

## 21 Hyperion residence

73 Rue Carle Vernet, 33800

**FRANCE Bordeaux**

2021

Under construction

### About

The Hyperion Residence is a complex of five buildings. One of them, the tallest, is a 57-metre tower built with a timber structure. The other four buildings are significantly lower in height and are built with a concrete structure. The Hyperion tower intends to be the tallest “living tree” in France. It is being built using mainly a wooden CLT structure. The lightness and stiffness of mass timber CLT, combined with the strength of glulam and LVL technology takes timber construction to new heights. The project will become representative of a new generation of low-carbon buildings.



Aerial view.



Hyperion Wooden tower form Carle Vernet.  
David Sebastián Martín



### Agents involved

Architect	VIGUIER		
Developer	Eiffage Immobilier Sud Ouest		
Construction company	Eiffage Construction company		
Structural engineer	Terrel Group		
Timber installer	Piveteau	Timber manufacturer	Piveteau



Aerial view of the façade.



### General

<b>57</b>	Height (m)	<b>16</b>	Floors above ground
<b>17.000</b>	Built-up area (m <sup>2</sup> )	<b>1.606</b>	Ground floor area (m <sup>2</sup> )
<b>18.000.000</b>	Budget (€)	<b>1.059</b>	€/m <sup>2</sup>

Building use **Mixed**



Façade seen from the ground.



### Technical data

**Mixed** Structural system      Bracing system      **Concrete walls**

#### Timber products used

- CLT panels on slabs
- GLT posts
- GLT beams

**3** Concrete floors

**14** CLT floors

**0** Concrete-timber floors



Detail image of the joint between timber posts and beams.  
Eiffage



### Construction timing

**28** Months to complete the building

**14** Weeks to build the structure



CLT floor panels stacked next to the reinforced concrete core.  
Eiffage

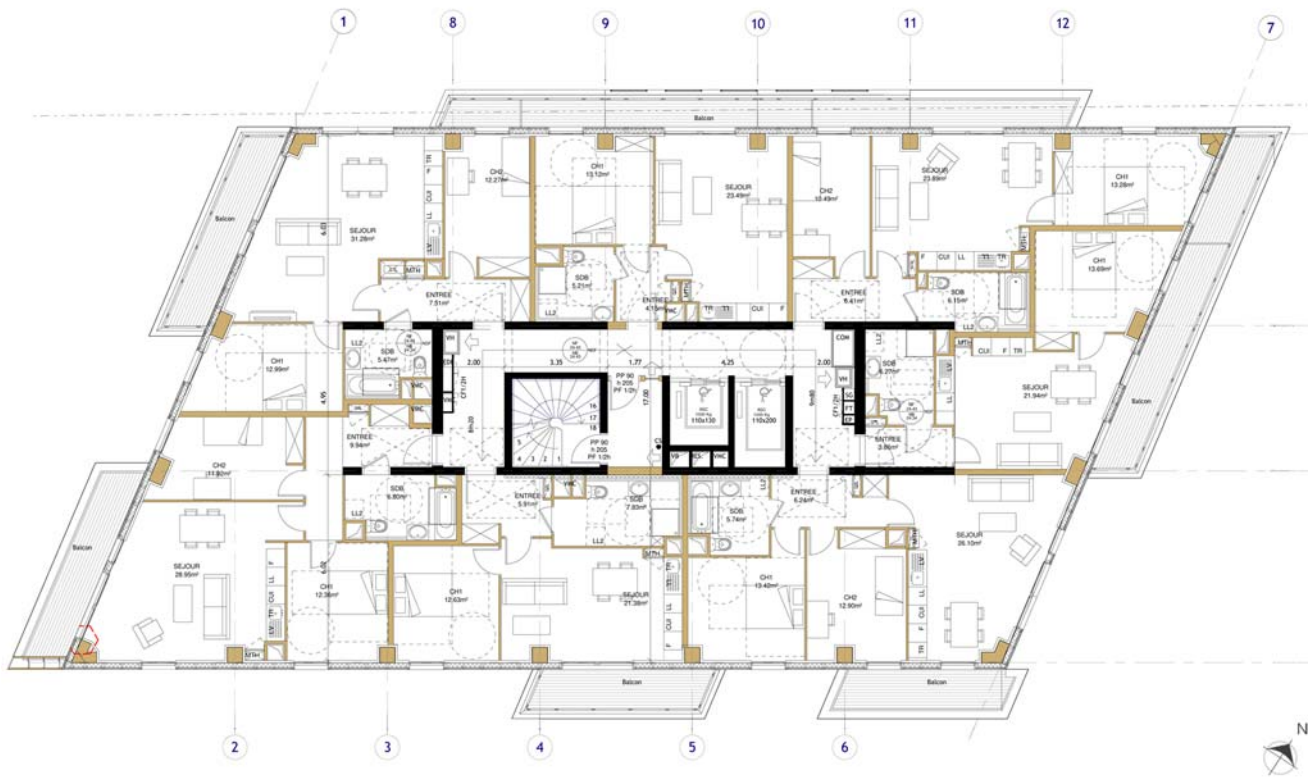


### Wind actions

**Terrain category III**

Area with regular cover of vegetation or buildings or with isolated obstacles with separations of maximum 20 obstacles heights (such as villages, suburban terrain, permanent forest)

**Slenderness 3,0**



General floor plan

**Sustainability**

**Pseudotsuga** Wooden specie

**menziesii** Wood volume  
**1.576** (m3)

**683** Potential CO2 benefit (t)  
1.000

**330** Distance of transportation (km)

Special transportation needed

**26%** Percentage of structure made of wood

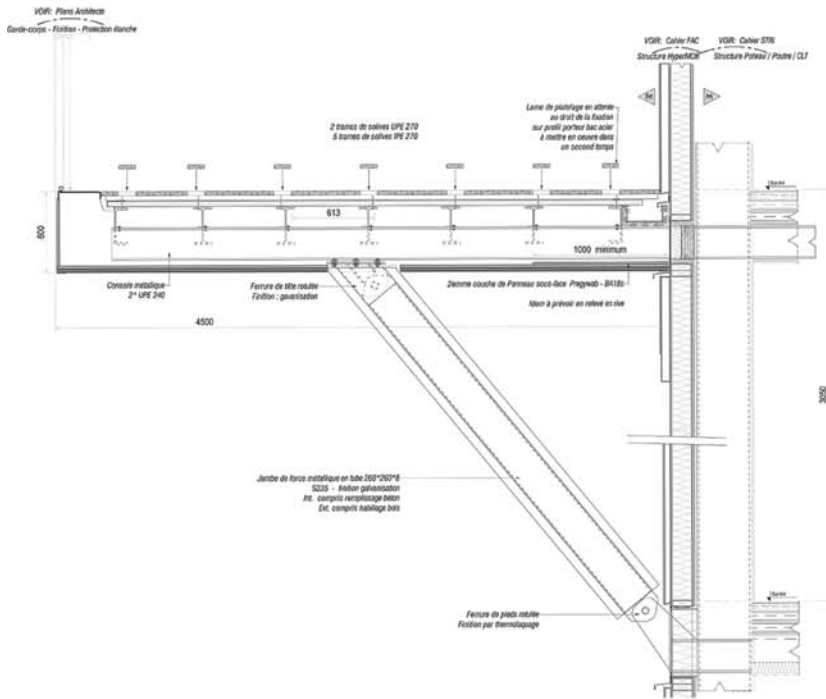


Aerial view of the construction process.  
David Sebastián Martín



East elevation

0 1 2 5 10 m



Balcony overhangs.

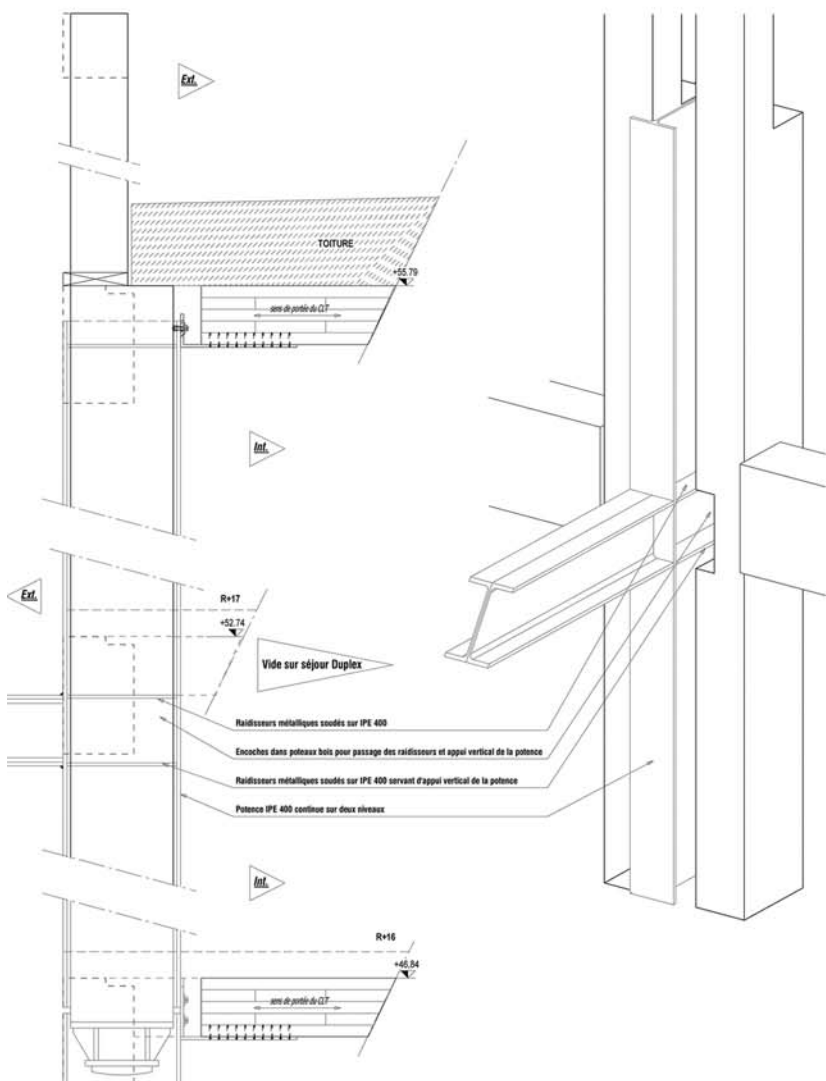


Balcony overhangs seen from the ground.



References:

- Visit to the building on 20.09.21.
- David Sebastián Martín. Online survey on 22.06.21.
- Eiffage Construction Nord Aquitaine. Online survey on 03.10.21 and interview to Ludwig Hahusseau on 20.09.21.
- Viguier <https://n9.cl/eorc2> [18.03.21].
- e-architect <https://n9.cl/oi6tz> [18.03.21].



Constructive details