This unique residence, with curved corners and flowing lines, featured wall systems of lightweight steel framing covered with metal lath and stucco.

Steels Helps an Historic Blend

When architect Burton Samuels received a commission to design a residence in a historic Chicago neighborhood, he wanted to create a structure that was modern in style, yet blended with the character and mood of the area.

Samuels designed a 4,000 square foot stucco home that has more in common with a modern sculpture than conventional housing.

His unique design, which featured curved corners and flowing lines, required materials that were not traditional to the Chicago area. For the wall systems, he selected lightweight steel framing covered with metal lath and stucco.

“No other materials worked better for the many curved surfaces in my design than steel framing,” says Samuels. “Not only was steel framing a suitable backing for metal lath, it offered excellent design flexibility.”

Other Benefits

But there was more than just aesthetics to consider. When Samuels began transforming his design from idea to reality, he found steel framing offered other advantages equally as important, such as meeting the city’s building code requirements.

The city required a two hour fire rating for the side walls of the structure. Samuels could have met this requirement with masonry, but the resulting wall would have been extremely heavy. By using steel framing, Samuels met the fire code, with a lot less weight and for less cost than if he had specified concrete blocks.

Another concern was making the home as energyefficient as possible. Using steel framing allowed Samuels to specify studs which enabled him to provide eight inches of wall space for insulation. The result was a wall with an excellent R-rating which was more cost-effective than other materials.

Construction Details

Samuels specified 8” 14-gauge studs located 24 inches apart with 1½-inch channel bridging for all exterior walls. The prepainted stud/track assembly was fabricated on the job site. To provide wind resistance, 6” 14-gauge strap bracing was also installed.

William A. Duguid & Co., an AWCI member contractor based in Mt. Prospect, Il, used structural steel studs with
“Using steel framing allowed . . . to specify studs which provided eight inches of wall space for insulation. The result was a wall with an excellent R-rating which was more cost-effective than other materials.”

According to Matt Duguid, president of William A. Duguid & Co., the project demonstrated the compatibility of steel framing with non-steel materials. “Not many buildings in the Chicago-area are designed with steel framing,” he says. “But our experience has proven that steel framing is compatible with other structural systems and gives the exterior walls superior dimensional stability.”

The exterior walls were made of 3.4 pound, self-furring metal lath over gypsum sheathing. Other plaster accessories

By using steel framing, architect Burton Samuels was able to meet the city fire code with a lot less weight and for less cost than other materials.
included corner beads, control joints and casing beads.

**Impressive Results**

The project was completed on schedule in approximately three months. To further help the building’s radical design blend in with the surrounding architecture, Samuels found a rare site dominated by trees, and set the building far back from the sidewalk, to help the adjoining landscaping compliment the overall design.

The results are stunning. In addition to the curved and flowing lines of the building, the design theme is repeated in large semi-circular windows. There are also two large skylights, each more than 300 square feet in area, that cover the two-story living room and master bedroom and bath.

Architect Samuels certainly proved it’s possible to blend modern design with classic architecture. And steel framing helped transform his design idea into reality.

For more information on lightweight steel framing, write to: Metal Lath/Steel Framing Association, 221 North LaSalle, Chicago, IL 60601.