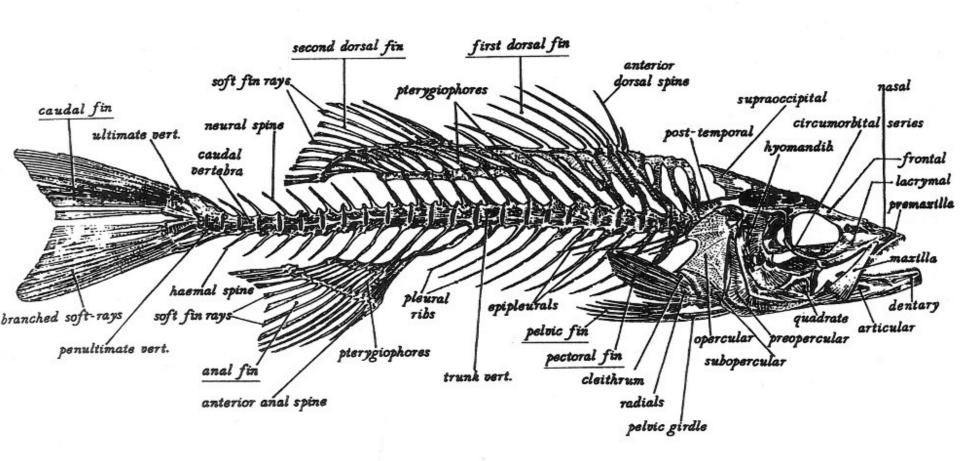


# AINE, VOIMA JA KAUNEUS

# Nomenclature Of Generalized Teleost Fish Sheleton



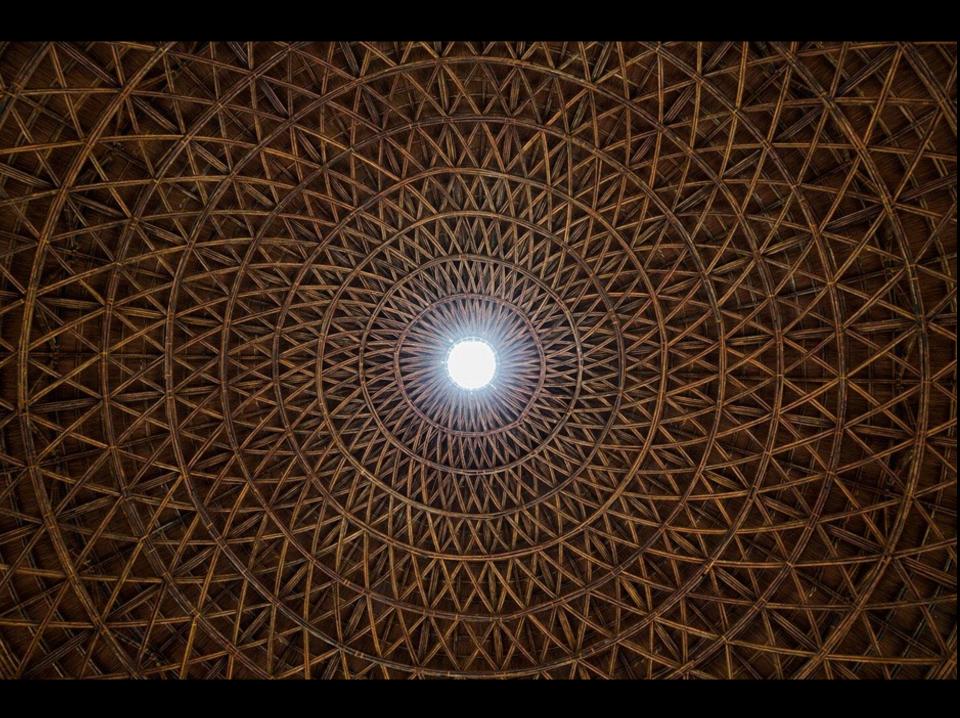


Figure 34
Energy gained from environment

#### Sun

- heating and cooling effects/ direct and indirect
- creation of electric energy/ direct and indirect

(Solar heat gain active and passive\*/ cooling by heat energy, absorber technique/ photovoltaic/solar furnace/TIM façades)

\* solar installations, winter gardens

#### Water

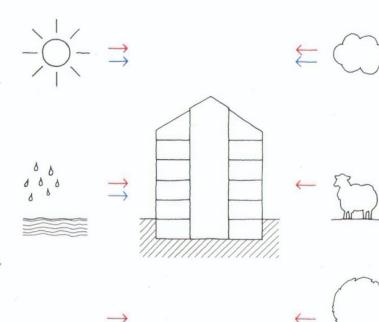
 heating and cooling effect/ direct and indirect

(Groundwater for cooling or heating with heat pumps (HP)/surface water for cooling, recycled cooling or heating with HP/ rainwater for heating with HP)

#### Soil

 heating and cooling effect/ direct and indirect

(Cooling by 'air well'/storage of heating or cooling energy in aquifer storage)



#### Air

- heating and cooling effect/direct
- creation of electric energy/ direct and indirect

(Ventilation/ cooling by heat abstraction/ cooling of building components, heat gain with HP/ creation of electric energy)

#### Fauna

- heating effect / direct and indirect

(Heat gain by combustion)

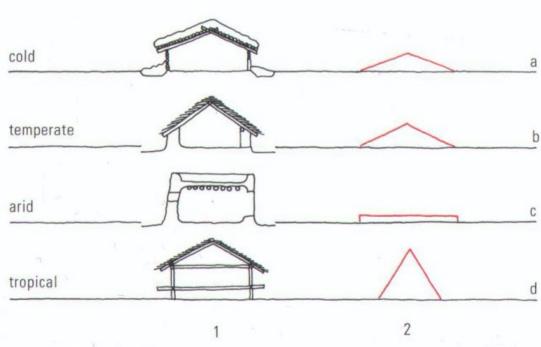
#### Flora

- heating and cooling effects
- filter effects
- oxygen enrichment/ direct and indirect

(Heat gain by combustion / cooling by evaporation/ reduction of dust and contaminants /  $O_2$  enrichment of air)

### 2 Typical indigenous roof types

- low pitch allows snow to remain, acting as insulation from chilling winds
- b medium pitch allows rain run-off
- c flat roof, rain reservoir
- d high-pitch roof allows drainage and ventilation



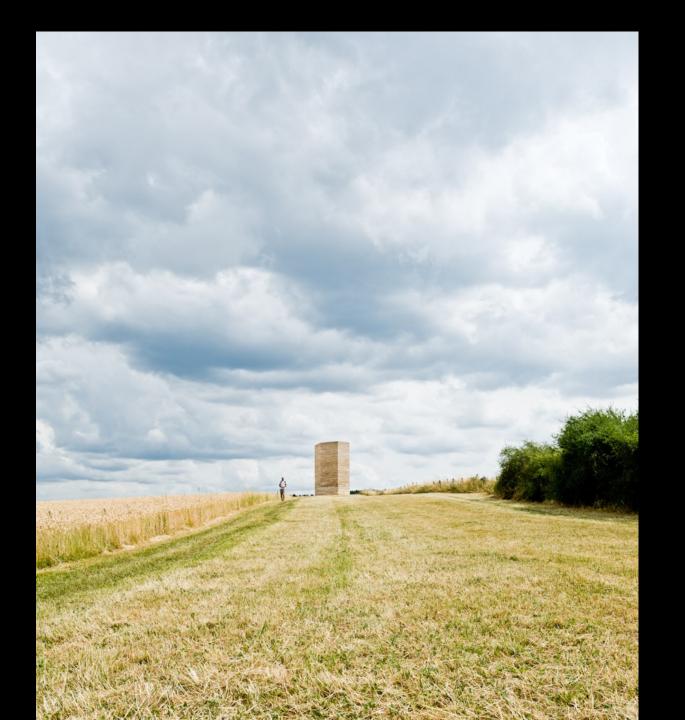
## Figure 20

Typical, traditional dwelling and roof types in different climate regions

Lähde: The Technology of Ecological Building, Klaus Daniels, Birkhauser, 1997

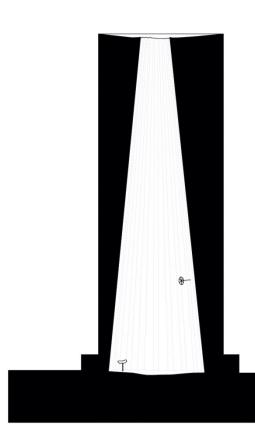
"Architecture is always concrete matter. Architecture is not abstract, but concrete."

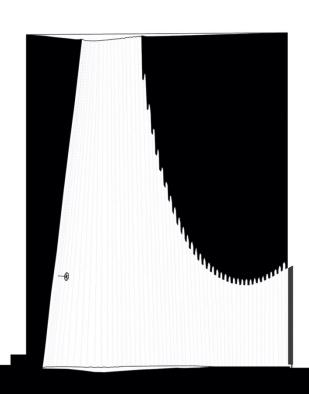
Peter Zumthor

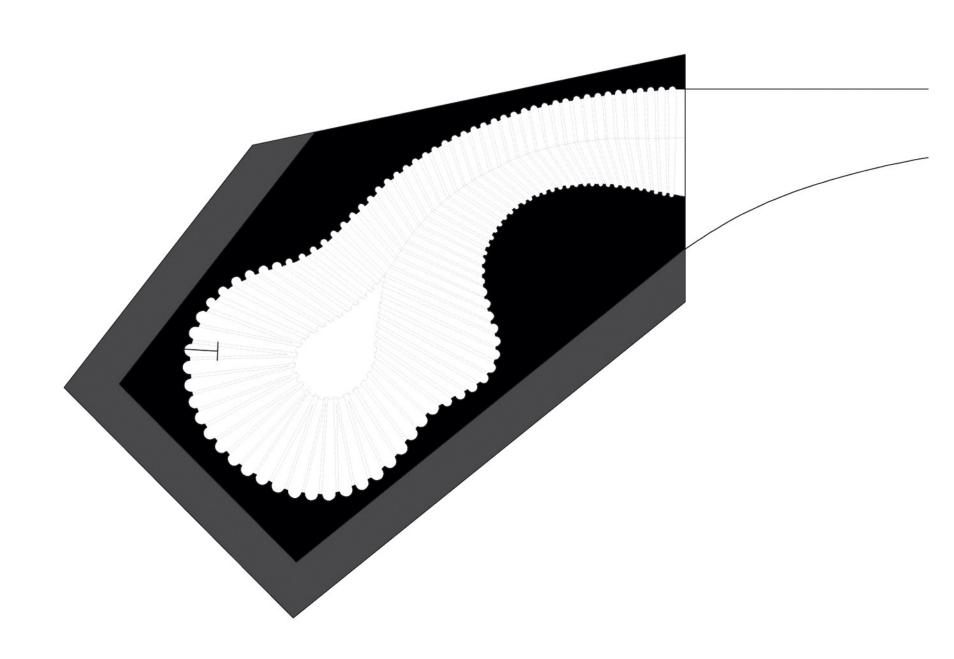














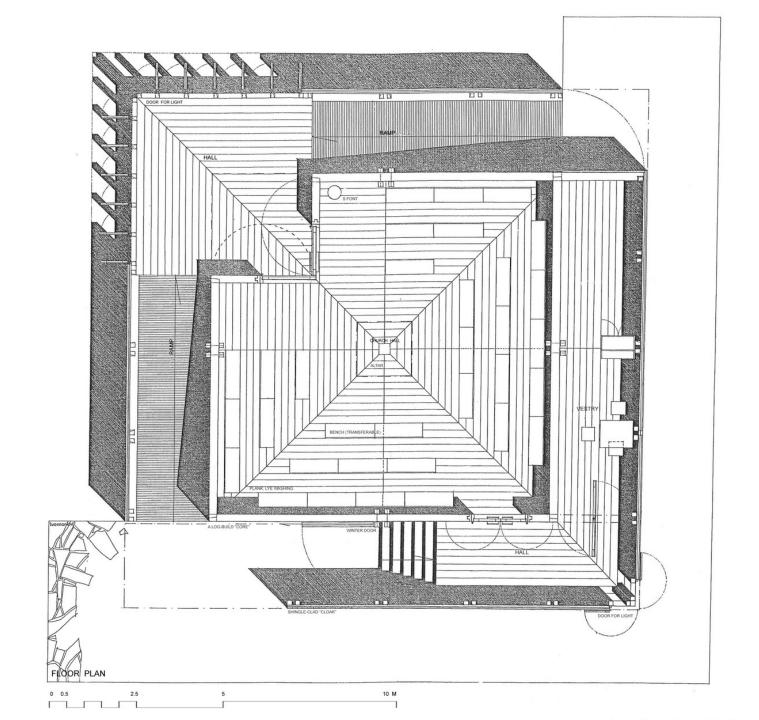




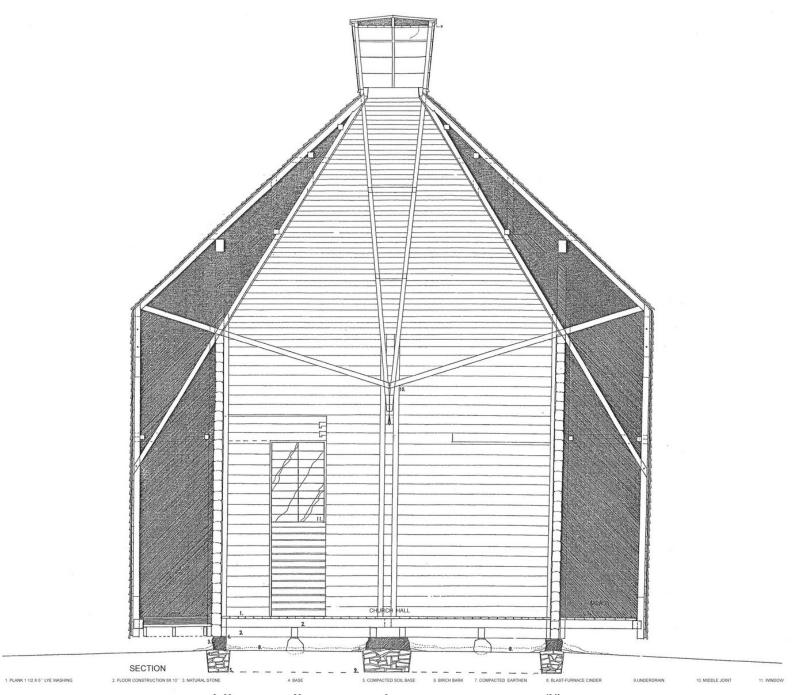








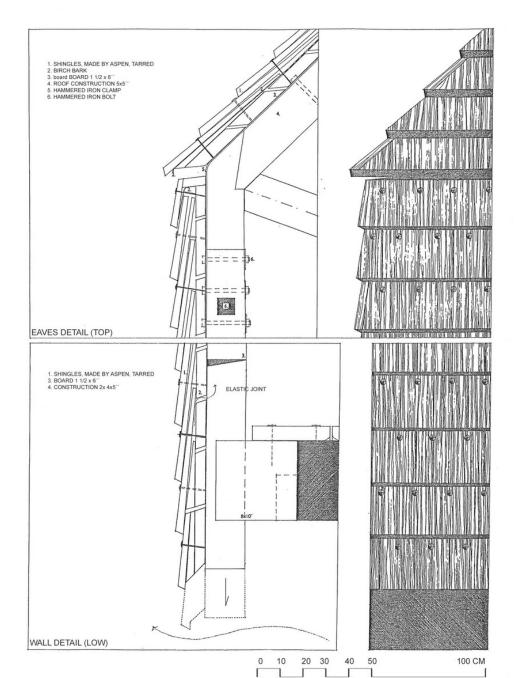




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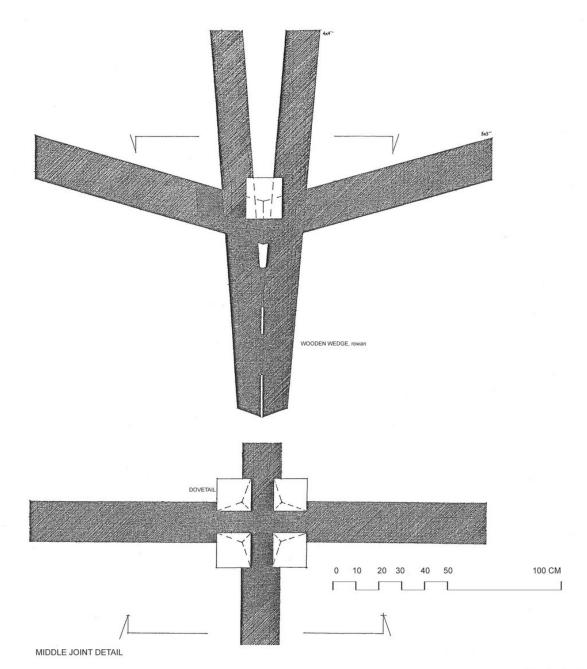
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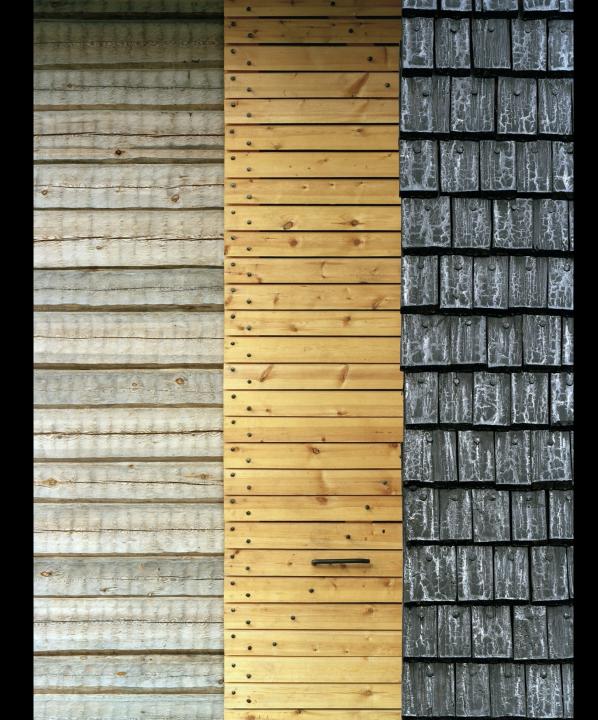








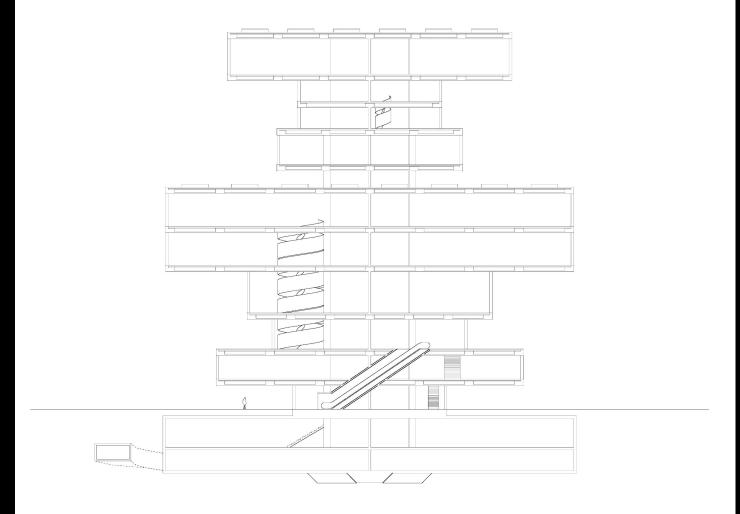


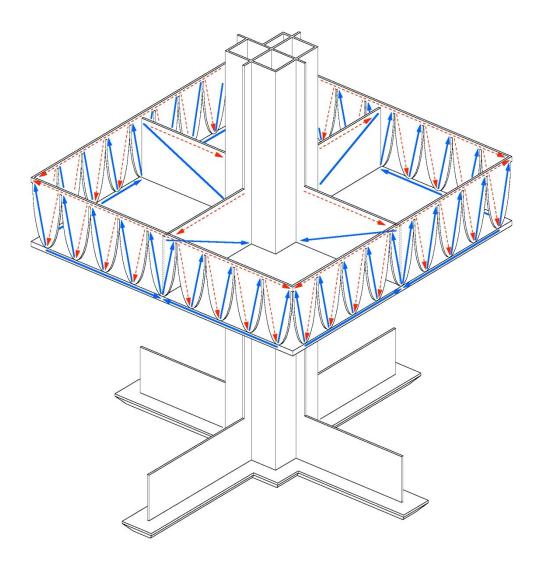


"In fact, all architecture proceeds from structure, And the first condition at which it should aim is to make the outward form accord with that structure."

Viollet-le-Duc, Lectures, vol. 2, 1872

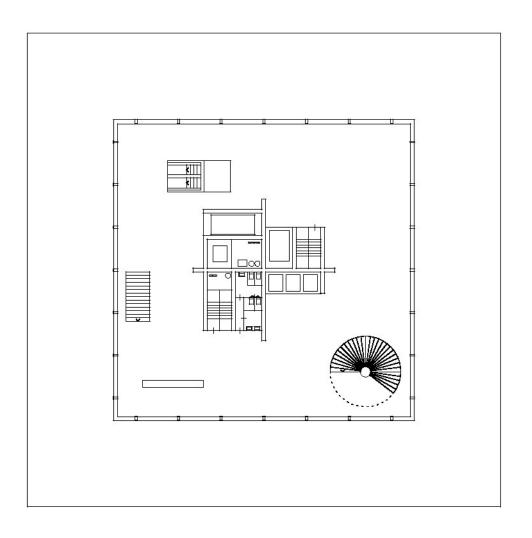






STRUCTURAL SCHEME / 1:400





2 / FOYER / 1:500

"You employ stone, wood, and concrete, and with these materials you build houses and palaces. That is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy and I say: `This is beautiful.' That is architecture. Art enters in."

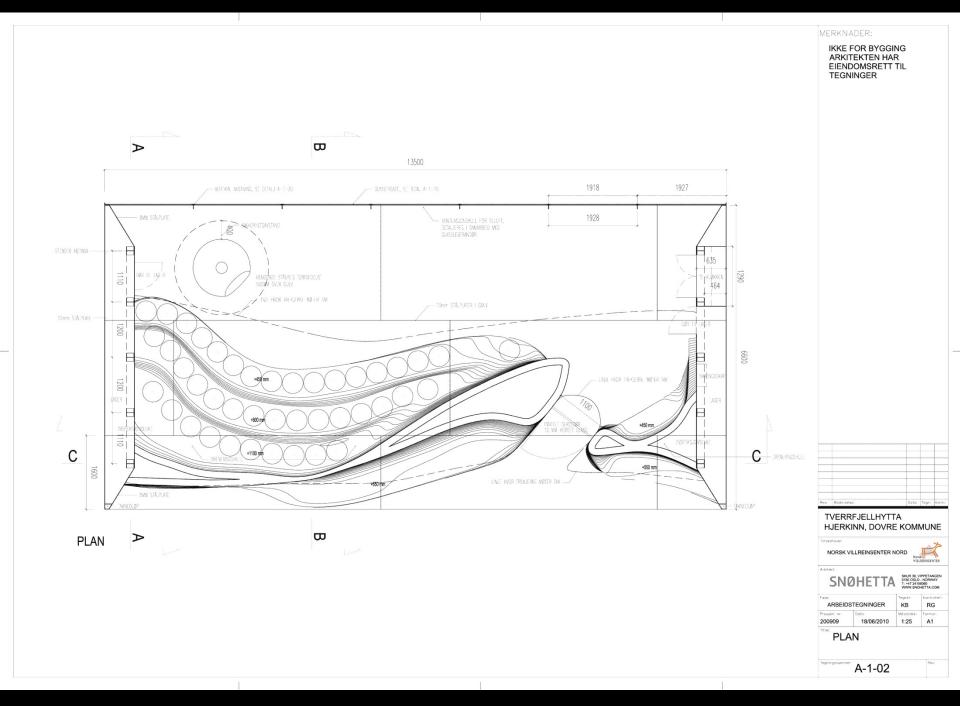
Le Corbusier

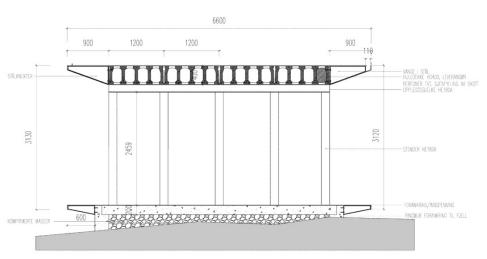




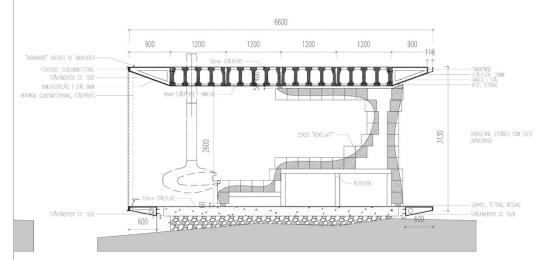








SNITT A-A'



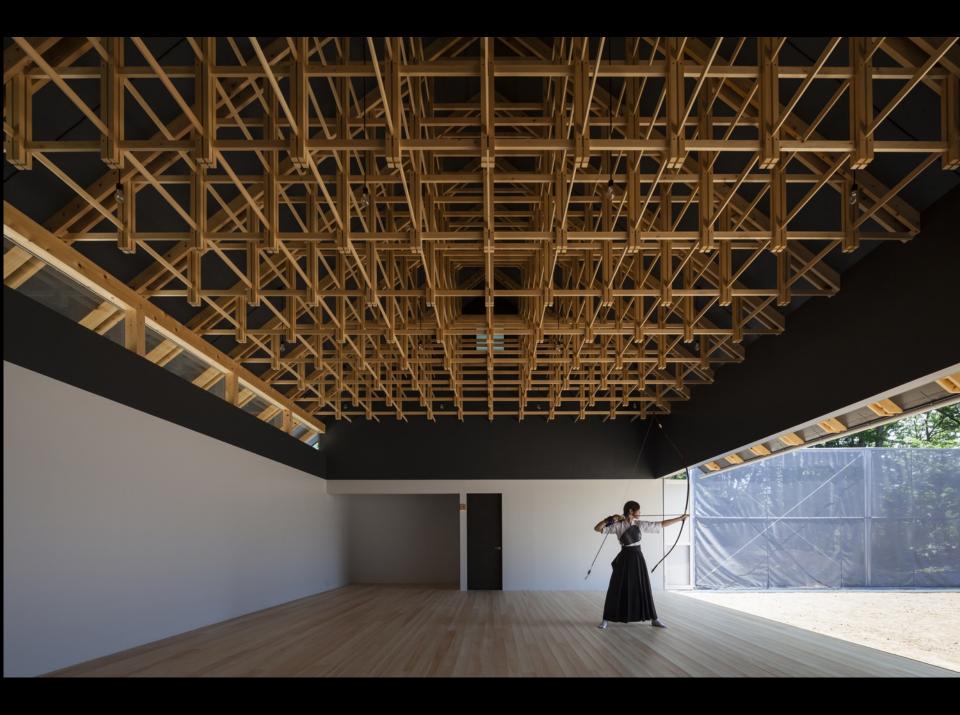
SNITT B-B'

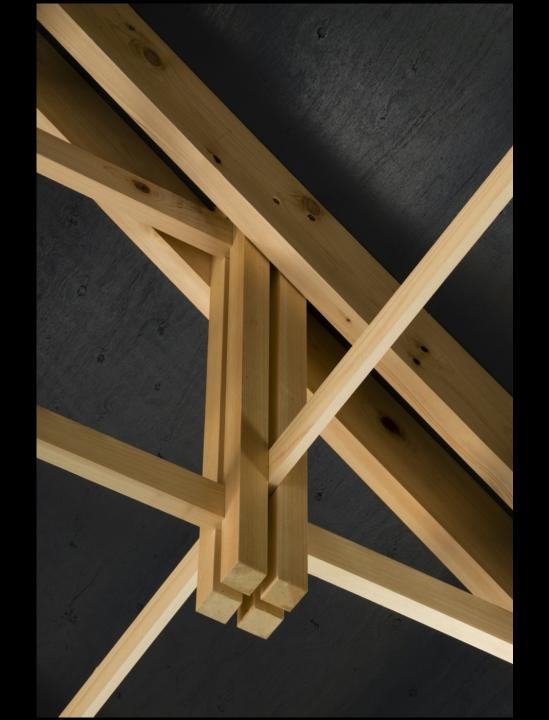


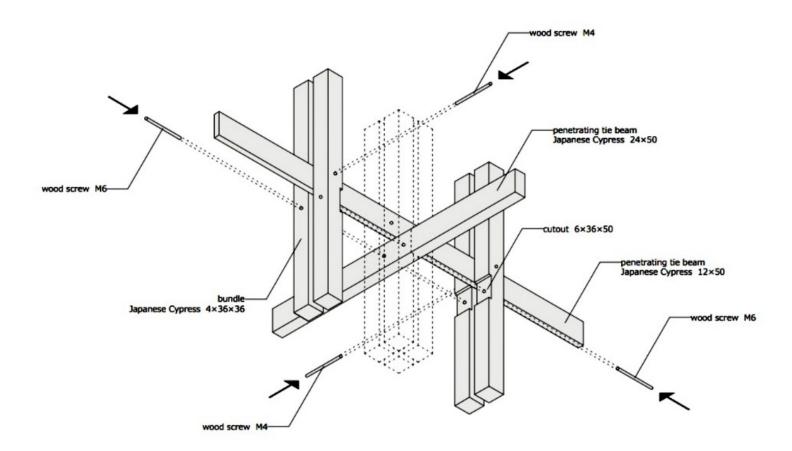




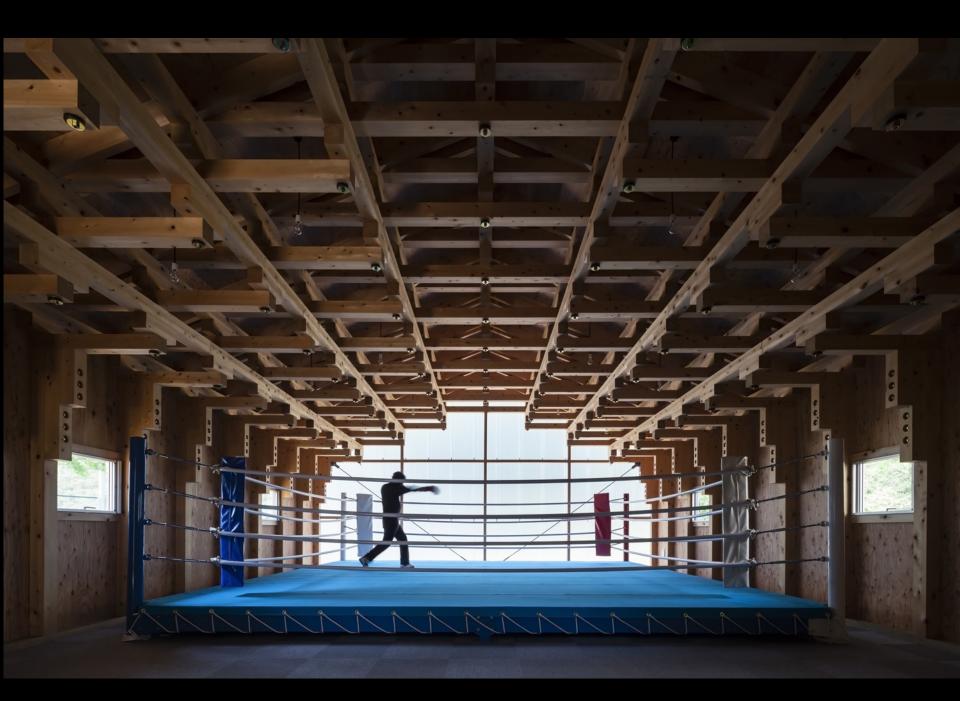




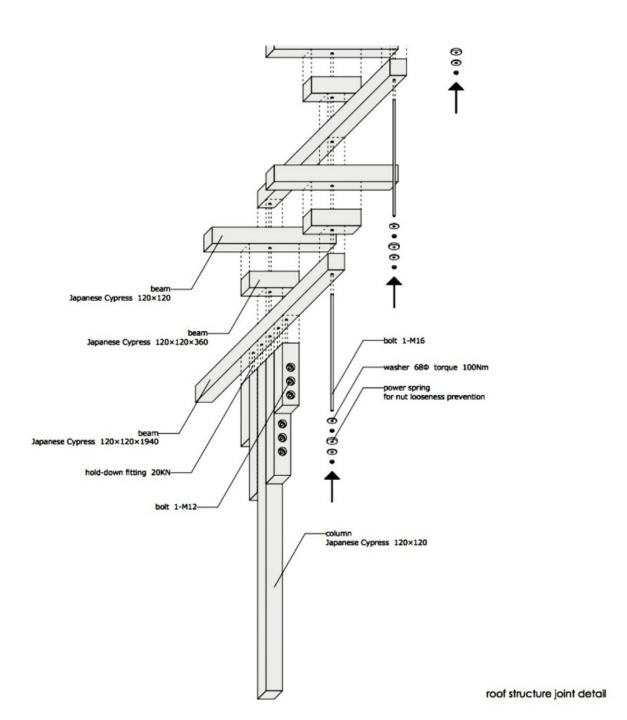














"Each material has its own message, and to the creative artists, its own song.... Every new material means a new form, a new use if used according to its nature."

– F.L. Wright



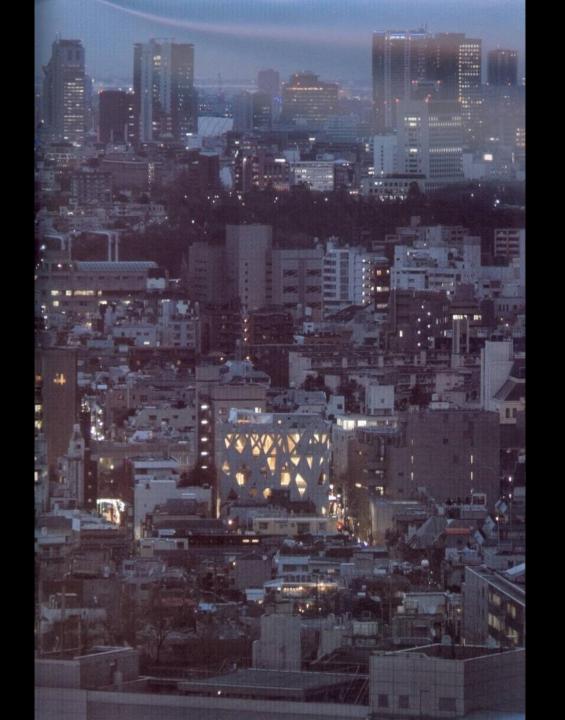


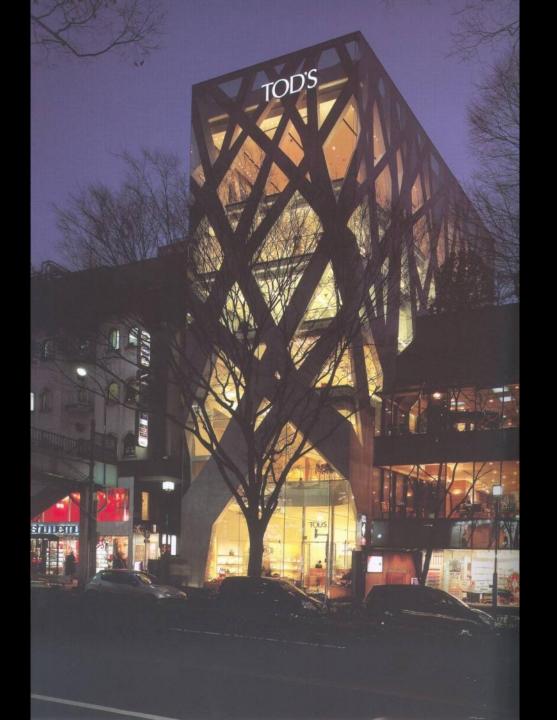


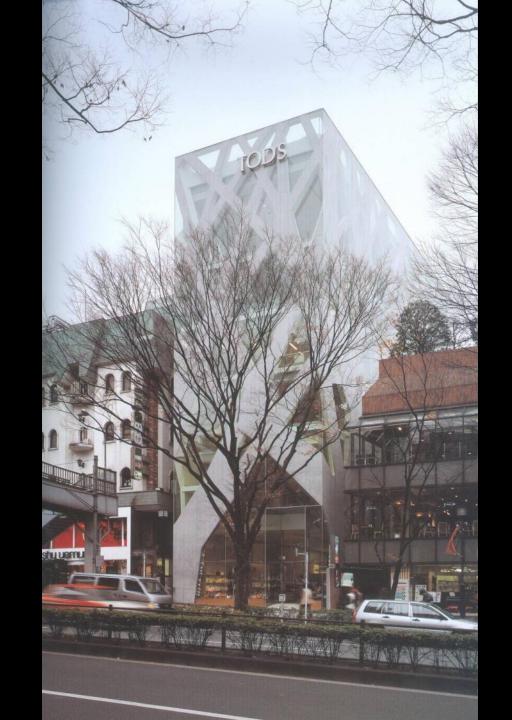




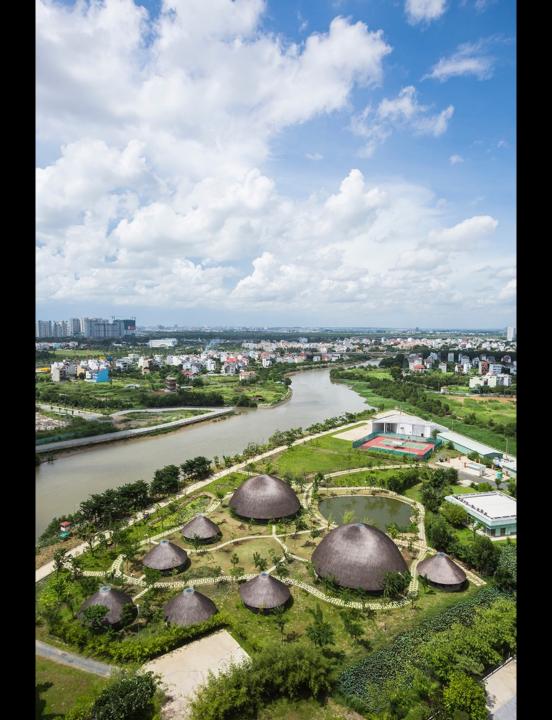


























"It is impossible to separate the form of the architecture from its structure; every member of this architecture is the result of a necessity of that structure, as in the vegetable and animal kingdom there is not a form or a process that is not produced by the necessity of the organism.

Viollet-le-Duc, Lectures, vol. 1, 1872

