

Enabling Disaster Resilience in Parang, Marikina by Fostering Social Cohesion in the Integrated Design of Public Spaces and Evacuation Centers.

FRAGILE CITIES AND CLIMATE CHANGE

Cities face increased risks to weather hazards due to the effects of climate change. Particularly vulnerable are the communities in Marikina City which are exposed to frequent flooding. Moreover, the social infrastructure of cities is at threat since public and open spaces in Metro Manila are becoming increasingly exclusive or are being removed entirely

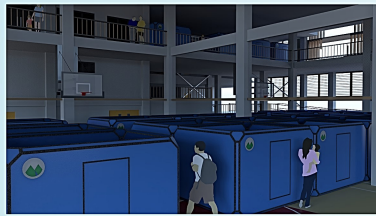
This thesis explores for architectural solutions that can strengthen communities vulnerable to the frequent flooding of Marikina. The design proposal aims to strengthen a community's social infrastructure through creating a public space that can be used as an emergency facility such as an evacuation center. The site is in Parang Plaza, which is next to the Parang Barangay Hall.

PROVIDING FACILITIES FOR DISASTERS

Using flexible open interior and exterior spaces, the layouts can be modified for various uses in day-to-day and evacuation contexts.



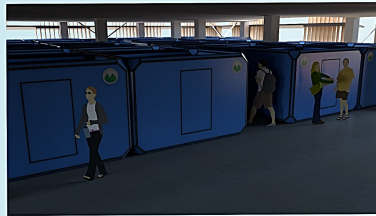
GF Day-to-Day Context



GF Evacuation Context



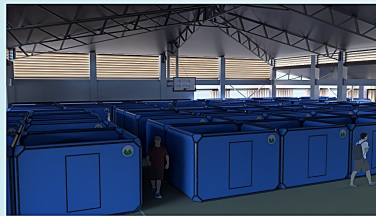
3F Day-to-Day Context



3F Evacuation Context

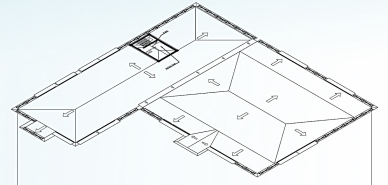


4F Day-to-Day Context

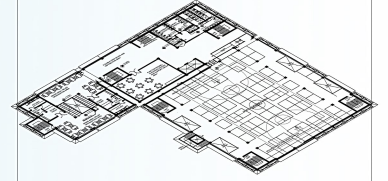


4F Evacuation Context

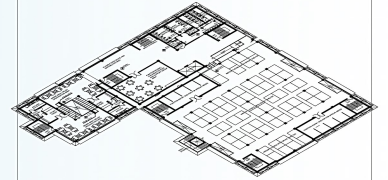
ROOF



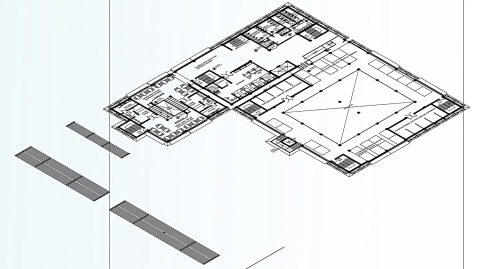
FOURTH FLOOR



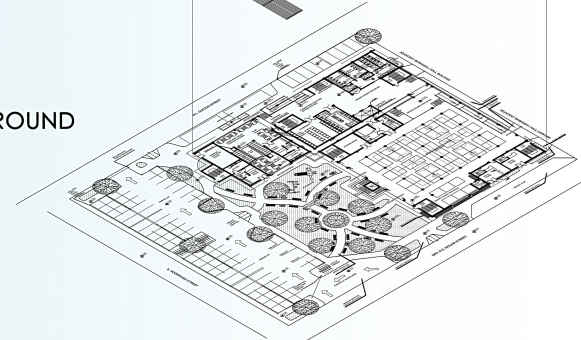
THIRD FLOOR



SECOND FLOOR

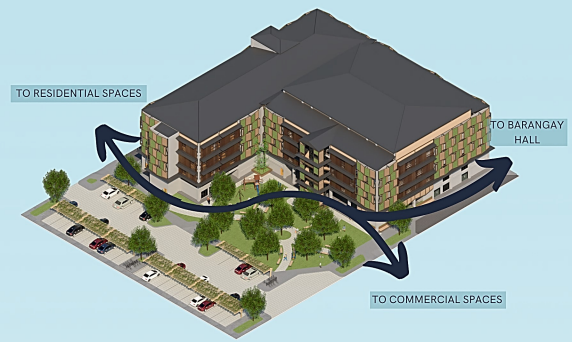


SDP W/ GROUND FLOOR



DESIGNING FOR SOCIAL COHESION WITH EXPLORATION AND VISIBILITY

In designing for social cohesion, my research led to the use of the concepts of perception, sense of place, and spatial solidarity. It revolves around creating visible spaces with subdivisions that includes defined links to each other. It encourages pedestrian circulation through the site, while also making its features visible as one travels through the site. These features create opportunities for chance encounters and interactions between people.



EXTERIOR PERSPECTIVES



FRONT APPROACH



REAR APPROACH



POCKET PARK

DESIGN FOR SAFETY FROM HYDROLOGICAL AND GEOLOGICAL HAZARDS

The site was chosen through criteria that puts the public space and evacuation center at an area with low risk of flooding and earthquake hazards, but is still proximal to communities that are vulnerable to these risks.

The building mass is divided into three zones, and spaces are organized in ways that allow the shear walls and cross bracing to be positioned symmetrically at its corners. In this way the structure's center of mass is relatively equal to its center of rigidity. This allows the structure to better resist lateral forces from storms and earthquakes.

ZONE A



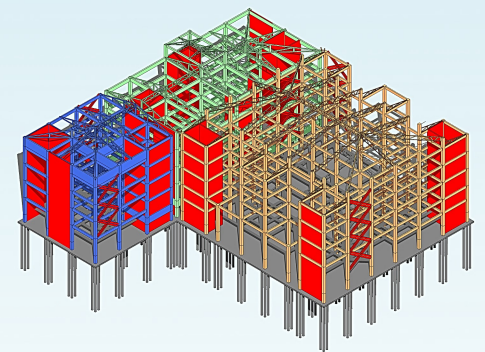
ZONE B



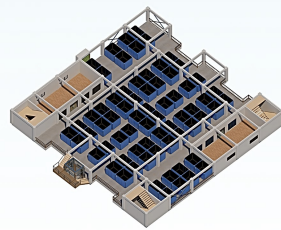
ZONE C



SHEAR WALLS



EXTERIOR SHELTERS



TYPICAL INTERIOR SHELTERS

EVACUATION SHELTERS

The shelters are arranged in the open spaces using partition tents that are currently being used by the Marikina City LGU. The open spaces where they are arranged allow for flexibility to use other types of partition systems. Should the interiors be unable to house evacuees, or should more shelters be needed, they can also be arranged at the building's parking area. The pocket park can be used as well, but it is ideal for it to be kept as common area for all evacuees.

