

(A Guest Column)

## THE HUMAN BENEFIT OF GREEN BUILDING

By Phyllis and Howard Kaplan, Co-Directors of CASA - A Center Advancing Sustainable Architecture -

First things first; when it comes to the well being (welfare) of everyone, the ongoing response about the reduction of our CO<sub>2</sub> output and its impact on people's health is a subject that is of increasing concern. In a recent op-ed article in this newspaper, the authors, who are members of "Physicians for Social Responsibility and "Environment New Mexico" implied just such a major focus.

Their reference to clean energy is right on target but only touched upon the role of sustainable building design. A recent White Paper, published in November 2006, in a prestigious industry journal, *Building Design and Construction*, is an impressive survey of 10,000 architects, product developers, manufacturers and real estate developers. It emphasized the importance of a need for an energy saving, healthier work and living environment. This White Paper, *Green Buildings and the Bottom Line* showed proof that not only is efficient building design more economical, but they are healthier. This was the 4<sup>th</sup> in a series describing the increase of Sustainable Designs for all types of buildings, both commercial and residential, along with increased sustainable product and construction practices. The advantage is not just noted, but the successes and statistics for clean energy homes, schools, hotels, factories, office buildings and hospitals clearly show health benefits.

This is the future of green building. As the increase of environmentally efficient products, building techniques and designs appear all over the country we will see a decrease in overall costs for all building types. The highlight for me in the Health and Human Performance movement is the positive response from people living and working in these clean energy buildings. The research reports increased performance, health benefits, and lower turnover for their companies. A strong response is to natural light; increased daylighting for instance, showed a 26% improvement in reading and 20% in math in high performing schools. In sustainable factory designs, production increases up to 25% with better efficiency, lower pollution and improved health overall are just a few of the benefits cited. Hospitals using green building designs revealed high levels of worker and patient satisfaction. Other features were cleaner air, better heating and cooling systems and sound control. Reducing turnover in this industry is a great benefit we can all see and translates into a competitive advantage for these important institutions.

Human Factor research with regard to occupant health is becoming integrated as a benchmark for successful sustainable buildings. This information uses case studies of existing buildings with a highly refined protocol. The information translates into increased economic values and profits in many areas.

Another important aspect of the effect of sustainable buildings has come to light. The connection of environment on people has spawned a new tool called The Happy Planet Index (HPI), developed by New Economics Foundation, a social research organization based in the United Kingdom. The focus moves beyond the crude ratings of nations

according to national income, measured by gross domestic product (GDP), to produce a more accurate picture of the progress of nations based on the amount of the earth's resources they use, and the length and happiness of people's lives. The study includes 178 nations around the world with relation to environmental resource limits. The ranking index based, on a scale of 100 points, placed the United States, with a score of 28.8, in 150th place among 178 nations. The G-8 countries generally scored badly in the index with the United States scoring near the bottom, only above Russia in the 172<sup>nd</sup> place.

Sure we are a rich country, according to our GDP, but we do not pay attention to our impact ratio of environment to the health of our citizens. We share this distinction with all of the other highly industrialized nations of the world. This index redefines the purpose of our systems based on series of surveys that explores the status of human satisfaction, with regard to specific factors in the environment. In addition, this inquiry takes into account other situations such as community life and how it is impacted by the environment in its natural and man-made state.

In total we are consuming 30% more than the planet can sustain. This translates well into environmental influences, and the essential adaptation of sustainable living styles that must include the built environment. We are indeed reducing our quality of life, and have been living this way for the last 100 years without knowing that we are endangering our ability to survive as a society. If the objective of sustainable building designs is to reduce energy use and hence increase efficient use of our resources eliminating the high levels of CO<sub>2</sub>, among other gases, it is an easy jump to develop a connection, through statistical analysis of the significance of human performance and well-being, which according to this research can mean happiness without so much risk.

As a species we are over-burdening the Earth's currently available biocapacity. We now have the opportunity in New Mexico to address the health and well being of the people in our State with some of the bills before the State Legislature, as well as other measures being undertaken by the Mayors of Albuquerque and Santa Fe.

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