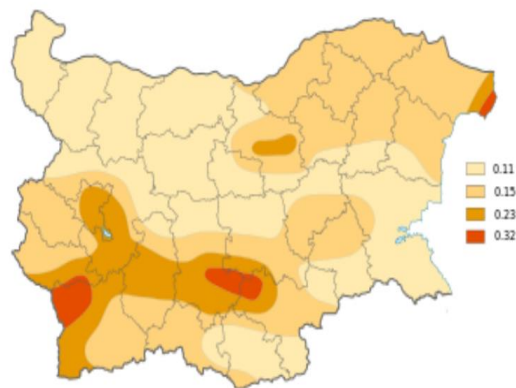


# The interior goes outside.

As parents it is not just about accepting a diagnosis or finding out about the reach of any condition of the child: it is necessary to go beyond this, it is required to embrace the difference on the part of society. Showing inside. Starting from reflection, the design objective is to show the inside to the outside. And protective hands, Open to the community. On the access facade, it was considered to leave double height and let the interior be seen, and the interior texture comes out to the parcel cloth

## PROJECT LOCATION

The territory of Bulgaria belongs to the most dangerous seismic areas on earth. The most violent and frequent earthquakes in the world occur in the seismic belt of the Pacific, around 75% and 80%. Bulgaria is among the most active nuclei in Europe, which belongs to the Alpine-Himalayan world seismic zone. This is where the remaining 15% - 20% of the world's tremors take place. In the Balkans, however, they are between 2 and 3 times weaker and less frequent than in the most active parts of the Pacific zone. This is why the region, including the country, belongs to the second range of most dangerous places on the planet. 97% of the territory of the country is hit by seismic phenomena and is ranked second in relation to the potential risk of earthquakes. This is why it is considered very important to place on the map the areas of seismic risk and the epicenters of earthquakes, classified  $M \geq 5$  on the Richter scale. In Bulgaria, areas of high seismic risk are located around Blagoevgrad, Sofia, Shabla, the Maritsa River, Veliko Tarnovo and Gorna Oryahovitza. (Fig. 2.2.3.1)



*Figura 2.2.3.1 Mapa de riesgo sísmico, muestra los valores máximos de aceleración de la superficie terrestre (medidos en g) con un tiempo de repetición de 475 años (Instituto Búlgaro de Estándares)*

## JUSTIFICATION OF THE ADOPTED SOLUTION.

For this reason being a seismic zone, the lowest use of levels has been considered, which increases the area by a percentage.

It has been proven that steel structures are more convenient for resisting earthquake attacks due to the inherent characteristics of the structural system used that allow it to develop strength, stiffness, high ductility and energy absorption capacity to reduce the response of earthquakes. Earth.

The solution adopted consists of a structure based on S275JR steel profiles and steel slab with reinforced concrete. The pillars will be subject to high compression values. That is why hot rolled HEB profiles will be used for the abutments, since these profiles better support the effects derived from compression such as buckling. On the other hand, since in both rails and in jácenas the predominant effort is that of bending, hot rolled IPE profiles will be used for said elements, since they are the ones that best withstand the effects caused by a bending moment.

**CONSTRUCTION:** significantly reduce the time of placement on site and allow to withstand large overloads with small edge slabs.

**CONCRETE - STEEL:**

Due to the restriction of areas, concrete columns and beams increase their section so that the area increases and heights, in the case of steel the sections are smaller helping to decrease area by the structure of the building.

**COST:** the cost of the steel structure increases comparatively with that of concrete,

**STEEL STRUCTURE ADVANTAGES:** faster execution, greater structural safety, after the life of the building the steel can be recycled, it can be modified.

The proposed structure, 7 m wide, is to obtain the greatest freedom in the floors, and to be able to redesign adjustments according to your future needs. The internal corridor that connects all the space, has the function of a large terrace

**WALL:** As a complement to the construction of the walls, the use of a 10 cm thick exterior rock table has been considered, the advantage of this material for the walls, is that its surface is completely smooth, this material allows to adjust in the future the spaces that require it, since it is easily assembled and dismantled and can be used to use elsewhere.

The building that in general is a "V", has been considered at the vertex, a staircase and elevator core that works internally to connect the three levels, and at the same

time is a structural separation between the two cores of the building to avoid problems of torsion by earthquake of the whole building.

LEVELS: The levels that were considered in the project were the following: for parking the level 54.70m, because the average level where the parking lot 57.70 was located, is where fewer trees exist, an excavation of 3 m is proposed to reach parking floor level at level 54.70, which adding 2.70m of free parking height plus 0.30m of the thickness of the parking slab gives us a total of 3 m.

The difference between level 57.70 and level 58.00, allows us that the ground in general is level, and easily accessible from any point of the lower aisle.

For level 58.00, it was considered to have the average difference between the two extremes, avoiding having to hurt the trees due to the filling and de-stemming, making the land almost flat and at ground level.

The height of this floor is 3.50 free plus 0.40m thickness of slab, which gives us the level 61.90m, this level has a height of 3m free plus 0.40 thickness of slab, obtaining level 65.30, this level has a height of 3m and 0.40m thick slab, giving the roof level of 68.70, the building has a height of 10.70m.

The roof has two accesses to the inner core and the reception.

AREAS: To verify the project areas, in a very particular way and not in a general way (30% for the circulation and structure 2,592.20m<sup>2</sup>), the minimum percentages required for these concepts were taken, 15% for the circulation of the 1994m<sup>2</sup> of the use area, require 299.10 m<sup>2</sup>, and for the structure 12% of 1994m<sup>2</sup> of the use area, 239.28m<sup>2</sup> are required, giving a total between area of use, circulation and structure m<sup>2</sup> = 2,532.38m<sup>2</sup>, so I consider that the project is within Design parameters With 2,636.03 m<sup>2</sup>