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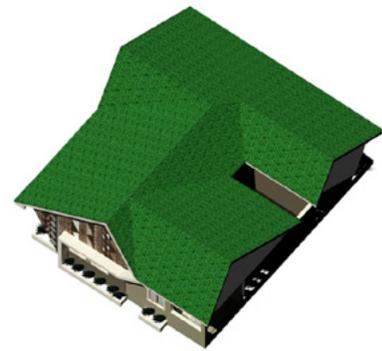
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UMOJA

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HONORABLE MENTION
Promoting a synthesis of African design



OVERVIEW

‘Umoja’ is the Swahili expression for unity. It is a sacred task in history attempting to formulate a multicultural, yet singular theme for modern African architecture. Just as the Latin phrase “e pluribus unum” means “out of many, one” and also describes the word ‘university’ as finding unity in diversity, this idea has informed my approach in general. Umoja becomes the melting pot that emulsifies the diverse ingredients of culture, aesthetics and sustainability.

INSPIRATION

Umoja design is inspired by the ‘Golden Rectangle’ or the divine proportion phenomenon seen in nature, art, architecture and geometry inspired by the unprejudiced decorative patterns of the Gurunsi people of northern Ghana and southern Burkina Faso. The decorative patterns symbolize the same diverse decorative symbols evident all across Africa.

CONCEPT

Umoja explores proportion and geometry research findings in regard to the Golden Rectangle. Most African vernacular, art, and architecture is characterized by intricate geometric forms, patterns, symbols and motifs; debunking any ideas that vernacular architecture is lacking in both identity and meaning.

The Golden Rectangle is a rectangle with its sides in ratio 1:1.618 represented by Greek letter phi. 1:1.618 is also recognized as the “Golden” number, divine proportion, golden section, and Fibonacci’s constant.

TRADITIONAL ARCHITECTURAL ELEMENTS INCORPORATED IN UMOJA

- Courtyard design strategically zoned for increased ventilation and airflow
- Integration of laundry-space alongside the kitchen which could also serve as a substantial local meal preparation area
- Functional plan which celebrates the carry-over rituals of most African residential cultures of having an ante room (with a visitors’ toilet) before gaining entrance into other spaces of the building
- Roof gutter system formed by the courtyard roof for water recycling

Traditional Aesthetics Sourced from Traditional Design for Exterior Finishing

- Reinterpretation of the motifs and patterns seen on the exterior of most Gurunsi buildings
- Natural, earthy color schemes that blend with nature

BUILDING MATERIALS USED IN UMOJA

- Green colored Hydraform roofing tiles
- Hydraform wall bricks
- Hydraform foundation bricks
- Aluminum window frames with UV protective glazing
- Extruded polystyrene integrated foam for projected shading forms

HOW UMOJA ADDRESSES ISSUE OF HEAT, VENTILATION AND AIRFLOW

- Deliberate window arrangements in room spaces for cross ventilation
- Courtyard integrated for effective airflow
- Strategic aligning of kitchen space and its windows to reduce heat and trapped smoke

WHAT MAKES UMOJA SPECIAL AND ATTRACTIVE TO PROSPECTIVE HOMEOWNERS

- The modular and gridded layout plan in constant intervals enables ease in setting out and construction.
- Umoja's simple form is aesthetically pleasing using a regular and repeated roof slope to form a frame to the wall surfaces finished with motifs.
- Umoja pays homage to the modern African kitchen by building an area adjacent to the dining space to provide ample space to prepare, cook, and wash. Integration of laundry-space outside the kitchen which could also serve as heavy local meal preparation area.
- Availability of materials

The characteristics listed above of the Umoja are worthy of becoming a building code requirement for construction in Africa.

