

MAKING A CASE FOR TEAMWORK

Turning Brownfields Green: Green Buildings 101

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Definition of “Green Building”

- ▶ EPA – Practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building’s life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction.
- ▶ USGBC – Green building design is significantly reducing or eliminating the negative impact of buildings on the environment and on building occupants.

Definition of “Green Buildings”

- ▶ What features are important to owner?
- ▶ What features are important in region/locale?
- ▶ Are green building standards mandated?
- ▶ Are there benefits encouraging building green?
- ▶ Is a third-party green building standard going to be used?

“Green Buildings” Standards

- ▶ Does a green building have to be built to a published standard?
- ▶ Unless mandated by a building code, no.
- ▶ What is important to Owner.
- ▶ What is Owner willing to invest in process or meeting standard?
- ▶ What is required by climate, environment and locale?

Green Building Standards

- ▶ LEED – Leadership in Energy and Environmental Design – U.S. Green Building Council
- ▶ Green Globes – Green Building Initiative
- ▶ National Green Building Standard – ANSI ICC–700–2008, National Association of Home Builders
- ▶ Living Building Challenge – International Living Building Institute

LEED Green Building Rating System

- ▶ Family of different standards for new construction, core and shell, commercial interiors, operations and maintenance, etc.
- ▶ Takes a holistic look at buildings
- ▶ Points on scale awarded for meeting certain credits and prerequisites
- ▶ Prerequisites must be met by all projects

LEED and Brownfields

- ▶ LEED 2009 for New Construction and Major Renovation
- ▶ SS Credit 3: Brownfield Redevelopment
 - 1 point
 - Option 1: Document contamination by ASTM E1903-97 Phase II Environmental Site Assessment or local voluntary cleanup program
 - Option 2: Develop on a site defined as a brownfield by a local, state or federal agency

LEED and Brownfields

- ▶ Other LEED Credits encouraging redevelopment of Brownfields:
 - SS Credit 1: Site Selection
 - SS Credit 2: Development Density and Community Connectivity
 - SS Credit 4.4: Alternative Transportation - Parking Capacity
 - SS Credit 5.1: Site Development – Protect or Restore Habitat

LEED and Brownfields

- ▶ Other LEED Credits encouraging redevelopment of Brownfield:
 - MR Credit 1.1: Building Reuse - Maintain Existing Walls, Floors and Roof
 - MR Credit 1.2: Building Reuse - Maintain Interior Nonstructural Elements
 - MR Credit 3: Materials Reuse

Building within Brownfield

- ▶ Will the building be part of the brownfield solution?
 - Will it be the cap?
 - Will construction pierce a cap to be maintained?
- ▶ How will contractor comply with brownfield plans?
 - Health & Safety issues.
 - Disposal issues.
 - Maintain cap or other institution/engineering controls.
- ▶ Are green building options limited by brownfield needs?

Green Building Codes

- ▶ Mandate “green” or sustainable construction
- ▶ Building Codes may define green buildings where applicable
- ▶ California
 - California Green Buildings Standards Code
 - Mandatory for new construction in 2010
- ▶ New Jersey
 - Global Warming Response Act of 2007
 - Called for statewide green building code
- ▶ Proposed national building code

Pennsylvania Green Building Code

- ▶ February 2009, Governor Rendell proposed a green building code
- ▶ Current codes are 2006 International Codes issued by ICC
- ▶ Next code changes should occur by December 31, 2009

Limitations on Adopting LEED as Building Code

- ▶ Third party determining compliance
- ▶ Flexibility, but certain standards apply
- ▶ Regional concerns may not be addressed
- ▶ A Pennsylvania example:
 - On June 4, 2009, Legislative Forestry Task Force held hearing on green building certificates
 - Complaint that Pennsylvania's wood product industry does not qualify for LEED credit
 - Alleged bias against wood in favor of rapidly renewing materials