

GHESKIO Cholera Treatment Center

Port-au-Prince, Haiti



SQ FT
7,459 BGSF



OWNER/AFFILIATION
Les Centres GHESKIO



ARCHITECT(S)
MASS Design Group



COMPLETION DATE
2015



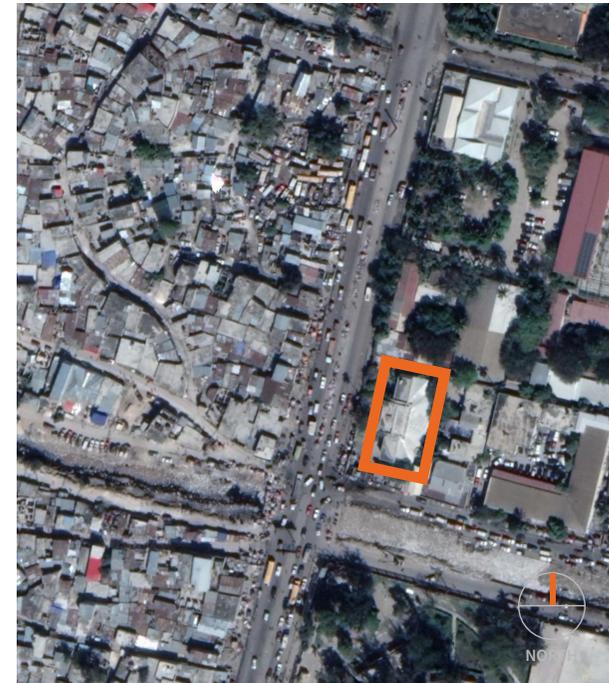
FRONT FACADE



INTERIOR



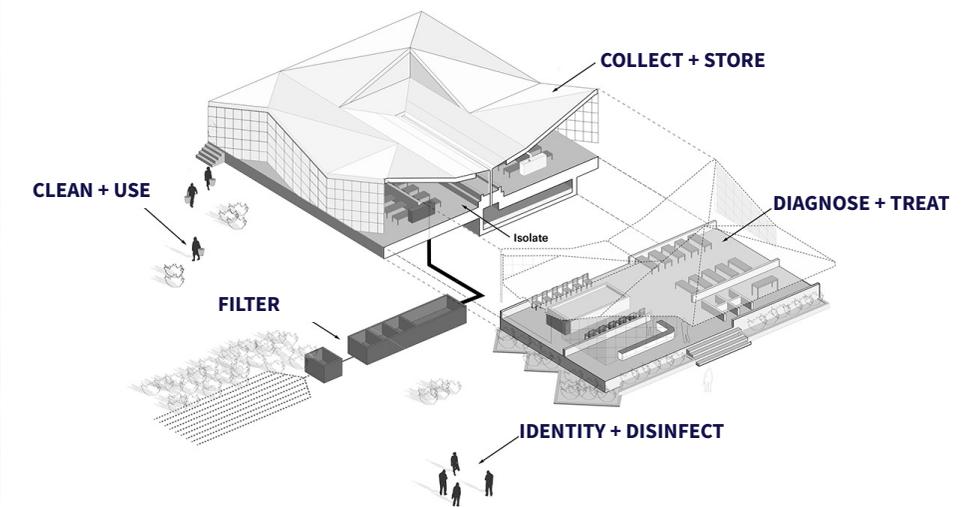
INTERIOR



SITE MAP

ABOUT | DESIGN INTENTIONS

Cholera—a curable, preventable disease that had not existed in Haiti in over a century—emerged following the 2010 earthquake and ran rampant throughout the country. Since the outbreak, cholera patients have been treated in temporary tents, which are difficult to keep sanitary, hot in the Haitian climate, and deficient at ensuring prevention from infection and the human right to dignified health care. **In partnership with leading Haitian health care provider Les Centres GHESKIO, MASS designed and built a state-of-the-art permanent cholera treatment center, incorporating an on-site wastewater treatment facility to thwart recontamination of the water table and consequent spread of the disease.** The GHESKIO CTC is the first purpose-designed permanent cholera treatment center in Haiti, and has a **100 patient capacity for thirty-five mild cases and sixty-five severe cases.**



AERIAL VIEW

GHESKIO Cholera Treatment Center

Port-au-Prince, Haiti

The Haitian example will provide a model for other countries to emulate in the years ahead.
 - Dr. Roger Glass, Director of the NIH Fogarty International Center

DESIGN STRATEGIES

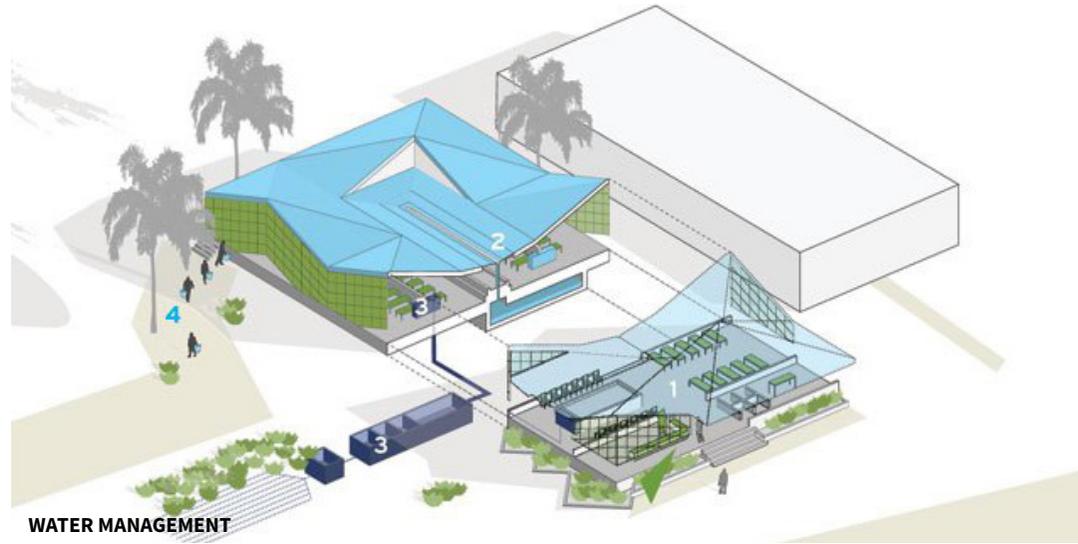
Sustainable Design

The building is made from compressed stabilized earth blocks (CSEBs). **All materials were fabricated in-house and sourced locally, which allows for complete oversight and quality control, ensuring high grade product.** The CSEBs reduce CO2 emissions as they require half the cement, and create jobs, since a team of 10-12 is required to operate the manual machine for each production shift.

Bordering a landfill settlement along the coast, the new 7,500-square-foot reinforced-concrete and steel structure is earthquake- and hurricane-resistant and sits on a slab raised more than 3 feet above grade. **This not only thwarts potential flooding but also provides room for a cistern under the building that captures rainwater from a gutter on the steel roof.** The rainwater is treated and purified for nursing and cleaning. To prevent contamination of the groundwater (only about 6 inches below grade), the architects worked with San Francisco-based Fall Creek Engineering to develop a wastewater decontamination system. This efficient anaerobic biodigester with four chambers (instead of the more typical three) introduces chlorine at the third stage.

KEY SPACES:

1. Admitting/Diagnostics/Treatment
2. Rainwater Catchment System
3. Wastewater Treatment System
4. Chlorine Production and Community Distribution



WATER MANAGEMENT

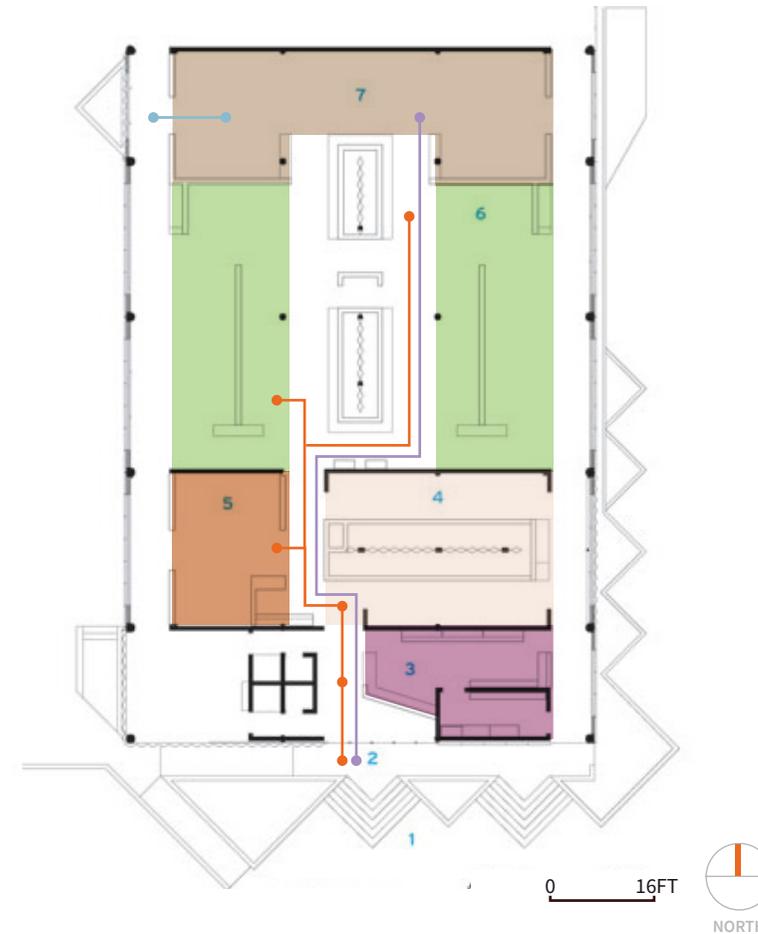


INTERIOR



SKYLIGHT

SITE PLAN



KEY SPACES:

1. Outdoor Waiting Area
2. Entrance
3. Administration/Check-in
4. Mild Cases Observation (830sf)
5. Severe Ward (414sf)
6. General Ward (710sf each)
7. Patient Attendant Seating

TRAVEL DISTANCE ANALYSIS

- Patient Entrance to Registration 15ft
- Registration to mild case observation 10ft
- Registration to severe ward 29ft
- Registration to general ward 30-67ft
- Family Entrance to seating area 124ft
- Staff Entrance to attendant seating 13ft



NORTH

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DESIGN STRATEGIES

Interior Design

On the interior, there are distributed hand wash sinks and pour flush toilets for direct access to clean hands and waste disposal, and distributed floor drains for collecting soapy water from floor washing. **A 1.5m perimeter access corridor around the building allows for expedited movement of beds and staff, and nurse stations are situated in each patient bay for direct observation.**



PROJECT SUMMARY:

Project: GHEKIO Cholera Treatment Center

Project location: Port-au-Prince, Haiti

Owner/Client: Les Centers GHEKIO

Architect: MASS Design Group

Structural engineer: Matt Sisul, YCF Group s.

General contractor: a., Port-au-Prince

MEP: Arash Guity, Mazzetti

Civil: Fall Creek Engineering, Inc

Photographs/Illustrations: Iwan Baan

Construction cost: \$700,000

Building area GSF: 7,500 square feet

Cost per square foot: \$93

Substantial completion date: March 2015

AIA/AAH DESIGN AWARD WINNER

Category D: Innovations in Planning and Design Research (Built and Unbuilt)

JURY COMMENT

- ▶ The craft of design and construction are evident throughout this facility. This is a culturally relevant response to specific community concerns that will have an impact far beyond the act of placing a healthcare building on a site. Sustainability for the environment by addressing the building systems and sustainability for the community by developing worker skills are key attributes that set this project apart.
- ▶ It addresses the functional need in a creative and cultural sensitive way while also providing on the job skills training for the workers who were building it so they will have the employable skills to provide for their families long after this project is complete. The utilization of local resources and embodiment of local culture is powerfully executed.
- ▶ This submission embodies the triple aim of improved quality, reduced cost and expanded population health – acting as both a demonstration of sustainable water technologies and as a training opportunity for the Haitian construction industry. This project holds multiple lessons for healthcare designers of all scales: healing the community as well as the patients through culturally specific, innovative solutions.

