



FLORESTAL EXPANSION Construction Information Package

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1.Presentation

Building a house is an exciting and challenging project. There are many things to take into consideration to make your dream home a reality.

To consider all of this in a foreign country with a different climate, construction types and a cultural barrier, can be overwhelming.

Adding to that is our wish to construct beautiful useful homes that will relate to their sacred forest surrounding, rather than just condominium cubes motivated by profit and with no real relation to their surroundings.

This document is intended to assist you in starting this adventure by giving an overview of the subject and all that we have learned and accomplished in our journey. We hope it will open up possibilities in your mind and ignite your vision for your own home.

As a supportive community, we wish to help each other accomplish their vision in the best way! Here we go...



2. Our history

We arrived to Florestral 6 years ago with little knowledge about construction & infrastructure. We did have some experience through all the communities we visited and farms we rented previously, and from that we learned and imagined the perfect setup of homes, hosting and community structures. Yet the details were much grander than we imagined.

We arrived here to bare grazing land. With the help of many workers and volunteers we built the first version of the hosting center to be able to start receiving family friends and guests. It was really very basic with a big overhang tarp for the kitchen and dining area, a couple of small wood cabins, a shower and a toilet.

We were very lucky to receive free teak wood from the neighbouring land (this same land that is now the expansion) since they just cut some of it for export and with that we basically built it all.

Sure, we made many mistakes in the beginning... yet many less than expected, mostly thanks to our God-sent-angel Pablo who came in as a young constructor with some experience as a builder in a western country and some basic english skills.

Together we continued to improve and learned so much of what and how to build in the forest. From landscaping to material, from listening to the spirit of a space and the flow of the elements to choosing materials and design. We built temples, rooms, toilets, a huge living space and 7 homes. 6 years after we started, We learned so much and improved each structure that we built in the initial phase. We had also some architect work done, on the main living space and some of the fire temple design.

Right now we are in the second phase of building our recording studio and sound healing center which is our biggest and most complex project yet and involves a few Architects and Engineers. We will also be building more rooms for the hosting center soon, combining all the techniques and materials we have learned about, to construct high quality rooms at an excellent eco-standard and low cost.

All in all, with this project we really got into eco-sacred-architecture and during the years it opened our eyes to the amazing possibilities that open up when building WITH nature FOR spirit. We are excited to see it unfold !

3. Building codes/modules

Building Codes / Building Mindset suggestions

This is what we learned during the years of how to approach a construction project with the right perspective and attention to various aspects.

- A. Less is more- In the forest there is no need for thick isolated walls . Actually many people build their home with as few walls as possible to allow air flow and connection with the forest. No need huge heavy doors and big locks. Most people use their balcony all day unless it rains.
- B. Build with nature- Every space in the land has its own micro-topography. The facing of the lot to the different directions, mini slopes, big boulders - everything has an impact on the flow of elements through the space. Considering this in the stage of design helps to build a home which is connected harmoniously with its surroundings, takes less energy to run, and gives the privilege of living in a temple, since nature is the perfect temple of life. We try to build with the contours of the earth, involving rocks as beds under foundation or even walls in a house or a garden wall . Simply coming from this attitude of being in a space and then designing the best house to fit it is radically different than imposing a cubic pre-made design which is the norm. Spend some time on your lot if possible, see the power points , the sunny spots ,the water flow, the rocks and trees and by seeing and feeling the space a deeper understanding of what and where to do will be received. They don't teach that in architecture school ;)
- C. Imagine uses- The function and uses of the home should be well examined. Together with the previous point, it is the 2 pillars of a home design for us. Thinking about all the possible uses that we would like to have, i.e amount of rooms, special features, flow of rooms, connectivity. We were surprised to learn how much usability we can get from even a small space if the function of it is well thought.
- D. Imagine scenarios. An extension of the last point, thinking different scenarios will also help to design a great home. Where would you like to be when it's sunny? Rainy? How do imagine your needs and uses of the house in the future?
- E. Modularity in the tropics- It is very feasible to build a frame first, cover it with a temporary roof and live in it for a while. I (Vismay) did it in my house with just a shading cloth and a tarp over a dome frame and lived like that for almost a year. It was less of a challenge than I imagined and when it was time to design the house, I was very ready.
- F. Sacred geometry- Nature has the perfect sacred geometry in it's design, symmetry within asymmetry in the most perfect organic way. We try in our construction to connect

with this element, and thus, sacred geometry in our construction became a 'thing', something we always aspiring to achieve. The geodesic domes and ferro cement give a lot of possibilities for that, more important even is the orientation towards sacred geometry alignment (another rare subject in architecture classes). From our experience it has a huge impact.

- G. Art- Home is function & personal manifestation of creativity. Thinking about some art or at least the medium of it in the design stage make things easier later and also helps to keep in mind the artistic side of things, among all the rough construction stages. It may be wall paintings, water features, light features, sculpture work etc. When this is included in the design, it feels much more natural and less 'framed'.



Building Modules

A. Domes

We Love Domes! To live in a round home brings a different feeling than living in a cube. Domes are an amazing solution for a house frame since they are strong, cheap, modular and sacred geometry ready. We have built 6 dome frames to date in different sizes and geometries (although the icosahedron is the most common dome geometry, many more exist, (visit <https://simplydifferently.org> for a great dome site). The domes on our land are ranging from 7 meters in diameter for a room / pool to 23 meters for our recording studio. We have come up with 3 ways to cover the dome frame: metal and wood sombrero roof, Ferro cement roofing, and Panel roofing. The walls can be made either from wood, Ferro cement, blocks, or panels.



B. Ferro Cement

A system in which a 3 layer metal frame is built and concrete is layered over and in it to create a firm structure. It makes possible to create any curve , it is a mix of construction and sculpturing and it is very strong and durable. As you can see: Anything is possible!



C. Panels:

Panels are attached to the dome/Ferro cement frame to create walls and roof. It is an inexpensive way to seal a dome and eco stain art can still be applied to the outside.

D. Wood

We use wood as posts for frames and balconies, for walls and inner ceiling covers. Wood is prone to bugs and so we do not install it directly on the ground but rather lifted up , in second floors (also as floor material) and furniture. We have learned how to treat and maintain the wood for long life.



E. Eco stain

Eco stain is a way of staining polished cement to create designs, color patterns and even a texture which is close to clay. We use it for any concrete work we do and it creates walls floors and ceilings which are beautiful, very cost effective and very durable with almost no maintenance.



4. Case studies



This is a Geodesic Dome frame house of 10 meters in diameter, covered with a 3 part roof which allows a lot of airflow. The walls are built with custom panelling. This house features two large bedrooms, a living area/kitchen and a loft.





Geodesic Dome Frame House of 11 meter in diameter with metal reinforcement and panelling and plaster on the exterior. This home is still in construction. The geometry of the dome is a very interesting one which allows a spacious second floor.



This loft style house is built using an open-concept layout in the interior, allowing for maximized living space, while maintaining the beautiful high ceiling. The house is built using timber frame construction and poured cement for the foundation. 3 bedrooms, large living space, kitchen, bathroom.





This two story house was built by our crew in just a few months. It was constructed using ferro cement techniques , there is not one single block in this house and walls are thin and elegant. It features 2 bedrooms and various living spaces.



This modest home was built for a single or couple. It was built in just a few weeks on a shoestring budget (under 10K) and features wood panel walls and timber framing. This is the most economical home built in Florestral, yet 6 years after it's construction, it still remains beautiful and aligned with nature.

Eco-Friendly Home Solutions



Compost/Dry Toilet

We do not use septic systems at Florestral. Instead, we opt for a nature-friendly alternative. A compost or 'dry' toilet has a receptacle for solid waste, which is then covered in sawdust. This larger reservoir is sealed when full and one year later, the natural processes occurring inside will break down the waste into incredibly rich compost that can be used as fertilizer for forest trees.



Rooftop Solar Water Heating System

This system works by using the sun's heat to warm water in an insulated array of tubes. The heated water is stored in a large reservoir that is able to offer warm water for an entire family on a sunny day. This water heating solution requires no electrical power, since it works on gravity alone.



Liquid waste toilet

This system works by flushing liquid waste only (no paper, no solid waste). This washroom option gives you the comfort of a toilet, yet the liquid waste is flushed directly back into the earth.



Outdoor Oven / Water Heating System

This oven works well for making a meal, but the extra use is that it can be used to heat water. The fire is built under and inside the metal coil, where water passes and gets hot. In this example the hot water are used to create an indoor pool.

Outdoor/Garden roofs with bamboo/metal

We have constructed a few roofs without closing the walls, thus making an 'outdoor' roof. One of these roofs is found in the hosting center's dining hall and the other is the temple . Each one of those bringing a different application to the concept of an outdoor roof.



Budgets & costs

There are many factors to consider when coming to calculate a budget for a house. The size, use of materials, complexity of construction and level of finish will all determine the final cost of your home. We built constructions with a budget ranging from around \$5,000USD for a decent room to \$80,000USD for a large family home and a lot in between. It really depends on needs, features and look that are required. We are always improving, and every new construction takes into consideration cost and time efficiency. The possibility to build in a modular way within a longer period of time and the very cheap price of setting a dome frame with a temporary cover are a huge advantage. We will be happy to help you determine your needed budget or help you see what you can do within a specific budget.

5. Helping your home to happen

We, as a community and a founding organization would love to help you build your home in Florestral!

Our involvement can be limited to advice or comments about your design, or expand to a whole involvement of our crew from the design level to a complete house.

We can help with the following aspects :

- Walking in your spot to feel the space and imagine functions
- Help in design
- Contacts with architects
- Help in acquiring material (also using Florestral discounted rates at hardware shops)
- Use of some of the teak wood on the land. Some will be distributed for free and some for a very low price.
- Our construction crew with a main constructor and trained workers
- Artistic advice and contacts with suitable artists.

To be clear, our meaning is not to open a construction company but rather to connect and share all the knowledge we gathered to create an amazing community with incredible houses.

We will be happy to be in touch and help on a personal base.

We hope all is clear and are open to any questions & inquiries

Thanks for your attention!

Blessings from the forest,

Vismay and the Florestral Community