**HEROS DAYLIGHT SCHOOL**

**SPACE REQUIREMENTS**
- Number of students: 400 students in 4 academic years
- 100 students / academic year
- 25 students / class
- Total: 16 classes

**OHS standard / Arbonorm**
- 2 m$^2$ / student + 3.5 m$^2$ / teacher = 53.5 m$^2$ minimum
- HEROS concept ± 60 m$^2$ minimum

**Division disciplines**
- Pavilion: technologies & entrepreneurship (project space, student store/horeca)
- Ground level: science (physics, chemistry, biology, care)
- Art & music: drawing, crafts, music, drama
- First level: languages (dutch, english, french, german)
- Second level: social science (geography, history, sociology, economy)

**PROGRAM HEROS SCHOOL**

**GROUND LEVEL +0**
1. Bicycle storage
2. Distribution
3. Entrance
4. Reception
5. Toilets men
6. Toilets women
7. Science storage
8. Biology & care
9. Physics & chemistry

**FIRST LEVEL +3750**
24. Playing tables
25. Toilets
26. Storage
27. Coffee / drinks
28. Library
29. Classrooms languages
30. Reading nets / hammocks
31. Relax / lunch area
32. Repro
33. Toilet
34. Administration

**SECOND LEVEL +7510**
35. Flexible learning garden divided into 4 zones
36. Meeting room
37. Office
38. Office

**ROOF +11600**
21. Charging point electric vehicles
22. Project space students
23. Student stores

**SPACE REQUIREMENTS**
- Average temperature lower
- Average temperature higher

**HEATING / COOLING**
- Floorheating and -cooling using existing hot-cold storage beneath the adjacent grass field

**VENTILATION**
- Natural ventilation
- Mechanical ventilation

**CONSTRUCTION**
HEROS SCHOOL

Solar / Daylight Roof
- Monocrystalline solar cells
- Total output: 140,000 kWh/year
  (including output roof pavilion)
- Equal to 40 average households
- Columns white coated

Milkglass
- 70% transparent glass

Program School
- Zone North: Teachers/Staff
- Zone Middle: Communal
- Zone South: Students

Reuse Existing Building #39
- Façades
- Foundation
- Ducting systems

Pavilion Solar/Daylight Roof
- Zone North: Charging point electric vehicles
- Zone Middle: Project space students
- Zone South: Student stores
Roof detail 1
1:10
glass; double, insulating HR++
IPE 300 steel plate; white, reflective coating
comfort and edge finishing
concrete; floorheating/-cooling pipes
carpet; natural sisal
milkglass; 70% transparent, HR++
IPE 400 steel plate eave; white, reflective coating
existing façade; brick, light beige
milkglass; 70% transparent, HR++
supporting structure; structural glass
roof covering; sloped, 2 degrees/meter
ceiling board; white, reflective coating
stone edge finishing; attached to existing façade
30 115 80 690
85

Roof detail 2
1:10
glass; double, insulating HR++
monocrystalline solar cell; 61 cells/panel; output 210 kWh/year / panel
rigid, triangular panel; aluminum honeycomb, white coated
placed on aluminum profile
rainwater drainage; protected with filter
rotation axis solar panels; double shaft, ball-bearing

Interior detail 1
1:10
façade detail 1
1:10
façade detail 2
1:10
IPE 300 steel plate; white, reflective coating
concrete; floorheating/-cooling pipes
carpet; natural sisal
milkglass; 70% transparent, HR++
IPE 400 steel plate eave; white, reflective coating
existing façade; brick, light beige
milkglass; 70% transparent, HR++
supporting structure; structural glass
balustrade; structural glass, blind assembly
Daylight School
1:50
hammock; knitted structure
morning
sunrise in East

noon
high position in South

afternoon
sunset in West

SUNFLOWER MOTION
horizontal grid

SUNFLOWER MOTION
diagonal grid

LOTUS MOTION
diagonal grid

0.88 Threshold
0.20 Tolerance

0.80 Threshold
0.25 Tolerance

0.86 Threshold
0.20 Tolerance

0.87 Threshold
0.20 Tolerance

0.83 Threshold
0.25 Tolerance

0.90 Threshold
0.25 Tolerance

0.85 Threshold
0.25 Tolerance

0.90 Threshold
0.25 Tolerance
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