Building a Sustainable Community
A Real-Time Account

Chris Schroeder

Discussion Overview

• Background about Wellspring Development Company and the Rock Hill Trails project
• Our approach and philosophy
• Examples of specific issues and challenges

Wellspring Background
Rock Hill Trails Project

• 170 acres
• Farm ground, pasture, and wooded
• Active streams on east and west end
• Farmstead with family cemetery

Vision

Our vision is to provide people with a superior quality of life and sense of community through the creation of a sustainable residential development that is an asset to the region, protects and preserves the environment, and sets higher standards of sustainability for future developments.
Core Development Objectives

- Low Impact Development
- Sustainable Community
- High Performance Homes

CONSERVATION DESIGN WORKSHOP

Client: Anthony Schreuder

Faculty Advisor:
Dr. R. E. Derry

Design Team:
- Ethan Flaherty (Landscape Architecture)
- Elizabeth Kinosian (Civil Engineering)
- Student Council of Environmental Awareness
- Student Council of Environmental Awareness
- Student Council of Environmental Awareness

Water
Runoff Flow

Renewable Energy

Sun Exposure
Our Journey With the City

- Initial contact
- Educational process
- Annexation terms
- Planned Use Development
- Pushing for as much flexibility as possible, but choosing our battles carefully

Education
Team Field Trip in May 2007
Education
Presentation to Planning Commission at Public Meeting

• Reinforced earlier messages at field trip within the context of city planning
• Addressed citizens who were there with concerns
  • Nature preservation
  • Storm water management

Education
Conclusions

• Extremely important and takes time
• Would be difficult to re-create
• Takes a whole team approach
• Resources and examples available are increasing

“This is the stuff they taught us in college, but I've never seen it since!”

War Stories
A year in the life of a green developer.
Objectives
• Reduce storm water runoff
• Improve storm water quality

Tactics
• Curb modifications
• Minimize storm sewers
• Vegetative filters
• Infiltration systems
Storm Water Management

Curb Types
Mixed Use Development

- Single family residential
  - Traditional and cottages
- Multi-family town houses
- Live-work units
- Neighborhood business
**Mixed Use Development**

- A change in perspective for the City
- Different needs
  - The City needs clear definition
  - We need flexibility
- Some concepts stirred the wrong images
  - Small = low quality
  - Detached garage = pole barn
  - Condos above businesses = transient tenants

**Natural Vegetation**

**Objectives**
- Storm water management
- Enhance wildlife diversity
- Aesthetics
- Low energy maintenance

**Tactics**
- Native plantings in common areas
- Allow native plantings in limited parts of residential lots

Native Prairie does not mean that you simply don’t mow your grass!
Selecting the Best Products

Challenge With Valuing Green

• Some factors are more tangible than others
  – Tangible: High efficiency HVAC
  – Intangible: Indoor air quality
• The perceptions of value are changing rapidly
  – Traditional: Maximum square footage and acreage
  – Emerging: Right-sizing and low environmental footprint
• Distinguishing between different shades of green
  – Using a couple of Energy Star appliances versus
  – Using heel trusses

Categories of Value

Structural
  Features or upgrades that add to the soundness and structural integrity of the home

Cost Savings/Economic
  Upgrades that provide fairly well defined payback

Intangible Value
  Features or upgrades that provide value that is difficult to measure directly

“Save the Planet”
  Similar to intangible, except focused on reducing environmental footprint
### Sample Green Value Matrix

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value Currently Recognized?</th>
<th>Structural</th>
<th>Economic</th>
<th>Intangible</th>
<th>Save the Planet</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 X 6 construction</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upgraded countertops, carpets, etc.</td>
<td>Y</td>
<td></td>
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<tr>
<td>Masonry siding</td>
<td>Y</td>
<td></td>
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<tr>
<td>HVAC</td>
<td>Y</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Insulation</td>
<td>Y</td>
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<tr>
<td>Energy Star Appliances</td>
<td>N</td>
<td></td>
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<tr>
<td>LED lighting</td>
<td>N</td>
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<tr>
<td>Concrete Backyard siding</td>
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<tr>
<td>Structurally Insulated Panels</td>
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<tr>
<td>Insulated Concrete Forms</td>
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<tr>
<td>Passive solar (orientation, windows, etc.)</td>
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<td></td>
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<tr>
<td>Natural lighting</td>
<td>N</td>
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<tr>
<td>Labeling properties</td>
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<tr>
<td>Access to open space, trails, etc.</td>
<td>N</td>
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<tr>
<td>Low VOC paints and varnishes</td>
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<tr>
<td>Socially sustainable neighborhood</td>
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<td>UDI development infrastructure</td>
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<tr>
<td>FSC Certified Lumber</td>
<td>Y</td>
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<td>Recycled construction materials</td>
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<td>Permeable pavers</td>
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<td>Low Flow Fixtures</td>
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<td>Clinics</td>
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<td>Wind Turbines</td>
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<td>National green certification</td>
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### Future Challenges

- Current economic conditions and housing market
- Finding and putting the right pieces together to form a sustainable system
- Distinguishing our product from green-washed product
- Selling to buyers with different experiences and expectations of green
Summary Thoughts

- Timing is everything
  - With the City of Wood River
  - Local transportation (I-255 and Moreland)
  - Green movement/media attention
- We would not be where we are today without the investment of time for learning and team-building
- Would be more difficult if the City was not willing to invest as well
- Little changes to well established systems have far-reaching ripple effects