

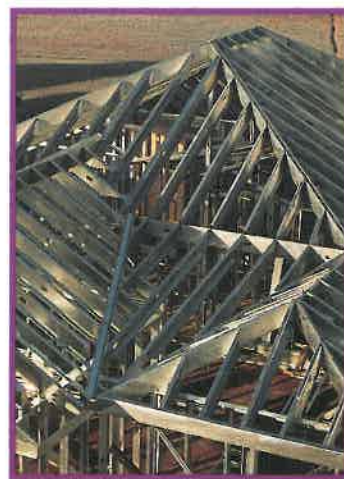


Homesteel

Getting Into a Steel Frame of Mind



Lightgauge Galvanized & GalvalumeTM Steel Framing



Residential Steel Framing

For more than 150 years, steel has been used in the North American construction market. Today it remains one of the strongest, most durable and economically manufactured materials. While it has typically been associated with skyscrapers and bridges, cold formed steel is emerging as the material of choice for residential framing. Across Canada and the United States, builders, developers and homeowners are finding out about the many benefits that cold formed steel has to offer in the residential marketplace.

Although the name "steel" may conjure up images of a heavy or cumbersome material, the coated steel products used in residential framing are just the opposite. Cold formed sheet steel is a light weight, easy to handle, economical and high quality alternative to traditional wood framing materials. Among its other advantages, steel offers the builder a strong, dimensionally stable, easy to work with framing system.

Residential steel framing members were originally designed as a substitute for wood framing. However, they are now being manufactured in systems which reflect the superior strength and consistency of steel. The variety of available steel shapes, strengths and sizes has expanded beyond that of standard lumber, and this versatility offers the advantage of savings in both material cost and time while delivering a consistently high quality product.

Environmental and economic concerns have prompted the building industry to research alternative building materials and methods. This, in addition to its construction benefits and 100% recyclability, is making steel framing a growing choice for residential construction. This follows the long time use of steel framing in commercial construction where steel has proven quality and performance records.



Loadbearing steel framing used in the basement of the Bedford Homesteel Project.



Four framers lift and hold a 40 foot lightgauge steel framed wall during construction of the Oakville Homesteel Project.

Ancaster, Ontario



The first Homesteel project was built in Ancaster, Ontario. This home featured steel wall studs and floor joists in an otherwise traditional home.

Why Use Steel Framing?

The reasons why home builders are turning to steel framing members as replacements for wood are as varied as the homes they build. Here are some of the most significant benefits for both user groups, the builder and the homeowner, that give steel an edge over the competition.

Homeowner Benefits

- Steel's inherent strength and non-combustible qualities enable a steel framed house to resist such devastating events as fires, earthquakes, and hurricanes. Homes can be designed to meet the highest seismic and wind load specifications in any part of the country.
- Because of its strength, steel can span greater distances offering larger open spaces and increased design flexibility without requiring intermediate columns or loadbearing walls.
- Remodeling can be easily accomplished. Non-loadbearing walls can easily be removed, altered and relocated.
- Steel framing does not need to be treated for termites. It is free of resin adhesives and other chemicals used to treat wood framing products.
- Steel framing can be used for every home; from traditional to contemporary to ultra-modern and from low cost to luxury. Steel framed homes can be found in every climate.
- Steel framed walls are straight and remain that way. There is no shrinkage to cause nail-pops and squeaking floors.

Builder Benefits

- Steel will not rot, shrink, swell, split, or warp and is non-combustible.
- Every steel stud is a good stud. There is no longer the need to sort through lifts of framing members to select suitable pieces. Steel framing is of consistent quality.
- Steel framing can be supplied to the exact lengths required thus eliminating much of the on-site cutting and most of the waste.
- Steel framing members are available in a variety of standard shapes and sizes in varying steel thicknesses to accommodate any structural requirements.
- Steel members weigh as much as 60% less than wood members; therefore, foundation and seismic loads can be reduced.
- Steel framing members are manufactured with pre-punched holes for running piping and electrical wiring, minimizing preparation work for other trades.
- The inherent strength of steel can be utilized to reduce the number of framing members required. It is not necessary to replace steel for wood stick-for-stick.
- Steel prices are more stable than wood and steel supplies have historically been more readily available.
- Steel framing does not dry out and shrink over time, thus the costly call backs to repair warped walls, nail-pops and squeaking floors are eliminated.
- Building waste and pilferage from the construction site is greatly reduced.
- Job-site scrap has resale value.

Environmental Benefits

- All steel products are 100% recyclable. The overall recycling rate of steel products in North America is 66%; the highest rate of any material.
- Steel products can be recycled repeatedly without degradation or loss of properties.
- The steel industry is the single largest recycler in North America because recycled steel is an integral ingredient in steel production.
- During the last decade, more than 1 trillion pounds of steel scrap have been recycled, keeping a valuable commodity out of the country's landfill sites.
- Magnetic separation makes steel the easiest and most economical material to remove from the solid waste stream.
- The amount of energy needed to produce a ton of steel has been reduced by 40% since 1972 and continues to decrease.

Additional information about lightgauge steel framing systems is available from the CSSBI, the AISI and the LSF manufacturers. For more details contact a CSSBI Residential Steel Framing Manufacturer near you:

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Residential Steel Framing Case Studies

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Oakville, Ontario



Stittsville, Ontario



Burlington, Ontario



St. Albert, Alberta



Surrey, B.C.



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