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Train Topper

New Two-Tower Complex Rises Over West Side Rail Lines

An active rail line made for challenging foundation work on a mixed-used, 739,000-sq.-ft. complex that will feature two 25-story towers.

by Alex Padalka

The construction team working on a $186 million, two-tower residential complex on Manhattan's West Side topped the project's greatest obstacle by building directly over it.

The 739,000-sq.-ft. Mosaic, with two 25-story towers and a seven-story structure, stands partly on a platform over an active Amtrak railway. But it also reinvents an area disconnected from the urban grid, said Elizabeth Finkelshteyn, project director with New York-based FXFowle Architects, which designed the complex.

"Building over Amtrak is one of the very big challenges," she said. "But the overall challenge here is not only structural. By creating this particular complex over Amtrak, we changed this area of Manhattan's West Side. We created a wonderful complex that will have housing and parkland."

The new development, set to open next year, will have 288 rental apartments in one tower and 339 in the other. The complex will reserve 20 percent of units for lower income tenants.

The north tower will also have two theaters, while the seven-story structure will house a third theater, all incorporated into the project during planning and zoning negotiations between the community board, city planners, and the developer.

Work on the concrete superstructures began in the spring, starting with the southern tower. That tower topped out in July, and the north tower was set for topping out later this year.

The complex will also have underground parking, retail space, and two landscaped public courtyards. The three theaters will be fit-out under separate contracts. The seven-story structure will also have six high-end condominiums.

The development broke ground last year after a lengthy planning review process that began in 2003 when the New York City Department of Housing Preservation and Development selected New York-based Dermot Cos. to develop the two city-owned sites along 10th Avenue between West 51st and 53rd streets.

Originally called Clinton Green, the development in the Clinton Urban Renewal Area is in a transitional neighborhood where low-rise residential gives way to commercial and manufacturing facilities.

After demolition of several buildings onsite, the project's biggest hurdle came late last year and early this year in the construction of a platform over the two railroad tracks dividing the parcels. The task was complicated by the site's choppy terrain, said Tony Marrone, project manager for Bovis Lend Lease of New York, the construction manager.

"Building over a railroad track is a challenge on its own, but the site was a steep, rocky ravine down to the track, with little access," he said.

An early task was ensuring that the project team was familiar with Amtrak's operations. Crews from Civetta Cousins JV of the Bronx, the foundation contractor, were trained on signal systems. A team of six Amtrak employees was also onsite for flag signal work during the six weeks of foundation work, said Jim Brown, senior project manager with Bovis.

The training paid off in preventing Amtrak, which uses the line for trains running between Pennsylvania Station and points north, from having to alter its schedules. The only change in operations was limited to routing trains onto a single track on occasion.

Still, the tight workspace made installation of piles and walls more difficult, with some supporting walls for the towers only 3 to 5 ft. from the tracks.

Another issue in coordinating below-grade tasks was limited site access. The site is bordered by existing buildings on both the east and west sides, giving the team access only from the side streets.

That complicated the task of building the platform, which uses 160 precast concrete planks. With each plank weighing 30,000 to 80,000 lbs., the team brought in "the biggest possible cranes you could get into New York City," Marrone said.

The team took three weeks to install planks for the platform under the south tower, but learned fast, Brown said.

"It only took two weeks for the north tower, because we picked up some efficiencies," he added.

In order to fit the 600-ton crane on the already-cramped site, Bovis cut a deal to rent space on an adjacent parking lot. It took on the insurance risk and arranged for valet parking for all of the lot's customers from January to early February.

As the complex entered the fit-out stage in late summer, the developer was still deciding which Leadership in Energy and Environmental Design rating it would seek, Finkelshteyn said. Among the Mosaic's green features are the use of recycled and regionally based materials, construction waste management, low-VOC finishes, automatic lighting systems, and reflective roofing materials.

Other energy conservation measures include high-efficiency condensing boilers, variable-speed pumping, high-efficiency glass glazing, and a co-generation system utilizing roof-mounted microturbines, said Glenn Giustino, principal with Edwards & Zuck, the M-E-P engineer for the project. The features will help the building save about a third off of the annual energy costs of a standard code-compliant residential building, he added.

The affordable housing component, meanwhile, stems from Dermot's decision to use city incentives allowing a larger building in exchange for reserving 20 percent of units for lower-income tenants.

The layouts for the affordable units are identical to the market-rate apartments, though they will have different finishes, such as parquet wood floors and marble bathrooms in the market-rate units as opposed to carpeting and tile in the affordable apartments.