

# STEEL FRAME HOME PROJECT

# 52m<sup>2</sup>

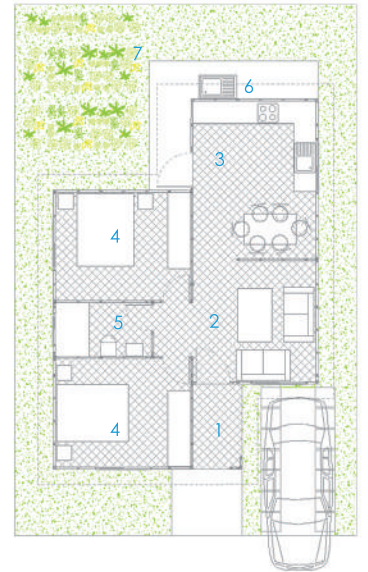
52 m<sup>2</sup> housing, Steel Frame construction system, with structure of cold formed lightened galvanized profiles.

Possibility of extension.

## FUNCTIONAL DISTRIBUTION:

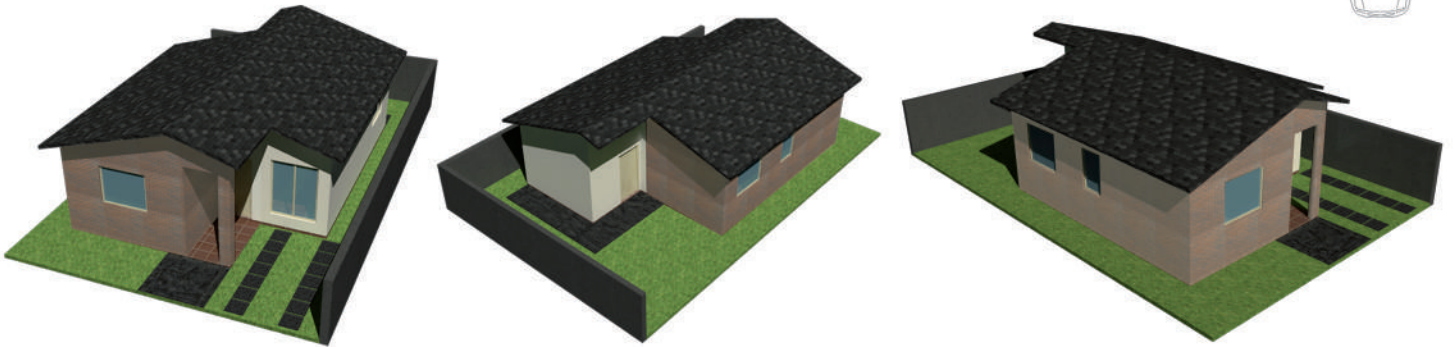
1. Access porch
2. Living room
3. Kitchen
4. Bedroom
5. Bathroom
6. Exterior laundry
7. Vegetable garden

## 52M<sup>2</sup> HOUSE



52m<sup>2</sup> HOUSE ACCESS VIEW

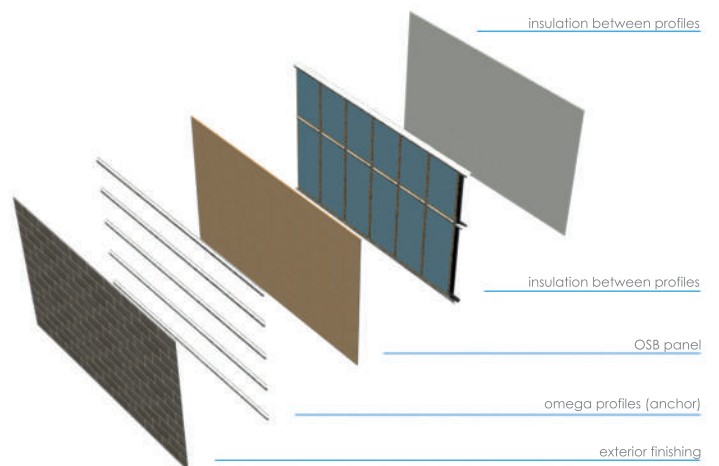
## HOUSE VIEWS



## URBAN SYSTEM



## SYSTEM COMPONENTS:



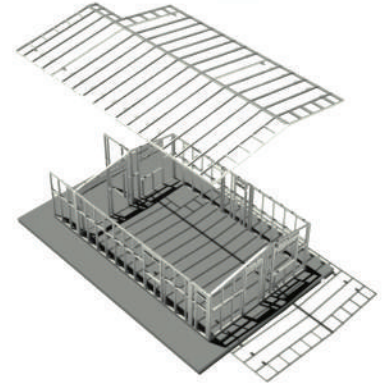
## COMPONENT DESCRIPTION

### SYSTEM GENERAL FEATURES

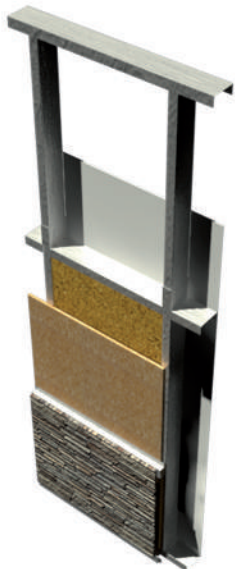
Steel frame is a constructive system whose main feature is a structure which consists in cold-formed profiles of galvanized steel. This system is basically formed by upright-profiles in C form (installed in vertical position separated 40-60 centimeters). On the borders, the profiles are screwed down to the track profiles (U form). These U form-profiles form the inferior and superior border of the whole grid.

The profiles are used to form structural and non-structural panels, secondary beams, ground beams, rafters and other components. These profile grids are later covered by different layers of panels. That is why we can talk about a Dry Construction system.

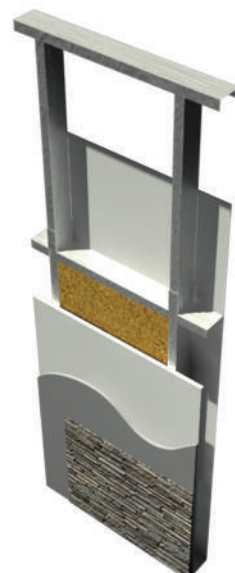
The profiles present reduced thickness and have drillings to let the electric and plumbing installation system go through them.



### CONSTRUCTIVE SOLUTION



FACADE - OSB panel



FACADE - Calcium silicate panels

### SYSTEM ADVANTAGES

Main advantages:

- Faster ( almost 80% faster than traditional systems)
- lower construction costs ( around 40% cheaper)
- Easier to handle

We can also emphasize and group the system advantages into 3 types:

#### 1. ADVANTAGES OF THE CONSTRUCTIVE SYSTEM ITSELF:

- Earthquake-proof system
- Fire proof system
- Light system
- Recyclable and environmental system
- Modular and panel based system
- adequacy and benefits not only in big but also in small projects
- Durability (profile sheet galvanization)
- Easy transport everywhere
- Investment in plants or models not needed
- Flexible to all kinds of design

#### 2. ON SITE ADVANTAGES:

- More cost-effective
- Faster
- Easier (easier assembly)
- Better thermic and acoustic insulation
- Dry system
- Cleaner construction site
- The system does not need high qualified workers
- Increases the usable floor area regarding to traditional systems
- Avoids overrun and setting-out on site
- Eliminates heavy machinery and reduces auxiliar construction elements
- Reduces the number of trades on site
- Simplification of the electrical and plumbing installations

#### 3. ADVANTAGES POST - WORK:

- Flexibility and simplicity in building extensions and renovations
- Easier, cleaner, faster and cheaper maintenance and repair works