 2868 sq. ft.

<table>
<thead>
<tr>
<th>Features</th>
<th>~Cost Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior drainage plane</td>
<td>$275</td>
</tr>
<tr>
<td>Finger joint studs</td>
<td>$0</td>
</tr>
<tr>
<td>Engineered lumber products</td>
<td>$224</td>
</tr>
<tr>
<td>Cementitious siding material</td>
<td>$0</td>
</tr>
<tr>
<td>Recycled content decking</td>
<td>$10</td>
</tr>
<tr>
<td>Low VOC paint and finishes</td>
<td>$550</td>
</tr>
<tr>
<td>Recycled PET carpet</td>
<td>$290</td>
</tr>
<tr>
<td>Ductwork cleaning</td>
<td>$300</td>
</tr>
<tr>
<td>Sealed combustion appliances incl. fireplace</td>
<td>$200</td>
</tr>
<tr>
<td>Blown cellulose insulation</td>
<td>$0</td>
</tr>
<tr>
<td>High performance bath fans</td>
<td>$270</td>
</tr>
<tr>
<td>Sealed sump pit cover</td>
<td>$60</td>
</tr>
</tbody>
</table>

Total                                             $2179
Does it work?

- McStain homes resell for an average of 4% to 11% more than homes of comparable age and size in the same market
  
  Source: The Genesis Group and the University of Colorado

- McStain homes sell for an average of $10.00 per square foot more than their direct competitors in the seven county Denver Metro Area (the McStain Premium)  
  
  Source: The Genesis Group

- Customer Satisfaction 2006 – 99.2%
  

- Customer Referrals 2006 – 33%
  
McStain Neighborhoods

We’re on a mission here.

You can do right and do well at the same time.

Thank You.

Eric A. Wittenberg
President and CEO