



Under Construction

# SMALL DESIGN FIRM WINS BIG WITH CAD

*Private Residence  
Southeastern CT*



**Size of Project:** 40,000 sq.ft.  
**Site size:** 180 acres  
**Builder/Developer and Contractor:**  
SDA & owner  
**Project Designer:** Sargert Design  
Associates, Inc. (SDA)  
**Landscape Architect:** Charlie Marder  
**Interior Designer:** SDA

A 40,000 sq.ft. residential project in Connecticut was already in progress and going wrong when David Sargert, ASID member and president of Sargert Design Associates of Springfield, MA, first learned of it. The project client, an internationally known and highly successful manufacturing entrepreneur, was acting as his own construction manager. After he began losing confidence in the large well-known and established design firm he was working with, the project contractors recommended Sargert's design shop-of-one.

Expected to take two years to complete, the residence will be a showcase of exquisite custom work. The lower level floors are multi-colored, imported marble with complicated inlaid borders, while others are resilient cork. Solid marble columns are everywhere, as are stone niches, elaborate cabinetry and millwork — a Sargert Design Associates specialty. Custom ironwork and railings are being wrought in an area of Portugal famed for



this type of craftsmanship. Given the scope of the project, even large design firms with ample staff would find the project daunting. CAD and the Internet leveled the playing field.

Sargert credits the design and marketing value of CAD — and specifically DATA-CAD®, the 2D/3D CADD system from DAT-ACAD LLC — as the essential key to winning the account away from his larger competitor. The client was more familiar with the software being used by the other consultants and contractors on the pro-

ject, but when he realized how easy it was for Sargert to generate detailed, impressive visuals, and to transfer files between programs, he committed.

Sargert also used the program's 3D modeling tools for some very fast modeling. "While the client stood over my shoulder, I changed the riser on a set of custom stairs and produced a 3D model immediately, something simply not possible in other programs, no matter what the add-ons."

He spent many hours "cleaning up"



the original plans, which had been created with another program, into workable ones, and first had to layer out all the components of the drawings. While generating the drawings Sargert was able to spot a serious structural problem — unsupported walls offset from the foundation.

Another benefit was timeliness. “In the past, it would have taken days to render design ideas by hand, or to make even the most minor of changes. Now the technology allows me to casually sit down with a client, download a couple of files, and immediately offer different design solutions, a range of textural possibilities or views in several elevations. It even allows these services remotely.”

A growing CAD library of previous work, including common design components that might have taken 10 hours to create for past projects, can be readily accessed and modified by Sargert. Inexpensive macros — those cheap trick add-ons that can save days of work — further streamline the process. Sargert cites one example of a \$15 macro which saved nearly \$1500 on a single job. “One macro allows global editing, while another painlessly translates file formats between software programs.”

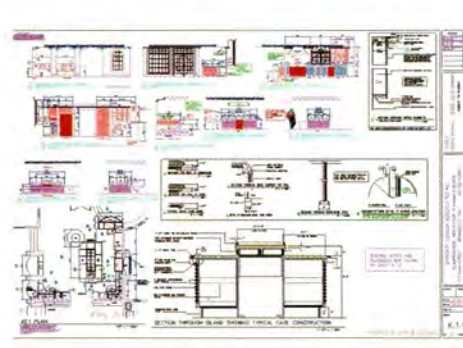
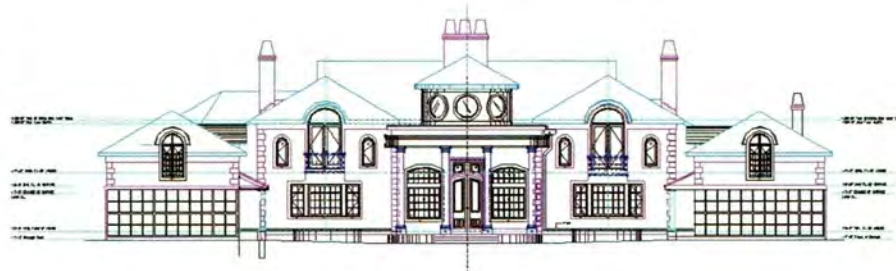
The other innovative technology giving Sargert’s business the edge is the Internet. Although he is 150 miles from the project, he transfers CAD files directly to the site — to the engineers, contractors and consultants, and to the owner’s office via the Internet. In addition, he has contracted out the project’s shell drawings to a design professional 100 miles away to free up time to concentrate on design details. Since the CAD program seamlessly converts imperial measurements to metric, he also communicates plans via the Internet to Portuguese fabricators on the stone, metal and ironwork.

### DESIGNER'S PERSPECTIVE

The challenge was to produce a product of extraordinary detail in the shortest amount of time. The owners are Portuguese natives and had several business interests in both Portugal and Brazil, which made finding and fabricating the specialty elements easier. Thankfully most of what “we” do is graphic, so the language barrier was minimal. The owners are exceptional in their ability to visualize. The use of the computer and our CAD programs helped to fill in any blanks when time mattered the most. Essentially, every element of the home is custom designed for them — from the planters to the mirrors. All on CAD, all on time.

**David Sargert, ASID**

**President, Sargert Design Associates**



#### SPECIFICATIONS

Structural framing is steel; roof framing is steel, Parallam, and wood; foundations and decks are concrete. Interior and exterior custom crafted products from Portugal include cabinetry/doors, terracotta roof tiles, cork flooring, marble, limestone, granite, and metalwork. Interior walls and ceilings utilize veneer plaster/speciality glazed finishes. Other selected specifications:

EIFS: Dryvit  
Windows/Exterior Doors: Marvin  
Locksets/Hardware: Baldwin, Hafele  
Ceramic Tile: SDA Custom, Azulejos (Portugal)

Plumbing Fixtures: Kohler, Grohe  
Appliances: Viking  
Paint/Stains/Clear Finishes: Sherwin Williams, Guardsman, Mohawk

