The United States structural steel industry supplied fabricated and erected structural steel framing for over 8,000 buildings and bridges through a network of producers, service centers, steel fabricators and erectors in 2011 down substantially from a peak of nearly 20,000 in 2006 and 2007. The decrease in market volume was solely the result of a downturn in overall construction activity as the market share of structural steel increased from 53% to 58% during this same period. Total industry employment in 2011 was estimated to be in excess of 150,000 individuals in 2,300 firms down approximately 27% from 2006. Total industry revenue in 2011 was estimated to be in excess of 10 billion dollars. It is anticipated that industry employment and revenue will expand marginally during 2012.

Structural Steel Supply Chain

The four distinct components of the structural steel industry are:

- **Producers** of structural steel products, including hot-rolled structural products (wide-flange shapes, plate, channels and angles) and manufacturers of hollow structural sections (formerly known as tubular steel).

- **Service Centers**, which function as warehouses and provide limited preprocessing of structural material prior to fabrication.

- **Structural Steel Fabricators**, which physically prepare the structural steel for a building or a bridge through a process of developing detailed drawings (the work of a detailer) based upon the construction drawings provided by a structural engineer; material management; cutting; drilling; shop fitting (bolting and welding); painting or galvanizing (when required); and shipping.

- **Erectors**, which assemble the structural steel members into a structural frame on the project site by bolting and field welding structural steel components together according to the construction documents.

Each of these four categories is discussed in greater detail below.

**Producers**

Three major structural steel shape producers – Nucor-Yamato Steel/Nucor Berkeley¹, Gerdau* and Steel Dynamics Inc.* – account for over 90% of all wide-flange shapes produced in the United States at five mill locations. Five producers, including the three mills mentioned above, supply the market with other hot-rolled shapes, such as angles and channels. All hot-rolled shapes are produced using electric-arc furnaces with ferrous scrap as the primary feed stock. The use of scrap results in an average recycled content of 90% for all hot-rolled structural material produced in the United States.

Hollow Structural Sections (HSS) for building applications are produced by a significant number of manufacturers including Atlas Tube*, Independence Tube* and EXLTUBE*, who account for more than 65% of the HSS production for buildings in the U.S. HSS are manufactured from

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¹ denotes AISC member company
sheet steel that may be produced in either a basic oxygen furnace or an electric-arc furnace. The recycled content of these sections is 33% and 90%, respectively. The domestic market for HSS in 2011 was approximately 900,000 tons.

Steel plate is used in the construction of both bridges and buildings and is produced domestically in both electric arc and basic oxygen furnaces. The weighted average based on production method for recycled content of plate used in construction applications is 75%. US plate producers serving the construction market include Arcelor-Mittal*, Evraz*, SSAB* and Nucor. Industry estimates are that 700,000 tons of plate are used annually for construction projects in the United States.

Structural steel has long been considered the premier green construction material, and the structural steel industry continues to improve its leading environmentally friendly position by further reducing greenhouse gas emissions. While numerous legislative and regulatory efforts in recent years have targeted emissions, energy efficiency, and related environmental concerns, the structural steel industry has been proactive in pursuing measures of its own that typically exceed regulatory requirements.

The results of structural steel industry efforts are evident in recent Environmental Protection Agency (EPA) findings on greenhouse gasses, which show that the iron and steel industry reduced carbon emissions by 47% between 1990 and 2005, and achieved the highest overall emissions reduction of any major industry – 67%. By comparison, initiatives such as the Kyoto Protocol would have required U.S. industries to reduce emissions by 5.2% by 2012.

At the same time, the industry remains the world leader in the use of recycled material and end-of-life recycling, with the recycled content of the structural steel beams and columns produced at U.S. mills averaging 90% and a recovery rate of 98%. The steel industry has also continually pursued methods for reducing energy consumption resulting in a reduced energy intensity per ton of steel by 29% since 1990.

The carbon footprint of domestically produced structural steel material is currently estimated to be between 0.73 and 0.89 tons of CO₂ per ton of steel.

Production of hot-rolled structural shapes in the United States in 2011 exceeded 6.1 million tons, of which slightly over 17% was exported. Approximately 4.6 million tons of this total represented wide-flange shapes. This production was supplemented by imports representing less than 7% of total domestic consumption.

Based on a survey of 2009 structural steel utilization, including HSS, 44% of domestic consumption of structural steel is utilized in building projects under roof, 34% in non-building structures and 22% for non-structural applications. This compares to 61% building structures, 25% non-building structures and 14% for non-structural applications identified in a similar survey taken relative to 2006 utilization.

Industry productivity has increased significantly over the past 40 years. The average number of man-hours required to produce a ton of structural steel has decreased from 12 man-hours/ton in 1980 to just over 0.6 man-hours/ton today.

Domestic demand for hot-rolled shapes increased by 5% during 2011 compared to 2010 primarily as a result of increasing demand in the industrial sector.

Pricing of mill material is typically posted on the web sites of the producing mills. Typical mill pricing of wide flange shapes for September 2012 is $790 per ton FOB mill. This compares to a price level of $840 per ton in September of 2011. Plate pricing is currently in the range of $785 per ton.

Service Centers

Service Centers stock all types of structural material, and are located throughout the United States. Approximately 65% of material flows through service centers to fabricators, with the remainder of the material being supplied directly from producing mills to fabricators or other direct users of structural material. A listing of AISC member service centers is available at www.aisc.org/servicecenter.

As of June 2012 service centers were holding 2.6 months of inventory based on recent order volumes. This is up from 2.4 months in May of 2012 and flat compared to 2.6 months in June 2011.
**Fabricators**

There are more than 1,800 steel fabricators in the United States supplying fabricated structural steel to building projects; 930 of these fabricators are AISC member companies with 377 of these certified for the fabrication of bridges. The typical structural steel fabricator is a family-owned business employing from 10 to 100 employees. Employee classifications include salespeople, engineers, project managers, detailers, shop workers, equipment operators, welders, painters, inspectors, delivery drivers and administrative personnel. Projects may range from the fabrication of several tons of structural steel for a small retail store to tens of thousands of tons for a large, high-rise structure. A very rough rule of thumb is that one ton of steel is required for every 200 square feet of building area.

The fabrication process for a building is driven by plans developed and sealed by licensed structural engineers which specify all design aspects of the structural components based on the building layout developed by an architect. Upon award of the project the fabricator typically is responsible for creating detail drawings of each piece of structural steel. These details are produced by a steel detailer to develop a dimensionally accurate drawing of each fabrication piece, including all connection details. Steel detailers either work directly on the staff of the fabricator or on a sub-contract basis. The detail drawings are then submitted to the structural engineer for approval.

Following a determined sequence that is optimized for shop flow and project schedule, the appropriate structural steel members are then cut to the proper length and drilled, plasma cut or punched, and all additional shop work is performed on the member. When required, the member is cleaned and coated with paint or galvanized. The members are then grouped in the order in which they will be erected in the field, placed on a truck for shipping and delivered to the project site.

The bidding and letting processes for bridges and transportation projects are different than buildings in that the majority of bridge projects are federally funded and require states to match a certain percentage of federal funds. However, while the administration process of transportation projects is different, the fabrication process can be similar. The fabrication process for bridges is driven by design drawings developed by a licensed state bridge engineer or a bridge design consultant.

A typical fabrication project will require between 10 and 20 hours of shop time per ton of fabricated steel. Material costs account for between 30% and 35% of the final cost of the fabricated and erected structural steel. Fabrication and erection costs for structural steel vary greatly based on the type of structure being constructed, the number of pieces, local labor conditions and the complexity of the connections. An AISC member fabricator in the area of the project (a list of member fabricators is available on the AISC web site [www.aisc.org](http://www.aisc.org) or the AISC Steel Solutions Center ([866.ASK.AISC](http://866.ASK.AISC)) is the best source for fabrication costs for a specific project. The practice of minimizing the weight of the structural steel in a building is often short-sighted as lighter sections, while satisfying the strength requirements of the structure, may result in more costly connections and fabrication procedures.

Many fabricators, both AISC members and non-members, have taken the additional step of obtaining AISC Quality Certification. This program is similar to an ISO certification program but specialized for the intricacies of steel fabrication. Companies are audited on an annual basis; while the program doesn’t certify product, it does verify that the fabricator has the processes, equipment, manpower, commitment, and experience to perform the necessary work and meet a minimum level of industry accepted quality standards. Currently, 1001 fabrication facilities are building certified, 377 are bridge certified and 83 hold bridge and highway component certification. Fabricator certification can be a recognized requirement for public projects, including almost all bridges. A list of AISC certified fabricators is available at [www.aisc.org/findcertification](http://www.aisc.org/findcertification).
Erectors

Erectors are the most visible component of the structural steel supply chain, because they perform the actual construction work at the project site. Most building erection is performed under the same contract as the steel fabrication, with the fabricator either providing in-house erection services or sub-contracting the erection work to a qualified firm. Field erection involves assembling the structural components in proper sequence while maintaining the structural stability of the partially completed structure. Stringent safety standards have significantly reduced the number of injuries occurring during steel erection. The erection team also is responsible for bringing the final building structure into plumbness, level and alignment within the required tolerances.

Over the years, the bridge design and construction industry has looked for ways to reduce delivery time of a bridge project through the implementation of Accelerated Bridge Construction (ABC). ABC represents a wide range of technologies including Prefabricated Elements and Systems (PBES), a nod toward modular construction and its ability to reduce cost, reduce schedule, reduce traffic delays, and improve the safety of both construction workers as well as commuters. For more information about Accelerated Bridge Construction, specifically on Prefabricated Bridge Elements and Systems, visit the FHWA ABC website at http://www.fhwa.dot.gov/bridge/abc/.

AISC offers a Certification Program for erectors and currently 330 erectors are certified. A list of AISC certified erectors is available at www.aisc.org/findcertification.
Marketplace Demand for Structural Steel

Structural steel is the leading structural framing material for buildings in the United States, with a 58% market share for 2011 for non-residential and multi-story\(^2\) residential construction. The market share for the closest competing material – reinforced concrete – is only 21%, indicating a market preference of nearly 3 to 1 for structural steel.

Market share values for all structural framing materials over the past 8 years for non-residential building construction based on square footage are as shown in the following table.

<table>
<thead>
<tr>
<th>Material</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Steel</td>
<td>51.7%</td>
<td>51.9%</td>
<td>52.2%</td>
<td>53.4%</td>
<td>54.8%</td>
<td>56.3%</td>
<td>58.1%</td>
<td>57.5%</td>
</tr>
<tr>
<td>Pre-engineered Bldgs (Steel)</td>
<td>5.6%</td>
<td>5.3%</td>
<td>4.9%</td>
<td>4.6%</td>
<td>5.2%</td>
<td>6.2%</td>
<td>5.7%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Wood</td>
<td>6.6%</td>
<td>6.8%</td>
<td>6.9%</td>
<td>5.5%</td>
<td>5.8%</td>
<td>6.1%</td>
<td>6.3%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Masonry</td>
<td>7.4%</td>
<td>7.5%</td>
<td>6.8%</td>
<td>6.2%</td>
<td>5.9%</td>
<td>6.3%</td>
<td>5.8%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Reinforced Concrete</td>
<td>20.8%</td>
<td>22.1%</td>
<td>23.1%</td>
<td>24.5%</td>
<td>21.7%</td>
<td>18.3%</td>
<td>20.1%</td>
<td>20.8%</td>
</tr>
<tr>
<td>All Other</td>
<td>7.9%</td>
<td>6.5%</td>
<td>6.1%</td>
<td>5.8%</td>
<td>6.6%</td>
<td>6.8%</td>
<td>4.0%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

Source: McGraw-Hill Analytics

Based on a 2009 survey, non-residential construction represented 42% of the overall demand for structural steel with each point of market share being equivalent to 40,000 tons of structural steel. Multi-story residential construction accounted for 2% of the overall demand for structural steel with each point accounting for 500 tons of structural steel. Structural steel's multi-story residential market share, which includes hotels and dormitories, has grown significantly over the past 5 years and is currently 36%.

The remaining demand for structural steel is comprised of two market segments:

- The first is non-building structures, which includes open-air stadiums, process and chemical plants, power plants, petroleum refineries, and other buildings that do not have a roof. Structural steel maintains a dominant share in these markets with these non-building structures generating approximately 34% of the demand for structural steel.
- Non-structural applications such as rack systems, marine applications, trailers, transportation and mobile homes comprise 23% of the overall demand for structural products.

Bridges are a special case in that the majority of bridge structures are fabricated from plate steel rather than hot-rolled shapes or HSS. Plate steel is not considered in the supply or demand calculations presented above. Hot-rolled shapes for bridges comprise 3% of the overall market for structural steel and are included in the non-building structures referenced above.

Construction starts in 2011 were up by 5% compared to 2010. This limited growth from a very low initial level is a function of the impact of the recession which began in the 4th quarter of 2007 and the collapse of the credit market, which occurred in the 4th quarter of 2008. The total loss of construction market volume from the peak in 2006 now stands at 67%. A significant increase in building construction activity will not occur until credit availability improves and GDP growth rates begin to exceed 3%. Assuming the overall economic growth continues in the range of 2% to 3%, it is anticipated that the building construction market will expand by 8% in 2012 to a level of 740 million square feet of construction starts.

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\(^2\) Multi-story is considered greater than 4 stories.
Marketplace Growth - Buildings

Non-residential and multi-story residential building construction accounts for 44% of the structural steel demand in the United States. In 2011 these two markets represented a total of 705 million square feet of construction. It is anticipated that construction starts in 2012 will be in the range of 740 million square feet.

U.S. Construction Market in Millions of Square Feet

<table>
<thead>
<tr>
<th>Project Type</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012 Q1&amp;Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial (Manufacturing under roof)</td>
<td>75</td>
<td>86</td>
<td>77</td>
<td>80</td>
<td>83</td>
<td>71</td>
<td>35</td>
<td>46</td>
<td>51</td>
<td>22</td>
</tr>
<tr>
<td>Commercial (Retail, warehouses, other)</td>
<td>471</td>
<td>503</td>
<td>527</td>
<td>498</td>
<td>534</td>
<td>387</td>
<td>154</td>
<td>130</td>
<td>141</td>
<td>85</td>
</tr>
<tr>
<td>Office</td>
<td>144</td>
<td>164</td>
<td>166</td>
<td>198</td>
<td>215</td>
<td>162</td>
<td>69</td>
<td>57</td>
<td>58</td>
<td>27</td>
</tr>
<tr>
<td>Parking &amp; Automobile Service</td>
<td>136</td>
<td>159</td>
<td>177</td>
<td>191</td>
<td>175</td>
<td>132</td>
<td>66</td>
<td>74</td>
<td>85</td>
<td>46</td>
</tr>
<tr>
<td>Assembly (Schools, arenas, churches)</td>
<td>353</td>
<td>320</td>
<td>323</td>
<td>333</td>
<td>317</td>
<td>307</td>
<td>236</td>
<td>196</td>
<td>177</td>
<td>74</td>
</tr>
<tr>
<td>Medical (Hospitals, healthcare)</td>
<td>92</td>
<td>94</td>
<td>107</td>
<td>109</td>
<td>101</td>
<td>109</td>
<td>67</td>
<td>72</td>
<td>72</td>
<td>29</td>
</tr>
<tr>
<td>Public (Courthouses, jails, other)</td>
<td>35</td>
<td>34</td>
<td>33</td>
<td>34</td>
<td>48</td>
<td>48</td>
<td>46</td>
<td>34</td>
<td>26</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>26</td>
<td>27</td>
<td>29</td>
<td>32</td>
<td>25</td>
<td>27</td>
<td>25</td>
<td>22</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>Non Residential Total</td>
<td>1,331</td>
<td>1,387</td>
<td>1,440</td>
<td>1,475</td>
<td>1,498</td>
<td>1,243</td>
<td>698</td>
<td>631</td>
<td>628</td>
<td>302</td>
</tr>
<tr>
<td>Residential &gt; 4 stories</td>
<td>196</td>
<td>244</td>
<td>336</td>
<td>344</td>
<td>217</td>
<td>133</td>
<td>41</td>
<td>44</td>
<td>77</td>
<td>49</td>
</tr>
<tr>
<td>Overall Total</td>
<td>1,527</td>
<td>1,631</td>
<td>1,776</td>
<td>1,819</td>
<td>1,666</td>
<td>1,376</td>
<td>739</td>
<td>675</td>
<td>705</td>
<td>351</td>
</tr>
</tbody>
</table>

Source: McGraw-Hill Analytics
Marketplace Growth – Bridges

The current state of our transportation infrastructure is bleak. 24% of America’s 605,000 bridges are either structurally deficient or functionally obsolete. While this may sound scary, the truth is that a structurally deficient bridge will eventually close or restrict traffic due to limited structural capacity, but the bridge is not in immediate danger. A functionally obsolete bridge is typically older and no longer able to support current traffic volumes, or isn’t wide enough to support vehicle sizes and weights. While the impact of these deficiencies aren’t immediate, they contribute to traffic congestion and delays, negatively impacting our nation’s ability to move goods and services effectively and compete globally.

While we can all breathe a collective sigh of relief that Moving Ahead for Progress in the 21st Century (MAP-21) has been signed into law, the reality is that we have another two-year extension of predictable, yet woefully low, levels of federal funding for highways and bridges. Completely solving our infrastructure problems is nearly impossible given the current economic and political climate. According to the American Society of Civil Engineers, “If investments in surface transportation infrastructure are not made soon, those costs are expected to grow exponentially. Within 10 years, U.S. business would pay an added $430 billion in transportation costs, household incomes would fall by more than $7,000, and U.S. exports will fall by $28 billion per year.”

Buy America provisions set forth by the U.S. Department of Transportation are meant to ensure that transportation infrastructure projects are built with American-made products. MAP-21 also amends the Buy America law for transit projects by requiring that waivers cannot be granted without a public notice in the Federal Register and on the USDOT FTA website, requirements similar to what is currently in place for highway projects.

The National Steel Bridge Alliance (NSBA) strongly commended the Alliance for American Manufacturing (AAM) for its national “Should Be Made in America” campaign. The campaign brought into focus how decision makers on the San Francisco-Oakland Bay Bridge financed the project with American tax revenues while circumventing Buy America provisions. The reality is that the bridge is almost 3 years behind schedule and $5 billion over budget. And to make matters worse, what could have been an American fabrication and manufacturing success story has evolved into a transfer of money and jobs to China.

According to Tom Hickman, vice president of sales & marketing at Oregon Ironworks, Inc., the bridge would have required more than 4 million man-hours. “This is a very significant number considering its impact on the west coast economy.” In California, for example, unemployment currently exceeds 11%. Just as significantly, California essentially paid to have a production facility built in China rather than the U.S. – a facility that will now vigorously compete with domestic companies on future projects.

Regardless of funding levels and legislative loopholes, the domestic steel bridge industry is more than ready to take on any project to come down the pike. In May 2012, the National Steel Bridge Alliance conducted a national study to determine the capacity of our domestic steel bridge fabrication industry. The survey asked U.S. bridge fabricators to state their 2010 plant use as a percentage of their overall capacity. 2010 was a significant year because the real value of bridge work increased more than $2 billion (8.5%) compared to just one year prior. This significant jump can be attributed, in part, due to the American Recovery and Reinvestment Act (ARRA) stimulus package. NSBA’s survey results determined that, on average, our nation’s significant steel bridge fabricators only used 67% of their total plant capacity in 2010, a year which showed a significant increase in demand when compared to the prior year. There are countless examples across the country of what American fabricators have done—and still do.

John O’Quinn, senior vice president of Hirschfeld Industries – Bridge and a member of NSBA, believes that “US fabricators are poised to handle any future challenge that American infrastructure may present. Our industry has done a much better job of adapting to the changing market over the last 5-7 years compared to years past. Through the utilization of new technologies including 3-D modeling and virtual assembly, domestic fabricators are able to stretch the tax-payers dollar further than ever before.” Hirschfeld is one of the largest domestic fabricators of steel bridges in North America with seven facilities located throughout the United States. Hirschfeld, and the entire steel bridge fabrication industry, have a rich history of fabricating complex, time-sensitive projects such as the new Woodrow Wilson Bridge in Washington, D.C., the Ravenel Bridge in Charleston, S.C. and a new Mississippi River crossing in Louisiana. All of these success stories were built with domestic steel fabrication and their American workers, and the steel fabrication industry stands ready to build America’s future.
Key Marketplace Advantages of Structural Steel for Buildings

The increasing market share of structural steel even in a declining construction market demonstrates the continuing recognition of the advantages structural steel brings to building projects. Architects, structural engineers, general contractors and building owners choose structural steel because:

- Structural steel is fabricated off-site under controlled conditions, ensuring a high-quality product and reducing the number of costly fixes at the job site. This also allows for just-in-time delivery, which accelerates overall project schedules.
- Structural steel is reliable and predictable. It’s produced to precise tolerances and consistent strength levels. This makes steel easier to design and use.
- Structural steel is at full strength as soon as it’s erected, which makes project schedules predictably shorter.
- Structural steel leads the construction industry with a fully integrated supply chain that uses advanced technology at all stages of design and construction. This technology has been proven to reduce or eliminate errors, improve safety and lower project costs.
- Today’s modern mills produce steel containing an average of 90% recycled material. At the end of the life cycle of a building, 100% of the steel frame can be recycled (the current recover rate for structural steel is 98%). Steel is the premier choice for environmentally conscious projects.
- Structural steel provides owners with buildings that generate revenue earlier, maximize the amount and use of floor space, are easy to modify and easier to sell, and are aesthetically pleasing.
- Structural steel is the most economical building framing material.
Key Marketplace Advantages of Structural Steel for Bridges

- **Aesthetics:** The vast majority of the world’s architecturally significant and award winning bridges are steel bridges. If you want to be inspired by the beauty of steel bridges, explore the steel bridge gallery at [www.steelbridges.org/prizebridges](http://www.steelbridges.org/prizebridges).

- **Value:** Steel bridges cost less to build. Erection costs are lower because construction with steel is faster and lighter requiring smaller and fewer pieces of equipment for a shorter period. Foundation and pier costs are less because steel is lighter. Less steel is required because steel can take advantage of composite design techniques maximizing the structural contribution of both the steel structure and the concrete deck.

- **Efficiency:** Steel is the efficient strong material ideal for bridge construction. For the same load and span requirements, a steel girder will require less depth than a corresponding concrete girder efficiently addressing any vertical clearance or complex geometry issues. Steel bridges can easily be designed to take advantage of continuous spans handling both live and dead loads in the most efficient manner.

- **Sustainability:** Steel is the most recycled material on earth. The steel used to construct bridges has an average recycled content of 75% far above any other material used in bridge construction. A new bridge requiring 500 tons of steel would typically use the steel from 300 old cars, 250 dishwashers, stoves and refrigerators, 60 tons of industrial scrap and 50 tons of recycled curbside waste. Steel is not only a sustainable material, but using steel reduces the bridge’s environmental impact by using longer spans resulting in fewer piers creating less impact on natural habitats and waterways.

- **Visibility:** There are no secrets with steel – what you see is what you get. Steel is strong, lightweight, durable, impact resistant, straightforward to inspect and easy to refurbish or repair.

- **Durability:** Bridge life spans exceeding 100 years are possible through the use of high performance weathering steel and coating technologies providing reliable protection from corrosion.

- **Functionality:** Steel bridge decks are commonly replaced one lane at a time allowing the bridge to remain in service during replacement activities. Segmental concrete bridge decks normally require the complete closure of the bridge during the repair period.
The American Institute of Steel Construction

The American Institute of Steel Construction, headquartered in Chicago, is a not-for-profit technical institute and trade association established in 1921 to serve the structural steel design community and construction industry. AISC’s mission is to make structural steel the material of choice by being the leader in structural steel-related technical and market-building activities, including: specification and code development, research, education, technical assistance, quality certification, standardization, and market development.

AISC’s current membership includes:

- Full (Producers, Service Centers, Fabricators) 952 firms
- Professional (Architects and Engineers) 24,107 individuals
- Affiliate (Construction professionals and building code officials) 1,273 individuals
- Educators 915 individuals
- Students 16,315 individuals
- Associate (Allied firms & organizations) 483 firms

AISC has developed and administers a certification program for both member and non-member fabricators and erectors. AISC Certification sets a standard for the steel industry. Companies that are AISC Certified have been through a rigorous initial evaluation, and are subject to yearly reviews. An independent auditing company, Quality Management Company, LLC, confirms that companies have the personnel, knowledge, organization, equipment, experience, capability, procedures, and commitment to produce the required quality of work for a given category, whether they are a fabricating plant or erector. There are currently 1001 AISC certified building fabrication facilities, 377 AISC certified bridge fabrication facilities and 330 AISC certified erectors. In addition, 83 companies hold AISC certification for bridge and highway metal components.

The National Steel Bridge Alliance (NSBA) is a division of AISC focused on providing technical support and market development activities for bridge projects throughout the United States.

AISC has a long tradition of service to the design community and construction industry of providing timely and reliable information. Designers, builders, and developers are encouraged to contact the AISC Steel Solutions Center with any questions related to the use of structural steel. The Steel Solutions Center can be contacted at 866.ASK.AISC or via email at solutions@aisc.org.
Structural Steel Quick Facts
Industry and Market Demographics

September 2012

Domestic Hot Rolled Shape Production and Consumption

<table>
<thead>
<tr>
<th>Year</th>
<th>Production</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>8.5 million tons</td>
<td>8.5 million tons</td>
</tr>
<tr>
<td>2008</td>
<td>7.7 million tons</td>
<td>7.5 million tons</td>
</tr>
<tr>
<td>2009</td>
<td>4.5 million tons</td>
<td>4.3 million tons</td>
</tr>
<tr>
<td>2010</td>
<td>5.6 million tons</td>
<td>5.2 million tons</td>
</tr>
<tr>
<td>2011</td>
<td>6.2 million tons</td>
<td>5.5 million tons</td>
</tr>
<tr>
<td>2012 Q1 &amp; Q2</td>
<td>3.3 million tons</td>
<td>2.9 million tons</td>
</tr>
</tbody>
</table>

Hot-rolled Structural Shape producers  5
Hollow Structural Section producers  12
Plate Producers (construction)  4
Service Center locations  500+
Fabricators  1,800
Detailers (individuals)  6,000
Total industry employment (2012)  150,000
External industry sales (fabricator to market) (2011)  $10+ billion

Market for Structural Steel

Non-residential Buildings  42% of demand
- 2008 square footage  1,243 million sq ft
- 2009 square footage  698 million sq ft
- 2010 square footage  631 million sq ft
- 2011 square footage  628 million sq ft
- 2012 Q1 & Q2 square footage  302 million sq ft
Current market share  56%

Residential Buildings greater than 4 stories  2% of demand
- 2008 square footage  133 million sq ft
- 2009 square footage  41 million sq ft
- 2010 square footage  44 million sq ft
- 2011 square footage  77 million sq ft
- 2012 Q1 & Q2 square footage  49 million sq ft
Current market share  34%

Non-building structures  34% of demand
Non-structural uses  22% of demand
Structural Steel Quick Facts
Marketplace Indicators

September 2012

Distribution
% of producer sales direct to fabricators 35%
% of producer sales to Service Centers 65%
Current months of inventory stocked at Service Centers 2.6 months

Change in hot-rolled structural shape producer pricing
current versus last month up 7%
current versus 3 months ago down 3%
current versus last year down 6%

Change in hollow structural shape (HSS) producer pricing
current versus last month down 3%
current versus 3 months ago down 9%
current versus last year down 7%

Change in plate producer pricing
current versus last month down 8%
current versus 3 months ago down 14%
current versus last year down 23%

Change in BLS\(^3\) index for fabricated structural steel for commercial buildings (July 2012)
current versus last month down 2%
current versus 3 months ago down 2%
current versus last year up 2%

Change in BLS index for fabricated structural steel for bridges (as of February 2012))
current versus last month down 8%
current versus 3 months ago down 2%
current versus last year up 2%

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\(^3\) Bureau of Labor Statistics, United States Department of Labor