CASE STUDY

VALDESIA GARDENS

BRONX, NY

ECHELON® MASONRY

PRODUCT:
InsulTech™ System

ARCHITECT:
Emanuel Kambanis, Baez Hughes Development

MASONRY CONTRACTOR:
Baez Hughes Development, Bayport Construction

MANUFACTURER:
Metro, an Oldcastle® APG Company

THE CHALLENGE

This complete system is proving essential in overcoming some of the Valdesia Gardens site's more difficult hindrances. Kambanis notes, "Energy codes demand we insulate the entire envelope – that means insulating and waterproofing the entire building…"

THE SOLUTION

"…InsulTech actually has the continuous insulation, moisture drainage, and air barrier we need to be in compliance – all in one unit."

INSULTECH™ REDUCES COST, LABOR AT VALDESIA GARDENS PROJECT

On the streets of the South Bronx, near the Valdesia Gardens affordable housing building, the long-forgotten clamor of construction noise fills the air. To local residents, that disharmony sounds like the sweet melody of progress and hope. Fueled by renewed local pride and an affordable housing shortage, an economic and cultural resurgence is taking place in the Bronx.

Baez Hughes Development has been at the forefront of the city's affordable housing efforts, and the contractors have recently broken ground on Valdesia Gardens in the South Bronx's Longwood neighborhood. Vice President Emanuel Kambanis is the architect and general contractor for a much-anticipated 7-story, forty-five-unit apartment complex being constructed on Prospect Street.

Kambanis, like other contractors, is under constant pressure to keep up with timelines while tackling the inevitable obstacles encountered in a high-density city like New York. "The greatest challenge is being two inches from the building next door and managing the brick and scaffolding in outside areas. When you have to lay block from the inside rather than outside and have scaffolding on another's property, there are added insurance costs," said Kambanis. With such close proximity to the adjacent building, Kambanis found that traditional masonry was not a viable option, so he made the decision to switch from traditional masonry to Echelon's InsulTech™ Insulated Concrete Masonry Units (ICMU) for this Valdesia Gardens project.

Kambanis explains, "The InsulTech System has the structural and thermal properties all in one system—block, insulation, air & moisture barrier and finished face—making it ideal for working from the inside of a structure."

Like all New York City contractors, Kambanis also has to consider the limited space available and weather variables. With old-fashioned masonry, he adds, "You also need scaffolding on the outside – then start your brickwork, weep holes, air gap etc. Also, it's wide open so when masons work with mortar, they need mesh to protect the air gap. You can imagine the extra labor – a particular pain when you consider the high cost of labor in NYC!"

"With InsulTech, you get a three-in-one product that includes the insulation layer – you've got thermal performance, R Values, moisture resistance all in one unit plus aesthetic outer face," explains Kambanis. "With these efficiencies, we were able to get 15% back in energy rebates, which gave me more design freedom to put design elements back into the building such as high energy windows. We add quality and even more energy savings on top of the energy savings from InsulTech."

Because InsulTech is a novel system, some instruction is required to get masons up and running, so the Echelon team went on-site to Valdesia Gardens to provide training.

"The Echelon reps came to the site to explain the ICMU installation to our crew," he said. "The training was great. Len Browning, lead technical advisor and Dan Suchovic, architectural sales representative, were there to help build a mockup panel with the team to get them acquainted with the system." Kambanis recalls, "We did dry runs on exterior pieces," which included InsulTech's Half-High units, designed with all the features and benefits of the full unit, but with the aesthetic of jumbo brick.

"We can achieve the linear brick look at half the cost—it makes a huge difference, using the taller profiles where you can't see, but then the half high on the visual areas in the front elevations."

In New York City's competitive construction market, efficiencies and time management are critical to remaining profitable. To stay relevant, Kambanis and associates are tuned into current developments in the affordable housing market, which falls under the purview of New York City's Housing Preservation and Development (HPD) department who uses Area Median Income (AMI) as criteria for qualifying.

Of the 44 affordable units on Prospect Street, 16 units will be available to households earning up to 70% of the Area Median Income of $96,000 while 28 units will be designated for households earning up to 90% of the AMI. That qualifier, however, does not guarantee access. These much sought-after units are allocated based on housing lotteries; the city's overall supply of affordable housing falls far short of the demand. The reality is that contractors can't build these structures fast enough.

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>
> — Emanuel Kambanis, Project Architect

For the Valdesia affordable housing project, the ICMUs make all the difference. "InsulTech speeds up the job and is much faster than block and brick. Overall, we think InsulTech will save us about six months of time – with an early 2020 targeted completion date. We are already trying to plan InsulTech for our next affordable housing project. We will be able to document speed much more accurately because we will be using it from the start," said Kambanis, adding, "I like the product, crew and all the support we've had throughout the process. With InsulTech, you've got it covered."