

REFUGEE VILLAGE, MASTERPLAN PROPOSAL

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The proposal envisages the creation of refugee villages, or processing centers, in Lesbos, Kos, and other 'hot spots' in Greece, perhaps also in Italy and elsewhere in the Mediterranean. Refugees arriving there would have temporary quarters (for a few days or weeks at the most) while they wait to be processed, with services, clinics, child care, refectories, clothing dispensaries, laundry service, etc. Their first experience in Europe would thus be welcoming and civilized.

The buildings would ideally be constructed of sun dried brick (adobe) which is cheap, easy to produce and quick to assemble. An additional advantage is that in their construction, as in their eventual dismantling, sun-dried bricks are highly ecological, as they do not generate deleterious amounts of carbon dioxide when being handled, nor do they leave toxic or other environmentally hazardous waste when discarded. Our intention is to assemble a team of international experts to train teams of workers in adobe construction, and supervise during the construction of the proposed buildings.

It is our hope that the realization of the refugee villages can be financed with European funds, but private initiative is also welcome. We expect that there will be a good return on investment, with gains both for the state and for private investors from eventual conversion of buildings into ordinary family dwellings, academic villages, and resorts, once the refugee crisis has subsided.

The masterplan is meant to serve as a template that can be made to conform to the particular topography of selected sites. A typical village would be organized in quadrants, forming four distinct urban quarters. These are arranged in pinwheel fashion around a central square which is bounded by public buildings, including an administrative complex with a processing center, offices, security, and fire station. Other public buildings would contain services such as a refectory and kitchens, cafés, clothing dispensaries, hairdressing, postal office, audience hall, clinic, child care, etc. Mosque(s) and a church (or alternatively, interfaith buildings) would open onto secondary squares a short distance from the larger central space. The urban quarters comprise residential blocks arranged around two greens, or landscaped public spaces. These are lined on one side by spacious community halls with multipurpose rooms, and separate restrooms and shower facilities for men and women. Surrounding each village would be dining facilities, daycare, entertainment, medical and other services, which would be useful especially whenever the villages reach maximum occupancy. Laundry pickup points serving the houses around each green are conveniently located near the community halls.

The residential units are deliberately modest in size (approximately 80 sq. meters) and in the nature of their furnishings. This is for two principal reasons: 1. to keep the cost of construction and maintenance down, and 2. to discourage prolonged stays. They are designed to

accommodate transient individuals with a basic degree of comfort, providing temporary shared quarters for individuals or for families of refugees who have just arrived and need immediate shelter and care. A typical unit comprises a ground floor with small dining area, kitchen, sleeping quarters and bathroom, and a loft with additional beds. Four or five beds with associated furniture can be easily accommodated in the combined ground floor and loft, and a couch or *divan* in the dining area can be used as an additional bed. Curtains would afford the ground floor sleeping area a modicum of privacy without requiring the construction of walls, which would be an additional expense. Small fireplaces have been incorporated in the dining areas, to serve as a supplementary heating source or cooking facility, which for many refugees is a familiar and reliable resource.

The walls of a typical unit are made of sun dried mud bricks (adobe), which may be manufactured locally, even on site, provided there is available clay-rich earth. These bricks are manufactured easily using simple wooden forms into which a thick, wet mixture of clay mud, hay, and sand is poured and left to dry. Drying takes approximately a week or two, which is about the same time for the construction of the walls and roofs. Individual units could thus effectively be constructed within three to four weeks after foundations are set. In the model we propose, the roofs are also made of sun dried brick, laid in rows of inclined arches to form vaults according to the so-called 'Byzantine' method. The bricks are held together with mortar made of the same clay mixture. Walls are plastered with a thick coat of lime, which forms a waterproof exterior. The vaulted brick roofs are given an additional layer of fired brick tiles, to ensure impermeability. Floors are made of simple wooden decks with built-in natural insulation (e.g. pumice or hay), painted and set on continuous concrete footings above a layer of gravel. Simple area rugs would provide additional insulation.

Urban blocks are made of contiguous barrel vaulted units, with shared walls to reduce costs and increase expediency in construction. Facades have simple openings, perhaps with alternating square and arched window and door types to ensure a degree of variety. Operable clerestory windows at the front and back of each residential unit—the ones at the rear serving the lofts—permit cross ventilation when the ground floor windows and doors are closed. Small courts at the back of the units provide natural light and are convenient locations for modest bathrooms with a shower, sink and toilet. As shown in the aerial view at the ends of the urban blocks, small towers, some perhaps serving as actual dovecotes, would take the place of the open court and incorporate larger bathrooms. The end units that are illustrated in the elevations depict a simpler option, which does not include towers. At these locations, between end units on the sides facing the street, small gated enclosures hide waste and recycling bins that serve the units on each block.

As indicated in the section cuts, the mud brick walls rest on continuous concrete footings. These circumscribe the units and the spaces between them are filled with gravel. Plumbing and waste pipes are buried in the gravel, and are easy to access. The floors are made of removable wooden decks, easily assembled on site, which are painted on their upper surfaces and laid next to each other on the ground floor, and supported on posts and beams to create the lofts. The construction of the residential units is conceived for maximum economy and expediency, using the most

ecologically responsible materials made from locally available resources. The mud bricks can eventually be demolished and broken up, and worked back into the top soil without affecting the site's agricultural productivity. If on the other hand the buildings are re-purposed after the refugee crisis abates, their adobe construction is guaranteed to endure for decades, even for generations to come.