



BUILDING DREAMS. SAVING ENERGY.

COMPANIES



# GBNT, LEED-H & THE STANDARD OVERVIEW

# WHO ARE WE?



STATE CAPITOL 1881

# WHO ARE WE?



4<sup>th</sup> GENERATION

# WHO ARE WE?



FERRIER BROS. BRIDGE CO



# WHEN DID WE GO GREEN?





# AWARDS

- ▶ EVHA 2005, 2006, 2007, 2008 & 2009
- ▶ 1<sup>ST</sup> LEED Platinum Home in Texas
- ▶ American Lung Association Health House
- ▶ NAHB Green Builder Advocate of the Year 2007
- ▶ Green Built North Texas “Green Godfather”
- ▶ SIPA Building Excellence Competition Winner
- ▶ Vesta Best Green Built Home 2007 & 2008





# GREEN HOME FEATURES

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- ▶ Less Energy
- ▶ Less Water
- ▶ Less Natural Resources
- ▶ Durable / Low-Maintenance
- ▶ Creates Less Waste
- ▶ Healthier & More Comfortable





# BENEFITS OF A GREEN HOME

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- ▶ Lower Energy Bills
- ▶ Lower Water Bills
- ▶ Reduced Greenhouse Emissions
- ▶ Improved Indoor Air Quality
- ▶ Increased Comfort



# **GBNT VERIFICATION STEPS**

- ▶ Join Local HBA & GBNT
- ▶ Hire Verifier & Complete Compliance Checklist
- ▶ Begin Project
- ▶ Initial Inspection at Pre-Drywall
- ▶ Verifier Submits for Home Registry
- ▶ Finish Project

# **GBNT VERIFICATION STEPS**

- ▶ Finish Project
- ▶ Complete Final Inspection
- ▶ Verifier Lists Home as Completed on Registry
- ▶ Consumer Receives Certificate from GBNT



# **GBNT CATEGORIES**

- ▶ Site Management & Waste Recycling
- ▶ Water Efficiency
- ▶ Indoor Air Quality
- ▶ Energy Efficiency
- ▶ Materials
- ▶ Homeowner Education





# GBNT CASE STUDY

## Green Built North Texas – Builder Agreement Addendum Checklist

CATEGORY	PROTOCOL ELEMENT:	WHEN VERIFIED:	RESPONSIBLE PARTY:	HOW VERIFIED:
<b>SITE MANAGEMENT</b>				
Site Management	Obtain TCEQ Storm Water Permit, when required, and follow best management practices.	Before Pre-Drywall Inspection		
Site Management	Implement a tree protection plan or fully comply with established local ordinance regarding tree protection.	Before Pre-Drywall Inspection		
<i>Optional Items (choose one of the following waste reduction strategies):</i>				
Site Management	<input type="checkbox"/> Specific Waste reduction strategies employed (choose any or all). <ul style="list-style-type: none"> <li>○ Reuse form board on slabs and flatwork</li> <li>○ Optimize building dimensions to correspond to standard lumber dimensions.</li> <li>○ Develop detailed framing layouts to avoid waste when ordering lumber.</li> </ul>	Before Pre-Drywall Inspection		





# LEED- H VERIFICATION STEPS

- ▶ Contact Home Provider
- ▶ Identify Project Team
- ▶ Build the Home to Stated Goals
- ▶ Certify Project as LEED Home
- ▶ Market & Sell the LEED Home





# LEED-H CATEGORIES

- ▶ Innovation & Design Process
- ▶ Location & Linkages
- ▶ Sustainable Sites
- ▶ Water Efficiency
- ▶ Energy & Atmosphere
- ▶ Materials & Resources
- ▶ Indoor Environmental Quality
- ▶ Awareness & Education





# LEED-H

Certification Levels	Required Points
Certified	45
Silver	60
Gold	75
Platinum	90
Total Available Points	129



# LEED-H CASE STUDY



for Homes

Project:

Building Type: **Single attached**

# of Bedrooms: **4**

Builder Name:	<i>Ferrier Custom Homes</i>
Project Team Leader:	<i>Don Ferrier</i>
Home Address (Street/City/State):	<i>2321 Ryan Ave., Ft. Worth, TX</i>

## LEED for Homes Project Checklist

Project type:	Adjusted Certification Thresholds			
<b>Custom</b>	Certified:	<b>37.5</b>	Gold:	<b>67.5</b>
Floor Area: <b>1,960</b>	Silver:	<b>52.5</b>	Platinum:	<b>82.5</b>

Project Point Total		Final Credit Category Point Totals			
Prelim: <i>96 + 2 maybe pts</i>	Final: <b>25</b>	ID: 0	SS: 3	EA: 13	EQ: 0
Certification Level		LL: 0	WE: 7	MR: 2	AE: 0
Prelim: <i>Platinum</i>	Final: <b>Not Certified</b>	<i>Minimum Point Thresholds Not Met for Final Rating</i>			

date last updated :

last updated by : **9-23-08, DF**

	Max Pts. Available	Preliminary Rating			Notes	Project Points
		Y	Pts	Maybe		
<b>Innovation &amp; Design Process (ID)</b> (Minimum 0 ID Points Required)	<b>Max: 11</b>	<b>Y:9</b>	<b>M:1</b>			<b>Final: 0</b>

### 1. Integrated Project Planning

<b>1.1</b> Preliminary Rating	<i>Prereq.</i>	<b>Y</b>			
Target performance tier:	<input type="text" value="Platinum"/>				
<b>1.2</b> Integrated Project Team ( <i>meet all of the following</i> )	<b>1</b>	<b>1</b>	<b>0</b>		<b>0</b>
<input checked="" type="checkbox"/> a) Individuals or organizations with necessary capabilities	<input checked="" type="checkbox"/> c) Regular meetings held with project team				
<input checked="" type="checkbox"/> b) All team members involved in various project phases					
<b>1.3</b> Professional Credentialed with Respect to LEED for Homes	<b>1</b>	<b>0</b>	<b>0</b>	<b>unavailable until further notice</b>	<b>0</b>
<b>1.4</b> Design Charrette	<b>1</b>	<b>1</b>	<b>0</b>		<b>0</b>

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# **STANDARD VERIFICATION STEPS**

- ▶ Home Planning: Use Scoring Tool
- ▶ Schedule Verifier for Rough Inspection
- ▶ Designer's Report to Verifier
- ▶ Assemble Documentation for Verifier
- ▶ Schedule Verifier for Final Inspection
- ▶ Complete Construction
- ▶ Builder Receives Green Certification



# STANDARD CATEGORIES

- ▶ Lot Design, Preparation & Development
- ▶ Resource Efficiency
- ▶ Energy Efficiency
- ▶ Water Efficiency
- ▶ Indoor Environmental Quality
- ▶ Operation, Maintenance & Building Owner Education
- ▶ Global Impact



# STANDARD CATEGORIES

	BRONZE	SILVER	GOLD	EMERALD
Lot Design/Preparation/Development	39	66	93	119
Resource Efficiency	45	79	113	146
Energy Efficiency	30	60	100	120
Water Efficiency	14	26	41	60
Indoor Environmental Quality	36	65	100	140
Operation/Maintenance/Education	8	10	11	12
Additional Points	50	100	100	100
<b>Total Points:</b>	<b>222</b>	<b>406</b>	<b>558</b>	<b>697</b>

# STANDARD CASE STUDY

## ▲ Hide Emerald Scoring Analysis

Chapter	Required Points	Claimed Points	Additional Claimed Points Above Emerald	Point Shortfall	Mandatory Status
<a href="#">Chapter 5: Lot Design, Preparation, and Development</a>	119	167	48		Not Applicable
<a href="#">Chapter 6: Resource Efficiency</a>	146	137		9	Met
<a href="#">Chapter 7: Energy Efficiency</a>	120	230	110		Met
<a href="#">Chapter 8: Water Efficiency</a>	60	67	7		Met
<a href="#">Chapter 9: Indoor Environmental Quality</a>	140	179	39		Met
<a href="#">Chapter 10: Operation, Maintenance, and Building Owner Education</a>	12	15	3		Met
SECTION TOTALS	597	795	207	9	
Additional Points Above Emerald	100	--	207	0	
TOTAL POINTS	697	795	--	9	

### To achieve Emerald:

- Reach required Emerald score for each chapter
- Reach required Additional Points for this project
- Meet all mandatory items
- Select the Performance Path AND select a minimum of 2 items from Section 704 in Chapter 7: Energy Efficiency.
- Meet the requirements of 801.6 & 802.2 - High Efficiency or Waterless Toilets



# SUMMARY **GBNT**

- ▶ Regionally Specific
- ▶ Lower Level of Requirements
- ▶ Goal of Municipality, Consumer & Builder Acceptance
- ▶ Minimum 3<sup>rd</sup> Party Verification & Cost
- ▶ Pass/Fail, No Point Accumulation



## SUMMARY **LEED- H**

- ▶ National in Scope, Not Climate Specific
- ▶ 4 Levels of Certification
- ▶ Extensive 3<sup>rd</sup> Party Verification
- ▶ Increased Time & Cost

# SUMMARY **STANDARD**

- ▶ National in Scope, Climate Specific
- ▶ 4 Levels of Certification
- ▶ Moderate 3<sup>rd</sup> Party Verification
- ▶ Moderate Increase in Time & Cost
- ▶ Consensus of 3 Distinct Groups (ICC, NAHB, ANSI)



COMPANIES

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