

# CASE STUDY RESEARCH

## PART

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## AIDS and TB Resistant Housing Case Studies

- **Colonia San Martin Holistic Health Care Center for PLWHA in Sacramento:**

Colonia San Martin is a 60 unit apartment complex. 40 units are reserved for families with at least 1 PLWHA. The other 20 units are affordable units reserved for families regardless of their HIV status. A large community center, including a dining room, kitchen, residents' computer room, case management offices, a medical examination room, and smaller meeting rooms for counseling is also available. A children's playground, a garden with raised beds, and a fruit orchard make up the exterior. The facility currently exceeds energy efficiency standards by 25% and incorporates sustainable design features such as solar panels, preheat water for laundry and other features.

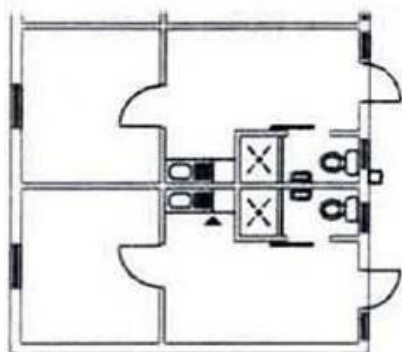


*"Colonia San Martin Permanent Supportive Housing."* AIDS Housing Alliance. Web. Aug. 2009. <http://www.aidshousingalliance.org/newProjects.shtml>>

- **Langa Hostel Renovation in Cape Town, South Africa:**

Langa Hostel Renovation is a development action group that renovated a dilapidated and over-run social co-op hostel in Cape Town, South Africa. The new design allows for the privacy of each tenant, while providing a communal space encouraging social interaction. The minimum requirements of a housing unit for a typical family is:

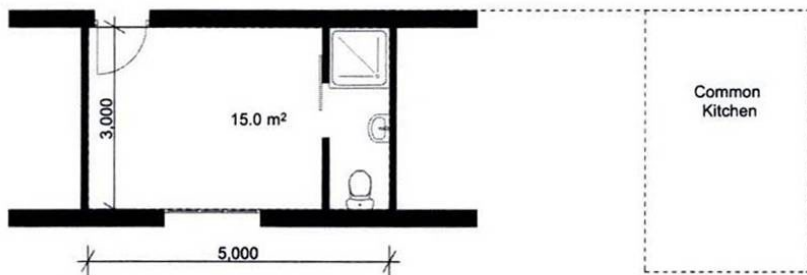
1. 22.5 m<sup>2</sup> of total floor space
2. 1 light fixture & 1 window per room
3. 9 m<sup>2</sup> bedroom
4. 11 m<sup>2</sup> lounge/kitchen with a kitchen sink
5. A 2.5 m<sup>2</sup> bathroom with a toilet, shower, hand wash basin, & sliding door



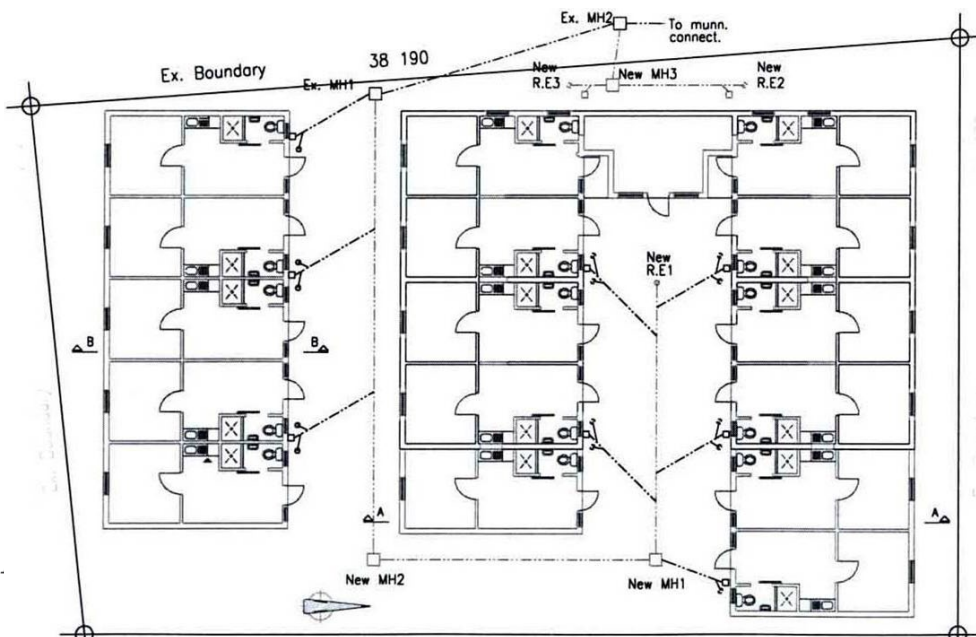
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In some instances amenities such as private bathrooms for people living on their own are necessary, DAG states that the requirements for single person units are:

1. 15 m<sup>2</sup> total floor space minimum if there are private bathrooms.
2. Or 12 m<sup>2</sup> floor space with access to shared cooking facilities and bathrooms is adequate



Key design principles for low income housing at Langa Hostel Renovation include adequate living space and privacy, good quality communal space, optimal use of space, flexibility and adaptability, energy efficiency, greening, supporting sustainable livelihoods, integration into surrounding urban areas, and contextual sustainability. Individual bathrooms in converted units provide needed privacy. Additionally, an open courtyard between housing units provides communal social space.



Design Action Group, and Urban Sector Network. Design Options and Delivery Models. Rep. USAID, Apr. 2003. Web. Aug. 2009. <<http://www.dag.org.za/docs/research/14.pdf>>

• La Roche Village Relocation in La Saline, Haiti:

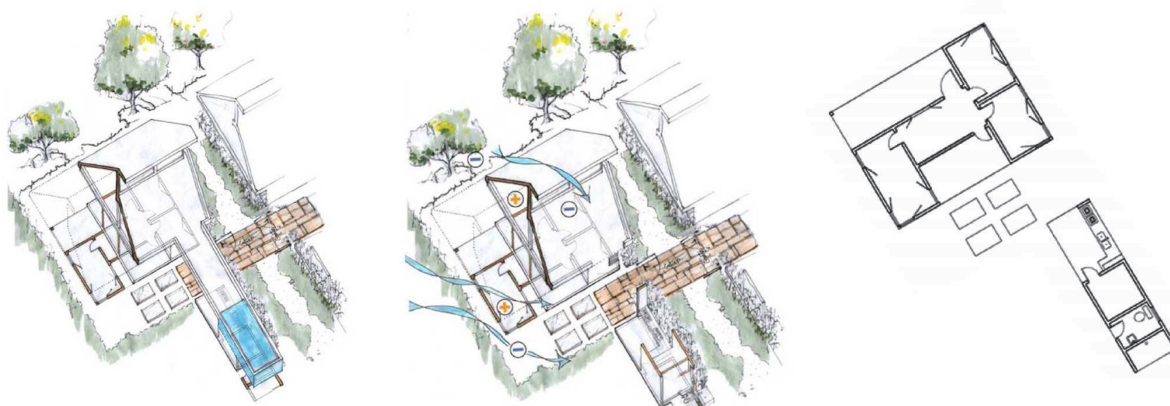
After disastrous flooding from Hurricane Lili in 2003, The Organization for the Rehabilitation of the Environment (ORE) relocated 30 families living in La Saline, Haiti to a new site - La Roche. Here, rooms just large enough for 2 beds typically slept 4 people. The new village in La Roche was designed through a series of community meetings and surveys to accommodate the needs of the families. Solar patterns were studied to determine the best location for each home and existing drainage issues were improved by a canal using bioswales. The disposal needs of each family were resolved through the strategic placement of compost sheds and dumpsites. Wind patterns and daily heating and cooling cycles were analyzed to plan a vegetation system that creates wind channels to ensure proper natural ventilation for each home.

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Improvements in living conditions include better lighting, ventilation, sanitation, water collection systems, water use, organization and the stacking of functions. Features in the homes include:

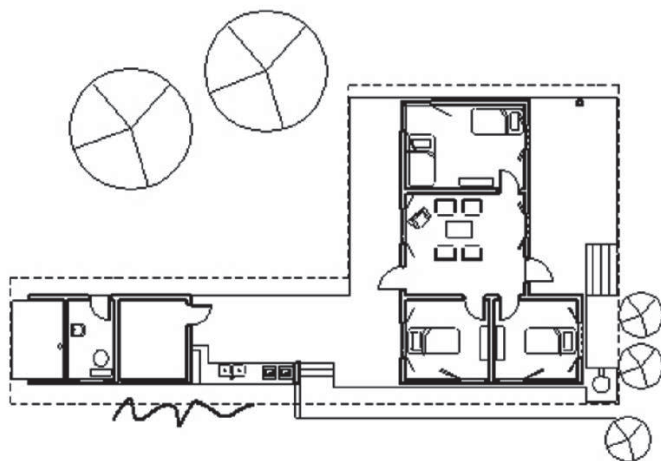
1. Gravity-Fed Water Distribution which provides flowing water to the kitchen, toilet, shower and garden.
2. Composting Toilets use vermiculture (waste composting worms) and graywater treatment to deal with waste.
3. Natural Ventilation encourages orienting walls at 20°-30° oblique to wind direction, locating window openings on opposite walls, creating high & low pressure zones.



4. Water Catchment Systems involve roof water collection, sink and work area water recycling, and gravity-fed water distribution.
5. Daylighting positions windows against walls and roof sections
6. Rammed Earth Construction was utilized. This is a system where a special mixture is pressed in wooden formworks and then is a solid and a natural construction. Soil is a material which is very easy to obtain as it can be excavated at the building site, which lowers the costs of transport. This type of construction reduces the need for concrete intensive materials, eliminates the need for posts and beams, and allows for strong, cost-effective, quick construction. Rammed earth is also an excellent insulating and temperature regulating material which will help to avoid overheating.

Typical houses at La Roche are for 6-8 people, at 1380 sq. ft. Organization of public and private spaces was determined by layout of the lakou or courtyard. The organization also accommodates social and spiritual security, suits the aesthetic values of Haitians, and has versatile living arrangements that will accommodate individual family needs.

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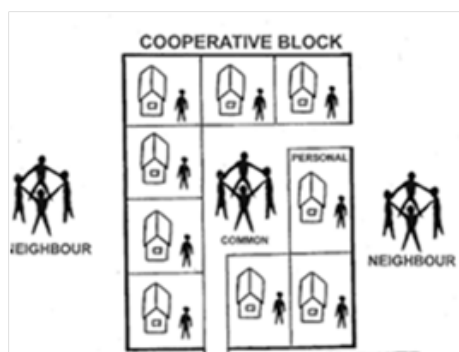
Organization for the Rehabilitation of the Environment, and AJEC. Laroche: *Relocating a Village in the South of Haiti Threatened by Flooding. Presentation. 2003. Web. Aug. 2009.* <<http://www.slideshare.net/gueste297f/haiti-housing-project-presentation>>

- **Masisizane Women's Co-op for PLWHA in Ivory Park, South Africa:**

Masisizane Women's Co-op is a development housing co-op whose goal is to enable individual leadership. Its objectives are to: provide 300 brick homes to members through rotating savings schemes. "Rotating savings schemes" needs a brief definition. It seeks to create local economic development initiatives by creating jobs, construction materials & skills. It provides for active HIV/AIDS groups as well as home-based ones.



The project consists of free-standing 40 sq.m core houses built on a 200 sq.m service stand, divided into 3 spaces which many beneficiaries build upon at their own expense. Access to electricity and water connections are available at the perimeter of the stands. The houses are constructed on cement slabs prepared by a private sub-contractor. The walls and roof are constructed by construction teams organized by the Co-op. Many of the beneficiaries initiated the expansion of the initial design, taking the opportunity to add in additional rooms or verandahs.



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The Co-op provides short-term & long-term work for over a hundred local people, including brick-making, housing support administration, construction, plastering, window-making & an HIV/AIDS support team. These efforts create jobs and other economic opportunities while simultaneously tackling social issues such as HIV/AIDS and gender issues. Masisizane empowers both women and PLWHA by providing a AIDS workshops for all members and support team for PLWHA.

### The Block Yard:

The block yard in Masisizane was established to manufacture and sell masonry blocks to benefit the members of the program. It is situated next to the housing support center and overseen by volunteers. They manufacture two different types of masonry products: the external hollow core block (45x14x20 cm with two holes that run through the core) is used for exterior walls and “mamparras” (29x9x14 cm) which are solid bricks used for interior walls.

These masonry units are manufactured by hand-powered molding machines and are left to harden on a concrete slab. The yard has the capacity to produce 1800 bricks/day and 1000 blocks/day, which sell for R1,50 and R2,50 respectively.

### House Snapshots:

Anna Zondi: A 45 sq. m house built by the community as a donation for Anna Zondi, who is a pensioner and was unable to help with the construction. The house was built with blocks manufactured by the Masisizane block yard. The roof is asbestos Big 6 on timber purlins, both the external and internal walls are plastered and painted; there are no ceilings. The house has electricity, an outside toilet with a water point at the back of the house. There are four shacks in the backyard that are rented out to tenants to provide Anna with a supplemental income.

HIV/AIDS : The community built a house specifically for an unemployed couple who are HIV+ and have six children. The husband has since died of AIDS. The home enabled the couple to move their family out of shacks and into more permanent, suitable living conditions. The house was 45 sq.m and was accompanied by a garden to improve their diet to combat the disease.



*The Social Housing Foundation. Emerging Co-operative Housing Models in South Africa. Rep. Web. Aug. 2009. <<http://www.ica.coop/al-housing/attachments/Emerging%20Coop%20Housing%20Models%20in%20South%20Africa.pdf>>*