

Tigoni Medical Center Tigoni, Kenya Healthcare

Case Study



CLIENT

Tigoni Medical Center- Tigoni, Kenya

CHALLENGE

Provide energy-efficient natural lighting to a new COVID-19 medical center

RESULTS

Daylighting incorporated throughout the building to maximize patient and staff health and wellbeing; no electric lights needed throughout the day

PRODUCT

24 SolaMaster 330 DS units were used, half of which were donated by Solatube International

SOLATUBE DISTRIBUTOR/INSTALLER

Steam Plant, Ltd.

ARCHITECT

James M Macharia, Kiambu County Architect

BACKGROUND: As cases of the coronavirus continued to rise in Kiambu, Kenya, Governor James Nyoro knew he needed to do something to handle the growing numbers and ease the pressure off of the Kiambu level 5 hospital overwhelmed by COVID-19 patients. In a record time of 10-weeks, a new COVID-19 medical center, known as the Tigoni Medical Center, was built.

The new 104-bed facility, fully equipped with an emergency center, ablution blocks, wards and changing facilities for doctors, nurses and other health care workers, was designed to provide much-needed space for isolation and treatment of the coronavirus.

CHALLENGE: It's a unique challenge to design a place where no one wants to end up. That's why when Solatube's long-term Kenya distribution partner Steam Plant heard about the new medical center, they knew Solatube Daylighting Systems would be a perfect lighting solution to successfully nurture the occupants within by creating a healthy indoor

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-H.E James K Nyoro, Governor

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environment. Given the 24/7 nature of the health care facility and the hot and humid climate, energy and environmental performance was another challenge the facility was facing, and a way Solatube could help.

SOLUTION: 24 Solatube SolaMaster 330 DS units were used for the new hospital design to maximize light output at any time of day, half of which were donated by Solatube International in collaboration with the local distributor Steam Plant, Ltd.

To ensure a consistent amount of daylight delivered to the floor, the design team used Solatube's proprietary design calculator to determine the number of units needed and the amount of light that the Solatube Daylighting Systems would bring into the space.

RESULTS: With the consistent daylight provided by the Solatube SolaMaster 330 DS units, the Tigoni Medical Center was able to achieve desired light levels, provide a significant reduction in energy consumption and HVAC costs and create a healthy indoor environment that maximizes patient and staff health and wellbeing.

"The Tigoni Hospital COVID-19 isolation ward has many firsts:

It was the first full kitted ward to be built from scratch in Kenya. It took a very short 100 days from inception to completion.

It is the first isolation unit anywhere in the world to be fully daylight using the Solatube Tubular Daylighting System.

No one wants to be hospitalized, but because it must happen from time to time, making a hospital stay as comfortable as possible is always top of mind for Administration. Nothing beats natural light connecting patients with the outside world.

We are delighted that we could bring natural light to both patients and health care workers in the Tigoni COVID-19 isolation ward. To do this sustainability with Solatube sets a new standard in Kiamby County's quest to go green."

- H.E James K Nyoro, Governor



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