

on the
HOMEFRONT

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How can Homewood raise the bar for responsible resort redevelopment in the Western United States? Homewood can do it by redeveloping into a world class resort that will exemplify concepts of social, economic and environmental responsibility. By doing so, Homewood will pioneer a new path toward “sustainability”. Sustainability refers to an ability to meet today’s needs without compromising the ability of future generations to meet their own needs. Environmental, economic and social sustainability are important considerations in the design and redevelopment of Homewood Mountain Resort. This newsletter presents an overview of how Homewood Mountain Resort will become a model for the future of responsible land use and community planning.



SITE CONSIDERATIONS

Maintaining the natural beauty at Homewood Mountain Resort is a key element of the Sustainability Plan. Homewood’s unique location on the west shore of Lake Tahoe elevates its responsibility to the

environment. The rebirth of Homewood will be located on an in-fill site. This means that it will occupy an area that has already been developed. From a sustainable planning standpoint, this is a plus.

The decision to limit the impacts of the new development to a site already impacted reduces the amount of disturbance to surrounding, undisturbed areas.



The process of addressing existing areas of damage from past uses has already begun. Road cuts on the mountain are being restored to their natural state with re-vegetation. Erosion control measures will keep the native landscape where it belongs. Water bodies and watershed features that crisscross the property have been documented and will be protected from development impacts. These improvements will last for generations to come and will ensure that the clarity of Lake Tahoe is not compromised. By being a good environmental steward, Homewood hopes to preserve and maintain its magical Sierra setting.

Redevelopment at Homewood will take advantage of all that the natural site can offer. Abundant natural resources in the form of sun, wind, water and timber give Homewood the opportunity to make its own energy. The ability to produce energy on-site greatly minimizes the impacts the development has on our global environment. The availability and efficacy of the site's sun, wind, water and timber resources will be quantified and studied in an effort to diversify Homewood's energy resources and diminish the Resort's energy impacts.

With over 300 days of sunshine, Homewood is likely to incorporate a number of technologies to make

good use of the abundant sunlight. Photovoltaic panels can be placed on the roofs of the resort and the tops of the chair lifts to take full advantage of the great solar exposure that Homewood is afforded and provide much needed electricity all year long. Solar-thermal collectors make use of the sun's heat energy to provide hot water for the resort's guests, spas and pools, and for radiant space heating. Thermal mass in the form of concrete and stone can absorb the heat of the sun throughout the day and then radiate that heat during the cooler hours of the evening.

The potential for micro-turbines to generate wind energy is another possibility for sustainable energy production at Homewood. Wind is



a clean source of energy that has been utilized all over the world for many generations. The assessments still need to be made as to whether or not there is a consistent amount of wind experienced on the mountain to determine its applicability.

Micro-hydroelectric power is a form of alternative energy that uses water to create energy. Truckee's Utility District has included micro-hydro in its portfolio of non-fossil fuel energy sources. The resort at Snowmass in Aspen has installed a micro-hydro system on their mountain with great

success. With steep slopes and several on-site creeks, micro-hydro may be a viable option in Homewood Mountain Resort's diverse energy infrastructure.

Timber is a natural resource that may assist in Homewood's desire to offset its energy consumption. The removal of timber in forests that are choked with growth is essential to its health as well as the safety of surrounding communities. The potential for wildfires can be minimized and energy can be produced by utilizing the dead wood in a biomass system. Wood is fed into an incinerator that heats water which creates steam and the steam is then used to generate power. The heat captured from the system's cooling process can then be used in the form of clean, heated air or water for on-site use. This process, which creates thermal energy, is known as "Waste Heat Recovery". The contamination into the atmosphere that is often a result of wood combustion can be diminished with a closed system that eliminates or greatly reduces the carbon output.

Some of these alternative energy methods may only be relevant in the warmer, summer months, but with a diversity of energy sources, Homewood can offset its environmental impacts all year long.



GREEN BUILDING PRINCIPLES

The environmental impacts of the built environment at Homewood will be considered with the same regard as the impacts to the natural environment. The construction process is inherently full of practices that diminish the quality of the environment. Homewood is taking a proactive stance by creating a sustainability plan that addresses all of the concerns associated with the building process. All of the members of the development team will play a role in helping to minimize environmental impacts.



Architectural design at Homewood will consider the “life-cycle” costs of the infrastructure and buildings used in the resort. The positioning of the buildings will play a huge role in how much energy is expended throughout the year. By assessing the path of the sun during the planning stages of the development, it is possible to maximize the heating opportunities during cooler months, minimize the heating impacts during the summer and design buildings to avoid dark, cold, uninviting areas all year long. The benefits of

energy savings in the long run are well worth the time spent upfront in the planning phases.

The LEED certification standards put a great emphasis on the reuse of building materials and the limiting of waste disposal for previously developed sites. Homewood Mountain Resort has a number of existing buildings that will be taken down as part of the redevelopment process. The architecture of the new buildings will utilize the existing materials from these dismantled structures. The opportunities for reuse are not limited solely to the architecture. The components from old chair lifts can be used when building new chair lifts on-site or at other local ski resorts. The ability to implement the sustainable practice of material reuse and decreasing waste production will be one more way that Homewood can help to minimize their impact on the environment.

The energy efficiency of the buildings is dependent on many things, but a building that is not well insulated in our climate is a giant drain on our resources. The buildings at Homewood will be well insulated with tight construction and the use of non-toxic and/or recycled materials. Efficient mechanical systems such as boilers and chillers can be purchased that are easy to install or remove if problems arise. There are systems on the market today that fulfill a number of uses and help to eliminate the need for separate machines. Boilers that utilize their waste energy (like the biomass system mentioned earlier) to heat radiant floor systems, domestic hot water, laundry needs,

pools, hot tubs and other places that require heat will greatly enhance our energy efficiency. These systems also provide a benefit for landscaping needs. The condensation produced with a gas powered boiler system can be collected and used to water plants around the development.

The electrical systems require the same consideration as any other system in sustainable design. How a building is lit is as important as how it is heated and cooled. The lighting of a building not only affects the mood of a space, but it contributes to how that space is utilized. An improperly lit space does not make for a healthy living or working environment. The ideal space utilizes the sun for lighting purposes, helping to offset our dependence on artificial lighting. This sustainable concept of daylighting is not always an option. For those spaces that require artificial lighting, there are new, highly evolved opportunities for high efficacy lighting. It is possible to utilize fluorescent and LED fixtures that greatly lower the energy costs associated with making spaces conducive to both living and working.

In addition to the options in fixtures, light colored interiors and well placed windows can make spaces much more comfortable. By thinking about our options now, the environments that will be created in this development can become places that people want to inhabit. A sustainable working environment addresses the energy efficiency of the building as well as the impacts to the health of those who work in the space.

SOCIAL OPPORTUNITIES

The sustainability of the social environment at Homewood is part of our three tiered approach to the redevelopment of the site. The consideration and respect for those who live and work at the resort as well as those who visit is a key element of the principles behind a socially responsible development.

The community of Homewood plays a vital role in the success of this project. By locating mixed-use buildings along State Route 89 South, the architecture of the Resort establishes a vibrant commercial and residential presence. The resort will act as the 'Village Core' for the greater community. Neighborhood

servicing businesses, such as a small market and hardware store will welcome locals and visitors alike.

The construction of on-site, affordable workforce housing for those employed in and around Homewood is a proactive way for the development to address the needs of its community. Opportunities for on-site childcare will help to alleviate the stress that parents have to deal with when they have to go back to work. A healthy and safe work environment and access to health care and fair wages make Homewood Mountain Resort a place that truly cares about their employees. The implementation of

progressive labor practices throughout the lifetime of this project highlights an area of sustainability rarely touched upon in the business environment.

An extensive transit system will change the way people come to the resort. Dial-a-ride programs with alternative energy vehicles, a water-borne taxi and incentive-based carpool arrangements are ideas being considered in an effort to diversify transportation options and reduce automobile impacts. Bike trails and sidewalks that connect the surrounding communities will make Homewood a place that is accessible to all who wish to visit.

CONCLUSION

Homewood Mountain Resort is making a profound difference in the world of land use planning and redevelopment in the Lake Tahoe Basin. The consideration being given to the Site, Green Building Opportunities and the Social Environment of a resort of this caliber is significant and probably unparalleled in the region. By serving as a model for future development at Lake Tahoe, Homewood is setting a new standard; a standard that seeks to acknowledge the impacts that factor into a development of this size and how to best address those impacts. By consciously planning for the future, Homewood is helping to redefine sustainability in new terms;

terms that recognize the challenges associated with redevelopment on in-fill sites that are surrounded by existing communities. The opportunity to make a profound change in the social, natural and financial health of Homewood is here. Homewood is excited to have the opportunity to change the face of land use planning and community building for generations to come.

Article by Nikki Riley

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The Sierra Business Council is a non-profit organization dedicated to securing the social, financial and environmental health of the Sierra Nevada.

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