

Merit Contractors Niagara

Having now completed 3 LEED (Leadership in Energy and Efficient Design) projects in the Niagara Region (Brock Plaza 2006, Ball's Falls Visitor Center and SouthBrook Winery), Merit Contractors Niagara is taking the reins and leading the commitment to building energy efficient designs and minimizing the impact construction has on the environment around it.



LEED is a rating system designed by United States Green Building Council that has since been adopted here by the Canadian Green Building Council. The rating system works on a point system basis, the more points received the higher the rating (certified, silver, gold and platinum). Points are received for criteria such as: waste diversion, reducing soil erosion, having bicycle racks and change rooms to promote alternative transportation, using low chemical emitting materials, reduced energy usage and controllable working spaces, among others.



As one example, the Plaza 2006 the building was designed to take advantage of the hollow core slabs by running cold air in the summer and hot air in the winter during the night whereby the air can be dissipated throughout the day, reducing the workload of a normal heating and cooling system and providing a cost savings to the owner.



Merit has embraced LEED with open arms and is committed to providing environmentally friendly, sustainable building practices and bringing the future energy efficiency to building construction.

I. Implementation of the 4R's - Reuse, Reduce, Recycle, Rethink



Ball's Falls, Southbrook and Plaza 2006 all incorporated a method for waste diversion that involved multiple bins on the construction site to divert wood, metal, drywall, concrete and other products to ensure they were recycled and nothing of value was thrown out.

At Southbrook Winery alone, we were able to divert 88% of waste construction materials, allowing products that would have simply been thrown out decades ago to be properly reused and/or recycled.

As well, LEED also influences product selection. At Brock and Ball's Falls quarry stone and limestone were selected for use because they came from local sources. Lowering the impact to the environment because the materials were not being shipped from across the world, thus greatly reducing its carbon footprint.

In another example, the Glu-Lam structure at Ball's Falls was chosen for its recycled content. Wood products and Glu-Lam are starting to make a return in the construction world because of their reduced impact and natural beauty. Choosing specific products based on their recycled content is becoming more and more common because it helps the environment.



II. Energy Or Water Conservation Initiatives

Ball's Falls provides the best example of water initiatives. The berm in front of the building is in place to hide three, 43,000 litre non-potable water holding tanks that store and reuse rainwater that are used for toilets, hose bibs and to top up the fire hydrants. Additionally, the washrooms are equipped with flushless urinals and water consumption will be reduced by 72%.

Both Ball's Falls and Southbrook feature bioswales which treat any water leaving the building through a combination of natural treatments, so that water released back into the ground has been filtered of any harmful contaminants.



All three buildings have combined to provide ways of reducing energy. Ball's Falls is situated with southerly windows to capture the most sunlight and reduce dependence on artificial lighting. Ground source heating and cooling has also been installed to reduce energy consumption.

Brock Plaza has used a Thermodeck system that takes advantage of the hollow core slabs to provide supplementary heating and cooling throughout the building reducing the dependence on a standard heating and cooling system. Vents on the outside of the building open at night to allow cool air to flow through the core slab at night and slowly dissipate from the floor throughout the day to cool the building during the summer. In the winter, the opposite takes place as heat is run through the slabs at night and dissipated during the day.

Southbrook has taken on a number of initiatives to save on energy and water consumption. A bioswale is set up for storm water management to collect water runoff from the asphalt during rainstorms. A separate reflecting pond outside the front doors collects run off from the roof. Large overhangs provide natural shading inside the building and a white roof reflects sunlight away, thereby reducing interior temperatures during hot, sunny days.



III. Participating In Climate Change/Greenhouse Gas Reduction Initiaves.

LEED is the future of building. In this century and beyond, owner's, designers and contractors have looked for ways to save money. One of those ways is lowering a buildings energy footprint. As clients begin to realize the importance of energy efficiency and the notoriety that comes with it, a snowball effect is being created.

Canadian Cities are now adopting legislating promoting LEED buildings and stating that every new construction project must be designed to achieve a certain energy standard



St. Catharines' new Aquatic Complex is already being promoted as a LEED building.



The owner's of Southbrook Winery will be the first to acknowledge and boast that their new winery is the only LEED Gold winery in Canada.

At Merit, we are just proud to be able to say we have been a part of the new building boom. For us, if we can continue to work with clients who want to promote green building and want an energy efficient facility, we have the experience to ensure their dreams comes true.



IV. Community Involvement That Benefits The Environment



Having LEED buildings in a community and especially a local contractor with extensive experience in constructing LEED facilities goes a long way toward promoting environmental consciousness.

It has been said that the two largest contributors to the environment are cars and buildings. To be able to

have a impact on reducing the effects buildings have on the environment is something Merit takes pride in.

We are very fortunate that we have had the chance to be involved in the projects at Brock, Ball's Falls and Southbrook and we have learned the important of energy efficient design. The administration level and learning curve associated with these projects are immense and having a local contractor with that experience is a great way to promote the green building boom.



Now when kids and their families visit the Ball's Falls Visitor center the displays will educate them on how the technology involved during construction and how the building has significantly reduced its own impact on the environment.

There is a lot of ways to get the community involved in the environment, building is one of them and Merit has started from the ground up.

