



Is Green Building Good for Conservation Land Development?

The old knock on the USGBC's LEED program was that a building could be LEED-certified simply by installing a bike rack outside.

No, that was not an accurate depiction, but we should consider this detail to understand its impact. What does it mean to add a bike rack outside a building? It invites the users of that building to arrive at the site by bicycle rather than by driving a car. Will it reduce the number of parking spaces? Will that result in less storm water management? How about heat absorbed by the pavement? A side benefit is the exercise it offers the rider!



In addition to pedestrian or bicycle modes of transportation, there are more elements that can be part of sustainable, conservation land development. The ICC700-2012 National Green Building Standard (NGBS) provides the guidance for certification through Home Innovation Research Labs (homeinnovation.com) and applies to design and construction of the residential portion(s) of any building and to subdivisions, building sites, and building lots. Whether a community, a subdivision, or an individual building lot, the same practices can be applied to design, preparation and development efforts to incorporate “green” features. Those features add points as stipulated in the NGBS toward certification. Management efforts in the NGBS include minimizing erosion, minimizing disturbance to the natural resources and habitat on the site, landscaping, density and transportation to the surrounding community services.

What's Green About Land Development?

Every property offers unique opportunities for development. Beginning with the goal of profitability, successful development has resulted in improved properties that control surface water, minimize heat islands, and encourage pedestrian traffic with access to mass transportation. That first goal is addressed by Randall Arendt in his article on site design. Borrowed, unabridged, from his website (greenerprospects.com) is Randall's list of economic benefits of conservation design:

- Greater flexibility in lot sizes allows developers to create lots smaller than one acre, for empty-nesters who wish to minimize their routine outdoor maintenance work (mowing lawns, raking leaves, etc.). It also enables developers to take far greater advantage of special places on the property (such as knolls offering views of ponds, meadows, etc.) by locating a larger number of less-wide lots there than would ordinarily be possible.
- The ability to divide and sell parts of the protected open space as “conservancy lots” enables them to tap into the higher-end Country Property market, boosting their profit margin and also adding value to all lots in their vicinity.
- Reduced site grading costs are another “hidden incentive.” One developer in Texas who hired me to redesign his 60-acre subdivision told me his site grading costs plummeted from \$300,000 to \$50,000 as a result of my re-design, according to his engineer's calculation of both layouts. In addition, it enabled 24 of 25 large trees to be preserved in this otherwise open landscape, retaining the value they add to the neighborhood (The dollar saving is documented in a letter he later sent to me). He deeply appreciated the quarter-million dollar savings my conservation design enabled him to achieve.
- Reduced street costs are sometimes another benefit. In Pleasant View, TN, I recently redesigned an 86-lot subdivision in such a way that I saved the developer \$212,000 (by his own calculations), through wiser street layouts involving less street length.
- Greater attractiveness, provided by the open space, is another benefit having direct economic value. Another client of mine, in Indiana, told me my design enabled him to charge \$20,000 to \$25,000 more per lot, compared with house lots without open space, such as those he had developed the previous year in the same community, for the same upscale market, at the same over-

all density. On that 40-lot subdivision I designed, the total added value was therefore between \$800,000 and \$1,000,000 (This increase in lot value is documented in a letter from him as well).

- Faster absorption rates are another economic advantage created when significant amount of open space are preserved. One of my projects in the Tallahassee area (centerville-florida.com) surprised even my client, who wrote to me several weeks ago to let me know that 86 of the first 87 lots in Phase One had sold out in seven hours flat. Both he and his investors were very impressed, and greatly pleased, with the results. At the Sugar Creek Preserve with 70% open space in Lafayette (Walworth Co.) WI, 15 of the 52 lots were pre-sold prior to advertising, double the developer's original projection (see sugarcreekpreserve.com).

Research Results: One researcher, who recently studied 184 lots in conservation subdivisions and in conventional subdivisions in South Kingstown, RI, reported the following results:

- developers' costs were 28% lower (\$7,400 less, per lot), compared with conventional subdivisions
- lots in conservation subdivisions commanded a 14% premium (about \$15,000 more per lot), compared with conventional developments
- lots sold 47% more quickly, compared with those in conventional subdivisions.

Arendt describes conservation subdivision designs as "twice green." The list above demonstrates the economic aspects of improved profits and values, but the environmental green features are equally important. He repeatedly writes about respecting natural terrain and designing around existing site features. With this in mind, we can look to the National Green Building Standard and realize that points can be generated for undisturbed natural habitat, for cataloging and preserving natural resources, and minimizing road construction, which benefits surface water management and erosion control.

In our first visit with Randall Arendt in 2011, we focused on conservation subdivision. After learning about his successful applications of the principals he outlined, the workshop broke into groups to come up with a better solution to a "typical" proposed subdivision. It was a fun, enlightening process to see how relatively easy it was to improve the use of the property when one has the mindset to do so. In 2012 Arendt returned to present his workshop on reclaiming commercial strips and strengthening town centers. Again, the discussion included many topics that would generate points toward green building certification – reclaiming underutilized property, safe pedestrian walkways, using native plant landscaping, and managing storm water to benefit those landscapes. Saving energy by managing exterior lighting expands to also managing the light pollution that so often changes the nightscape of our communities. Arendt's enthusiasm is infectious as he challenges how we think about everything from zoning to transportation to recreation and more.

Is green building good for conservation land development? They are one and the same. And, like a National Green Building Program certified home, it all starts with fundamental planning.

Conservation Design Workshop, October 24

The Build Green NH Council is again pleased to join Plan NH, Vibrant Villages, the Northern New England Chapter of the American Planning Association and New Hampshire Housing in sponsoring a new workshop by Randall Arendt titled "Greenways, New Urbanism, and Conservation Design." This workshop will demonstrate how communities can plan healthier futures with physical exercise and wellness as central organizing principles of neighborhood and municipal design. ■



Greenways, New Urbanism and Conservation Design

A workshop by Randall Arendt

Now is the time to reserve your seat!

Thursday, October 24, 2013, 3:30 – 9 PM

in the East Conference Room of the

NH Housing Finance Authority, Bedford NH

This workshop describes and illustrates how communities can plan healthier futures with physical exercise and wellness as central organizing principles of neighborhood and municipal design. Creating greenway networks for informal recreation, exercise, and enjoyment of nature is the most fundamental element of enlightened town planning, whether in rural, suburban, or urban locations.

Excellent information for planners, landscape architects, architects, planning boards, conservation commissions, and more. Join us to continue the conversation on conservation!

For more information, and to register, go to
hbranh.com/calendar-of-events

