

APERTURE

3-STORY CLUSTERED RESIDENTIAL HOUSING W/ STUDIO TYPE

RENTABLE SPACES

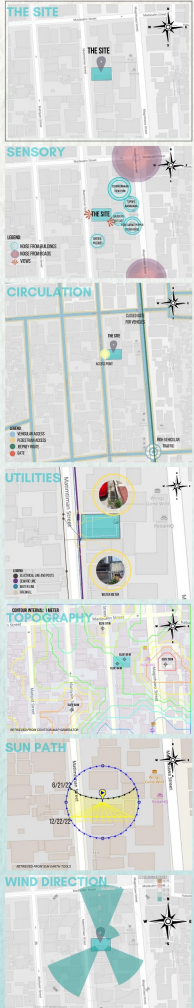
113 MATIMTIMAN ST. SIKATUNA VILLAGE, QUEZON CITY HERRERA, ARZEL K. VILLAR

DESIGN CONCEPT

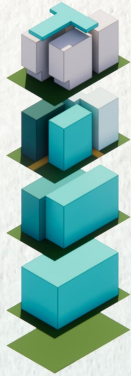


APERTURE A TERM USED TO BE ASSOCIATED WITH LENSES WHICH CONTROLS THE ENTRY OF LIGHT INSIDE THE CAMERA. CAMERA'S APERTURE IS ADAPTIVE TO THE CONTEXT OF THE PLACE, IF IT IS DARK, THE APERTURE AUTOMATICALLY ADJUSTS TO MAKE THE IMAGE APPEAR BRIGHTER. LASTLY, APERTURE CAN ALSO BE DEFINED AS AN OPENING OR SPLIT.

SITE ANALYSIS

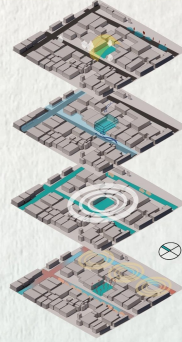


MASSING



SWOT ANALYSIS

- STRENGTHS**
- SITE LOCATION:** THE SITE IS LOCATED AT A POINT WHERE IT IS NEAR BUSINESS ESTABLISHMENTS AND PUBLIC TRANSPORTATION BUT WITH LESSER NOISE AND HUMAN TRAFFIC
 - LOT SHAPE:** THE SHAPE OF THE LOT IS RECTANGULAR THUS EASIER TO GENERATE DESIGN FORMS
 - SITE ORIENTATION:** THE SITE'S LONGER SIDE IS FACING NORTH AND SOUTH WHICH IS MORE DESIRABLE TO AVOID DIRECT SUNLIGHT
 - SLOPE:** THE SITE IS RELATIVELY FLAT, THUS EASIER TO BUILD
 - NATURAL BUFFER:** THERE IS A TREE LOCATED AT THE BACK SIDE OF THE LOT WHICH CAN ALSO SERVE AS A BUFFER FOR NOISES COMING FROM MAGINAWA.
- WEAKNESSES**
- TOPOGRAPHY:** THE SITE IS RELATIVELY LOW, FLOODING MAY BE AN ISSUE, SOLUTIONS MAY INVOLVE SETTING HOUSING WITH LIFTERS AT THE SECOND FLOOR
 - WIND FLOW:** THE WIND AS EXPERIENCED ON THE SITE WAS A BIT MINIMAL
 - LOT SIZE:** CONSIDERING THE VALUE OF LAND IN THE AREA, THE SPACE IS A BIT CONGESTED TO FIT FOR 3 DWELLINGS, SOLUTION MAY INCLUDE GOING VERTICAL BUT WITHOUT DISTURBING OR BEING AN EYE SORE TO NEIGHBORING HOUSES
- OPPORTUNITIES**
- ACCESSIBILITY:** NEAR TO MAJOR ESTABLISHMENTS SUCH AS SCHOOL, HOSPITAL, RESTAURANTS AND BUSINESSES
 - VEHICLE:** TRANSPORTATION GOING TO AND FROM THE SITE IS EASILY ACCESSIBLE THRU JEEPNEYS AND TRICYCELS, THE STREETS LIGHT TRAFFIC IS ALSO DESIRABLE FOR PRIVATE SERVICES
 - LOCATION:** THE SITE IS LOCATED AT A STRATEGIC SPOT MARKING THE MARKET VALUE MORE ADVANCED THAN USUAL LOTS AROUND QUEZON CITY
- THREATS**
- TRAFFIC JAM:** THERE IS ONLY ONE ACCESS POINT TO REACH THE SITE IF GOING FROM MAGINAWA AND THERE IS A HIGH VEHICULAR TRAFFIC ON THAT INTERSECTION
 - NOISE:** SINCE MAGINAWA IS A BUSY STREET, THIS NOISE FROM BUSINESS ESTABLISHMENTS MAY BE UNAVOIDABLE
 - HOOT HEAT:** SINCE THE SURROUNDING BUILDINGS AND MATERIALS ARE MOSTLY CONCRETE, HEAT MAY SEEP INTO THE SITE
 - ONE SIDED PARKING:** IT MAY BE HARD TO TRANSPORT YOUR PRIVATE VEHICLE TO AND FROM THE SITE



USERS



DESIGN TRANSLATION



- CONTROL**
- CREATABLE SUN SHADING DEVICES AND DOUBLE ROOFING CONTROL THE ENTRY OF DIRECT SUNLIGHT
 - STRATEGIC PLACEMENT OF DOORS AND WINDOWS TO ENSURE PRIVACY
- ADAPTIVE**
- THE SITE IS A STRATEGIC SPOT FOR BUSINESS OPPORTUNITIES AND A LOT OF STUDENTS/EMPLOYEES ARE TRYING TO FIND A TEMPORARY SPACE TO STAY AROUND THAT AREA, THUS, THE DESIGN INTEGRATED A STUDIO TYPE RENTABLE SPACE BUSINESS FOR THE OWNERS OF EACH RESIDENTIAL UNIT.
- SPLIT**
- THE DESIGN IS A SPLIT LEVEL HOUSING WHICH IS A SOLUTION TO THE POSSIBLE FLOODING OF THE SITE, THE SPACES ARE ALSO SPLIT FOR EACH DWELLING TO BE ABLE TO ALLOW EACH USER TO HAVE A SENSE OF OWNERSHIP OF THEIR RESIDENCE.

MARKET ANALYSIS(3C'S)

CUSTOMER	
TARGET INCOME CLASS	MIDDLE TO UPPER CLASS
MONTHLY INCOME OF USER	PHP 121,380
CONSIDERATIONS	OWNERSHIP, PRIVACY, SECURITY, COST DENSITY

COMPANY	
PRODUCT	RESIDENTIAL HOUSING
LOT SIZE	16M X 25M (400 SQ. M.)
FLOOR AREA/UNIT	205 SQ. M.
LAYOUT	CLUSTER HOME

COMPETITORS	
AVERAGE LAND MARKET VALUE ESTIMATE	PHP 80,000 PER SQ. M.
AVERAGE CONSTRUCTION COST ESTIMATE	PHP 50,000 PER SQ. M. OF FLOOR AREA
ESTIMATE SELLING PRICE PER UNIT	AROUND PHP 20,000,000

EDGE APPLICATION

FINAL ENERGY USE:	629 kWh/MONTH/UNIT
FINAL WATER USE:	25.00 CU.M./MONTH/UNIT
FINAL OPERATIONAL CO2 EMISSIONS:	0.50 TCO2/MONTH/UNIT
FINAL EMBODIED ENERGY:	5.378 MJ/SQ.M.
FINAL UTILITY COST:	PHP 8,524/MONTH/UNIT
TOTAL FLOOR AREA:	415 SQ. M.
ENERGY SAVINGS:	135 kWh/yr
WATER SAVINGS:	918 CU.M./YEAR
OPERATIONAL CO2 SAVINGS:	0.45 TCO2/yr
UTILITY COST SAVINGS:	PHP 20,000 /YEAR/UNIT
BASE CASE EPI:	44 kWh/SQ.M./yr
IMPROVE CASE EPI:	37 kWh/SQ.M./yr
TOTAL BUILDING CONSTRUCTION COST:	PHP 5,900,000
INCREMENTAL COST PER UNIT:	PHP 1,900,000
% INCREASE IN COST:	32.38%

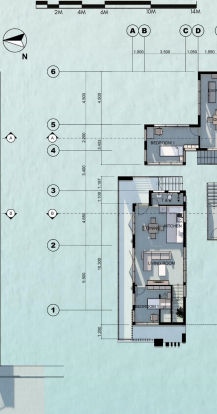
SITE DEVELOPMENT PLAN W/ ROOF PLAN



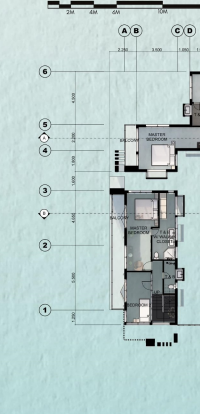
GROUND FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN



LEFT SIDE ELEVATION



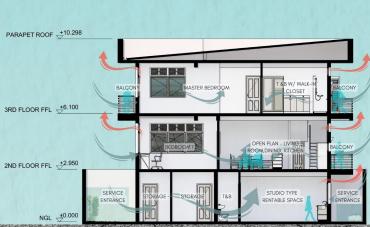
FRONT ELEVATION



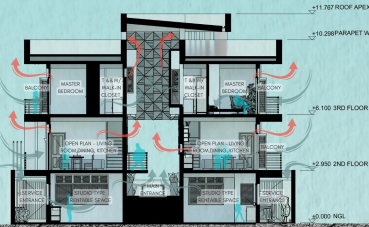
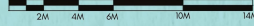
RIGHT SIDE ELEVATION



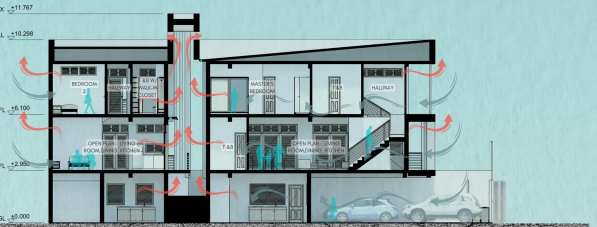
CROSS SECTION THRU A



CROSS SECTION THRU B



LONGITUDINAL SECTION THRU C



SUSTAINABILITY GOALS

CONTEXT ADAPTATION



WATER EFFICIENCY

- RAINWATER COLLECTION TO BE USED FOR WATER CLOSET FLUSHING IN 1ST AND 2ND FLOOR
- DUAL FLUSH SETUP, LOW-FLOW BATHROOM FIXTURES



ENERGY EFFICIENCY

- VENTILATION: INTEGRATION OF PASSIVE COOLING SYSTEMS STACK EFFECT (BIG LOWER OPENINGS AND SMALL HIGHER OPENINGS) CROSS VENTILATION (TWO OPENINGS ON SPACES)
- SUN PROTECTION: INTEGRATION OF OVERHANGS, AND SUN-SHADING DEVICES, LIGHT COLORED EXTERIOR FINISHES

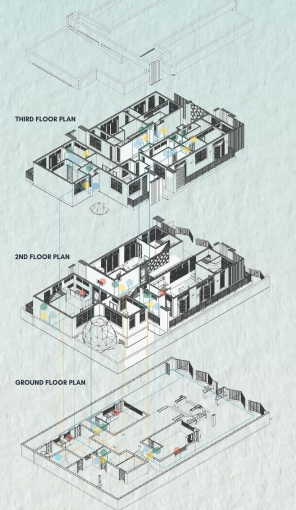


CARBON FOOTPRINT

- PROMOTE WALKING / CYCLING AND INTEGRATE BIKE RACKS ON THE DESIGN
- LOCATION: THE LOCATION OF THE SITE HAS A HIGH WALKABILITY RATE TO OTHER IMPORTANT ESTABLISHMENTS

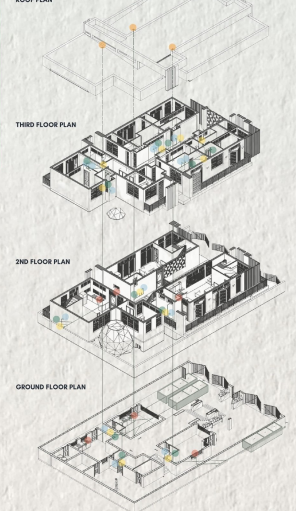
WATER SUPPLY SCHEMATIC DIAGRAM

- KITCHEN SINK
- WATER CLOSET
- LAVATORY
- SHOWER
- WATERLINE FROM LOCAL WATER SUPPLY
- WATERLINE FROM RAINWATER COLLECTION TANK
- RAINWATER TANK

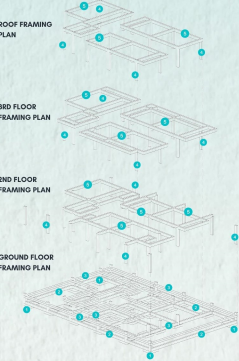


SANITARY SCHEMATIC DIAGRAM

- KITCHEN SINK
- WATER CLOSET
- LAVATORY
- FLOOR DRAIN
- SANITARY LINE
- WASTE
- SANITARY TANK (2M X 2M X 5M)



EXPLODED AXONOMETRIC STRUCTURAL DIAGRAM



- INDIVIDUAL SPREAD COLUMN FOOTING
- FOOTING TIE BEAM
- STRIP WALL FOOTING
- RC COLUMNS
- RC BEAMS

DESIGN FEATURES

WATER EFFICIENCY

CARBON FOOTPRINT

ENERGY EFFICIENCY



VARNISHED DARK WOOD TIMBER LOUVERS



EXPANDABLE LIVING ROOM TO BALCONY



BICYCLE RACKS



RAINWATER DOWNSPOUT



ALCOVE READING NOOK



JALOUSIE TYPE CLERESTORY WINDOWS AND BIFOLD LOUVERED DOORS

MATERIALS



SIMULATED CEILING WOOD CL 10012



TIMBER LOUVERS



LASER CUT PERFORATED PANEL WITH DARK BROWN PAINT FINISH



LIGHT GRAY PAINTED GRAY CEMENT FINISH



POLISHED CONCRETE



METAL

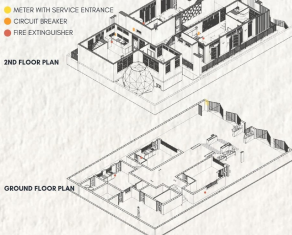


GLASS



GI ROOFING MODERN ROOFING CENTER RIBTYPE

ELECTRICAL / FIRE PROTECTION



- METER WITH SERVICE ENTRANCE
- CIRCUIT BREAKER
- FIRE EXTINGUISHER



APPROACHING



OPEN PLAN



MASTER BEDROOM UNIT 1



MASTER BEDROOM UNIT 3



BEDROOM