



Changing Attitudes

BY MIKE SCHWIEBERT

The Latitude One office high-rise in downtown Miami may just be the beginning of a structural steel revolution in South Florida.

FOR MANY YEARS THE DEFAULT CHOICE FOR BUILDING CONSTRUCTION IN SOUTH FLORIDA HAS BEEN CONCRETE. But with a strong construction growth market throughout the state, structural steel is making inroads, thanks to competitive pricing per square foot coupled with scheduling advantages.

Across the state the misconceptions of steel construction in the past have been proven to be just that: misconceptions. Most major metropolitan areas, such as New York, Chicago, Boston, Philadelphia, and many others, have been using steel for the vast majority of their larger projects for years. Florida has always had the old mind-set that “seeing is believing,” and it has now been seen, thanks to an open-minded owner, a structural engineering firm well versed in steel structures, and a visionary architect. This team has shown the Florida construction industry that steel is a viable choice for larger commercial projects in this region, and they’ve helped create the largest structural steel office building in Miami: 455,000 sq. ft using 4,300 tons of structural steel. The 24-story Latitude One includes 13 floors of office suites, eight levels of parking, and a lobby that provides additional room for retail space.

The choice of steel was largely due to the construction manager’s extensive experience with this type of project, having completed numerous successful steel projects in



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the Northeast. Schedule is always a concern in the construction industry and can either make or break a job, and Latitude One's Miami location made schedule that much more important; the need to beat the hurricane season and make sure the building was reasonably "dried in" was of utmost importance. Of course, the building also needed to be built to withstand hurricane-force winds.

As floor tiers were plumbed and final-bolted, floor decks were turned over for concrete placement at a rate of almost one level per week. Floors were then turned over for other trades. These workers were able to begin their work much more quickly, since they did not have to wait for



Opposite: The 24-story Latitude One office tower is part of a planned development along the Miami River and is adjacent to Miami's Metro.

Top: The 14-ton fabricated base anchors were set in place to exacting tolerances.

Middle: The base of the building contains eight levels of steel-framed parking.

Left: The completed tower features 13 floors of column-free office space.

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the curing process and shoring removal to take place, as they would have with concrete. Once the steel erection was beyond the second tier, the construction team was able to turn over one floor every five days for follow-on trades. As with most downtown projects, lay-down area was minimal at best. However, structural steel allowed for small erectable sequences, delivered to the hook on a daily basis, to work within the lay-down space available throughout the erection phase.

The labor situation also swayed the job toward steel. With the condominium boom throughout Florida, there was also a shortage of skilled laborers in concrete, which drove labor prices to an all-time high. Another reason concrete was not a good choice for this project was that the market pricing for raw materials and labor was more volatile than that of steel at the time. The concrete prices would fluctuate day to day, and there was no way to predict where they would go.

Base Anchors

The most unique and critical part of the fabrication and erection was the base anchor assemblies. Each anchor assembly weighed nearly 14 tons and had to be fabricated and then erected to near-perfect tolerances; once these were set in place and the foundation was poured, it would have been impossible to adjust them. The erector's attention to this critical first phase of erection was paramount to the success of the main building erection.

A Sign of Things to Come?

Latitude One may bode well for the future of structural steel in this longtime concrete state. "All it took was one building to get the ball rolling," says Cives Project Manger Lyn Busby. "Since the erection of this building, we have seen multiple buildings being designed in steel, and many of them are much larger than this building."

"It is finally catching on in Florida that steel is faster and, in a lot of cases, more affordable," he continues. "I am looking forward to more steel projects in Miami, as it has been a long time coming."

As the construction market continues to grow in south Florida, so will the demand for structural steel. With the strong commercial and retail markets, owners will always be looking for the best value to make their projects economically viable. In the case of Latitude One, the benefits of steel outweighed those of concrete, making

it a great material decision to help add to the Miami skyline.

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