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## STCA Update

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Technology Brings Realizable Opportunities for Light Gauge Steel Framing  
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*"...the real growth opportunity for light gauge steel framing lies in load bearing applications."*

The relatively new load bearing light gauge steel framing industry employs technology in innovative ways as it begins carving new paths for its products and services. In this context, "load bearing light gauge steel framing" means light gauge steel framing products and systems that are used to comprise all or part of the primary building structure. Considering potential applications of these products and systems in both commercial and residential construction, the opportunity is on a scale of roughly 15-16 million steel tons per year in the U.S. (the current steel stud industry consumes about 1.7 million tons per year).

### SO WHERE ARE THE IMMEDIATE OPPORTUNITIES?

Right now, the steel stud industry dominates market share positions in non-load bearing applications (curtain walls, partition walls and supports for suspended ceilings) for nearly every commercial construction market segment. While growth is still expected in these applications, it is generally regarded as modest.

Currently, the real growth opportunity for light gauge steel framing lies in load bearing applications. Increasingly, assisted living facilities, multi-family structures, hotels and motels, offices, dormitories, barracks, day care centers, schools, churches and fast food restaurants are being framed partly or entirely with light gauge steel.

These market segments are undergoing swift changes that are having broad effects on the increasing use of light gauge steel. Economics, assisted by new proprietary truss shapes, improving design abilities and software, and non-



combustibility requirements in several segments of the market are all contributing to steel's favorable growth. Additionally, commercial framing contractors generally find the transition to light gauge steel an easy and beneficial one, which greatly assists in creating a larger pool of available, trained labor.

That's the macro picture. At the micro level, product and system applications, today's greatest opportunity exists in trusses for light commercial construction. With less than ten years under its belt, the steel truss industry is now estimated at about \$160 million per year (or approximately 800,000 tons), and growing at an impressive 25 percent annually.



## **HOW DOES TECHNOLOGY AFFECT THE GROWING STEEL TRUSS MARKET?**

Technology in design, fabrication and even shipping, has led to more efficient steel truss profiles able to span large distances, and can be effectively roll formed in a variety of depths and gauges. In other words, highly automated and efficient engineering software, truss layout software and truss fabrication facilities have a direct impact on the growth and success of light gauge steel truss systems. Take this a step further and integrate these systems (engineering, layout and fabrication), and now steel trusses can participate in non-traditional markets, including residential construction where wood trusses are made in the fabricator's sleep.

## **WHAT OTHER SYSTEMS PRESENT OPPORTUNITIES WHERE TECHNOLOGY PLAYS A KEY ROLE?**

Learning what the market needs and how those needs are being solved currently provides a platform for light gauge steel components to "leap frog" conventional methods and vastly improve not only the construction process but the building itself. A perfect example is what's been happening in recent years with steel wall panels.

In the residential markets, the single biggest obstacle to steel's widespread use is the cost of construction, namely time and labor associated with cutting and fastening. Logically, panelizing steel wall components offsite saves time and labor money and produces, in most cases, a better product. Making money at producing steel wall panels, both load and non-load bearing applications, is the tricky part. But recent important technological advances can help to squeeze out cost in design and manufacturing, such that fabricators can and will be able to offer a high-strength, fully integrated steel wall panel system that's competitive and easy to use.

## **CAN TECHNOLOGY TIE ALL OF THESE SYSTEMS TOGETHER ACROSS PLATFORMS & APPLICATIONS, EVEN MARKET SEGMENTS?**

Absolutely. With fully integrated automated systems, from design to fabrication, technological

advances for individual applications like trusses and wall panels can then be further integrated, providing a total framing solution that covers everything top to bottom. The technology that efficiently combines and eases compatibility of these systems is what will bring about sizable market share growth. The outcome is fully engineered, code compliant and field practical steel framing systems that meet the highest design standards and are cost-effective solutions for the builder, general contractor, architect and engineer, not to mention profitable for the fabricator.

We've come a long way with steel trusses and components. But now we're on the verge of breaking it wide open. The use of technology will be critical to making this happen. Stay tuned!

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With more than 20 years experience, Donald R. (Don) Moody, P.E., President and General Manager of NUCONSTEEL™ Corporation, a Nucor company, is an internationally recognized leader in the light gauge steel framing industry. As a champion of the movement to accelerate the growth in use of light gauge steel framing in residential and commercial construction, he previously headed up the Steel Framing Alliance (SFA) in Washington, D.C., was president and CEO of Western Metal Lath, Inc. of Riverside, CA, and spearheaded the merger of the ML/SFA and MSMA into what is now the Steel Stud Manufacturers Association (SSMA). Don currently serves on the SFA Board of Directors, is chairman of the Commercial Construction Task Force, and was recently appointed chairman of the International Iron and Steel Institute's (IISI) Residential Working Group.

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