



Large Scale Factory Layout

Capable of producing 50,000, 2500 s.f.
homes per year
or 167 homes a day or 420,000 s.f per day

Laminate Production Line -

The phenolic resin laminates that produce the strength of our panels are produced via a conveyor system through our proprietary process.

The laminates are cut to panel specifications or coiled for shipping to remote panel plants.

Plug & Play Electrical / Accessory Support -

The EPS foam initially will be manufactured by third party and delivered to the site with chases pre cut. Wiring Harnesses are installed and any necessary in-beds are installed.

Composite Panel Vacuum Press -

The EPS foam Core is bonded to the composite laminate and squared by the CNC machine.

Panel Assembly and Sizing -

Panels are cut to size and electrical outlets and special features are exposed and moved to shipping.





Scope of **HCSAFRICA** Homes

The scope of most projects is to furnish multiple single residential home kits complete; including a basic standard specification as follows:

- Structure Panels are built to conform the shell and interior walls of the house,
- Light texture interior and exterior paint,
- Two panel Vinyl windows
- Complete Plumbing and Fixtures (Toilet, sink, tub and Faucets)
- Electrical Complete, Breaker Box, Switches, Outlets, and Lighting Fixtures
- Kitchen Cabinets, countertop and hardware
- Flooring
- Solid composite exterior doors with tempered glass as needed, hollow composite interior doors with builder's grade hardware,
- Appliance Packages available on request
- Furniture Package Available on Request
- Foundation for selected areas

It is recommended these homes either be built on top of a 4" minimum concrete slab with a 12" outer beam or a **HCSAFRICA** Panel Floor System. The cost difference for the slab vs anchored panel is dependent to the region, but generally similar in cost, However, A Horton Panel Floor System can be installed in a few hours and the home can go vertical immediately.

HCSAFRICA Panel Design parameters:

- Country: International Use
- Seismic Zone: 5 (Five) - Tests exceeded 8.0 on richter scale
- Ground type: Any
- Basic sustained wind speed: up to 215 MPH
- Missile testing: 235 MPH
- Wind direction: Any
- Type of exposure: Urban to Rural Areas
- Classification by use: Housing and light Commercial to 3 stories
- Type of Structure: I (Closed)
- Level of Design: ND2
- Overload Ceiling: 100 KG/M2
- Overload: 175 KG/M2
- Frequency Response: 4 (Type of structure and level of design ND2)
- Movement of Design: $A_0=0.30$



Cost Per Housing Unit

Note: Costs per house will be provided once the following factors have been determined. Floor plan, finish package, electrical loads, appliance package, additional amenity package, HVAC selection, and final destination and site selection. In general, the **HCSAFRICA** structure is competitively priced, but is built in 1/3 of the time and is a far superior structure as it is energy efficient, with a carbon footprint that can be 1/10 that of traditional construction.

Cost Per Factory

HCSAFRICA offers a wide array of Factory set-up options and will vary according to project size, anticipated output requirements and available labor costs. In most cases, factories will be located in close proximity to the projects and produce many smaller factories around the area, vs a single larger factory due to the job creation factors and logistics of shipping the finish panels which are high in volume vs weight.

Additional Available Features

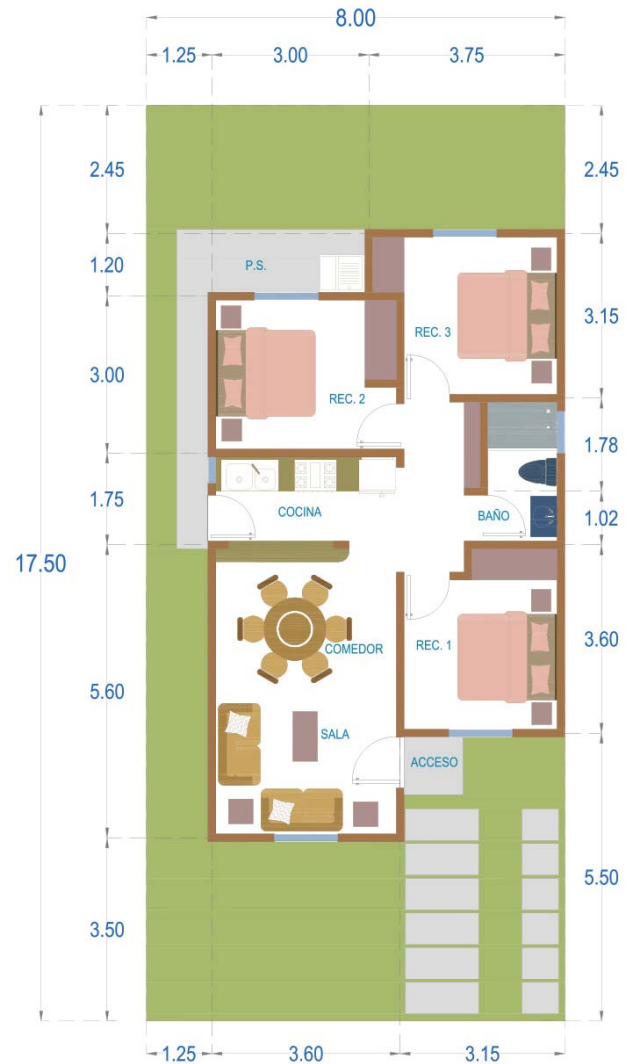
HCSAFRICA offers plug & Play electrical systems, Integrated Solar packages, Smart Home systems, and energy efficient windows and doors. All components are intended to provide a highly energy efficient home that reduces energy consumption and utility bills with the goal to provide a fully sustainable home or building.





Sample WORKFORCE HOUSING DEVELOPMENT

This simple floor-plan is a cost effective solution to high density areas. A home designed like this can be completed in a few weeks from start in the factory, to construction in the field, to furnishing and occupancy. **HCSAFRICA** can provide a factory solution that delivers from 100 to 100,000 units annually. **HCSAFRICA** with its vast experience can also aid in the construction and development of communities completely independent of the municipal utility department, “off-grid”, through the use of solar power, co-gen. electric plants, water treatment plant kits and solar water purification systems.



3 Bedroom Social Home



DANIEL C. SMITH, PE
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Mr. Terry Horton
Horton Construction Systems
Dallas Texas

Subject: Evaluation of Composite Construction Panel for Use in
Residential Construction.

For the past 4 years I have hands on experience with the fabrication of extruded styrene foam with a DuraSIP 2400 and 2415 phenolic resin non-woven fiberglass structural sheathing. In addition to fabricating these panels we have also performed numerous engineering calculations and statically tested and 3rd part wind tested these panels.

Early this year I traveled to Tulsa, Oklahoma to meet with John Pardue to design connections typically found in residential construction.

These connections and panel testing were then constructed by John Pardue and structural testing has been performed by Intertek Testing Labs and in-house testing reviewed by Dr Keller, PE.

These structural connections and panel structural testing were designed to meet the structural needs of high wind zones along the East Coast and Florida. The connections more than adequate to meet the hurricane wind generated forces and pressures applied to residential houses.



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The lightweight composite panels are an ideal structural member for seismic areas. The panel weight during an earthquake is directly related to the forces applied on the connections. Earthquake loads for composite panels are much smaller than hurricane wind driven loads.

Qualifications

BS Civil Engineering and an MS in Structures and Dynamics (with composite structural classes). Residential and Commercial design experience utilizing both the International Building Code (IBC) Residential and the IBC Commercial code books.

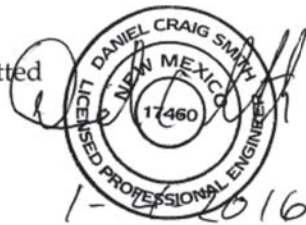
Forensic evaluation of construction defects and structural failures. Licensed professional engineer in 47 states. Own a consulting engineering firm since 1997.

Summary

Based on my engineering experience, education and testing of the composite panels, I find these panels to be suitable members in the structural design of residential housing projects.

Design load for the State of New Mexico are considered in this statement.

Respectfully Submitted



Daniel C Smith PE



**ENERGY STAR
Envelope And Duct Leakage
Control Certificate
CONGRATULATIONS!**

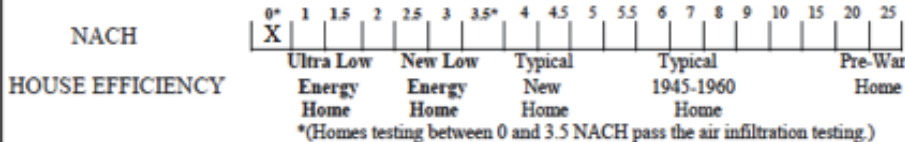
Your home has been tested by Curtis Maxwell of Home Energy Solutions.
 Builder/Homeowner: Horton Business Solutions - David Oberle
 Address:

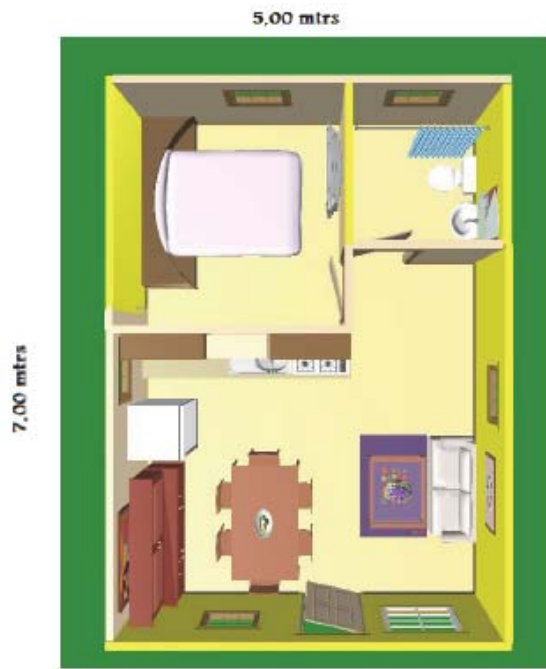
By taking advantage of this procedure, you have taken a major step towards improving your home's comfort and energy efficiency. High quality materials have been applied to seal the air leakage in both the areas the home's envelope and the duct system. Air leakage, as determined by various organizations such as ASHRAE, consume up to 40% of an average home's fuel. Two devices are used to help in determining the leakage in the envelope and the duct system: the **blower door** and the **Duct Blaster**.

The **blower door** is a device composed of an expandable frame, covered with a nylon sheet, into which a fan is inserted. Once the device is installed in an exterior door frame, the fan is used to depressurize the house to a measured level of 50 Pascals (Pa). When this pressure level has been obtained, a reading is taken of the amount of cubic feet per minute (cfm) passing through the fan. This number, called the **CFM50**, is compared to the leakage allowed for the home during analysis and in addition may be placed in a formula and converted to a natural air exchange rate or **NACH**, which tells us the amount of air in the house being replaced by outside air each hour. The CFM50 is an indication of the size of the holes in the home's envelope. The maximum NACH allowed is 3.5.

The other apparatus, the **Duct Blaster**, is more or less a miniature version of a blower door that is attached to the duct system. The register covers are all covered with a special tape, and then the system is pressurized to 25 Pa in this case. Again, the amount of air going through the fan is measured in cfm. The maximum **CFM25** number allowed is 6% of the conditioned square footage of the house.

Blower Door Test	Duct Test	House
Allowable: <u>840</u>	Allowable CFM: <u>N/A</u>	Pass: <u>X</u>
Actual: <u>227</u>	Actual CFM: _____	Fail: _____
NACH: <u>.89</u>		





Floor Plan



VALERIA 35sqm/ 1 bedroom



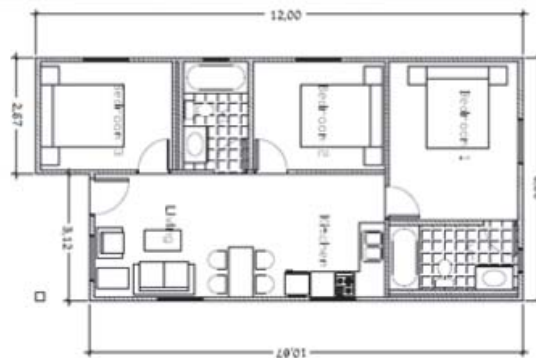
Isabela 45sqm / 2R 1B



Solidaria I 75sqm / 3R 2B



VANESSA 72sqm/ 3R 2B





Terry Horton - Co-Founder



Terry Horton also co-founded D.R. Horton, Inc. in 1978 with his brother, Don Horton. D.R. Horton, Inc. achieved positive cash flow in the first four months and delivered 117 homes with a \$2.8 million net profit in the first year. By 2006, D.R. Horton closed over 250,000 homes and generated in excess of \$18 Billion in revenue. Terry served as President of the DFW Division from 1981-2000 and was a member of the Board of Directors from 1992-2002.

In 2001, Terry and his son, Trent, formed Horton Capital Partners, LLC. The partnership has been involved with several projects from Texas to Florida to Hawaii. Notably, in 2005, the partnership invested \$1.2 Million to assemble 1,700 acres in the town of McKinney, one of the fastest growing communities in Texas. The partnership planned, engineered, and entitled 4,500 units. The property sold in 2007 for \$16.8 Million. In 2006, the corporation became a financial partner in the luxurious Texas Hill Country community of Escondido.

Escondido has been recognized as the best selling golf course community in Texas and was awarded the best new course in Texas by The Dallas Morning News. Additionally, Golf Week named Escondido among the top 100 Best Residential Golf Courses in 2010, nationwide.

Key to Terry's success is involvement in the cost aspect of business ventures. He has been profitable on every home under his management and subsequently every business endeavor he has undertaken. His in-depth understanding of the cost side of each business is the foundation for strategic business plans that yield profitable results.

Prior to entering the homebuilding industry, Terry built and operated the Medicare Pharmacy in his hometown of Marshall, Arkansas from 1974-1978. He borrowed 100% of the funds to build, accessorize, and stock the pharmacy. The business was profitable in six months; and, all debt was paid off in eighteen months.

Terry obtained a Doctor of Pharmacy degree from the University of Oklahoma in 1973. He also attended the University of Central Arkansas from 1967-1969.

Mr. Horton is currently an owner of a variety of homebuilding, construction and development companies and serves on the Board of Directors for the World Evangelism Fellowship, a group that is involved in water well development in third world countries. Additionally, he is involved in the President's Council of "A Defining Moment" which helps with AIDS education and treatment in Sub-Saharan Africa. He formerly served on the Board of Governors for The Vaquero Club (2002-2005) and on the International Mission Board (1988 – 1996). Terry became an ordained Southern Baptist Deacon in 1978.



David Oberle - Co-Founder



David Oberle has been involved in Real Estate development for the past 15 years. He has experience in Architecture, Golf design and construction, Land planning, Landscape Architecture, Finance, Design and Construction. Prior to joining Citadel's leadership team, David was the creator and owner of Progeny, LLC a Construction Company specializing in the construction of Residential Golf Course Development. With over 150 employees David directly oversaw scheduling, project cash-flow, architects and engineers, entitlements, contracts and governmental agencies.

David headed notable Golf construction/renovation projects such as The Ocean Course and Turtle Point on Kiawah Island, Pinehurst 2 & 7, Augusta National, TPC Sawgrass & Southwind, Golf Club of New England, Barton Creek, The Hills and Falls of Lakeway, River Oaks CC, The Pines and some 30+ other Golf & Golf Development Projects with values in excess of \$150 Million and moving 2.5 million yards of dirt.

During this time he formed relationships with developers and architects such as Jack Nicklaus, Tom Fazio, Jim Fazio, Arnold Palmer, and Gary Player. David established a separate road, utility, and landscape division under Progeny to be a one-stop-shop for developers.

Developer services expanded into entitlements, planning, finance packages, budgets and proformas. This division further expanded into building residential, and commercial developments in Golf and Mixed Use, as well as unique projects such as Water Treatment Facilities and an Airport Expansion. David built Progeny to become the largest contractor in Texas using GPS guided equipment with a fleet of over 25 GPS guided earth moving units and constructing Billion dollar developments.

From there he created a development company specializing in the use of government and incentives to achieve financing and reducing the costs of development. It was at this time where David was instrumental in the financial structure, and acquisition of a \$22,000,000 Build America Bond, \$18,000,000 in equity by monetizing New Market Tax Credits, on a \$65,000,000 Cancer Treatment Center in Tulsa, OK.

David, his lovely wife Lucia live in Tulsa. He has three great sons; Jack (15), Paxton (14), and Alec (12). David graduated from the University of Arkansas School of Architecture in 1994.



Steve Markham - Co-Founder



Steve Markham is an entrepreneur. Over the past twenty-five years, he has been involved in the foundation and management of twenty plus companies ranging in disciplines from real estate development, building, design, restaurant(s), sports, film and music production, technology and energy.

Steve is a partner in Voltaire Builders, LLC - a real estate development, design, and build company. (Terry Horton, Trent Horton and Steve Markham Partners)

Steve was a developing partner in the luxurious Texas Hill Country community of Escondido. Escondido has been the best selling golf course community in the state of Texas and was awarded the best new course in Texas by The Dallas Morning News. (2007-2013)

His film and media companies: Radical Hope Studios, LLC. Matter Media, LLC, Peace, Love and Happiness Studios, LLC and Mon-Ark Studios, LLC, have produced several successful films including; Dragon Day, Believe Me, Good Fortune, Jamaa, The Path to Gallows Road, Peace, Love and Happiness, Hope for America and Genetic Code.

Peace, Love and Happiness Studios, LLC
Mon-Ark Studios, LLC
Sports 88, LLC (partners Drew Pearson and Steve Markham)
Genetic Code, LLC

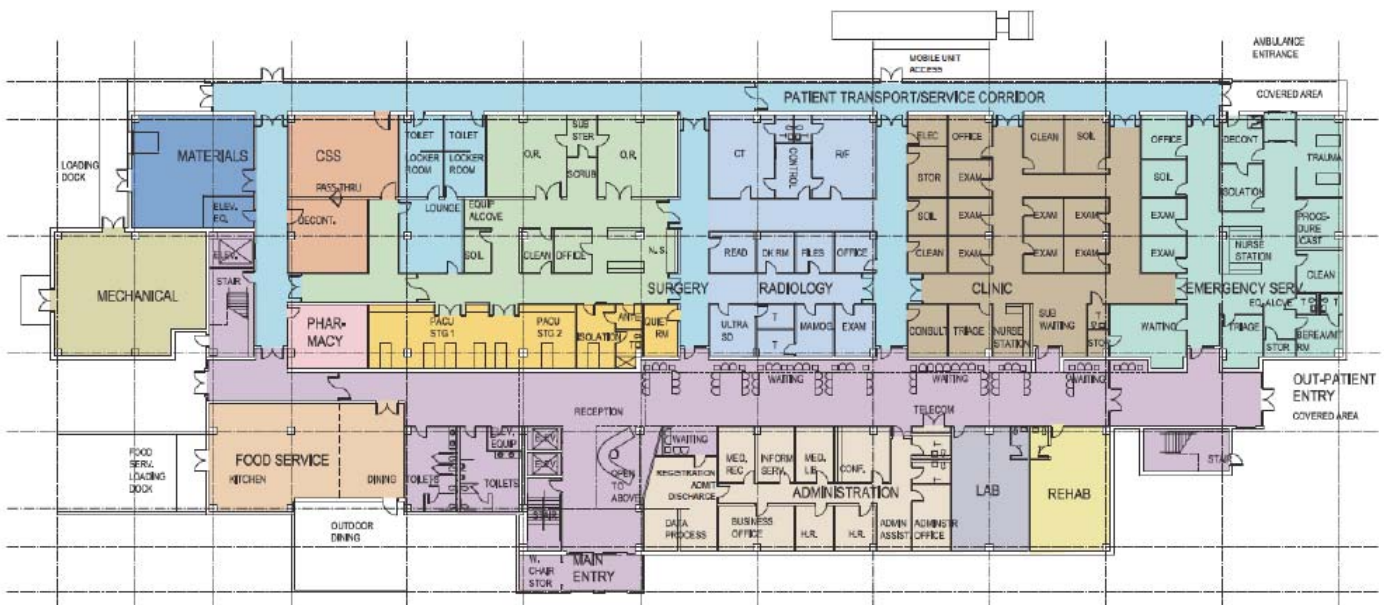
Steve founded Tri-Co services management and sold it to PepsiCo in 1994. USBD, Inc (Black Diamond) was formed by Mr. Markham in 1995 and built and managed several construction projects throughout the Southern United States. USBD, Inc has supervised over \$ 50,000,000.00 of development activities at the Escondido Golf community.

In addition, Mr. Markham co-founded two Technology companies; FM, Inc- a digital water and natural gas pipeline leak detection company and HPS, LLC a technologies systems integrations firm (Hewlett Packard and Cisco certified). Mr. Markham and others conducted a \$ 125,000,000.00 HP-Cisco integrations project for Dallas Independent School District. FM, Inc was sold to a publicly traded firm in 2007.

Mr. Markham has served on the Board of Directors of Candle Lighters of Austin, Chairman of the Board of the Barnabas Project and as Chairman of Rev 1211. He has been involved in building homes of Hope in Acuna and other charity projects.



Critical Access Hospital - Muskogee, Oklahoma USA



0 16' 32' 64'
SCALE: 1/32" = 1'-0"

- MATERIALS
- SURGERY
- PHARMACY
- RADIOLOGY
- LABORATORY
- CLINIC
- REHABILITATION
- EMERGENCY DEPARTMENT
- ADMINISTRATION
- FOOD SERVICE
- MECHANICAL
- PUBLIC AREA
- PATIENT / STAFF
- CSS
- PACU

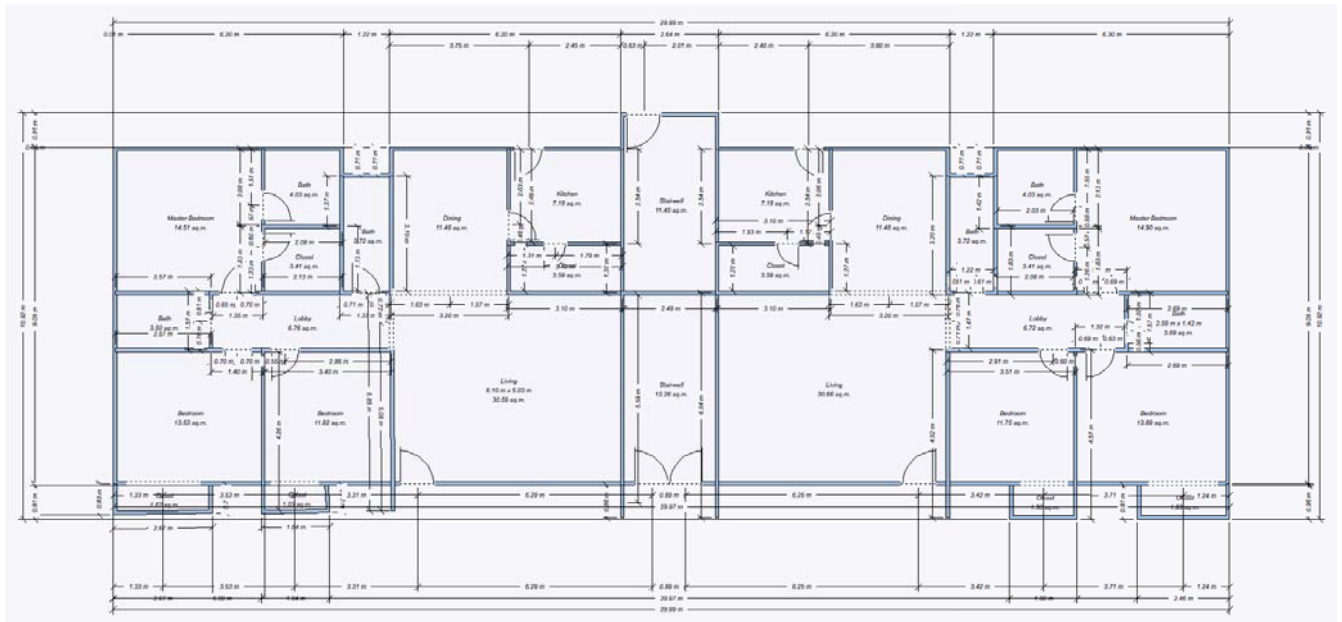


Members of HCS have built numerous Healthcare facilities, doctors offices and cancer treatment facilities throughout the US

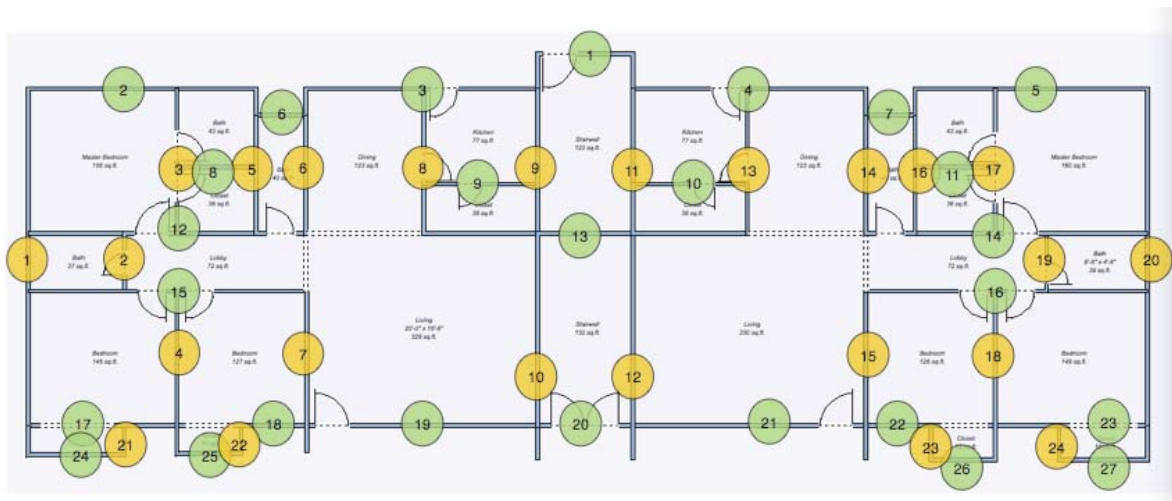


Apartment Complex Lagos, Nigeria

Planned but not funded as of this printing



Floor Plan for 1st Floor Apartment Complex



Panel Plan for 1st floor Apartment Complex



Presidential Palace

Abudhabi-
Composite Panel System



Building structure 100% Composite Panels Constructed within 15 weeks with 1st generation Composite Panel. **HCSAFRICA** is currently constructing with Generation 3



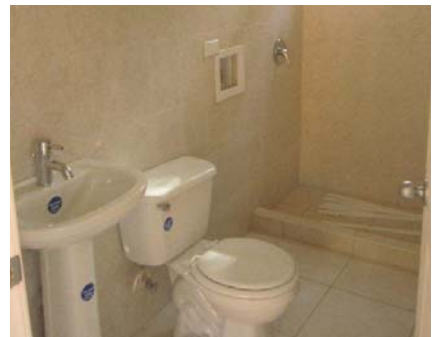
Sorouh Villa
Abudhabi-
Composite Panel System



Building structure 100% Composite Panels Constructed within 30 days with 1st generation Composite Panel. **HCSAFRICA** is currently on Generation 3



100 Unit Housing
Haiti-
Composite Panel System



Building structures 100% Composite Panels all 100 units
Constructed within 100 days with 1st generation Composite
Panel. **HCSAFRICA** is currently on Generation 3



Tammer Bank
Abudhabi-
Composite Panel System



Building structure 100% Composite Panels Constructed within 60 days with 1st generation Composite Panel. **HCSAFRICA** is currently on Generation 3



Elementary School

Haiti -
Composite Panel System
400 students

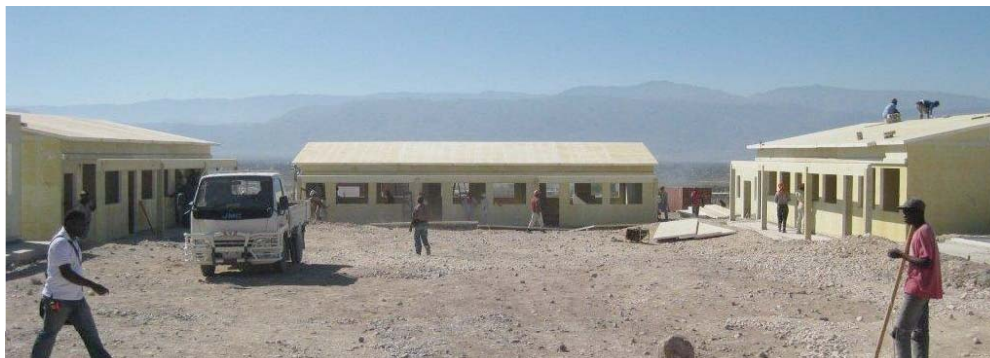


Building structure 100% Composite Panels Constructed within 45 days with 1st generation Composite Panel. **HCSAFRICA** is currently on Generation 3. *Notice no heavy equipment!*



Advanced School at Corail

Haiti -
Composite Panel System



Building structure 100% Composite Panels Constructed within 45 days with 1st generation Composite Panel. **HCSAFRICA** is currently on Generation 3. *Notice no heavy equipment!*



Government Offices
Haiti -
Composite Panel System



Building structure 100% Composite Panels Constructed within 10 days with 1st generation Composite Panel. **HCSAFRICA** is currently on Generation 3. *Notice no heavy equipment!*



HCS can accommodate any development need. Additional information available upon request for a development that may involve:

- Hospitals
- Restaurants
- Shopping Malls
- Hotels, Hospitality, Tourism
- Warehouses
- Golf Courses & Resorts
- Infrastructure, Roads & Utilities
- Water or Sewer Plants
- Airports
- Solar Projects
- Most Any Commercial Project

