

# GREEN WATCH: LEED™



GREEN building is the latest movement in the construction marketplace today. However, what some might see as a trend is actually the shape of building today, and the future.

Some might ask – “Why buildings?” Believe it or not, there are 76 million residential and 5 million commercial buildings in the United States, which consume 39% of the total energy, and 70% of the electricity produced annually. In effect, they produce 35% of the world’s carbon dioxide emissions, and 2.5 pounds of solid waste per square foot. In essence, buildings and building construction contribute to a sizeable number of waste to our environment; therefore change in this arena is necessary if we are to create a positive environmental impact.

The U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED™) Green Building Rating System™. LEED is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings.

According to the USGBC website: “LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings’ performance. LEED promotes a whole building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.”

Now you might be asking yourself, “How does this affect me? And what does Aegis have to do with it?”

Well, the USGBC has recognized cold formed steel framing as an important contributor to environmentally responsible, sustainable structures. Cold formed steel framing falls under LEED program’s Materials and Resources Credit 4.1 and 4.2 Recycled Content, which states the following:

*Credit 4.1 (1 point) "Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% of the total value of the materials in the project."*

*Credit 4.2 (1 point) "Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 20% of the total value of the materials in the project."*

With respect to the LEED, all Aegis truss materials and accessories are produced from 90% recycled steel, comprised of 57% post-consumer recycled content and 33% post-industrial recycled content.

"The value of the recycled content portion of a material or furnishing is determined by dividing the weight of recycled content in the item by the total weight of all material in the item, then multiplying the resulting percentage by the total value of the item."

Since steel (the material) and steel (the building product) are the same, the value of the steel building product is directly multiplied by steel's recycled content, or:

$$\text{Steel Recycled Content Value} = (\text{Value of Steel Product}) (\text{Post-Consumer \%} + 1/2 \text{ Pre-Consumer \%})$$

The formula above calculates the post-consumer and pre-consumer recycled content percentages for North American steel building products.

To illustrate the application of these steel recycled content values to LEED, manual calculations are shown below for Electric Arc Furnace (EAF) steel building products with nominal \$10,000 purchases, using 2004 data.

EAF Steel Recycled Content Value for Typical Product:

$$\text{Cold Formed Steel Components Value} = (\$10,000) (57.5\% + 1/2 \ 32.5\%) = (\$10,000) (73.75\%) = \$7,375 \text{ (Exceeds 10\% and 20\% goals)}$$

All three of our product lines - UltraSpan®, TradeReady®, and WallSolutions™ meet the qualifications necessary in obtaining LEED material credit for a structure. Aegis Metal Framing will work with you in providing the necessary documentation to assist you in achieving LEED Certification.



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