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Maggioli spa - Bimestrale - Poste Italiane s.p.a. - Sped. in a. p. - D.L. 353/2003 (conv. in L. 27/02/2004 n. 46) art. 1, comma 1, DCB BO - Firma immissione: 07/02/2019

Italia €15 / EU €17,5 / UK £15 / CHF 19,00 / HUF 5.810 / PLN 44,90 / Can. 21,99 C$
USA $19,5 / China ¥220 / Japan ¥3.100 / Korea 38.000 Won / Taiwan 1.100 TWD

SCHOOL COMPLEX COLLÈGE SIMONE VEIL

A SUN-FILLED PARALLELEPIPED

LAMBALLE, FRANCE

ARCHITECTURE

Dietrich | Untertrifaller Architekten
with Colas Durand Architectes

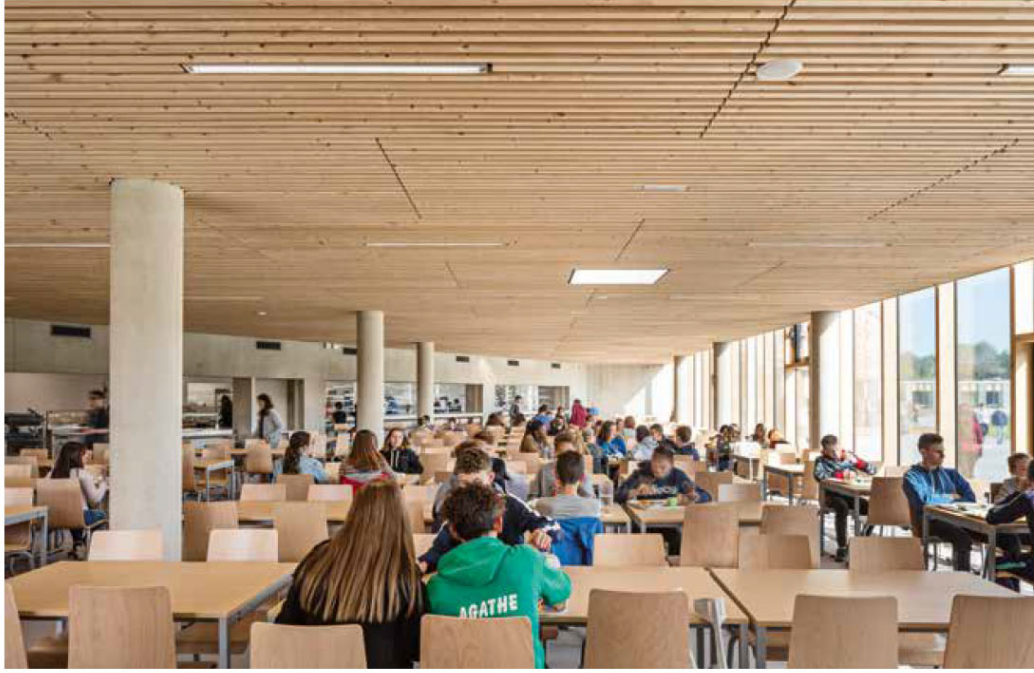
It is always heartening to tell the story of the Austrian architecture practice founded in 1994 by Helmut Dietrich and Much Untertrifaller that reads like the fabled success story of a provincial firm rising from humble beginnings to world class acclaim. All true. First set up in Voralberg, Austria, the firm now has six international offices. What is often passed over though is how this has been achieved thanks to the founders' solid grounding in architecture and shared dedication to a pure - although in no way schematic - concept of architecture consolidated during years of seminal experience in their early days working for a range of important European names that led them to experiment with several different languages and theories. The same applies to the firm's two associates - Dominik Philipp and Patrick Stremler - who over time have come to head Dietrich | Untertrifaller Architekten. They too started out working for important European firms and today continue to influence the firm's architectural choices of materials and its focus on environmental sustainability. Dietrich | Untertrifaller Architekten - written with that strange graphic sign "|", in deliberate contrast to an additive or complementary "and", as if to underline the egalitarian character of the firm - has long favored wood as their architectural material of choice. Over the last 25 years, they have proved their skill at exploiting not only the intrinsic aesthetic and technical qualities of wood but also the possibilities now offered by engineered timber thanks to recent strides in research.

This inevitably leads to remarking on the disparity between Europe and America as regards the research into and the use of engineered timber in building and construction, a theme this journal has already explored. America seems only recently to have grasped the importance of timber as a way of making a quantum leap in environmentally sustainable construction, not only to deliver energy efficiency but also as a structural material. Old Europe has innovated age-old construction systems and devised means of building increasingly large and efficient timber structures, a development that is now filtering across the ocean and elsewhere in the world.

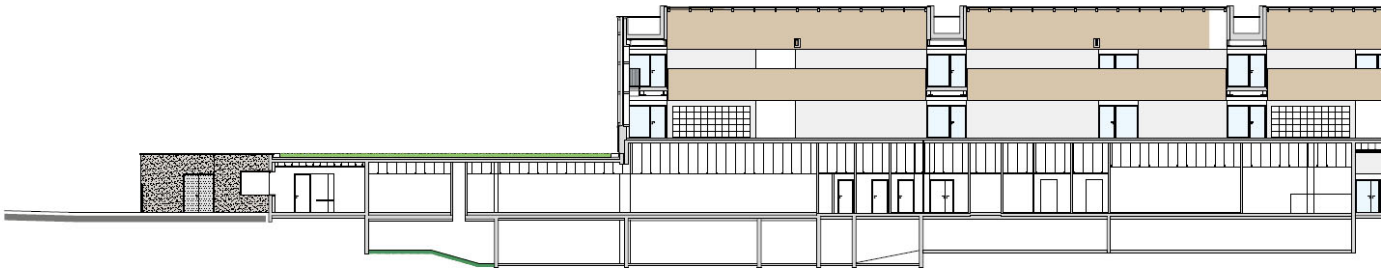
This issue looks at the Collège Simone Veil inaugurated for the beginning of the last school year in Lamballe, Brittany, France. An enormous, simple and complex building where Dietrich | Untertrifaller Architekten, in partnership with the local firm Colas Durand Architectes, have yet again proved their incomparable skill with educational environments. The Austrian firm has innumerable schools of all kinds to its name whose suitability for purpose, innovative form and excellent performance have earned them a shelf-load of awards. The Simone Veil middle school is no exception, having already won the 2019 Canadian Wood Design Awards.

Designed to accommodate 820 pupils, the school comprises two separate volumes: a long regular timber parallelepiped resting on a concrete base, slightly curved to follow the site topography and fit more comfortably into the surrounding landscape. Full-height ground floor windows lend a light airiness to the whole complex, making the massive timber box seem to hover in the air. The concrete ground floor houses the large atrium, a covered play area, communal teaching environments, a multi-purpose hall and the school canteen. The long southeast and northwest sides of the huge parallelepiped atop the base are marked out by projecting vertical and horizontal timber elements. As well as regulating the ingress of natural light, they create a changing play of shadows, conferring interesting variety to the long straight façades. Both the floor slabs and walls of the two-story timber box are in pre-fabricated cross-laminated timber (CLT) held up by locally sourced solid wood beams. The projecting façade elements are all glulam members. In interesting contrast to the rest of the tightly compact program, a full-height atrium allows natural daylighting of the vertical circulation system.

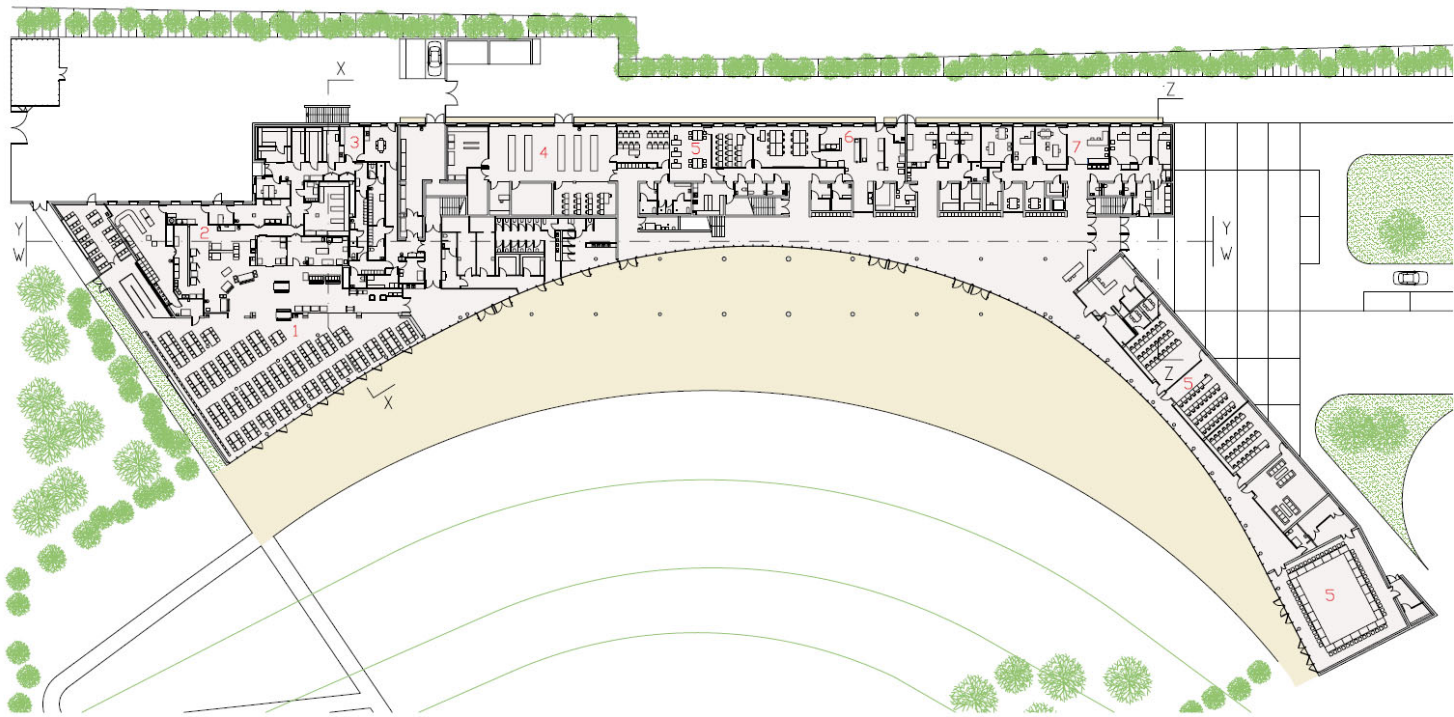
The school's program had to comply with France's strict regulations governing places of education, from which no departure is allowed. The design therefore had to provide for places where pupils conduct their daily activities under constant teacher supervision. Toilets and washrooms had to be located exclusively in the covered courtyard where the children assemble at the start of the day before departing to their classrooms; the canteen had to have a separate trade entrance for suppliers and canteen staff. While complying fully with these draconian regulations, Dietrich | Untertrifaller Architekten has mitigated the consequences, enlarging the school's access and connection zones as much as possible, and making them as luminous as the classrooms. Everywhere light is used as a gesture of welcome.




COLLEGE
Simone Veil

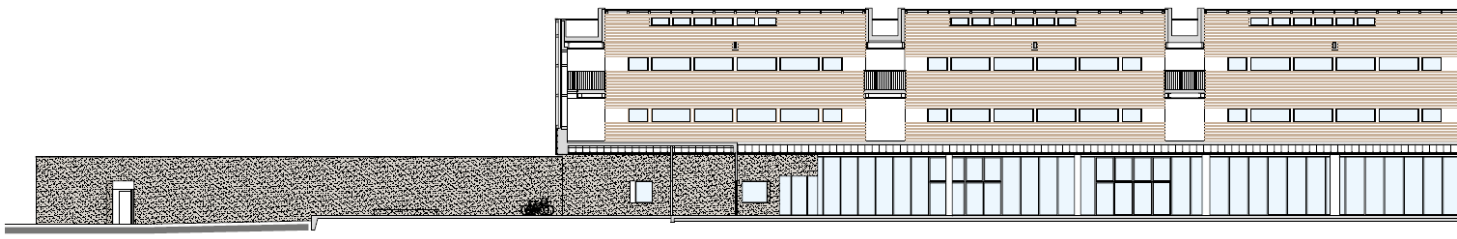


■ YY Section - Scale 1:400

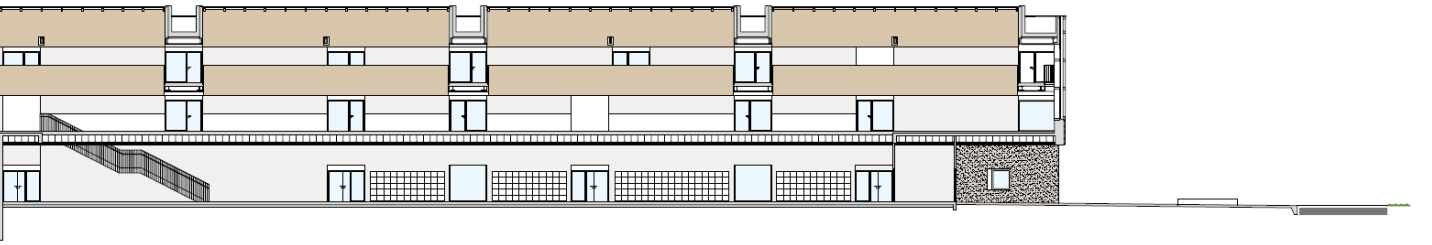


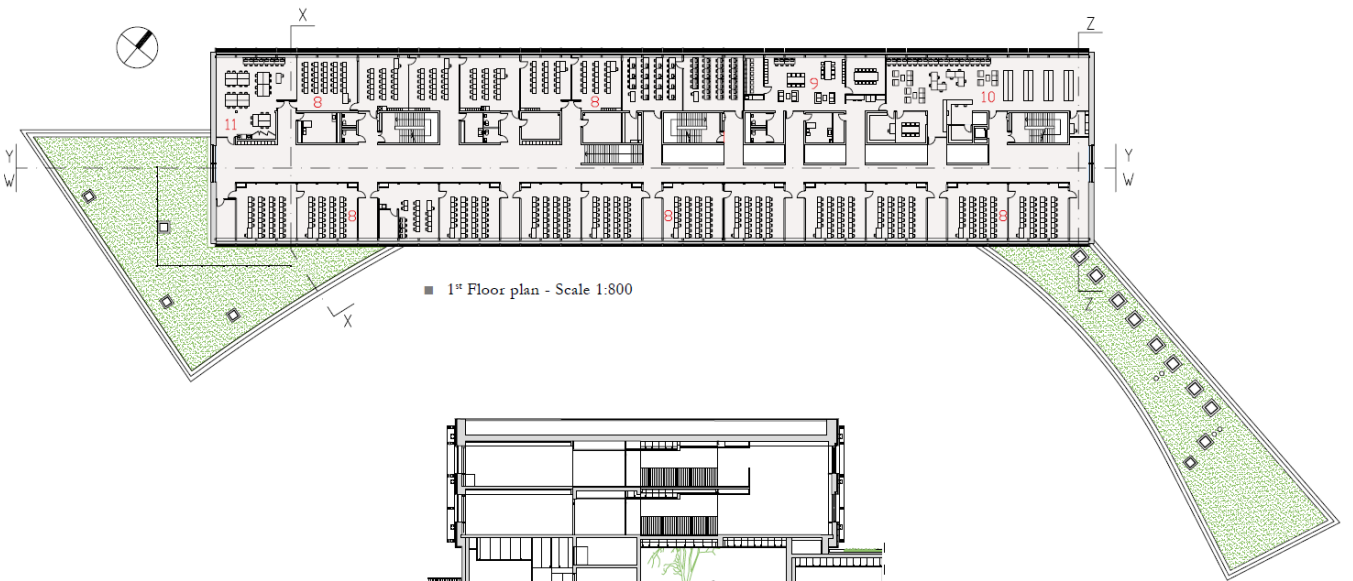
■ Ground floor plan - Scale 1:800

1- Canteen
2- Kitchen
3- Storage room
4- Workshop
5- Multi-purpose room
6- Infirmary
7- Office
8- Classroom
9- Teachers room
10- Library
11- Art education

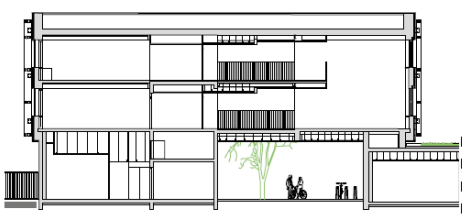


■ WW Section - Scale 1:400

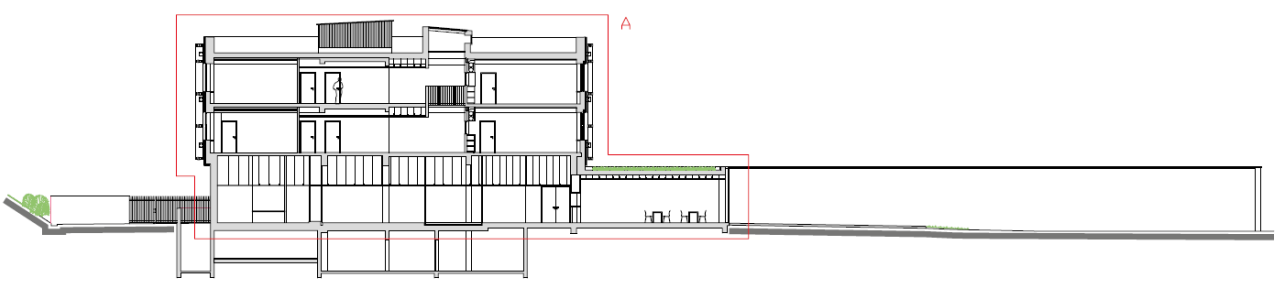




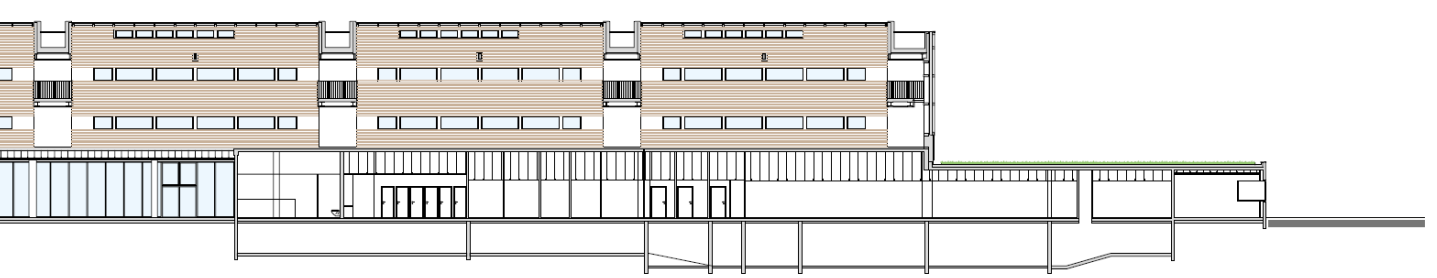
■ 1st Floor plan - Scale 1:800



■ ZZ Section - Scale 1:400

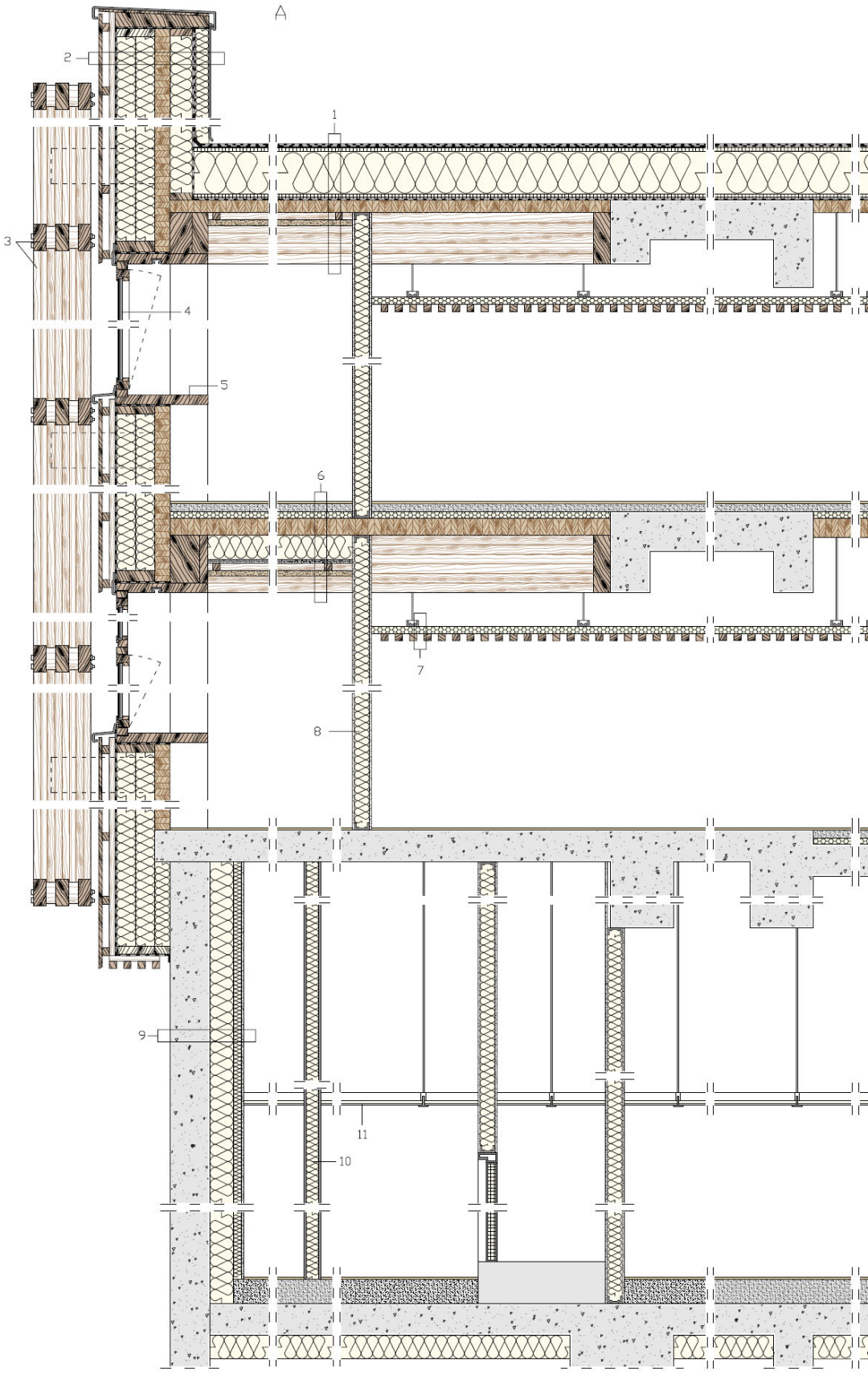


■ XX Section - Scale 1:400



Detail A: Construction system
Vertical section - Scale 1:30

1- Roof comprising double waterproofing membrane, 12 1/2" (320 mm) layered rigid insulation, vapor barrier, 3 1/8" (80 mm) laminated wood panel, wood beam, 1 3/8" (35 mm) wood fiber acoustic panels, laminated fir beam (parallel to plane of section)
2- Façade comprising 7/8" (22 mm) Douglas fir battens, 2 x 1 3/4" (50x45 mm) wood framing, waterproofing membrane, wood framing sandwiching double 9 1/2" (240 mm) rigid insulation, 3 3/4" (95 mm) laminated wood beams, wood framing sandwiching 5 1/2" (140 mm) rigid insulation, double waterproofing membrane, 3 3/8" (85 mm) rigid insulation, aluminum sheeting finish
3- Sunshading comprising Douglas fir beams and laminated wood panels
4- Wooden window with 9/32 - 3/8 - 1/4 + 1/4" (7/9/6+6 mm) glazing unit
5- Fir windowsill
6- Linoleum flooring, 2" (50 mm) screed, 1 5/8" (40 mm) acoustic insulation, 4 3/8" (110 mm) laminated wood panels, 5 7/8" (150 mm) insulation layer, double 1" (26 mm) drywall, wood beam, false ceiling comprising 1 3/8" (35 mm) wood fiber acoustic panels, glulam beam (parallel to plane of section)
7- False ceiling comprising 1 3/4 x 1 3/4" (45x45 mm) wood battens, 1 3/4" (45 mm) acoustic panel, metal framing suspended by tie rods
8- Internal wall comprising 1/2" (13 mm) drywall, steel C-profile framing sandwiching 4" (100 mm) insulation
9- Façade comprising exposed 9 7/8" (250 mm) reinforced concrete structure, 5 7/8 + 2" (150+50 mm) rigid insulation, 5/8" (15 mm) drywall
10- Wall comprising steel sandwich panel with insulation core
11- False ceiling comprising hygienic acoustic panels
12- Quartz-finish flooring, rigid insulation, 2 3/8 x 2 3/8" (60x60 mm) wood framing, 7 7/8" (200 mm) reinforced concrete slab, 5 7/8" (150 mm) rigid insulation



13- Bulkhead comprising 5/8 + 1/2" (16+13 mm) drywall on steel C-profile framing
14- Glazed curtain wall with wood frame and 3/8 - 3/4 - 3/8" (10/20/10 mm) glazing units
15- Green roof comprising soil, gravel, double waterproofing membrane, 4 3/4" (120 mm) rigid insulation, vapor barrier, 7 7/8" (200 mm) reinforced concrete slab
16- IPE 240 beam
17- Wall comprising 1" (25 mm) fir battens, wood framing sandwiching 1 5/8" (40 mm) insulation, double, steel C-profile framing sandwiching 2" (50 mm) insulation, double drywall
18- Railing comprising 7 1/4" (185 mm) laminated wood
19- Wooden window with 3/16 - 5/8 - 3/16" (4/16/4 mm) glazing unit
20- Sheet aluminum finish, 1 5/8" (40 mm) steel profile fastener, waterproofing membrane, steel Z-profiles framing 5 3/8" (135 mm) insulation, waterproofing membrane, 6 1/4" (160 mm) glulam beam, 1 5/8" (40 mm) rigid insulation, 1" (25 mm) wood batten finish
21- Sandwich panel for fume evacuation
22- Skylight with 5/16 - 5/8 - 3/8 + 3/8" (8/16/10+10) glazing unit

CREDITS

Location: Lamballe, France - **Client:** Conseil Départemental des Côtes d'Armor - **Completion Date:** 2018
Gross Floor Area: 9,000 m² - **Architects:** Dietrich | Untertrifaller Architekten with Colas Durand Architectes
Project Management: Gerhard Pfeifer, Christina Kimmerle

Consultants
Structural: Espace Ingénierie, QSB - **HVAC:** Thalem Ingénierie - **Acoustics:** Acoustibel - **Cost Estimator:** M2C

Suppliers
Metalworking: Morin Miranda - **Tiles:** CRA, Satras - **Ceilings:** Manival - **Elevators:** CFA

Text by Luca Maria Francesco Fabris, Milan Polytechnic
Photography by Luc Boegly, courtesy of Dietrich | Untertrifaller Architekten with Colas Durand Architectes