

FREQUENTLY ASKED QUESTIONS ABOUT POURED EARTH

1. *Is poured earth a patented or proprietary product?*

No. . . the more earth is used as a building product the better it will be for our environment! It is the goal, therefore, of LSSA to make poured earth available to all who want to use it. However, it is important to do it right so as not to compromise your project.

The best thing, presently, is to hire LSSA to develop the poured earth mix and to help coordinate the mixing, delivery and placing by local trades in your area. We also work on site to assure quality control for the forming and placement of the thermal break and the pouring of the walls. All of this takes place in a "training format" so that the material can be used again in your local area with little or no back up from us.

2. *What about financing a poured earth home?*

No problem. Poured earth in common terms is simply a "moderate strength concrete." Mortgage brokers and banks (as well as code officials) understand this terminology. It is important, however, to have your home certified by a structural engineer.

3. *What type of maintenance is necessary?*

The answer is little to no maintenance as poured earth walls have a high resistance to the deteriorating effects of water and sun. So, enjoy some extra leisure time!

4. *Do Poured Earth walls cost the same as wood frame?*

Generally, poured earth walls increase the overall cost of construction by only 10%-20%. However, it is important to keep in mind that frame walls have very low mass and, therefore, little ability to store heat or cooling. On the other hand, when you incorporate poured earth walls into your building project, you are also "purchasing" a large part of your heating and cooling system; one that will never break down, require maintenance, nor need to be replaced!

5. *Why does poured earth cost more initially?*

To date, poured earth has been used in smaller projects like unique custom homes. Economy of scale can only be achieved by building 20-50 homes at a time. Costs will then decrease by 20-40%.

6. *Is this an earth-friendly product if it uses Portland cement?*

Portland cement does contribute 6-8% toward global warming (embodied energy use). However, when natural or synthetic flyash is added to the poured earth mixture, the amount of Portland cement required can be reduced up to 50%. Magnesium oxide can also be used to help further reduce the use of Portland cement.

7. *Why use Portland cement rather than gypsum?*

Portland cement is water stable and gypsum is not. Therefore, while gypsum's strength will remain relatively stable in very dry

environments, its strength drops off significantly in climates where there is rain, In contrast, Portland cement becomes stronger in wet climates and is not affected by dryness.

8. *Are there other alternatives to Portland cement and gypsum?*

Cement can be created with mixtures of flyash and lime. Also, magnesium oxide is a promising, although presently expensive, alternative.

9. *Can I use on-site material for my poured earth walls?*

Yes, if on-site materials are basically a low in clay (something ranging between silt to 3/8" aggregate). Many times we amend a site soil with off-site materials so that they meet appropriate strength and durability standards.

10. *Can I mix Portland cement with any site material and expect a strong and durable wall?*

Probably not. Poured earth materials need to meet certifiable engineering standards. Appropriate testing needs to be done to assure a quality product. Depend on testing, not luck, for a quality mix.

11. *What does it cost to certify a material?*

The cost is generally about \$2000 (see SERVICES: Other Services) Testing must be done to determine shrinkage and compressive strength in order to make sure that the mix has very little, to no, shrinkage and has a compressive strength of 800-1200 psi. Accelerated weather testing is possible at an additional cost. Allow 2-3 months for testing.

12. *Who can supply poured earth?*

Since poured earth is a "next door neighbor" to concrete, local concrete suppliers can provide the product which can then be pumped using traditional concrete pump trucks.

13. *How do I hang pictures and cabinets on a poured earth wall?*

Pre-drill the wall and then use a concrete type screw which leaves a small, patchable hold. However, the color and texture variation usually visually masks any holes so little to no repair work is required.