

ENERGY-EFFICIENT RENOVATION OF THE SAINT-JUST ADMINISTRATIVE CENTER AT IVRY-SUR-SEINE (94) - FRANCE

OFFICE BUILDING : ENERGY-EFFICIENT RENOVATION - BIOSOURCED ISOLATION + DOUBLE-GLAZED WINDOWS + EXTERIOR & INTERIOR HEAT-PROTECTION SYSTEM - GLOBAL ENERGY PERFORMANCE GOAL : 90 KW_{HEF}/M².YEAR, ANTICIPATING THE 2030 OFFICE BUILDING'S DECREE

CLIENT Ville d'Ivry-sur-Seine
LOCATION Ivry-sur-Seine (94), France
PROJECT MISSION Thermal Rehabilitation of the Saint-Just Administrative Center
CONSULTANT AR ARCHITECTES / VERDI

AREA 7 077m²
COST 2 000 000€ HT

DATE Lauréat 2022 - Phase PRO/DCE



Building C of the Saint-Just Administrative Center - The former Lesquendieu perfume factory built in 1930



Main entrance facade of the Saint-Just Administrative Center after the energy-efficient renovation

The energy-efficient renovation of the Saint-Just Administrative Center aims to **improve the global energy performance of the buildings with the goal of 90 kWh_{ef}/m².year (absolute value by 2030 – 15%) in comparison to the buildings' current energy consumption of : 146 kWh_{ef}/m².year.** To achieve this goal, our solution is to propose an exterior thermal isolation by biosourced materials for the facades suffering from extreme summer heat, and those suffering from thermal loss in their winter, to replace all the current windows and doors by double-glazed frames equipped with different heat-protection system. Our mission is also to instore an architectural harmony to all of the building's facades in order to create a single architectural unity.





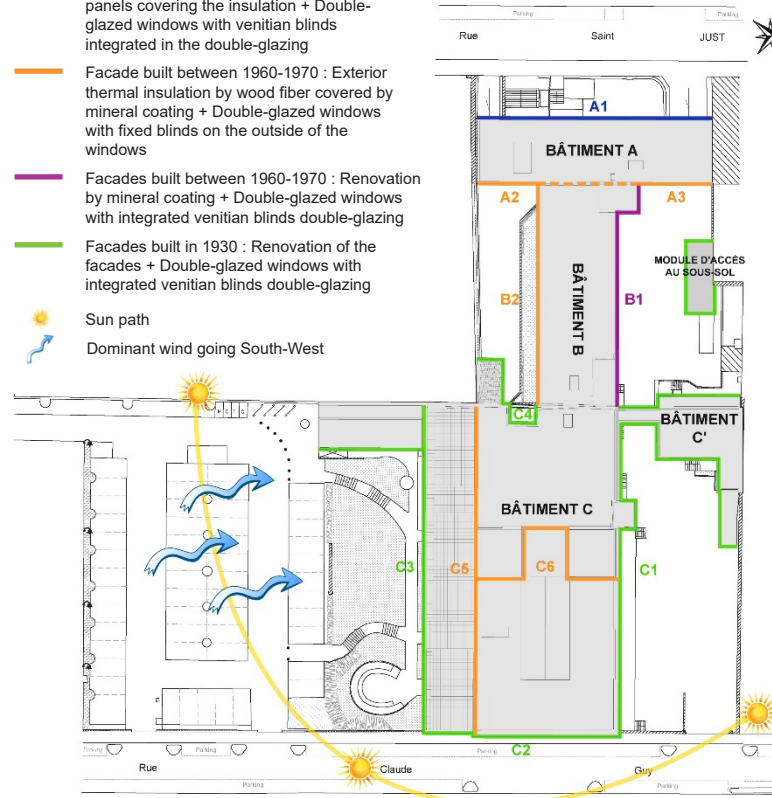
Current facade of Building C



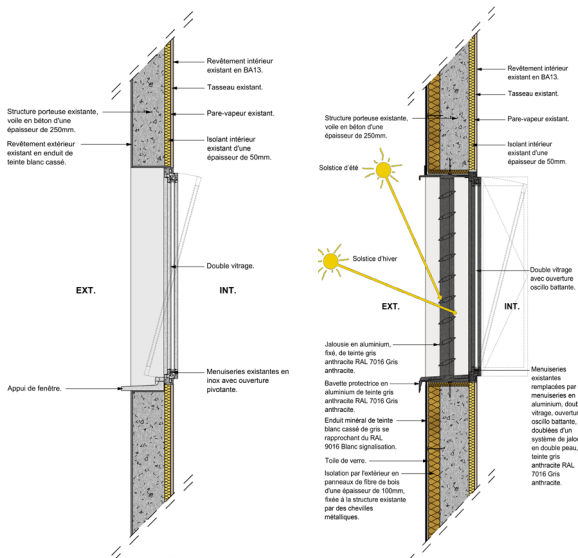
Thermally rehabilitated facade of Building C

Legend :

- Facade built between 1960-1970 : Exterior thermal insulation by wood fiber + metal panels covering the insulation + Double-glazed windows with venetian blinds integrated in the double-glazing
- Facade built between 1960-1970 : Exterior thermal insulation by wood fiber covered by mineral coating + Double-glazed windows with fixed blinds on the outside of the windows
- Facades built between 1960-1970 : Renovation by mineral coating + Double-glazed windows with integrated venetian blinds double-glazing
- Facades built in 1930 : Renovation of the facades + Double-glazed windows with integrated venetian blinds double-glazing
- Sun path
- Dominant wind going South-West



Master plan identifying thermal solution for each facade

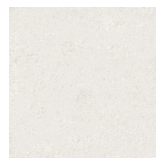


Typology 2 - Concept section Current state

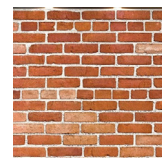
Typology 2 - Concept section Projected state



Metal panel



Mineral coating



Renovation of the brique facade



Color homogenisation for all exterior frames



Wood fiber panels for insulation



Double-glazed windows and doors



Venetian blinds integrated in the glass



Fixed blinds in front of opening frames

THE HQE® PROCESS

HARMONIOUS RELATION BETWEEN THE BUILDING AND ITS ENVIRONMENT :

Unification of all of the facades (by renovation, high-pressure cleaning and replacement of all of the windows and doors) :

- Light-toned mineral coating for all of the facades,
- Light-toned metal panels for the facade of the main entrance of the administrative center,
- Replacement of all of the windows and doors by dark-toned aluminium frames,
- Dark-toned coating for all of the exterior ironwork.

ENERGY MANAGEMENT :

- Exterior thermal insulation for the facades suffering from extreme summer heat and those suffering from heat-loss in the winter,
- Double-glazed windows with venetian blinds integrated and fixed blinds with sidings oriented at a specific degree, letting sunlight in the winter, and blocking all heat in the summer.

INTEGRATED CHOICES FOR MATERIALS AND CONSTRUCTION PROCESS :

Thermal insulation by wood fiber panels, a biosourced material, and double-glazed windows, guaranteeing an excellent insulation and a hygrometric comfort.

MAINTENANCE MANAGEMENT :

Replacement of the entirety of the windows and doors by new-generation and high-performance-quality materials enhance the lifespan of the building and the fixed blinds, as well as the venetian blinds integrated in the double glazing require minimal maintenance.

VISUAL COMFORT :

Visual comfort from the inside : The inclined sidings of the blinds guarantee a maximal visual comfort from the interior to the exterior.

