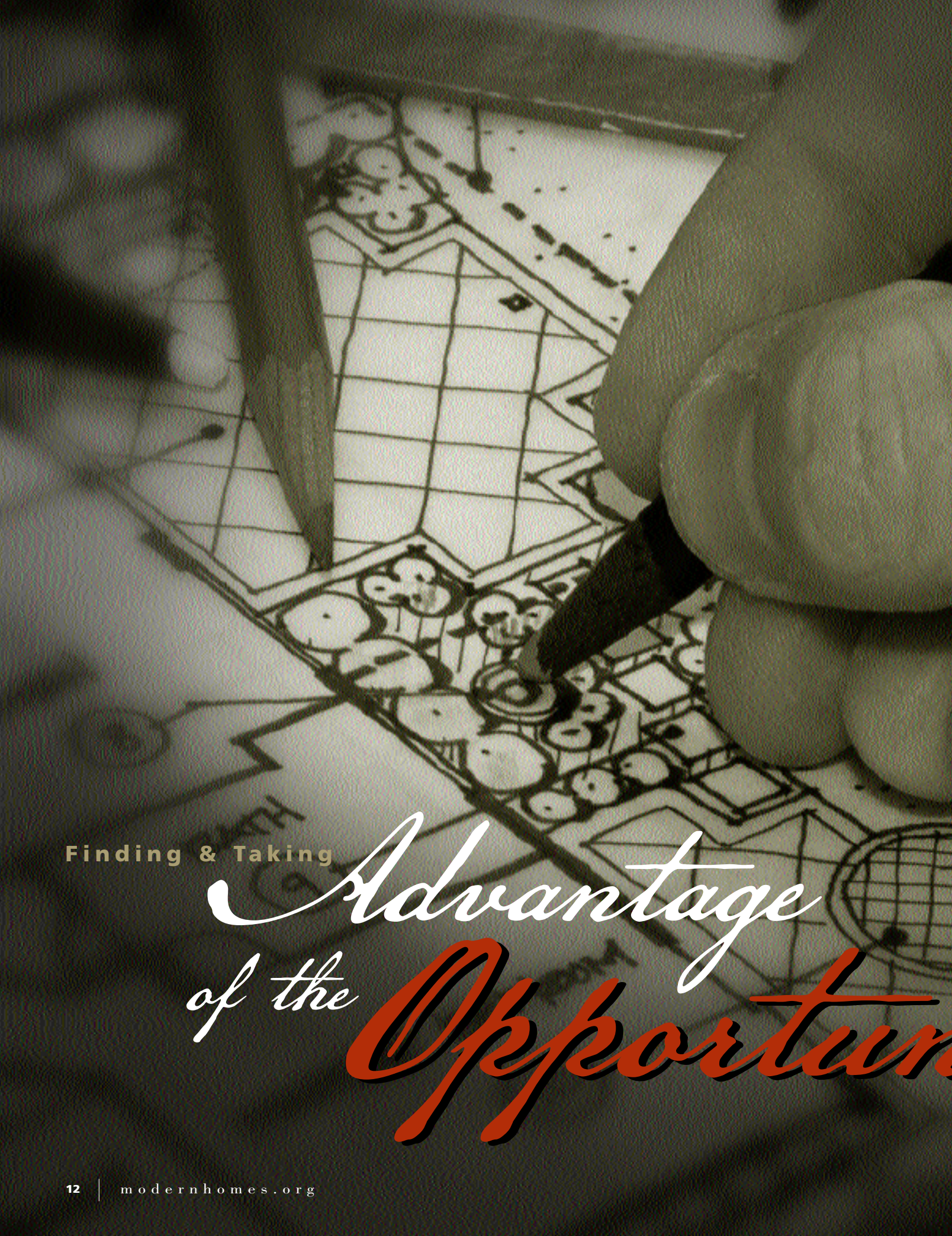
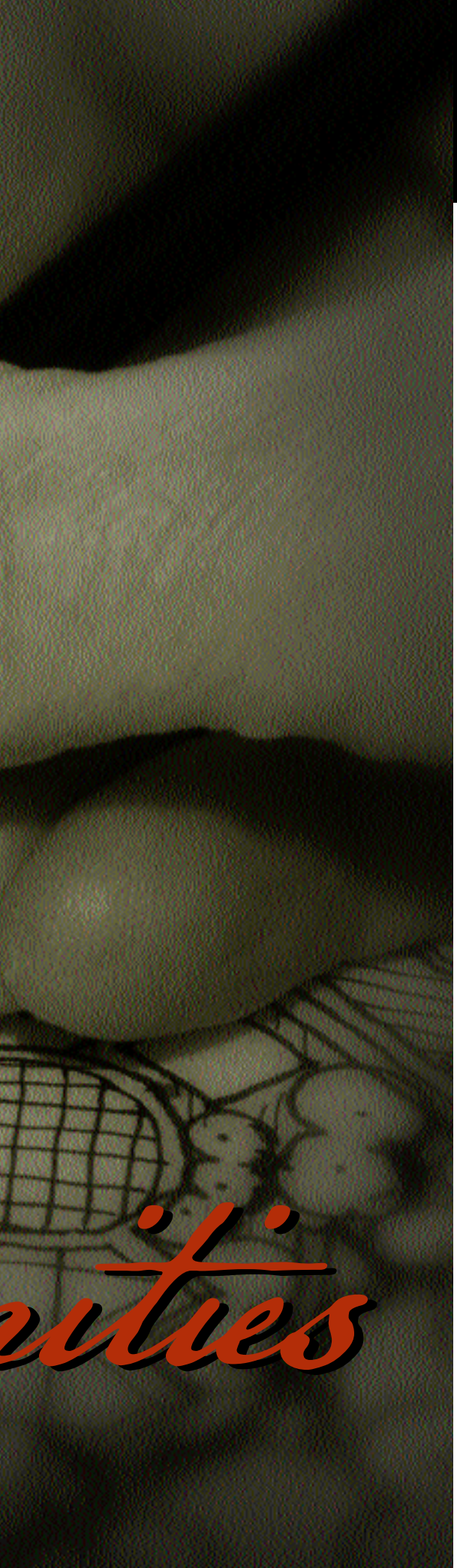


Finding & Taking

Advantage of the Opportun



Seize The Opportunity and Develop Green

by **Donald C. Westphal**

It's easy for an old Spartan from Michigan State University to "GO GREEN." That's the school's cheer and my favorite color, a natural choice for a landscape architect.

In today's world of energy concerns and emphasis on the state of the environment, it's not hard to understand why cities and towns (and their planning officials) across the country are becoming more receptive to manufactured and modular housing plans and projects that are environmentally friendly. The fact that manufactured and modular homes are factory-built is a great start, since the industry has long utilized the production line process to create a superior product with significantly less construction material waste. Recent industry lean building initiatives have succeeded in demonstrating ways to create even more efficiency and savings in the production process by cutting material waste and increasing employee productivity. The challenge for the owner-developer using factory-built homes, then, is to extend these same efficiencies into the planning, construction, and installation process so that the total project, from factory to occupancy, is wrapped in a "green" blanket.

Several "green" items or techniques that may be utilized in the planning and construction of a project are: preservation of the natural site features, protection of the environment, wise use of materials and resources, and energy conservation. Selection of the development team is the important first step of the planning process. All team members, owner-developer, planner, engineer, landscape architect, contractor and marketer, must be committed to the green philosophy and have a thorough understanding of the factory-built home and how it will ultimately be "married" to the land. ■ ■ ■ ■

The owner-developer, the lead member of the team, must realize the benefits to be derived from the green process and select team members capable of fulfilling its requirements. The benefits to be realized are: reduction in initial construction cost, savings in future maintenance expenses, greater acceptance by public officials, and a marketing advantage over less environmentally friendly and visually inferior projects. More importantly, the owner-developer must understand that money well spent on experienced professionals up front can result in development cost savings greater than the minimal savings gained from hiring a less qualified professional.

The project planner team member must understand and utilize design techniques that allow the project to grow out of the land, rather than being forced onto it. A complete site inventory and analysis is the first step in this process. Site features such as topography, natural drainage patterns, existing vegetation, and wetlands will influence the final plan. For example, clustering of residences in less sensitive areas may not only lessen the impact on these resources, but also reduce the amount of paving and utilities needed to complete the project.

The engineer team member must work hand-in-hand with the planner throughout the planning process, integrating best management practices for storm water management into the plan. Utilizing these practices will result in a reduction in run-off, a more efficient storm water conveyance system and a reduction in construction costs. Value engineering in the design of water and sanitary sewer systems can be achieved by exploring all options in the design and routing of these utilities. Proposing utility pipe sizing based on newer, documented, and more realistic flow calculations can result in materials and cost savings. Projects that must provide on-site waste water systems can profit by the use of technically advanced septic systems that utilize drip irrigation systems to dispose of the treated effluent while promoting lawn and plant growth.

Likewise, careful consideration of the most efficient means of marrying the home to the land as part of the overall planning process will produce similar results. The current segmented practice of leaving the installation process to a third party has resulted in duplication of effort, waste of resources, and a visually unsatisfactory end-product. Recently mandated federal standards make proper home installation an increasingly important part of the planning and construction process.

The team landscape architect also plays an important role in the green process. The landscape design and selection of plant materials should be appropriate for the location. The use of native trees, shrubs, flowers and grasses is not only less costly initially, but also requires less maintenance in the future. The use of water-saving irrigation methods will not only save money, but also place less of a burden on dwindling water supplies. In arid parts of the country, planning green may produce a visually tan landscape called xeriscape which results from the use of non-organic mulches and ground cover materials in place of lawns. These landscapes require little or no irrigation.

Most municipal planners and many elected officials are "in tune" with the latest planning trends, with some allowing and many mandating innovative planning techniques like "green" initiatives for new development projects. A savvy development team will take advantage of this awareness when promoting the approval of the project, being certain to emphasize the economic and quality advantages of the factory process in the production of the home and the positive attributes of their approach to the planning and construction of their development.

The consumer, the ultimate recipient of the benefits derived from such a green effort, must be told that a conscious effort was made to provide them with a superior living environment. Growing public awareness of the environment and its effects on our day-to-day lives can be leveraged in the marketing of green developments to persons of all walks of life. Preserved or created natural areas with walkways, dual-purpose water features, location-appropriate landscaping, and attractive placement of the homes, all resulting from the planning efforts, will be easily recognized by the consumer and should be emphasized in the project marketing efforts.

I'm convinced that the time is right for developers of manufactured and modular housing projects to seize the opportunity and reap the benefits of this innovative approach. GO GREEN! ■

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