

## ■ An Overview of Green Design and Construction

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### **Keith A. Shuley, Partner, LEED® AP®**

111 Congress Avenue, Suite 900

Austin, Texas 78701

T 512.482.6887

F 512.482.6859

M 512.750.5770

[keith.shuley@klgates.com](mailto:keith.shuley@klgates.com)

[www.klgates.com](http://www.klgates.com)

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Presentation will address:

**What is LEED?**

**What is a LEED AP?**

**What is a LEED Rating System?**

**What is LEED certification designed to accomplish?**

**What is the LEED process?**

**How are green projects different** from traditional projects?

**What should you do differently on a green building project?**

Require additional due diligence.

Consider alternate contracting models

Focus on key contract terms.

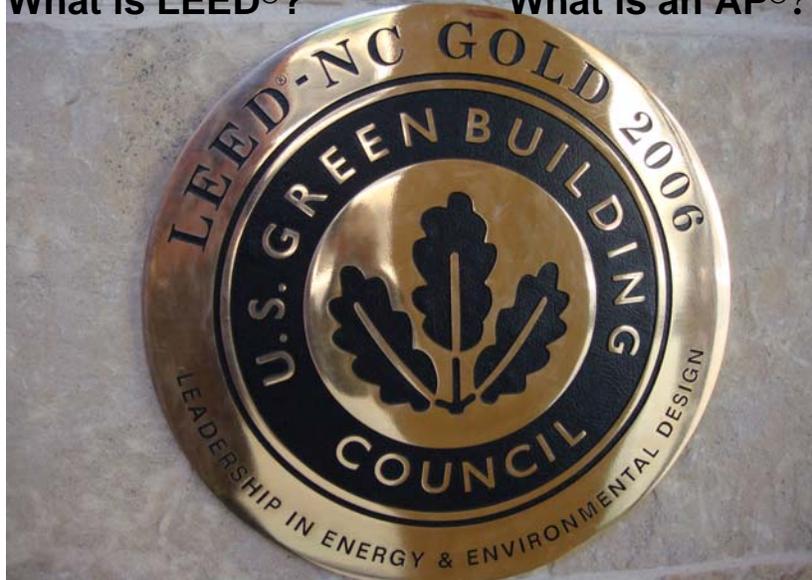
Consider green insurance and bonds.

Anticipate the unintended consequences of going green.

**Use claims examples** where possible to make highlight my points.

What is LEED®?

What is an AP®?



1. LEED is an acronym for a **green building rating system**.
2. The acronym stands for "**Leadership in Energy and Environmental Design.**"
3. LEED is a Green Building Rating System® promulgated by the **US Green Building Council**.
4. LEED has become the **established industry benchmark for the certification of sustainable building projects**.
5. LEED certification is based upon the **accrual of "points" for the implementation of efficiency and design measures**.
6. **LEED certification levels** range from **Certified, Silver, Gold and Platinum** based upon the number of points earned.
7. An AP is an Accredited Professional i.e., **a person who by examination has demonstrated the knowledge of green building practice required for implementation of the LEED Green Building Rating System**.
8. There are over **100,000** LEED APs around the world.

## What is a LEED rating system?

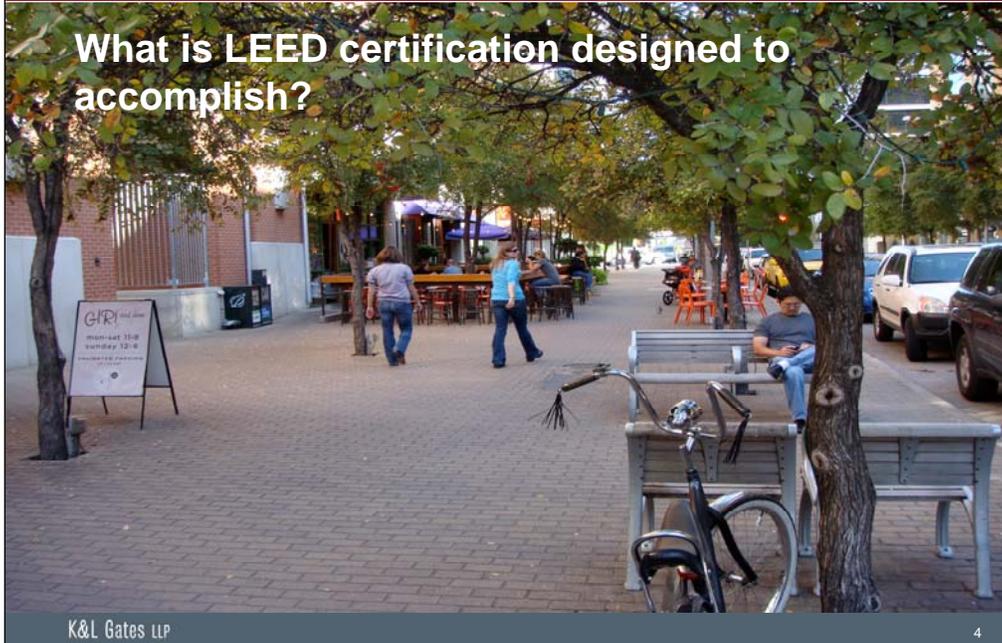


LEED has rating systems for different types of development:

- Homes.
- Neighborhood Development
- Commercial Interiors
- Core and Shell
- New Construction
- Schools
- Healthcare
- Retail
- Existing Buildings Operations & Maintenance.

LEED rating system runs through the building lifecycle (design, construction, operations).

## What is LEED certification designed to accomplish?



LEED certification is supposed to **utilize a collection of land use, building design, construction, operations and maintenance strategies to reduce energy consumption, promote occupant health and protect the environment.**

It is used to reduce the environmental impact of US buildings, which account for **12% of US water use, 39% of US CO<sub>2</sub> emissions; 65% of US waste output and 71% of US electrical consumption.** (US DOE 2008)

In general, **green buildings consume from 24-50% less energy; emit 33-39% less CO<sub>2</sub>; use 40% less water; and send 70% less solid waste to landfills and incinerators.** (USGBC)

## What is the LEED process?



1. **Register** your project.
2. **Track** its progress and **document** achievement
3. **Apply** for certification.

The LEED process is accomplished “**on-line.**”

The LEED process is handled by a **team** of professionals (architects, engineers, contractors, owners, lawyers, etc.)

All aspects of the project’s development are considered:

1. **Site planning**
2. **Water management**
3. **Energy**
4. **Material use**
5. **Indoor environmental quality.**

**Prerequisites** must be met before points may be accrued under applicable categories.

## How are green project different from traditional projects?



### **Traditional** design/construction

1. **Responsibilities** of team members are **well defined** and
2. **Risks**, which have been played out through the courts and arbitrations, are **known and understood**.

### **Green** design/construction

1. **Issues** are often **novel**,
2. **Insurance** markets are generally **not ready** to offer risk mitigating measures,
3. **Implications of damages** are **unclear**, and
4. **Projects with 3<sup>rd</sup> party certification and performance risk** are **novel**.

#### **Case examples** of Green Construction Issues:

**Substitution of improper sealant.**

**Unmet promise of LEED certification.**

**Unavailable green product.**

**Removal of LEED certification.**

### **What are the rules that apply?**

#### **What are the benefits?**

Fast-track permitting (Chicago)

Density bonuses (Arlington Co., VA)

Financial incentives/Fast-track service/Waiver of height and density limits (LA, CA)

Tax credits/waivers/Abatements (New Mexico, Nevada)

Marketing: (seal of approval)

Reduced O&M

Save the planet/warm fuzzy feelings.

#### **What are the penalties?**

Forfeiture of security deposit (DC)

Withholding/limits COO (Austin, TX)

Loss of tax abatements/waivers (Shaw Dev. v. Southern Builders., Nevada)

Bar from future opportunities (Chicago, Ill.)

Loss of marketing opps.

Rebates and lawsuits.

## What should you do differently on a green building project?

1. Do additional due diligence
2. Consider different contracting models
3. Focus on key contract terms
4. Determine available green insurance and understand its limitations
5. Determine whether bonds can help
6. Anticipate the unintended consequences of going green



**Require additional due diligence:**

1. Look for LEED experience not just LEED accreditation.
2. Verify insurance and endorsements paying particular attention to green policies and endorsements.
3. Secure copies of insurance policies not just certificates of insurance.
4. Determine the financial viability of each member of the design/construction team.

### Consider different contracting models:

- Design-build vs. the traditional design-bid-build
- Performance contracts:
  - Clear performance goals
  - Design process evaluation methodology
  - Process for post occupancy evaluation
  - Compensation that is partially contingent on performance

**Design-Bid-Build** = separate contracts for design and construction.

Least desirable option from O's standpoint, but most oft used.

Requires extensive allocation/negotiation of contractual responsibilities.

**Design-Build** = one contract for both design and construction.

Desired option from O's standpoint as all of the responsibilities can be assigned to one professional.

**Performance contracts** = Contracts that provide an incentive to design and construct efficient buildings.

**Owner:**

+ **reduces total bldg lifecycle costs.**

+ **increases rent revenue/sale price through lower operating costs.**

**A/E:**

+ **incentive/reward for lower energy cost design.**

**Contractor:**

+ **incentive/reward fro proper commissioning.**

**Focus on key contract terms:**

- Scope of Work/Services:
  - Assign responsibility for checking on new and potential green building requirements.
  - Engage in LEED credit hedging.
  - Require LEED AP staff for the Contractor.
  - Require team maintenance.
  - Require both compliance with laws and with principles, practices and procedures under the LEED rating system.

**Assign responsibility for checking on new and potential green bldg requirements:**

**Example Claim:** Arch designed a facility to meet existing codes and stds.

Public pressure produce political action that changed the requirements as the project was under construction.

Owner was forced to delay the project and redesign to meet the new requirements.

Arch wanted to be paid more for redesign.

Owner sued Arch claiming that a reasonable Arch would have been aware of the impending changes and therefore was responsible for the redesign, reconstruction and delay damages.

**Focus on key contract terms (continued):**

- Standard of care:
  - Specify the level of skill and care for an individual that is both architect and LEED AP.
  - Require at least an acknowledgment of the certification level being sought.
  - Require at least an acknowledgment of experience.
  - Indicate that LEED experience was a major inducement.

**Specify the level of skill and care:** e.g., “...the level of professional skill and care provided by architects serving as both architect and LEED AP practicing in the same or similar locality under the same or similar circumstances.”

**Require at least an acknowledgement of the certification level being sought:** e.g., “...Arch acknowledges that Owner seeks a design within the time and budget constraints set out herein that meets at least LLED Silver certification.”

**Require at least an acknowledgment of experience:** e.g., “...Contractor/Architect represents to Owner that Contractor/Architect is experienced with the principles, practices and procedures associated with the USGBC LEED rating system.”

**Indicate that LEED experience was a major inducement:** e.g., “...Contractor’s/Architect’s experience with LEED principles, practices and procedures associated with the USGBC LEED rating system was a material inducement to Owner’s decision to engage Contractor/Architect for the project.”

## Focus on key contract terms (continued):

- Pay particular attention to:
  - Indemnity
  - Warranty
  - Liquidated damages
  - Royalties and licensing responsibility
  - Privacy/Security
  - Final completion
  - Damage limitations

### **Indemnity**

**Warranty** – Std. AIA language provides that Owner agrees not to bring claim against Arch if the project does not perform as intended unless **Arch's negligence** is the **sole cause of the performance deficiency**. Owner should not agree to this.

**Liquidated damages** – **If LEED prerequisite not meet => LDs. If LEED credit not obtained and a specified LEED rating not obtained => substitute credit or LDs at Owner's option.**

**Royalties and licensing responsibility** – **Std. AIA** makes Contractor responsible for construction, but does not make Arch responsible for design. **Example claim: moving solar panel.**

### **Privacy/Security** –

**Example claim: Defense Contractor** with facility with large windows and skylights posed security risk. Government threatens to revoke Owner's security rating, cancel existing contracts and bar future contracts.

**Example Claim:** On innovative sustainable bldg., Owner contractually agrees to **allow Arch to photograph** bldg. **Arch entered a competition and provided floor plans, mechanical systems, and bldg structure without Owner's approval.** Owner sought injunction.

### **Final completion** –

What constitutes final completion? **Should it include receipt of LEED certification?** Be careful. This may also impact the transition from construction to permanent financing and the triggering of warranty provisions. Sometime separate LEED contracts may be desirable.

**Damage limitations/Direct/Consequential:** Owner should beware of attempts to limit Architect's/Contractor's liability to insurance or a specified \$ amount or to waive consequential damages.

## **Consider green insurance and bonds**

- Design Firm Professional Liability Coverage (E&O)
- Casualty Coverage (CGL)
- Builder's Risk Coverage
  - ACE, Fireman's Fund, Travelers and Zurich
- Property Coverage
  - ACE, Affiliated FM, Fireman's Fund, FM Global, Lexington (AIG), Liberty Mutual and Travelers

**Anticipate the unintended consequences of going green:**

Example claims:

1. “Greenwashing”
2. Respiratory problems



**Greenwashing: Example Claim – Owner (PR firm) held up to ridicule. Demand remediation and apology from Architect.**

**Respiratory problems: Example Claim – operable sash for library, pigeon droppings and respiratory problems. Arch sued for negligence.**

Questions?

