

<https://orthoslogos.fr/architecture/salginatobelbruecke/>

# Drawing Structures I

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**The Drawing Structures** I will introduce the basic drawing techniques (sketch, plan, section, elevation, and axonometry) to the first-year engineers.

Based on these techniques, we will further investigate analytical drawing methods capable of exploring projects, structural concepts and their solution

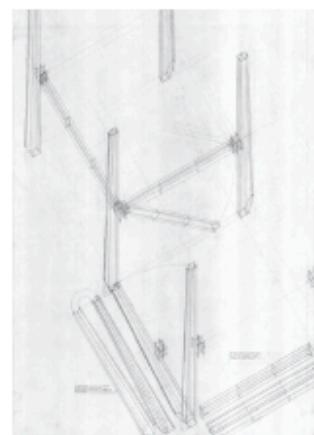


Fig.13 bis

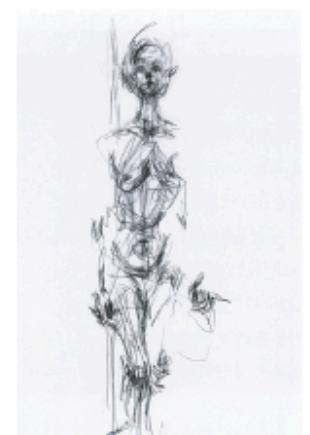


Fig.179

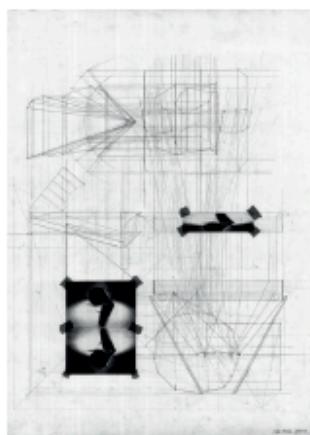


Fig.181

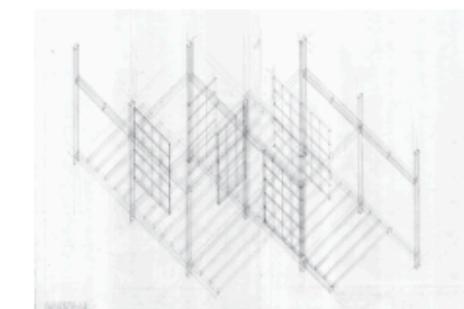


Fig.188

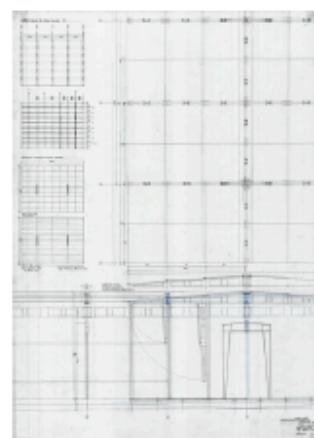


Fig.189

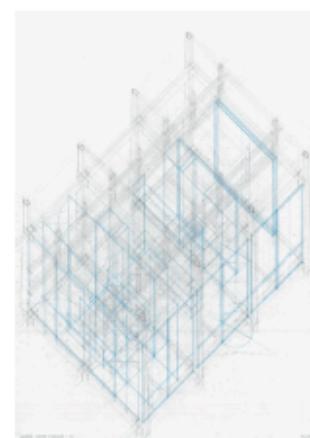


Fig.192

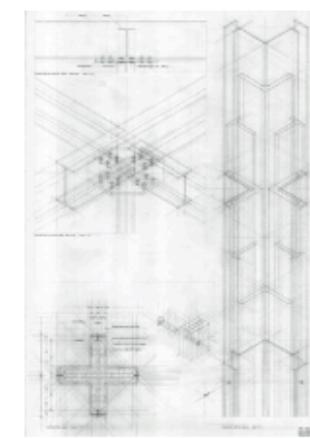


Fig.193

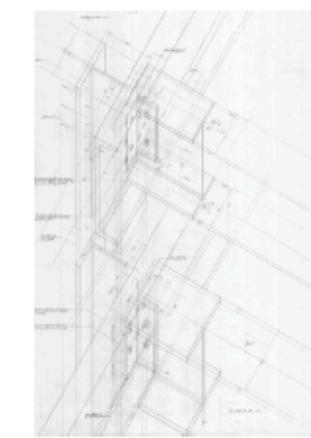


Fig.195

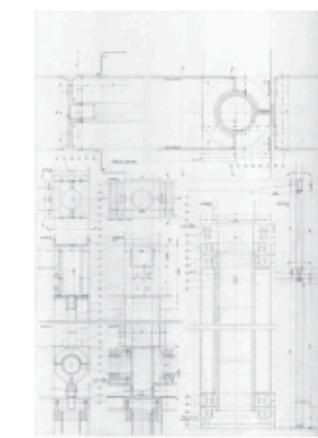


Fig.199

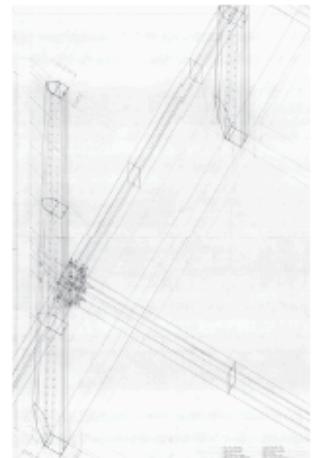


Fig.200

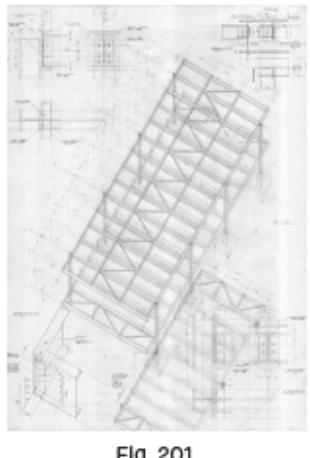


Fig.201

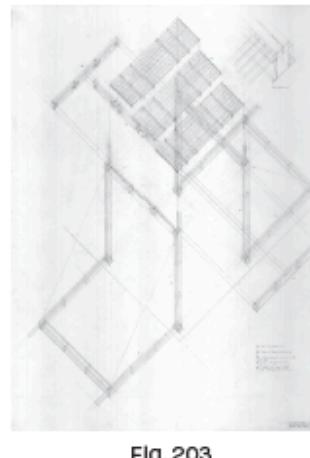


Fig.203

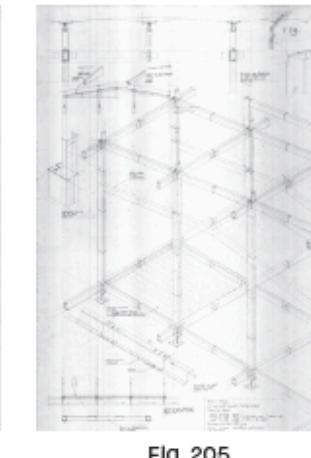


Fig.205

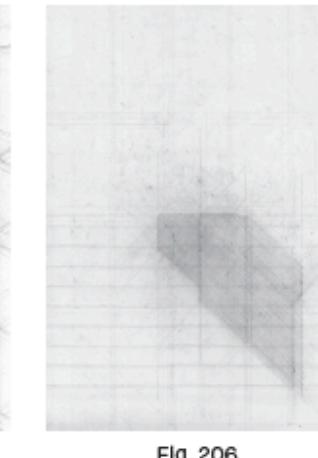


Fig.206

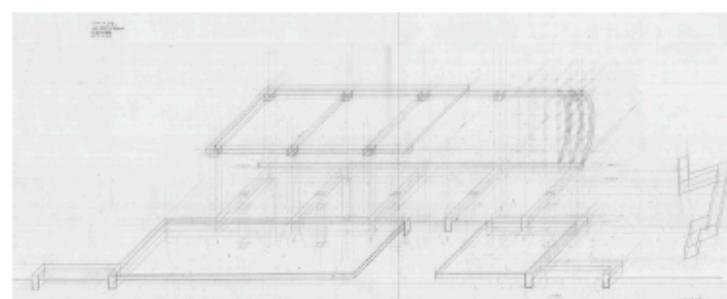


Fig.207

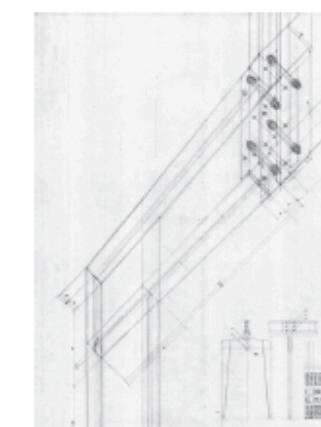


Fig.212

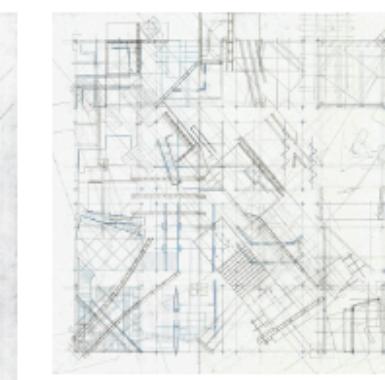


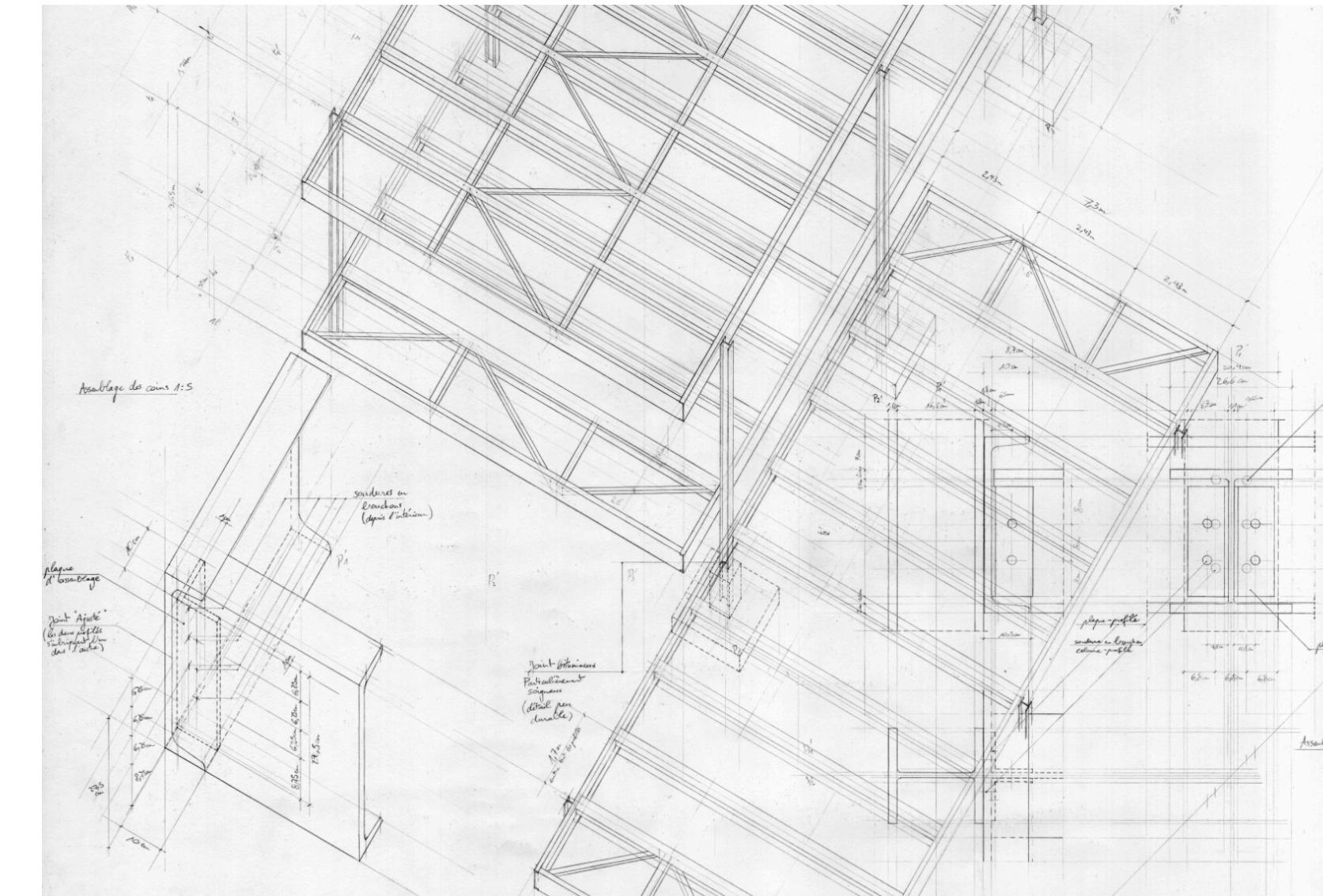
Fig.215

# Teaching and research *On Drawing* with Engineers and Architects

- . UE Docta Manus- Drawing Structures (UE CIVIL- 475, GC)
- . SW Drawing Research Platform Somerset (PENS-491)



Sketch survey by Alberto Johnsson, Daniel Nitsche and Alexander Turner, Drawing Research Plartform Somerset 2023,

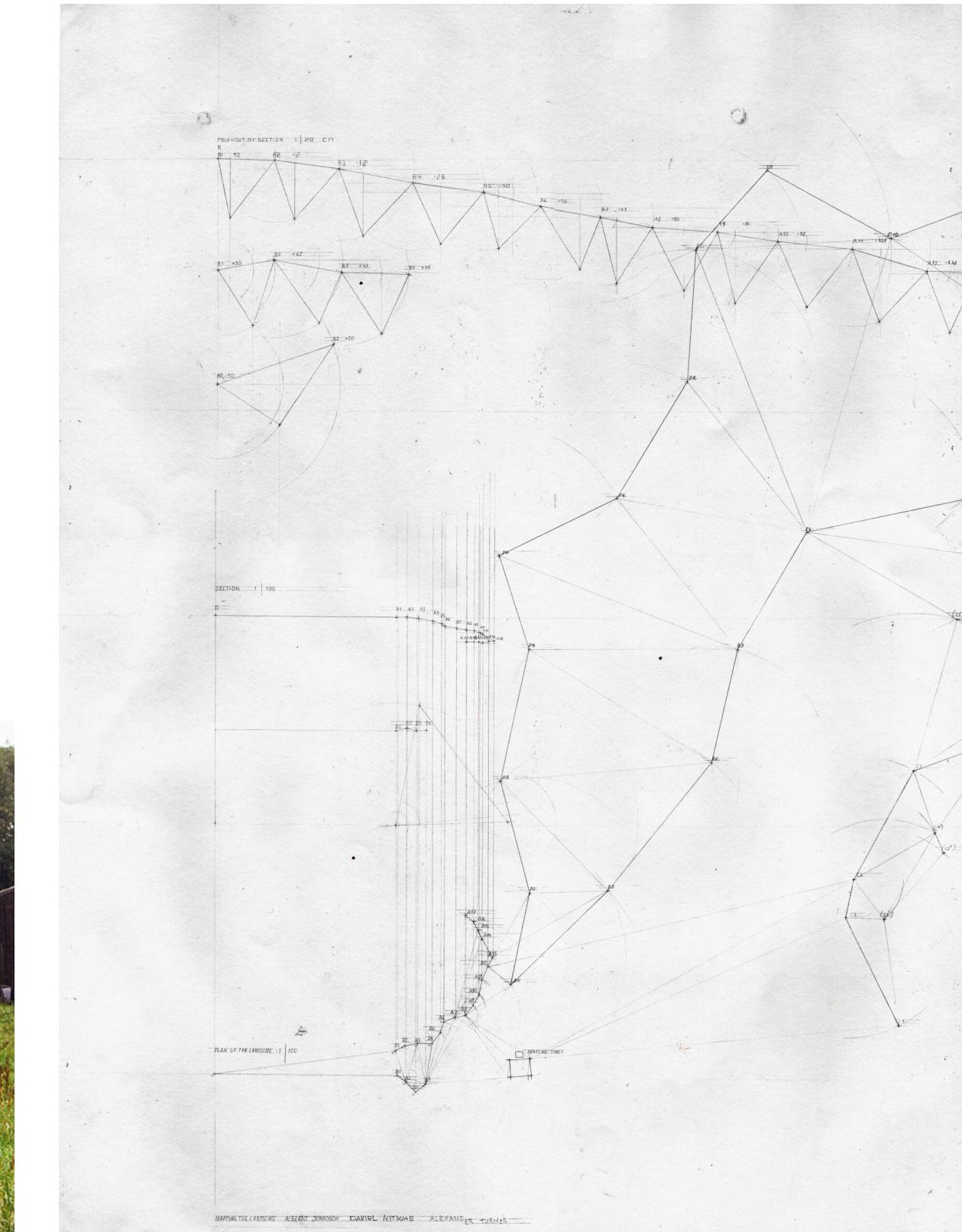


PENS-491 /MA, opt.  
“Drawing Research Platform“

ENAC Summer Workshop  
2023 at Drawing Matter,  
Shatwell, UK  
Archive  
workshop, 2023



Students with Patricia Guaita  
in the haybarn. Shatwell, UK



Drawing in process (survey) by Alberto Johnsson,  
Daniel Nitsche and Alexander Turner.

ENAC Summer Workshop 2023  
at Drawing Matter, Shatwell, UK

## 1. Linear projections

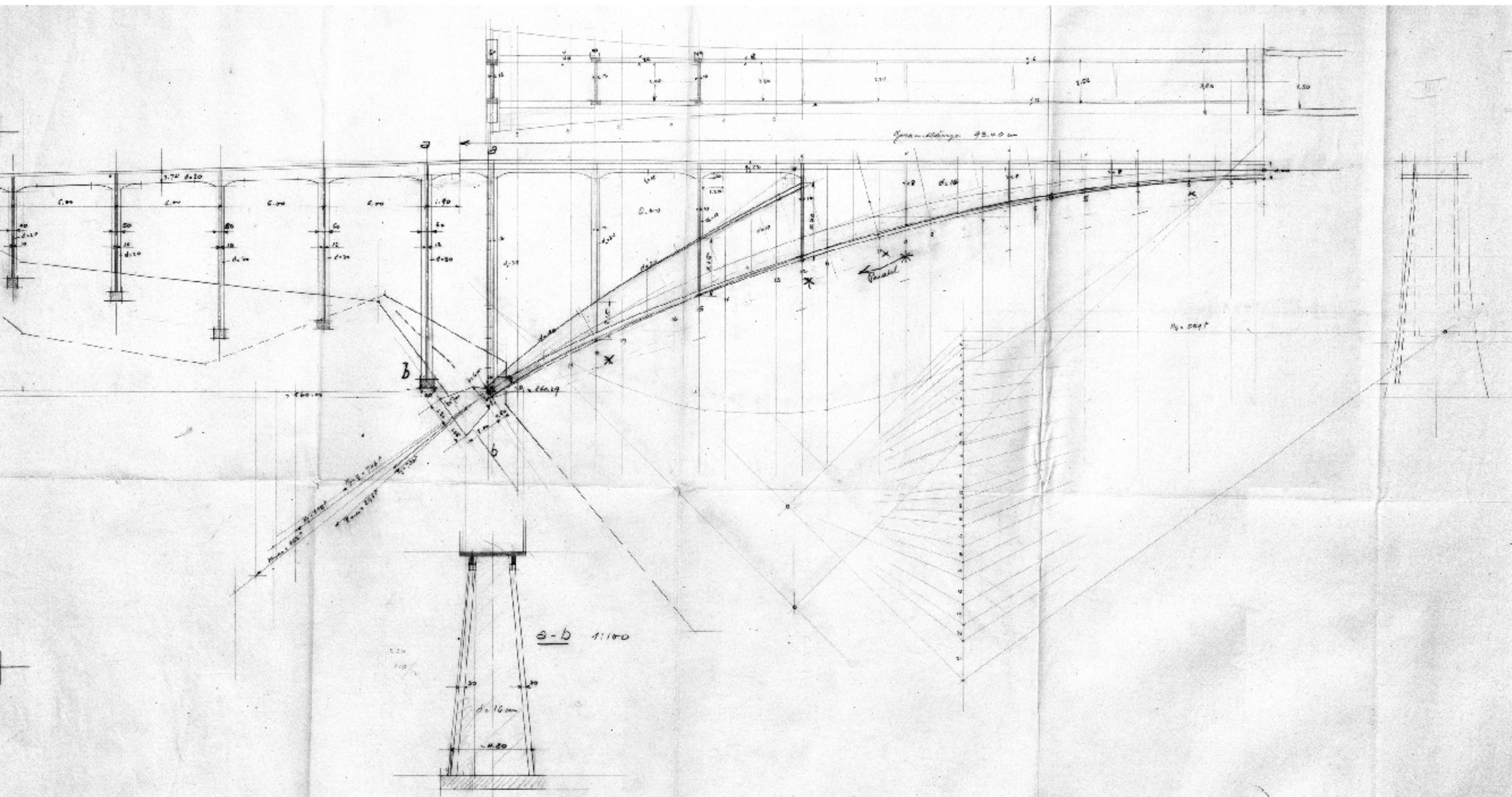
We will begin with the "*projections de Monge*", a technique that allows to construct plan, section and elevation simultaneously and in reciprocal relation.

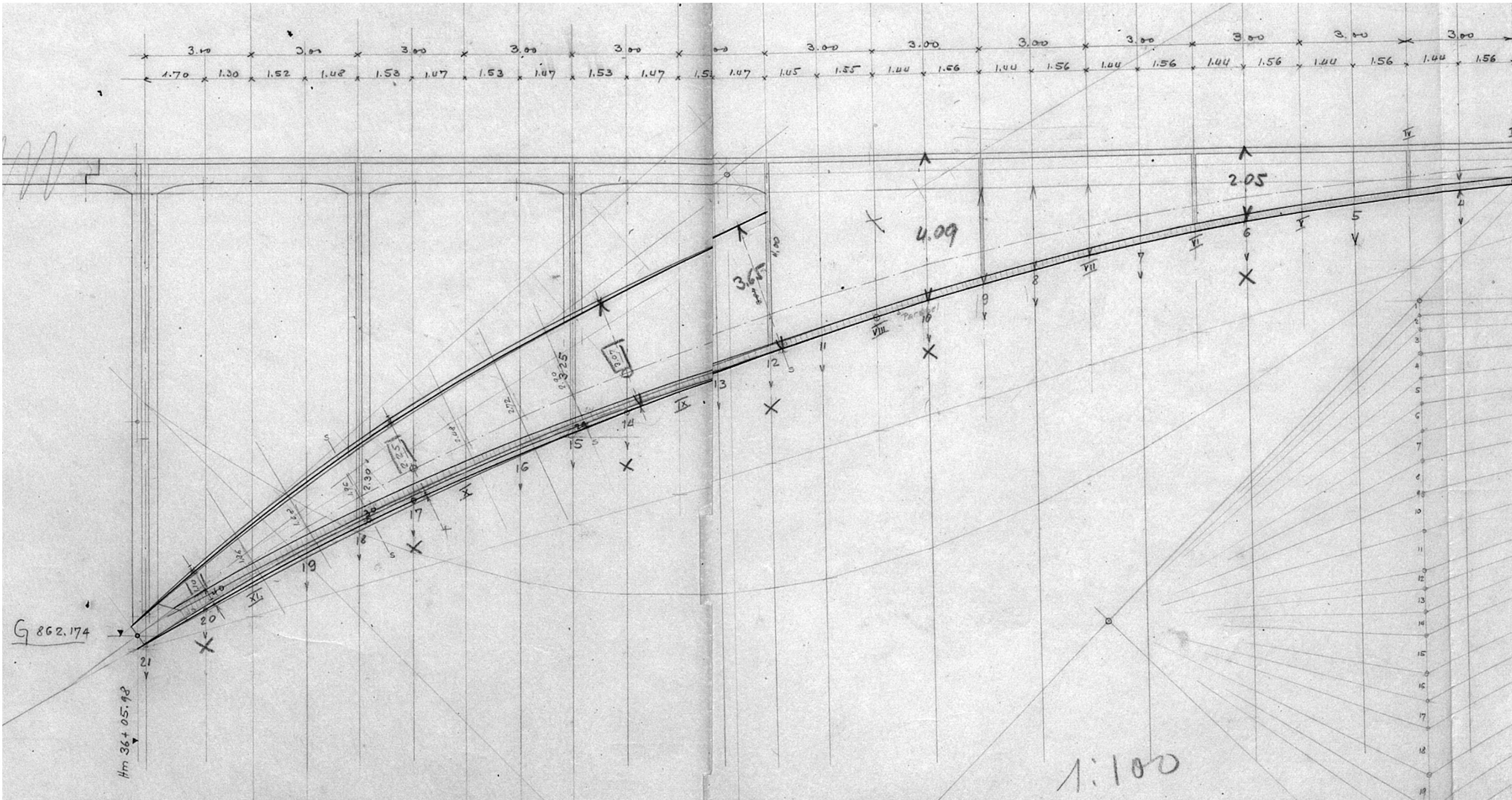
Learning to read a three-dimensional reality in two dimensions without immediate visualization in 3D fosters essential skills such as spatial relationship, visualization and precision.

Monge's projection technique helps to construct points and lines on the paper. It introduces the first concepts of scale, proportion, transparency, and composition. With only points and lines, the relationships between plan and sections are established. The construction lines remain and create other unforeseen spaces.



Salginatobel Bridge (1928-29) from Robert Maillart, static drawingfirst working-drawing.





Salginatobel Bridge (1928-29)  
from Robert Maillart,  
static drawing first working-drawing.