Green Building: Federal, State, and Local Governments LEED the Way

By Aaron P. Silberman

Thanks largely to global warming and skyrocketing energy prices, "green building" is all the rage these days, especially in public construction. Green building may offer many benefits to public project owners, including reduced operating costs, a healthier and more productive workforce, and positive publicity. From a public perspective, the potential benefits are staggering: the Department of Energy estimates that buildings in the United States use more than 30 percent of the nation's energy, almost 70 percent of the nation's electricity, and more than 50 percent of its natural gas. They use 25 percent of the world's wood harvest and 16 percent of its fresh water, and produce more than 35 percent of the nation's carbon dioxide emissions. In California, commercial buildings alone use 36 percent of the state's electricity, and all buildings generate about 30 percent of the state's solid waste materials. Moreover, from a cost perspective, studies in both California and Massachusetts have found that, on average, green building costs about 2 percent more to construct than conventional building, but results in cost savings of more than 20 percent due to reduced energy and water usage, waste production, and maintenance costs.

With all of these incentives, it is no wonder that green building is dramatically on the rise. An increasing number of owners, particularly public entities, are requiring green building, in many cases specifying a particular Leadership in Energy and Environmental Design (LEED) certification for their projects. In the residential sector, green building accounted for 2 percent of new construction in 2005 and is expected to account for 5 to 10 percent by 2010; the square footage of green commercial construction more than doubled between 2004 and 2005.

So, what is green building? Who is specifying it on their projects, and how are they doing so? And what does all of this mean for owners, design professionals, contractors, and suppliers?

What Is Green Building?

Green building, also known as sustainable building, is the practice of designing, constructing, operating, maintaining, and removing buildings in ways that save energy, conserve natural resources, and reduce greenhouse gas and other emissions. This can be accomplished by, among other things, using: (a) environmentally preferable materials (*i.e.*, materials that are longer lasting, less toxic, reusable, recycled, more easily recyclable, etc.); (b) systems that use less and/or renewable energy, materials and water, and that emit less pollutants and/or greenhouse gases; (c) construction methods that produce less waste and emissions; and (d) sustainable sites located near water and transportation.

The nationally accepted standards for green building are the LEED certification programs created by the United States Green Building Council (USGBC).[1] Depending on the level of energy and resource conservation and sustainability achieved, buildings may be LEED-certified, from lowest to highest, as Certified, Silver, Gold, or Platinum. There are different LEED programs for new commercial construction and major renovations, existing buildings, homes, school, retail, and other specialized construction.

There are several steps an owner must follow to achieve LEED certification. First, the project must be registered with the USGBC. Typically, this is done during the design phase (often after review by a green building consultant). Once a project is registered, the architect/engineer (A/E) can get opinions from the USGBC about how aspects of the project would affect certification. Finally, after construction, the owner submits as-built documentation to the USGBC. The USGBC gives the building credits in each of the following five areas of human and environmental health:

- sustainable site development;
- water savings;
- energy efficiency;
- materials selection; and
- indoor environmental quality.

The scoring is based entirely on documentation, rather than on-site inspection or verification. If the building meets the minimum performance requirements in each area it will be certified, and if it receives sufficient additional credits based on added performance, it will achieve one of the higher certification levels. A building may also earn additional credits under an "Innovation in Design" category.[2] Some environmental advantages—such as reductions in construction equipment diesel emissions and construction materials' PVC content—are not currently listed in the LEED scoring, but may be accounted for as design innovations.

Who Is Requiring Green Building?

Numerous local governments have enacted laws requiring green building. Most require LEED certification for all new construction and major renovations of local public build-

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ings.[3] Washington, D.C., Boston, and many smaller cities have gone even further, requiring LEED certification not only for all new public projects, but also for most large private projects.[4] San Francisco has proposed to do the same for new commercial buildings larger than 5,000 square feet, all residential construction, and some renovations, while also proposing to increase its requirement for larger commercial projects to LEED Gold by 2012.[5]

Likewise, many states, including California, New York, Pennsylvania, Minnesota, and Arkansas, now require green construction on all new state projects.[6] In California, for example, Governor Arnold Schwarzenegger has directed that all state agencies should take certain energy efficiency measures, including "designing, constructing and operating all new and renovated state-owned facilities paid for with state funds as 'LEED Silver' or higher certified buildings."[7]

Finally, United States government agencies will require green construction on virtually all new projects. Since 2003, the government's largest construction owner, the General Services Administration (GSA), has required LEED certification for all new construction and substantial renovations under its "Sustainable Design Program."[8] Since 2001, the Army Corps of Engineers (COE) has required that all new projects for design and construction of military facilities strive to achieve a Bronze rating under its Sustainable Project Rating Tool (SPiRiT), which incorporates the LEED system.[9]

Legal Ramifications

Each of the legislative or executive obligations described above applies to public, and sometimes private, owners (rather than design professionals or contractors), requiring that they specify green construction requirements for certain types of projects (*e.g.*, new public construction and major renovation). Although it is clear that an owner that fails to meet those obligations will violate the applicable legislation or executive order, it is unclear as to both how these laws will be enforced and what will be the consequences of violations. For example, in California, while Executive Order S-20-04 requires that state agencies specify LEED-certified projects, the order also specifically states that it "does not create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State . . . or any other person."[10]

Unlike owners' obligations, design professionals' and contractors' obligations to meet green building standards will arise only if they are specified in their contracts.[11] The owner typically will state the desired LEED certification level in the A/E's contract. The A/E, in turn, will develop specifications stating material, systems, and means and methods requirements, and related documentation requirements, all of which are incorporated into the prime construction contract. The only areas relating to certification that may be left in the contractor's control are waste management and indoor air quality during construction, but these are just as often specified by the A/E as well.

On public projects, potential bidders may protest an owner's specification of unduly burdensome green building requirements, but such a challenge would not likely succeed. For example, in *King Construction Co.*,[12] a potential bidder on an office build-out project for GSA protested to the Government Accountability Office both the government's requirement that the building be LEED-certified and the government's evaluation of bidders based on their experience with LEED-certified projects. The comptroller general denied the protest, stating that all new GSA projects were legally required to be LEED-certified and, as such, it was reasonable for GSA to favorably evaluate contractors with LEED experience.

For projects, public or private, specifying green building requirements, design professionals and contractors will be obligated to meet those requirements the same as any other contract specifications. For example, engineers will have to render designs that meet energy efficiency requirements, and contractors will have to procure supplies that meet recycling requirements. Because the criteria for LEED certification levels are flexible and somewhat open to interpretation, a thorny compliance issue may arise where a design professional or contractor believes it has designed or built a compliant building that nevertheless fails to receive the LEED certification specified in the contract documents.

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Contract terms and conditions allocating risk may ultimately need to be modified to address special issues on green construction projects. For example, such contracts may pose unique damages issues. One of the primary reasons why owners usually specify green construction requirements is the cost savings they anticipate over the life of the building. Unless the contract says otherwise, design professionals or contractors that breach those requirements will be potentially liable for the cost savings the owner can show it would have enjoyed but for the designer's or contractor's breach. Since such savings will usually be both substantial and difficult to prove, owners may push to cover them in liquidated damages provisions, while design professionals and contractors may seek to exclude or limit recovery through limitation of liability provisions.

Conclusion

Green building is here to stay. LEED certification, or similar requirements, will be specified on virtually all new public construction and major renovations for federal, state,

and local governments. Counsel for the participants in these projects should consider how to allocate the risks created by green building during contract negotiations. Who will ultimately bear those risks remains to be seen. PL

Endnotes

1. There are also several international green building rating systems, such as the Building Research Establishment's Environmental Assessment Method (BREEAM) International and SBTool (formerly, GBTool).

2. *See* LEED for New Construction v2.2 Registered Project Checklist *at* http://www.usgbc.org/ShowFile.aspx?DocumentID=2245.

3. *See, e.g.*, Atlanta Ordinance 03-O-1693 (2003); Los Angeles Sustainable Building Initiative (requiring that all Department of Public Works projects for new construction larger than 7,500 square feet be designed to be LEED-certified since July 2003 and LEED Silver since 2007); San Francisco Envt. Code § 707 (2004) (requiring that all municipal buildings designed and constructed since 2004 be LEED Silver); New York City Local Law 86 (2005); San Jose Green Building Policy (requiring that all city facilities larger than 10,000 square feet be designed to be LEED-certified since 2002 and LEED Silver since 2007).

4. D.C. Law 16-234 (2007) (LEED Silver certification required for public projects starting in 2008 and non-residential private projects starting in 2009); Boston Zoning Code § 37-4 (requiring LEED Silver certification for all development projects in the city more than 50,000 square feet).

5. The city has already implemented a fast-track permitting program for commercial projects with Gold or Platinum LEED certifications. S.F. Planning Dept., Director's Bulletin No. 2006-02 (Sept. 28, 2006); S.F. Dept. of Bldg Inspection, Admin. Bulletin No. AB-004 (Oct. 6, 2006); Dept. of Pub. Works Order No. 175,487 (June 22, 2005).

6. *See, e.g.*, Cal. Executive Order (E.O.) S-20-04; Ark. Code Ann. §22-3-1801, *et seq.* ("Ark. Energy & Natural Resource Conservation Act").

7. E.O. S-20-04, ¶ 2.1 (12/14/04).

8. *See http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentID=8154&contentType=GSA_OVERVIEW.*

9. Army COE Technical Letter No. 1110-3-491 (2001); *see also http://www/cecer.army.mil/SusDesign/SPiRit.cfm.*

10. E.O. S-20-04, ¶ 11.

11. *See, e.g.*, AIA Document B214-2004 Instructions ("Standard Form of Architect's Services: LEED Certification").

12. Comp. Gen. B-298276, 2006 WL 2000759, 2006 CPD ¶110 (C.G. July 17, 2006).