

ALWAYS REDy: Efficient and effective Philippine Red Cross Facilities

Sarakiel Ysabel Domingo 2015-08094



"Born officially in 1947, but with roots that trace back to the revolutionary days, the Philippine Red Cross has truly become the premier humanitarian organization in the country, committed to **provide quality life-saving services that protect the life and dignity especially of indigent Filipinos** in vulnerable situations."



PRC FUNCTIONS

- 01 DISASTER RESPONSE**
Multiple chapters all over the country do search and rescue operations and logistical support during natural disasters
- 02 EMERGENCY MEDICAL SERVICES**
PRC trains emergency medical personnel (paramedics) and operates the largest free emergency transportation system (ambulances, etc.)
- 03 COVID RESPONSE**
PRC stepped up during the height of the COVID pandemic by offering RT-PCR and antigen testing, patient transportation services, and a dedicated hotline
- 04 COMMUNITY SERVICES**
PRC maintains an independent blood bank and regularly holds hygiene and public health seminars for communities

PRC FACILITIES

HEADQUARTERS IN MANDALUYONG
The HQ is a repurposed office building. It houses a nation-wide command center, a blood bank, RT-PCR testing center, PRC offices, and several floors of leasable office spaces.

AMBULANCE FLEET
PRC, through its fleet of 154 ambulances, has rescued 46,451 individuals for 2019 alone.

FEATURES TO BE IMPROVED

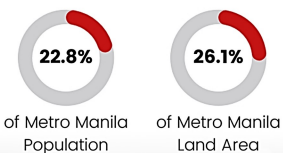
EFFICIENCY OF EMERGENCY VEHICLE CIRCULATION
Precious time is wasted with the internal backlog of vehicles into the headquarters.

EFFECTIVITY AND QUANTITY OF PRC LOCAL CHAPTERS
The establishment of more chapters in different regions can make for more effective and coordinated collection of information, response and community programs.

The current design of emergency response facilities limits the general public's access to their services. Timely access to first responder services, that PRC provides, is crucial and a regular part of disaster response and healthcare.

The main goal of this project is to explore **architectural interventions in the design of emergency response facilities of PRC that would make them more efficient and effective** in the execution of its mandate. Two facilities will be developed: the PRC HQ in an urban center, and a site-adaptable design basis for PRC outposts in remote areas.

SITE FOR THE HQ: QUEZON CITY



THE HEALTH AND WELLNESS CENTER IN ASIA

It has the largest bed capacity (for hospitals and medical centers) in Metro Manila. It also has 61 public and private hospitals.

Located in the CBD-Knowledge Community District are 7 hospitals and 8 medical centers, 118 accredited NGOs and Government Agencies, making it an ideal location for PRC HQ.

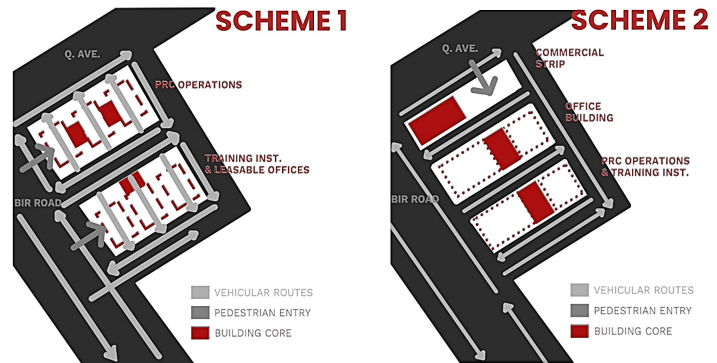
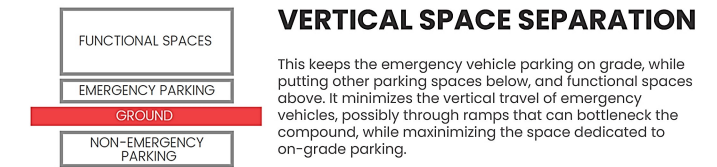
SITE ANALYSIS - CIRCULATION



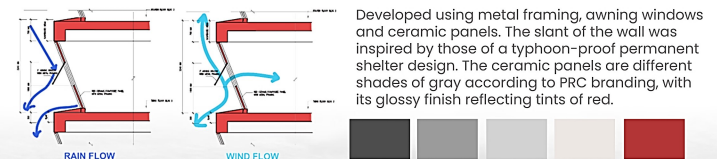
- | | | | |
|---|---|---|---|
| EGRESS
<ul style="list-style-type: none"> ✓ 1. Further into QC ✓ 2. To Manila ✓ 3. Further north (Valenzuela, Bulacan, etc.) ✓ 4. To rest of Metro Manila | INGRESS
<ul style="list-style-type: none"> ✓ 1. From hospitals in the area ✓ 2. From manila hospitals ✓ 3. From other Red Cross Sites ✓ 4. From rest of MM (EDSA) | EGRESS
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BUILDING SCHEMES



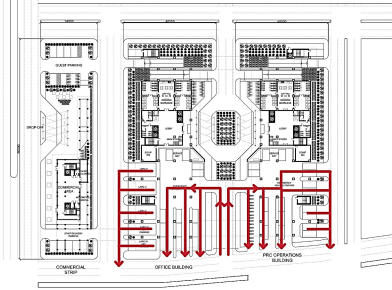
SLANTED CURTAIN WALL FEATURE



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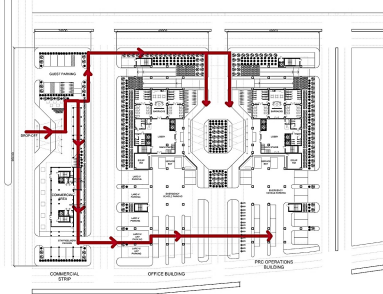
EMERGENCY VEHICLE CIRCULATION



The emergency vehicle parking lot scheme follows the parking bay concept used more commonly for fire engines in fire stations. The bays for ambulances have three parallel parking slots that open to the main road. Large and amphibious vehicles are given specialized parking slots that open to a secondary road.

The vehicles parked in the office building would serve the eastern and northern part of Metro Manila while those parked in the PRC operations building will serve the west and south.

PEDESTRIAN CIRCULATION



Pedestrian entry is concentrated in the public transportation drop-off point at the northern part of the commercial strip. An elevated crossing system connected to a pedestrian- and PWD-friendly ramp is designed as the main pedestrian access for the rest of the PRC complex. A park is located near the entry of this ramp to increase visibility and use of the ramp and elevated crossings.

Optional on-grade crossings can be done at the northern part since it won't interfere with ambulance traffic.

COMPLEX RESILIENCY

COMMERCIAL SPACES YEARLY CONSUMPTION
2.09 kWh/sqm per year **7,860** sqm

LABORATORIES YEARLY CONSUMPTION
9.30 kWh/sqm per year **1,460** sqm

INSTITUTIONAL AREAS YEARLY CONSUMPTION
2.09 kWh/sqm per year **13,450** sqm

SOLAR PANEL AREA COMPUTATION

* Aside from conventional generators, this unit can provide power mostly during short power interruptions. Area panels and battery systems can power the complex for long periods of time.

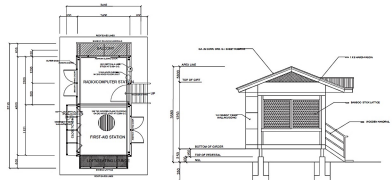
58,120 kWh/year
320 sqm

PROVIDED:
450 sqm

A main selling point for the leasable spaces, and critical feature of PRC operations is its resiliency even during extreme weather events.

Back-up power using generators, solar panels and solar batteries are provided for all functional spaces in cases of service interruptions.

PRC OUTPOST BASE DESIGN

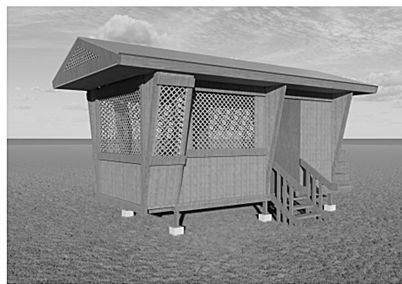


The design was inspired by the "Ocho Balay" permanent typhoon-proof shelter design for victims of Super Typhoon Yolanda.

Modifications were made to make the PRC Outpost easier to construct - both in the selection of materials, and joints of the structure.

It utilizes a slanted curtain wall to enlarge the interior space and redirect strong winds to prevent lift.

The main materials to be used are lightweight, easy to transport, and readily-available to the remote areas of the Philippines. The use of concrete is minimized to only the foundations, so that the outpost can be easily constructed, even in areas where roads and heavy machinery haven't reached yet.



HEADQUARTERS ISOMETRIC WITH INTERIOR COLOR-CODING SCHEME

