



Greener by design – SBS have eco-friendly advantages built right in

Steel Building Systems (SBS) are breaking new ground and helping architects and builders construct more eco-friendly buildings for today's environmentally conscious world.

SBS are pre-engineered systems completely customized to meet the needs of specific projects, regardless of size. The systems involve numerous interrelated steel components that are cut, engineered, and primarily assembled at the manufacturer. All components are designed to work together and they do it best when an SBS manufacturer is brought in at the design stage of a project.

The SBS manufacturers work with the project's architects and builders to maximize design and economical benefits, plus take advantage of SBS multiple green features. The LEED Canada New Construction Rating System recognizes buildings incorporating leading design, construction, and efficient operational practices with reduced impacts on environment and the public. Projects are evaluated and earn points across six categories towards LEED certification. SBS can help builders and architects pick up much needed points in five of these categories.

Presented below are the green highlights of SBS. For more specific information, including prerequisites and available points, please see the **CSSBI LEEDing with Steel document** or discuss with a LEED consultant.



Top level green advantages of SBS:

Recycling means green at the factory floor!

SBS components are manufactured from cold-formed sheet steel. As the **world's most recycled material**, every newly manufactured steel product has some component of recycled material in it – anywhere from 30% to 95% – depending upon manufacturer and product. At the end of a steel product's life, 100% of it can be recycled again and again. SBS building components are among the greenest construction materials around because all may be **reclaimed and recycled** for future use.





Faster construction for less site disturbance

When building with SBS, less people are required at the job site than traditional construction methods. This means that the actual impact on the **environment and site disturbance is reduced**. Components arrive at the job site as needed and with most of the work already completed. Manufactured to precise specifications, SBS create little to **no waste** at the job site and facilitate faster construction and **minimize construction schedules**. Projects that would have traditionally taken months to complete may be reduced down to just weeks (varies with size).

Superior strength weighs less and conserves natural environments

Unlike other building materials, steel is dimensionally stable and not susceptible to rot or chemical breakdowns. Steel's overall **durability and longevity** can be greatly enhanced by a wide variety of coatings and paints to further extend its lifecycle. SBS buildings are designed to last, but when the building's overall use has been redefined, SBS allows for **easy expansion** by removing end or side-walls, and even adding floors. New steel framework is easily accommodated and the overall look of the building can be maintained by matching steel wall and roof panels.

By their very design, SBS are lighter weight than traditional building materials and have a higher weight to strength ratio. These light weight structural systems are engineered to have large, clear spans and are designed to reduce a building's load requirements while **optimizing the energy performance** of HVAC systems.

An SBS building requires smaller or less concrete footings, which allows for an overall savings in material use and provides builders the opportunity to use brownfield or contaminated sites, thereby **conserving natural environments**.



Energy efficiency and thermal performance

In Canada, when you choose an SBS manufacturer, you are often choosing a single- source supplier for all of your project's steel needs. Many SBS manufacturers also provide high-performance steel roofing systems complete with vapour barriers and high R-value insulation to **minimize thermal transfer and maximize energy efficiency**. Combine these benefits with insulated steel interior walls, windows, and doors and the whole system can provide an **extremely tight building envelope**, which means less air loss, better HVAC performance, and energy conservation.

Green choices close to home

SBS manufacturers are located right across Canada in strategic locations to easily manufacture, assemble, and ship SBS components to project sites. Whether it's by rail or road, choosing a nearby SBS Canadian manufacturer greatly **reduces the transportation costs and pollution** associated with gathering the building components.

The green features of SBS are many. If you're starting a new construction project, consider one of the easiest ways to make your building more eco-friendly from the very beginning. For more information on getting SBS working for you, contact one of our **SBS member manufacturers**.

