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LEED Certification and the Affordability Factor

You can get your project LEED certified without blowing your budget out of the water. You may have heard the stories of green buildings costing 15% more to build compared with traditional construction, but you can be LEED certified with almost the same budget. The key is planning. According to Douglas Howe: “If you prearrange and organize your team, a good plan can get you LEED certified for less than 1% (extra cost) and in some cases, no extra cost at all.” Ian Gill of Highland Partnership makes the same point: “The key is to manage the project from start to finish and make sure you have your team synchronized.”

What will follow is a framework to help new construction projects meet LEED certification with minimal or no additional cost. Of course if you want to be state-of-the-art with solar power or wind turbine generators, you will easily be able to go well over budget. This article, however, will focus on how ordinary projects can share in the benefits of LEED certification. The misconception in the industry is that all green buildings need to be high-tech marvels of modern imagination. The United States Green Building Council (USGBC) has set up four levels for LEED certification. The projects you see in the media that cost hundreds of millions of dollars and generate electricity for themselves, recycle everything possible and provide healthy environments are at the top end of the LEED spectrum, Platinum certification. The levels are: Certified, Silver, Gold and platinum. The types of improvements suggested by LEED are not that difficult and the effort can make a big difference in operating costs and the reputation of your building. According to Howe, companies are starting to ask for LEED rated space in their RFPs, because it’s important to their company image.”

To achieve LEED certified status for new construction projects, you must earn at least 26 out of a possible 69 points. Some points are more attainable than others, and some are very “site dependant.” There are six categories within the project checklist showing where points are earned. The chart that follows gives a simple reference guide as to categories and difficulty.

| Category | Points Possible | Easy Points |
|--------------------------------------|-----------------|-------------|
| Sustainable Sites: | 14 | 6-7 |
| Water Efficiency: | 5 | 4-5 |
| Energy and Atmosphere: | 17 | 0-1 |
| Materials and Resources: | 13 | 6-8 |
| Indoor Environmental Quality: | 15 | 5-7 |
| Innovation and Design: | 5 | 1-2 |
| Total: | 69 | 22-30 |

Sustainable Sites:

This category focuses on your site and the impact on the surrounding environment. Within the Sustainable Sites category, we find a few different themes such as *Alternative Transportation*, *Storm Water Design*, *Heat Island Effect* and *Site Development*. There are points in this category that are very dependent on the site you choose, such as *Brownfield Redevelopment*, *Development Density and Community Connectivity*, and *Alternative Transportation: Public Transportation Access*. However, some points in this category can be attained with little cost and good planning.

In projecting costs, parking is a considerable budget expenditure. If the spaces are adjusted and designated for low carbon emitting and fuel efficient vehicles, you can earn up to two points. If 5% of the project's total parking is designated preferred parking for carpools or vanpools and another 5% is designated for low-carbon emitting and fuel-efficient vehicles, you earn two points. You don't need to add any extra spaces, just designate some of them.

Bicycle storage and changing rooms can earn you a point as well. Aside from the benefits of healthier and happier employees, the point is relatively pain free. You must provide bicycle storage racks for 5% of building users within 200 yards of the entrance and provide shower and changing facilities. Most often, lobby-level restrooms can be re-designed to include lockers and showers with modest additional cost. These three points are all variations on the *Alternative Transportation* theme within the Sustainable Sites category.

If you protect and restore the habitat and maximize open space, you can earn one or two points that can also translate into efficient water usage and earn you points in a different category, which we will discuss below. As you begin to integrate your project with these concepts, points in one category will lead to points from another category.

Water Efficiency:

Water Efficiency is a category that can be site-specific, but for the most part is not. For example, if you plant landscaping that is adapted to the natural local climate where natural precipitation cycles can sustain most of the vegetation; you earn a point for *Water Efficient Landscaping*. That point can be much easier in mild climates like California, but is still obtainable throughout the United States. If you perfect the landscaping so that the only irrigation you use is temporary and is removed once the plants are established, you earn the second point for *Water Efficient Landscaping*. The initial cost of planting native vegetation is no more than other vegetation, and in many cases less expensive. That's not taking into account the money you will save on water, which is quite substantial. The other side of this category is reducing the water your building uses outside of external sources. You get one point for a 20% reduction and 1 more point for a 30% reduction under the *Water Use Reduction* theme. Low flow fixtures, such as low flush toilets, waterless urinals, and showerheads with low flow nozzles are often cost comparable and are relatively easy to install. You can achieve a 20% reduction just by implementing these simple adjustments in the products you purchase and install. To further maximize your efficiency you could take simple steps

such as increasing pipe insulation, which will save not only water, but energy as well or capture water from roofs and parking lots for later use.

Energy and Atmosphere:

This is a category through which developers like Douglas Howe and Ian Gill can earn points with ease, but for the novice green builder, the cost associated with these points can get pricey. There are three required steps in this category that are not that difficult to implement, but to earn points you must go above and beyond the required criteria. Some cities, like San Diego for example, force builders to meet codes like Title 24, which are stringent enough to make the buildings qualify for points automatically. If your city has substantial energy efficiency requirements, this category should be explored. For the majority of the United States, however, setting up an independent commissioning authority, (*Enhanced Commissioning Credit*) can get costly. Again, some credits may be obtained that dramatically cut operating costs over the lifespan of the project, but the focus for most developers is on initial costs. Having said that, the *Green Power* credit is one that should be mentioned, and is worth exploring, even if it means an additional cost. The objective is to reduce a building's dependence on electricity and drop operating costs in a significant way. Solar power is not yet a high return investment, but with federal tax credits and rebates, it can be worthwhile in many local markets.

Materials and Resources:

This category starts off with a prerequisite. The requirement is that you set up an easily accessible area to service the building for recycling glass, paper, cardboard, plastics and metals. The theme of this category is recycling and reusing. Again, some of the points in this category are site-specific. Reusing 75% or 95% of existing walls would be pretty tough if you bought a piece of land that didn't have a building on it, or has a building that is in complete shambles. You can, however, get points for diverting 50% to 75% of the waste from construction or demolition debris. To capitalize on these *Construction Waste Management* points, you can simply designate certain dumpster bins for concrete, carpet, plastic, glass, metal, etc. You then train the construction workers to actually pay attention to what is in each bin and last, identify haulers and recyclers to handle the designated materials. This process might include donating the material to charitable organizations. The cost of integrating this process is low with some planning. The challenge lies in getting your team to buy into your vision and apply a little extra effort.

For the *Materials Reuse* credits, you need to use salvaged, refurbished or reused materials, (mechanical, electrical and plumbing not included) for at least 5% (to earn one point) or 10% (to earn a second point) of total building materials on the project. Basically you are reducing the demand for virgin materials. This could be very easy in a big city where access to these products is not difficult, but in the less industrialized cities it may be harder to get easy access to these materials. If you can hit 5%, it is not that much more difficult to do 10%, but again the location may not justify the extra transport cost associated with retrieving used products. The same could be said for the next set of points, *Recycled Content*. *Recycled Content* requires that you use post-consumer and

pre-consumer building products. Since recycled products are a little easier to come by, you must incorporate 10% (for one point) to 20% (for another point) based on the cost of the total value of the materials in the project.

Regional Materials is another subcategory that dances the line of being site-specific. The reason it is not considered site-specific is that the credit allows for a 500-mile radius. These two points, one for 10% and one for 20% regional material procurement, are earned when you use building materials extracted, harvested or recovered within a 500-mile radius. Again, if you find a “local” supplier to provide these products, it may be just as easy to get 20% from them as it is to get 10%. Whether or not this is possible also depends on the size of your project. Prices for all materials in the Materials and Resources category can vary, but if you conduct a thorough search, you can often find them for comparable or lower prices. Your project may be in an area that will enable you to capitalize on all of the points in this category and in some instances may be less expensive than what you had originally calculated in your pro forma with virgin materials. Any good project starts with a good amount of market research so why not include some research into what types of sustainable products are available in your area.

Indoor Environmental Quality:

A minimum indoor air quality (IAQ) level is required for all projects. Part of the requirement includes minimizing exposure of indoor surfaces and building occupants to tobacco smoke. In places where smoking indoors is not allowed, this becomes relatively easy and is achieved with minimal efforts, such as designating smoking areas at least 25 feet away from entry ways.

The points in this category can elevate costs quickly, similar to the Energy and Atmosphere category. This category can also get pretty complicated. Rest assured that developers can earn some points in this category and can do so with little increase in cost. Some things that all buildings use include paint, sealants and primers. Once again, developers can earn points just by switching to a certain type of product. Take the credit for *Low Emitting Materials: Adhesives and Sealants* as an example. This point is earned by using adhesives and sealants, such as caulking and duct sealant, which have low levels of volatile organic compounds (VOCs). The category *Low Emitting Materials: Paints and Coatings* is another point you earn just by switching the type of paints, varnishes and other coatings you use. Low emitting paints and varnishes are widely available and are probably offered by your current suppliers.

Most buildings today probably already implement the point possible for incorporating light systems that can be controlled by the occupants. The *Controllability of Systems: Lighting* point can be capitalized on by replacing your light switches for light dimmer switches which allow for different intensities of light. The point is earned by allowing a minimum of 90% of occupants to control the lighting to suit their individual tasks.

Innovation and Design Process:

Our last category is a very unique category. One point in this category, the *LEED Accredited Professional* point, could be the easiest of all points to obtain. To earn the

point you simply must have someone on your development team who has taken and passed the USGBC LEED Accredited professional exam. The other points in this category all stem from going above and beyond the requirements necessary for ordinary points. We are not trying to create city-defining architectural masterpieces; we are usually trying to achieve certification at little or no additional cost. If your site allows you to excel in one category, then you may want to seek additional points for innovation. In most cases, these points are awarded for developments that spend a considerable amount of money to make improvements in operational efficiency. When integrated, sunlight harnessing and many obvious design features, when integrated, can allow for points in this category.

Bringing it all Together:

It can be seen that some of the categories are easier on your budget than others. As you get deeper into the sustainable building movement, you see the operating cost savings that are realized year after year. You start to collect data to prove your claims about the benefits of going green which in turn allows higher base rents and values.¹ As you get more experienced, you start to understand which points can be easily obtained on the sites you are considering. You should also note the less quantifiable benefits such as healthier, happier and more productive employees. Just as every piece of real estate is different, the ability to earn points will vary by location. Your project may lend itself to certain points while others are too much of a challenge, but the point is to try. It starts with trying to get all the members of your team on board. Not trying means a building with greater chances of accelerated obsolescence.

Most developments go through extensive planning and designing before the first brick is ever laid. If the strategies discussed here can be integrated into the planning phase, the cost premium associated with green building will be minimal. The misconceptions that surround the cost of LEED-certified buildings will eventually be laid to rest, and the industry will realize that this certification is not only feasible, but essential.

¹ See the paper by Dr. Norm Miller, Jay Spivey and Andy Florance on “Does Green Pay Off?” presented October 30, 2007 at the Burnham-Moores Center for Real Estate Green Conference.