

FLOATING HOUSE

LOCATION: 2°3'28.45"S 79°54'53.89"O Trinitaria island, Guayaquil – Ecuador.

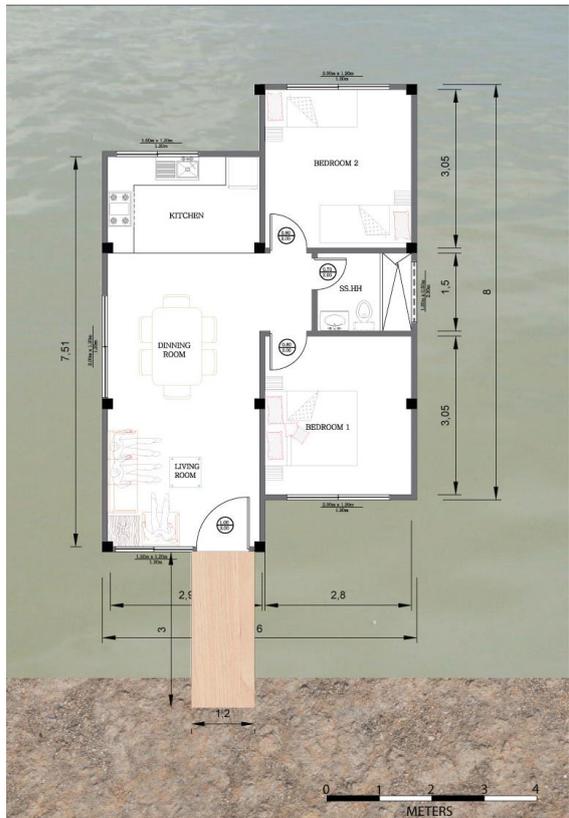
The branches of estuaries that have survived the overwhelming growth of the urban informal south of Guayaquil have different perceptions from the perspective of the actors directly or indirectly related to it. For some it is the memory of the natural environment that received 50 years ago and on which only the poorest people in search of land to live risked families to settle. However, for other city residents who observe it daily and even their homes sit directly on their flood banks, is simply invisible.

The recovery of mangrove and implementation of activities to cover the deficit of green areas and recreation experiencing poor neighborhoods south for their physical saturation are two major forces transforming these edges to be properly studied.

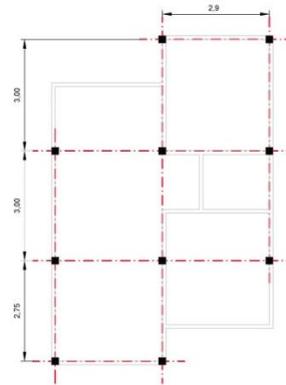
The objective of this proposal is to rescue the potential of this water body as integrated border between humans and nature within the city. The proposal seeks to generate new solutions and make visible the estuary and its branches. Recover its natural importance and strengthen its potential as an integrator of the city physically and socially fragmented. In terms of strategic urban planning south of the city of Guayaquil sector, the estuary is the key element to generate a sustainable urban development for settlements of low-income families.

PROPOSAL

FLOOR PLAN



STRUCTURAL PLAN



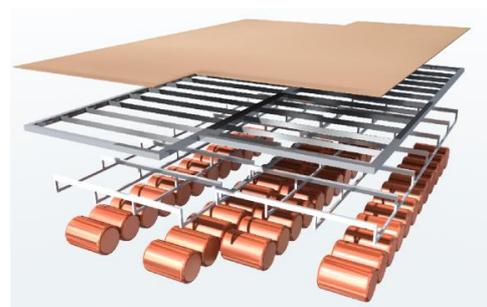
ELECTRIC PLAN DESIGN



FRONT FACADE



PLATFORM



FLOATING PLATFORM: The Trinitaria island is populated by precarious stilt houses that respond in a basic form the problem of constant flooding by the rise and fall of the tide. The constructive and floating anchoring system we propose tries to solve the flooding problem without removing the identity of homes on the water that has this island. The flotation system follows the typology of a dock platform with steel frame with corrosion protection and 25-gallon plastic tanks sealed with air. This platform is anchored to the shore by a bridge that also serves

as the main access to the house, which is attached by fixed vertical joints that allow the rise and fall depending on the tide level.

CONSTRUCTIVE SYSTEM: HORMI2 STRUCTURAL SYSTEM - ECUADOR

ADVANTAGES IN THE USE OF THE HORMI2. _

Light: to use expanded polystyrene, m² panel weighs 6 kg/m², which makes it easy maneuverability and handling, and in the work are not carried out in deep excavations.

Constructive quickly: system allows savings of up to 40% at runtime work.

Easy construction: is a system for easy transportation and installation. It improves the performance of the personnel engaged in work, and there is a reduction of personnel. In addition, its construction process is not required chopping and spackling walls for installations.

Resistant: having a mesh of steel welded to each side, which after being coated with a micro-concrete, the system offers high strength that conveys strength and safety.

Versatile: adapts to any constructive detail, regardless of its type or architecture, giving constructor multiple possibilities of application, even under difficult operating conditions or in adverse weather conditions.

Saving materials: provides significant cost savings by reducing the use of formwork, wooden, structure, nails, etc., which contributes directly to lower costs of housing.

Cleaning work: reduces considerably the eviction of waste and waste generated, turning a cleaner work.

Less time investment: the rapidity of construction allows the work to be delivered in less time, which allows also, the recovery of money faster.

SOURCE: HORMI2, THE NEW GENERATION OF CONCRETE

BUDGET

GENERAL STRUCTURE						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
HORMI2 STRUCTURE	m2	47,23	\$ 35,00			\$ 1.653,05
COLUMNS	m3	1,56	\$ 351,96	\$ 170,35	\$ 23,46	\$ 1.363,86
SLAB	m3	7,06	\$ 331,96	\$ 95,30	\$ 10,41	\$ 5.360,09
RAFTER	m3	0,76	\$ 363,34	\$ 156,45	\$ 26,62	\$ 671,18
LINTEL (DOORS AND WINDOWS 0,10x0,20)	lm	1,50	\$ 7,84	\$ 5,74	\$ 0,41	\$ 32,13
TOTAL GENERAL STRUCTURE						\$ 9.080,31
PLASTER						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
EXTERNAL WALLS	m2	67,43	4,35	\$ 9,01	\$ 0,64	\$ 60,90
INTERIOR WALLS	m2	70,23	3,05	\$ 5,71	\$ 0,41	\$ 27,97
COLUMNS	lm	2,8	0,59	\$ 1,55	\$ 0,11	\$ 1,33
TOTAL PLASTER						\$ 90,19
PAINT						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
EXTERIOR PERMALATEX CONDOR	m2	67,43	2,80	\$ 2,27	\$ 0,11	\$ 14,50
INTERIOR PERMALATEX CONDOR	m2	70,23	2,80	\$ 3,06	\$ 0,15	\$ 16,83
TOTAL PAINT						\$ 31,33
ROOF						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
STEEL PANEL SHEETS (3,60x0,25)	m2	47,13	18,82			\$ 886,99
TOTAL ROOF						\$ 886,99
ELECTRIC INSTALATION						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
POWER METER	global		\$ 110,33	\$ 29,50	\$ 2,11	\$ 141,94
ELECTRIC PANEL	global					
LIGHT POINT	unit	8	\$ 20,25	\$ 21,91	\$ 1,56	\$ 349,76
POWER POINT 110V	unit	8	\$ 21,32	\$ 21,91	\$ 1,56	\$ 358,32
POWER POINT 220V	unit	1	\$ 33,03	\$ 24,44	\$ 1,75	\$ 59,22
TOTAL ELETRIC INSTALATION						\$ 909,24
SANITARY INSTALATION						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
COLD WATER POINT	unit	4	27,35	\$ 14,39	\$ 1,03	\$ 171,08
COLD WATER DISTRIBUTION	unit	4	6,9	\$ 17,23	\$ 1,23	\$ 101,44
BATHROOM SINK	unit	1	80,64	\$ 14,39	\$ 1,03	\$ 96,06
BATHROOM TOILET	unit	1	110,07	\$ 14,39	\$ 1,03	\$ 125,49
PVC PIPE 4'	lm	1,42	10,49	\$ 23,94	\$ 1,71	\$ 51,32
PIPE 6'	lm	29,49	23,08	\$ 23,94	\$ 1,71	\$ 1.437,05
TOTAL SANITARY INSTALATION						\$ 1.488,37
DOORS						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
PLYWOOD DOOR 1,00X2,00	unit	1	\$ 187,15	\$ 25,23	\$ 1,80	\$ 214,18
PLYWOOD DOOR 0,80X2,00	unit	1	\$ 184,65	\$ 25,23	\$ 1,80	\$ 211,68
TOTAL DOORS						\$ 425,86
VARIOUS						
CONCEPT			MATERIAL	HAND WORK	EQUIPMENT	TOTAL
KITCHEN COUNTER	lm	4	\$ 29,82	\$ 22,94	\$ 1,64	\$ 217,60
TOTAL VARIOUS						\$ 217,60
TOTAL HOUSE						\$ 13.129,89

PLATFORM						
Concept	Unit	Quantity	Material	Labor	Equipment	Total
Armex Joist 6,5 m 70mm 10x10	U.	7,08	\$16,00	\$147,00	\$9,45	\$269,68
Joist Side Face T 1"x3/4"x6m Aluminum	U.	13	\$6,05	\$63,00	\$6,30	\$147,95
Marine Plywood (4m x 8m x 0,18m)	U.	1,5	\$44,00	\$0,00	\$10,75	\$76,75
Water tank 25 gl 0,90m high x 0,30m radius	U.	52	\$5,00	\$0,00	\$0,00	\$260,00
BRIDGE						
Armex Joist 6,5 m 70mm 10x10	U.	1	\$16,00	\$0,00	\$0,00	\$16,00
Joist Side Face T 1"x3/4"x6m Aluminum	U.	0,5	\$6,05	\$0,00	\$0,00	\$3,03
Marine Plywood (4m x 8m x 0,18m)	U.	1	\$44,00	\$0,00	\$0,00	\$44,00
			SUB TOTAL			\$817,41
			CONTINGECY 5%			\$40,87
TOTAL PLATFORM						\$858,28
SUBTOTAL						\$13.988,17
UNEXPECTED EVENTS					10%	\$1.398,82
TOTAL: Fifteen thousand three hundred eighty six dollars and ninety nine cents						\$ 15.386,99

NATIONAL FUNDING FOR HOUSING: BIEES

Competitive advantages: Credit of the lowest market interest housing, Maximum 25 years, Automatic online prequalification.

Funding for: New or used apartments or houses, Individual houses, Dwellings forming part of a residential complex.

CONDITIONS OF FUNDING

Amount and financing: If the value of the appraised value of the home is less than or equal to USD 125,000 100% may finance up to \$ 100,000; If it is more than \$ 125,000, Biess will finance 80% of the total of the property and the difference shall be covered by the applicant.

Maximum period Up to 25 years and maximum age to grant a credit of 75 years.

Rate of interest: The interest rate granted to mortgage, fluctuates based on the period, taking as a reference the rate enables effective referential of the segment of housing published by the Central Bank of Ecuador, whereas the maximum terms of payment. The rate is reset every 180 days.

BORROWING CAPACITY

- Depends on the ability to pay taken into account for the last 6 months average of salaries paid to the IESS and its monthly average indebtedness.
- The affiliate can commit up to 40% of net revenues, once deducted the debts reported by the Bureau of credit and risk Central