

# Disaster Resistant Home Design & Philosophy

## What Disaster Resistant Homes Are

- Homes build to **resist natural or man-made disasters** – to ensure your family's survival in the event of a cataclysmic event.
- Disaster Resistant Homes may also be named **survival shelter, fortified house** or **bunker**, but are much more than those, because from outside they are regular houses that do not look any different than the house next door. They are meant to be discrete, non-intrusive, difficult to detect and blend in the environment.
- Fortified homes are truly 100% **self-sufficient homes**: water, sewer, electricity, air, food and security. They are designed to protect you isolated against the elements of destruction during a cataclysmic event and ensure your survival for several years after that. Whether you live in a disaster prone region such as an active seismic zone, low-lying coastal area vulnerable to tsunamis, or you wish to prepare for December 21, 2012 and the years beyond that, having a safe house is critically essential.
- Your fortified home represents your **family safe house**. You can use it as a year-round home, as a vacation home, a retreat or a weekend home, but most importantly, it will be your family safe house, where you can find refuge from anything and anyone when you will need it.

## Disaster Resistant Homes – Key Specifications

The following are **minimum key specifications** we use in our designs to make your Safe House truly safe and the sustainable solution to your family's survival. All those features have to be fully met before we certify it as a family safe house.

### Location

- Rural, sparsely populated area at least 1km from any road or neighbor, 10km from a busy main roads or highway (escape routes from the cities), 100km from any city larger than 10,000 people and at least 100km from the coast, but within a day's hike walk from a farming town, near a forest that can provide wild life and firewood
- Have a discrete entry with a single lane dirt road up to the house, so that the road can be blocked easily and its entrance disguised, and making it impossible to approach unnoticed
- Place the house far inside the property, invisible from the road
- The elevation must exceed 600m or 2,000ft
- The ground must be rocky, ideally granite substrata, to support tunneling
- Surface should not be less than 10 acres (4ha) – roughly 500ft wide by 900ft deep, ensure the neighboring properties are similar or larger size, of fertile, easily cultivated soil – either level or gently sloping towards the sun
- The house must be surrounded by mature evergreen trees, but at least 50ft from them
- Place on higher ground but not where it makes it overly visible
- Within 20 minutes hike of a small river or stream
- Potential for multiple concealed escape routes from the main house to an emergency refuge nearby

### Construction

- Single level, high bungalow
- Concrete structure – preferably ICF technology
- At least a two-level basement, the lower one having concealed multiple entries
- Heavy gauge steel roof no less than 40% slope, with a color that blends in
- Safe shutters on all windows
- Minimize number of windows and their size, no patio doors or basement windows
- Solar and wind generated electricity
- At least two water wells, one equipped with a hand pump
- Composting sewer system
- Water treatment and filtration system
- Air sealed capability for the safest lowest basement floor with self-contained air recirculation and oxygenation system

### Construction Strategy

- Discrete development and ownership
- Stealth & covert development techniques, including the building permit phase and contractors
- Modest appearance when building and invisible, blending in the surrounding when finished – no signs, mailbox or other distinguishing signs

### How we will build your family's safe home

- Our **discretion** is unconditionally assured and it will be included in our contract with you.
- We stand behind everything we do and provide 100% **quality** warranty for our services and construction projects.
- You will be fully informed during the construction and will have our full support after that.
- We have defined a minimum set of specifications your safe house has to meet which establishes the minimum financial requirements. We will design your safe house based on your needs and **budget**. The costs to build your safe house start at about 50% more than traditional construction technologies, but are within the financial envelope of a middle-class family.
- We can assist with the selection of the **land** property with regards to the location, size, geo-technical testing of the soil, ecological survey and other parameters. You may also be interested to establish with your family and friends a small community of safe houses within a manageable perimeter.
- The **design** of your family safe home will start with a needs assessment and we will work together with you to create a pleasant, efficient and effective solution. We will work with you on all the options as we move along in the design stage on the many aspects to be covered such as the mechanical equipment, energy sources and supplies.
- The **construction** phase of your project will use stealth and covert operations techniques. We will actively supervise the construction for quality control and give you regular progress reports.

## Disaster Resistant Homes Standards

### Structural

- Foundation & walls: ICF or reinforced concrete
- Floors: metal pan filled with concrete
- Roof: metal trusses with heavy gage industrial steel, painted green or grey

### Mechanical: heating, cooling, water, sewer

- Bungalow & basement: radiant heating
- Sub-basement: electric heating with forced air fan
- Water: heating solar passive/solar electric, pressurized, well pump, water softener, multiple filters, 3 sub-basement reservoirs (black, grey, white), single regular reservoir in the attic (for natural pressurization)
- Wells: one next to the house, secondary with manual override 100m from the house
- Sewer: single self-sustained composting toilet backup in sub-basement, septic tank
- Wood stove with integrated water heater connected to the radiant heating

### Electrical

- Solar-electric panel array with battery storage
- Wind electric generator, stored for later use, medium size

### Finishing

- Exterior doors: insulated steel
- Windows: insulated aluminum, Low E, Argon
- Window shutters: automatic \ manual override, steel