

Forward

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Green Architecture - It Does Not Make Dollars But It Does Make Sense

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The Makings of a Conscientious Developer

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In This Issue

Only five years ago, I was a graduating architecture student in the nation's capital at Howard University. Sustainable architecture was the buzz phrase on everyone's lips. It was the favorite architecture flavor of the moment. Sustainable architecture, more commonly known as green architecture, is considered to be the type of architecture that will help to preserve our natural resources, that will protect the earth for generations to come. More commonly, green architecture is a term used to describe economical, energy-saving, environmentally-friendly, and sustainable development.



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As an architecture student, I loved being prepared by my professors to go out into the world, and "educate" the sprawl hungry developers of our profession. I was prepared to change the face of real estate development. Under my reign as an architect cul-de-sac driven suburban neighborhoods in the middle of nowhere would no longer be created; there would be no more energy guzzling commercial office parks built and green architecture would become the standard of all architectural practices. All the evils and real estate development practices that pervaded the need for the term green architecture would soon cease to exist, under my watch. Along with my classmates, I was going to save the world.

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I was young; you must forgive me for my ignorance.

Let us fast forward to last Thursday, when I was analyzing the forecasted investment return ("the bottom line") on a development pro forma, * on which I was working. The project's costs were too high, and its projected returns were too low, for the project to be considered financially feasible. As I continued to evaluate the economic stability of the project I came to one conclusion. I needed to cut cost. The project's revenues simply could not support its estimated cost. Guess which cost line was the first to attract my eye? It was not my attorney's fees, if anything these fees would only grow. It was not my construction cost, nor was it my management fees. Rather, the first cost line that I immediately sought to lessen was that which delineated the cost associated with green architecture and the sustainable design mechanisms.

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It took longer than it should for me to question my motives. How was my decision to cut the project's green architecture budget the culmination of years and years of academic preparation? Did not academia prepare me for this exact moment of choice? Was I the same person who vowed in her admissions application to Columbia University's Graduate School to become a conscientious real estate developer who would always respect the environment?

Did I really intend to compromise the value of sustainable development, via the exclusion of it on a groundbreaking real estate development project?

Did I not know better – or did I?

Did I now understand, only after a short period in the real estate development profession, that sustainable development is simply not a financially feasible option for developers? Is having a LEED** certified project or including sustainable practices in a development truly worth the upfront expenditures it requires?

The Disconnect

In the world of green architecture, there is a disconnect. Investor-Developer-Architect-Engineer-Consumer, somewhere along the lines of this conduit the value created by sustainable

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development is lost. Also lost in this conduit is the intent and practical function of the designed green architecture. Many members of the building industry understand the value of sustainable development; it is the consumer who does not completely understand the intrinsic value of sustainable development.

I think most developers understand the importance and the residual value that stems from sustainable development. However, these same developers have an extremely difficult time trying to capitalize or afford the inclusion of these elements in their particular developments. As it stands, real estate development is a very competitive field. As such, developers are posed the difficulty of developing financing strategies that enable them to build competitive projects. Sustainability takes a back seat to developing communities and buildings that can barely meet their investment returns. The market (consumers) is not prepared to accept the financial burden associated with premiums of sustainable development.

It is the real estate consumers, not the developers, who are to blame for the absence of green buildings and sustainable building design in the build environment? Green building techniques and mechanisms cost money; these mechanisms add a premium to the cost of the finished product. Homeowners and commercial building owners are not enthusiastic about paying these premiums, especially when they can find non-green products at a low price elsewhere. Ergo, developers and those who create and invest in real estate developments are not afforded the ability to include green/sustainable techniques in their developments.

For the sake of brevity, I have used the charts below to illustrate the separation that is created when additional costs (i.e. sustainable development premiums) are introduced into a project. If a developer is unable to charge a relative premium on the product a developer's profit margins and or internal rate of return ("irr") will be greatly affected. This irr has the potential to affect investor returns and the availability for capital on future projects.

Example Pro forma

Development Costs	\$ Total Dollars	% of Total	Development Costs	\$ Total Dollars	% of Total
Acquisition Cost	\$ 10,000,000	20%	Acquisition Cost	\$ 10,000,000	20%
Hard Costs	\$ 25,000,000	51%	Hard Costs	\$ 25,000,000	51%
Sustainable Development Premiums	\$ 13,000,000	26%	Sustainable Development Premiums	\$ -	0%
Soft Costs Paid From Financing	\$ 2,400,000	5%	Soft Costs Paid From Financing	\$ 1,750,000	4%

Total Development Costs Paid From Financing	\$ 50,400,000		Total Development Costs Paid From Financing	\$ 36,750,000	
Add: Soft Costs Paid From Revenues	\$ (1,000,000)	-2%	Add: Soft Costs Paid From Revenues	\$ (1,000,000)	-2%
Total Development Costs	\$ 49,400,000	100%	Total Development Costs	\$ 35,750,000	72%

Revenues		Revenues	
Condominiums	\$ 65,000,000	Condominiums	\$ 58,000,000
Retail	\$ 3,000,000	Retail	\$ 3,000,000
Gross Revenues	\$ 68,000,000	Gross Revenues	\$ 61,000,000
Total Net Revenues	\$ 68,000,000	Total Net Revenues	\$ 61,000,000

Financing Requirements		Financing Requirements	
Required Investment	\$ 49,400,000	Required Investment	\$ 35,750,000
Overall LTV	65.0%	Overall LTV	65.0%
Construction Loan @	7.00% \$ 2,110,000	Construction Loan @	7.00% \$ 23,237,500
Mezzanine Loan @	16.00% 0	Mezzanine Loan @	16.00% 0
Equity Investment	\$ 17,290,000	Equity Investment	\$ 12,512,500

Cash Flow Distributions		Cash Flow Distributions	
Cash Flow Available for Distribution	\$ 68,000,000	Cash Flow Available for Distribution	\$ 61,000,000
Less: Exit Fees Construction &		Less: Exit Fees Construction &	

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The Value in Green Buildings/Developments

Back to last Thursday: as I contemplated my conundrum, the pro forma and the project that I could not stand behind as a financially feasible investment, I began to consider and research other financial options. I am lucky; I work for a progressive development company. I figured I could find some form of abatement, government incentive or economic stimulus that I could use to subsidize the additional cost associated with sustainable development mechanisms. I was certain that my company would be open to the arduous efforts of making the green architecture program a constant, as long as I was able to make it viable financially.

Much to my chagrin, I found few programs that could be used to subsidize the additional costs associated with the project's green development program. I found a few government grants, one tax credit program, and some private financing options, none of which could be deemed as viable options.

To add insult to injury, I found a great deal of information that only fueled my desire to promote green development. My research made it clear to me that the inclusion of green development on this project was of great importance to the project's viability and to the future of development.

In addition to being environmentally friendly, green buildings have been demonstrated to increase occupant productivity, reduce absenteeism and insurance claims, and encourage longer tenant occupancies. More importantly, green buildings have been demonstrated to offer more efficient and effective energy systems. Ergo, they provide saving to the end-user by way of providing cost savings on energy bills. Certainly, green building offer significant cost benefits for the end user; however, these costs are the sole derivative of a substantial initial investment, an investment not made by the end user. It is very difficult for developers to quantify the savings allotted to green building systems. Many developers have tried to quantify and capitalize on the value of green development; there are only a few success stories. The fact still remains that a tangible monetary value in green building development/design is simply too difficult for developers to attain.

A Resolution

As it stands, the onus of making green development practices a reality lies on the developer. How can those who shape and mold the built environment justify the exclusion of green architecture in many of their projects? They cannot. Developers must identify ways to quantify and justify green developments. Thus, it is my job as a developer to educate and help the real estate market place realize the benefits of green building.

As the built environment community (Investors-Developers-Architects-Engineers-Consumers), continues to include green architecture in their given practices new solutions and more financially-practical models will be implemented. As time passes, the professionals of the built environment will find more efficient and economical methods for addressing the needs of green architecture.

I am afforded the luxury of working for a company that understands the value of green architecture and sustainable building practices. The professionals with whom I work are committed to working towards the enhancement of the earth's natural resources, the cultivation of environmentally friendly development projects and to cleaning up brownfields.

Alas, I have not yet ironed out all the kinks in that pro forma I was working on. And, I have not cut the green architecture costs from my budget. I now have a greater understanding for the intrinsic value found in green development. And, while I am not yet able to quantify this value, I am sure it is my job to do so and to convince others of this value. As a member of the real estate development contingent I understand that we can no longer live in the moment, we must find a way to mitigate the cost premiums associated with green development and make its use common place in the developments of tomorrow.

* A development pro forma is used to project how a particular real estate investment is to be managed in the future and how it is expected to perform financially. For example, a pro forma balance sheet can quickly show the projected relative amount of money tied up in construction, acquisition, and design services and how this money will be returned over time via real estate sales or rentals.

**The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution.



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