

RENOVATION FOR DIFFERENT ENERGY SYSTEMS

Prefabricated renovation approach for post-war walk-up
apartments that is applicable to different energy systems

Master of Science (MSc) thesis

Msc Architecture, Urbanism & Building Sciences

Master Track: Building Technology

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AE+T | Researcher Climate Group and Assistant Professor

Delegate of the Board of Examiners

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Urbanism | Assistant Professor



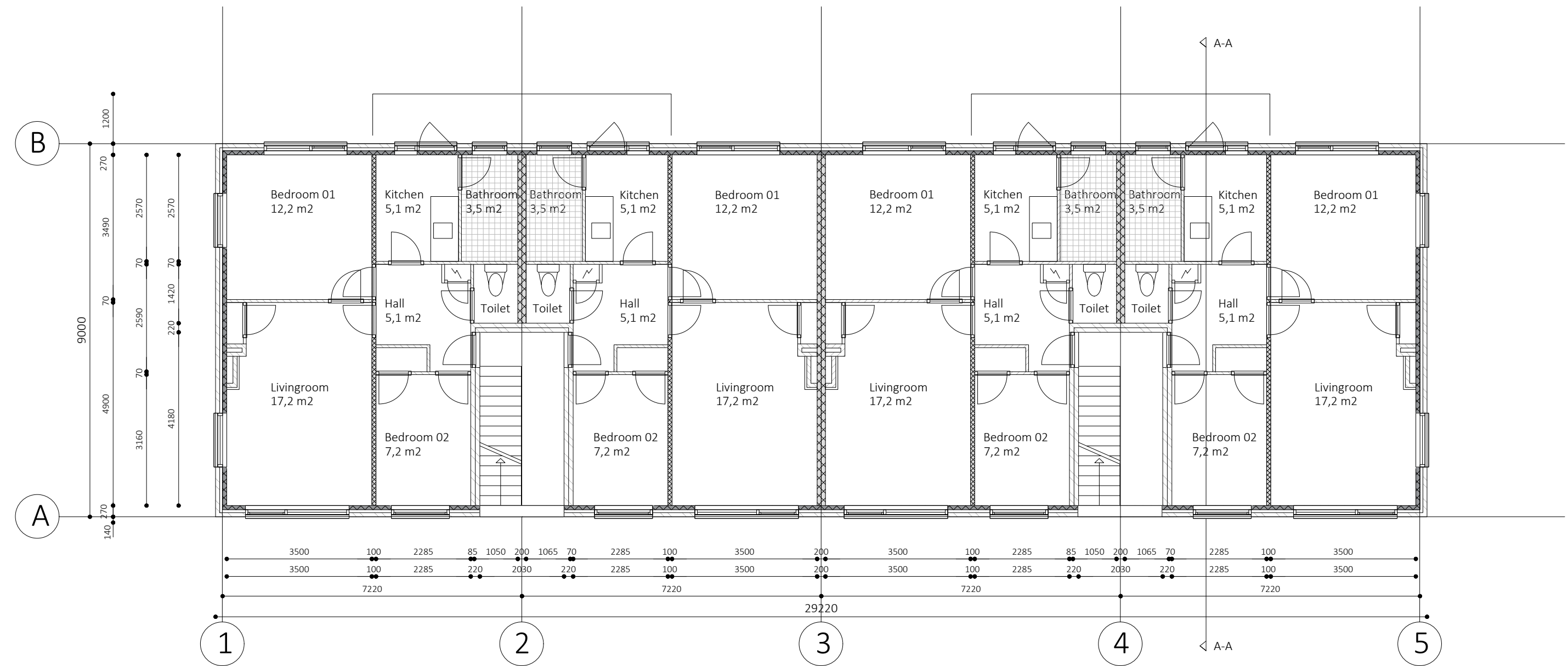
Delft University of Technology

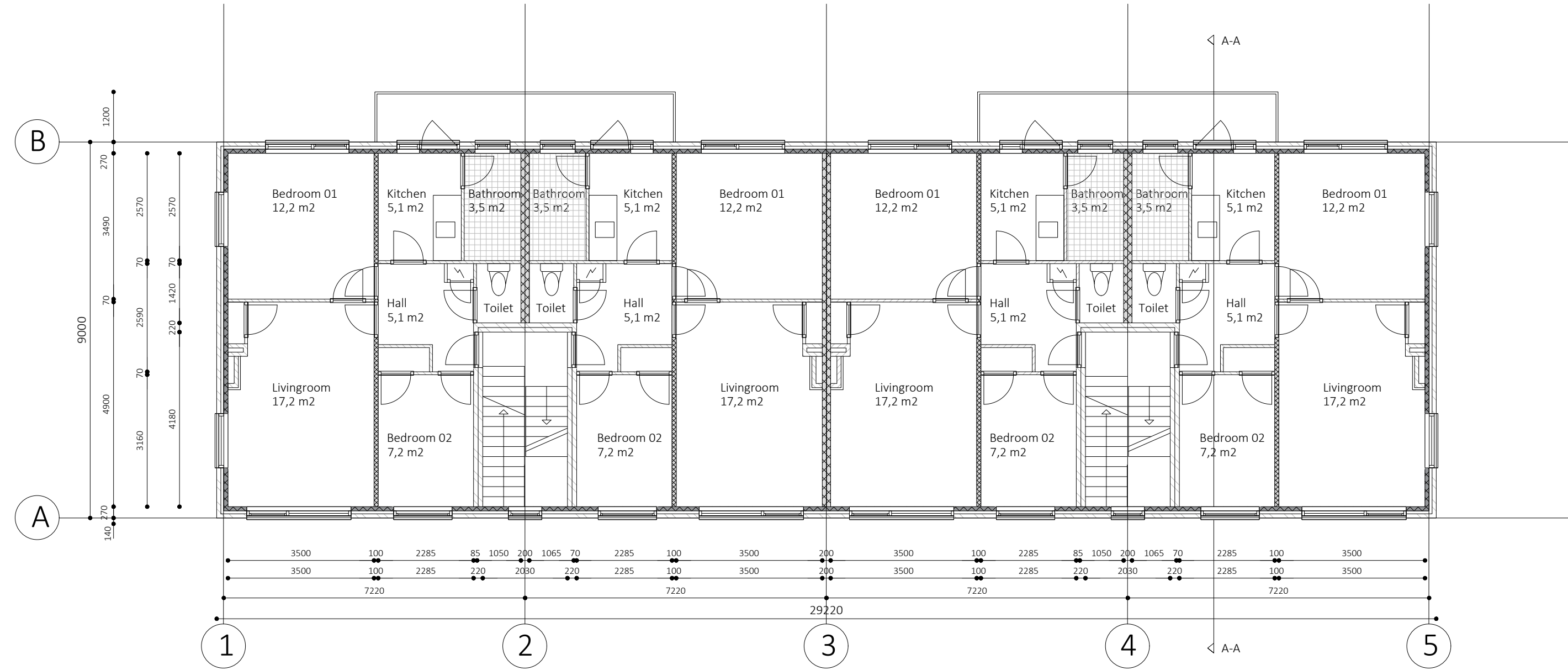
Faculty of Architecture and the Built Environment

Julianalaan 134

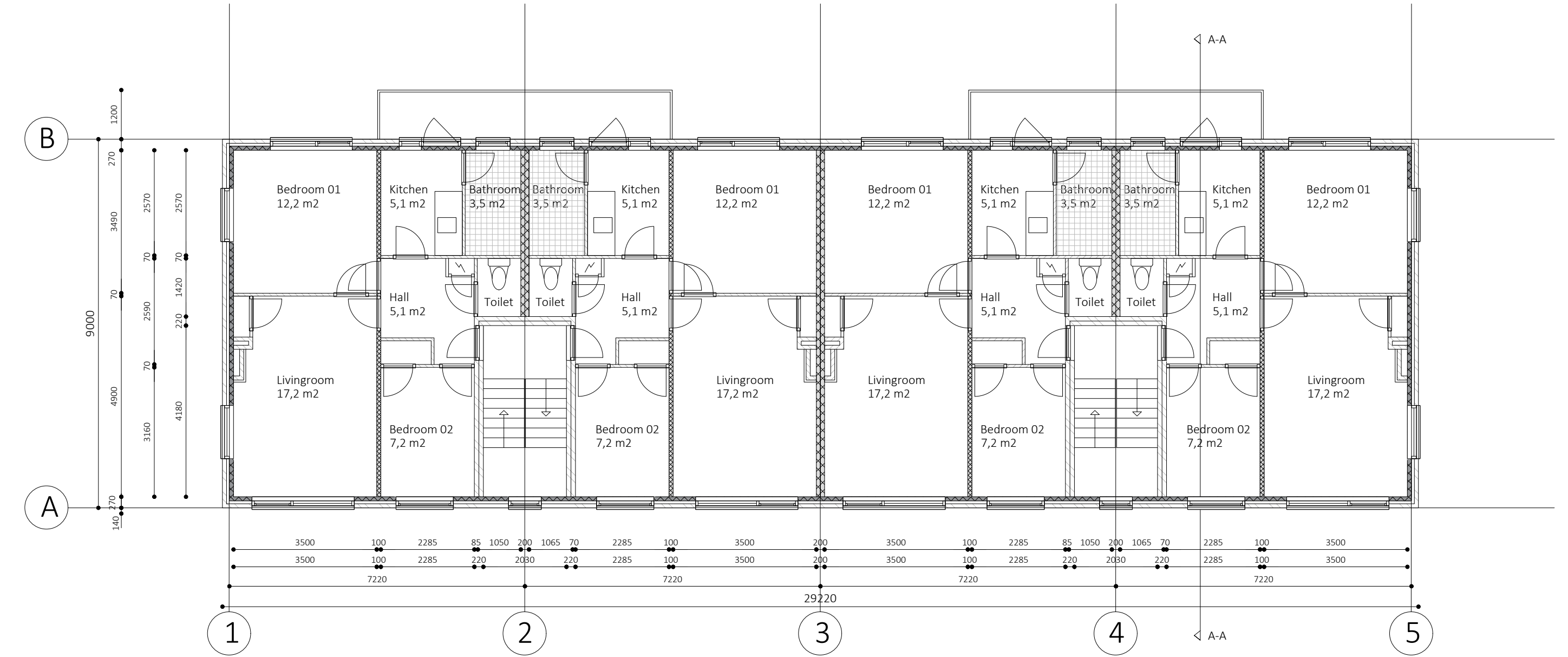
2628 BL Delft, The Netherlands

EXISTING SITUATION

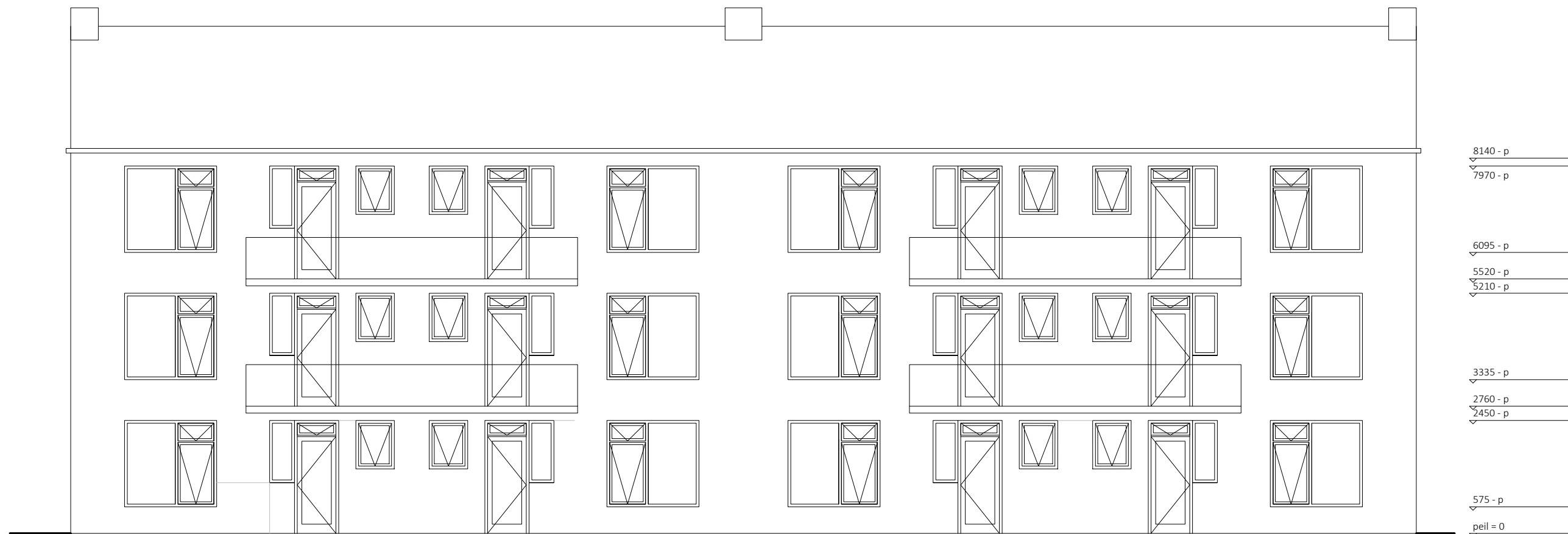




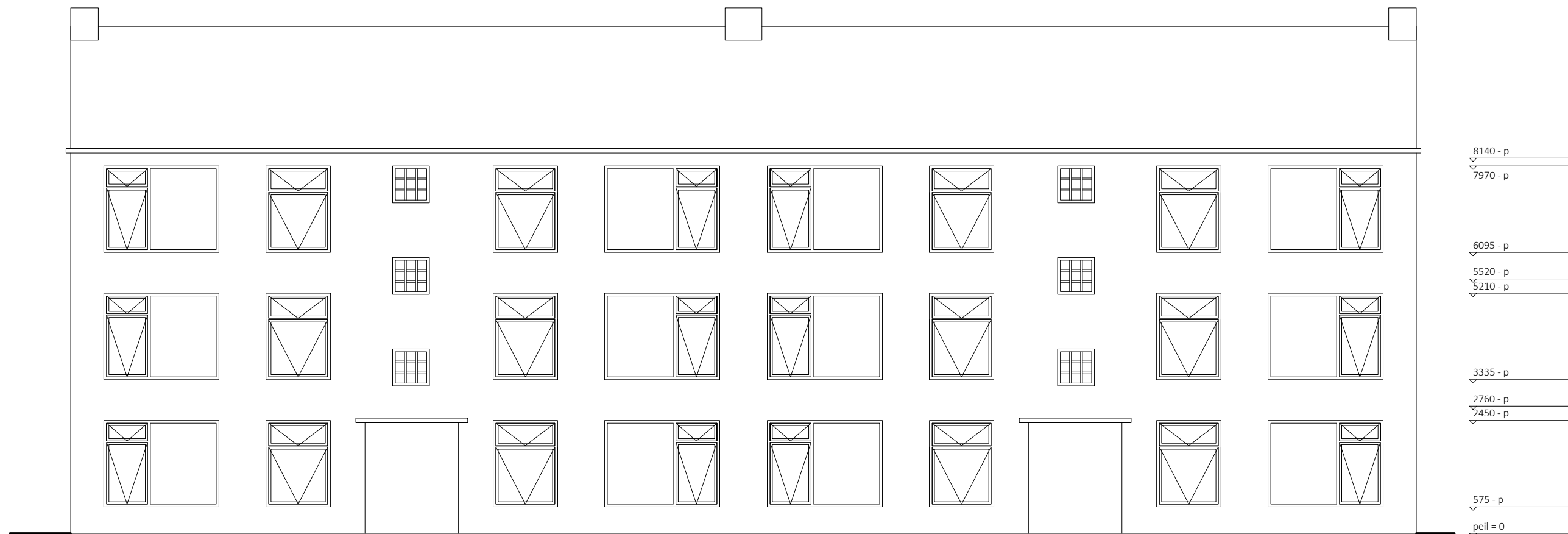
N
First floor
Scale 1:100



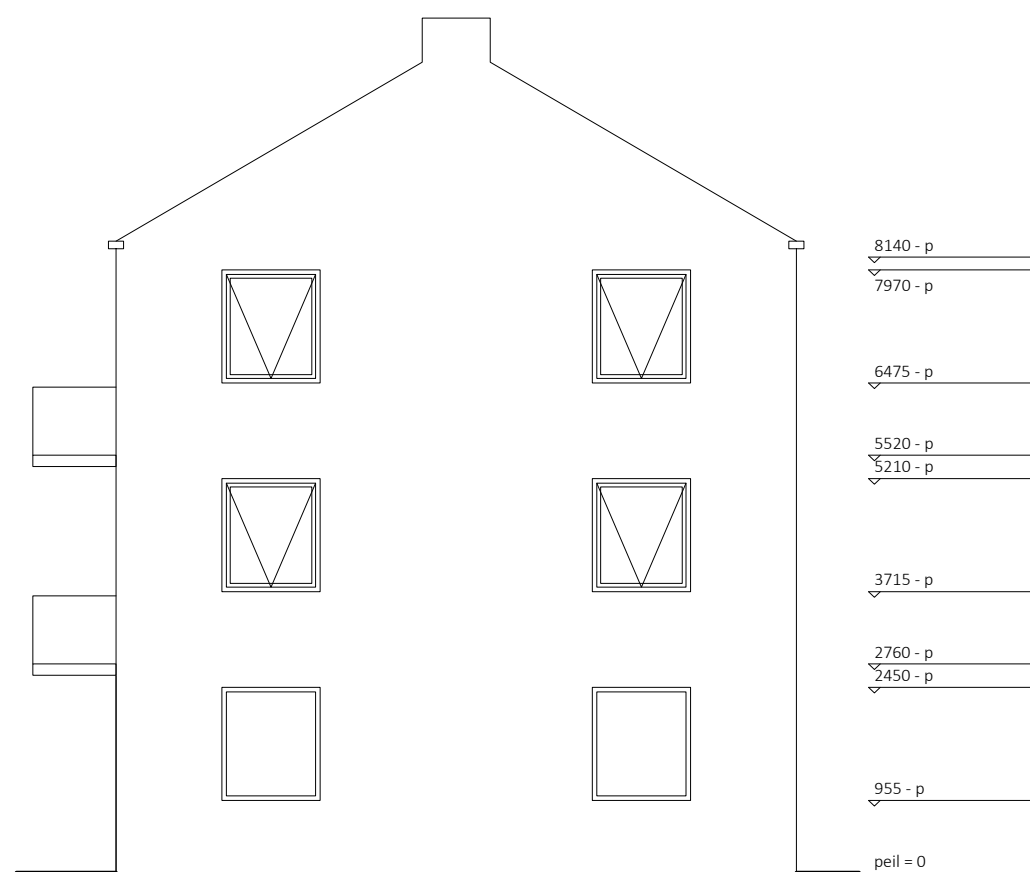
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Second floor
Scale 1:100



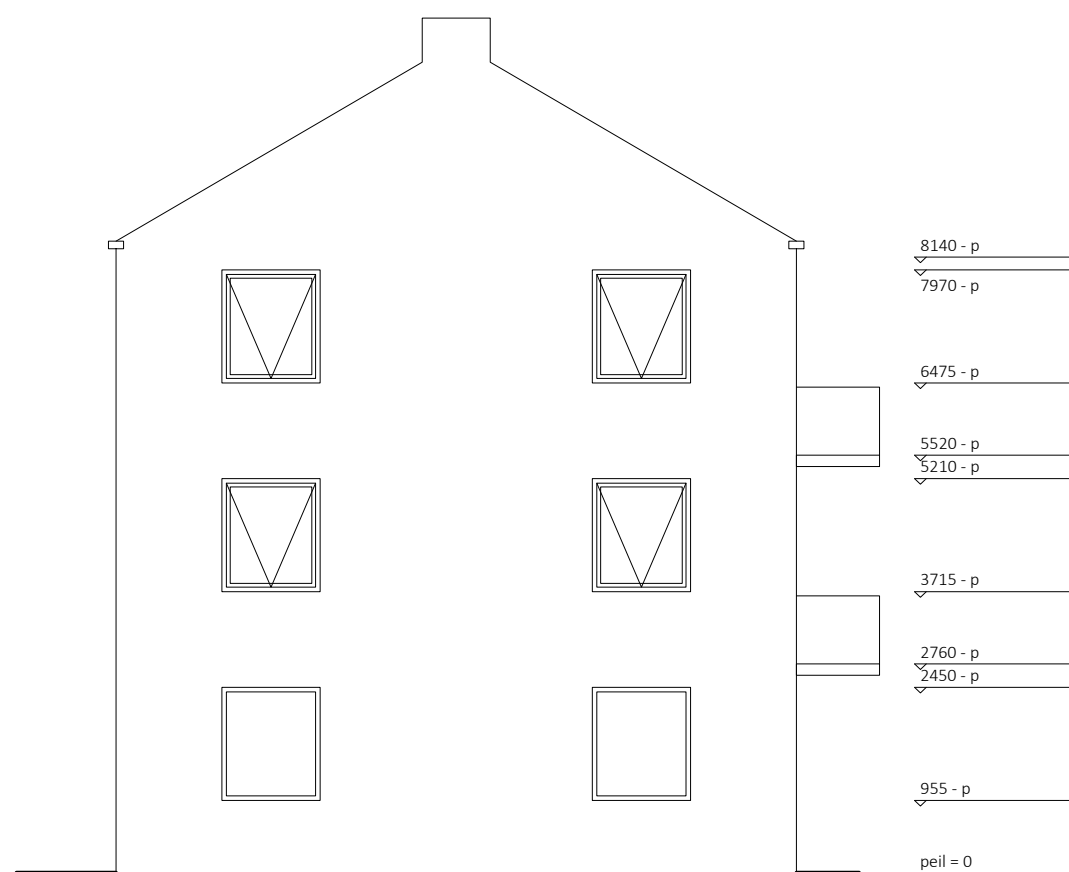
North facade



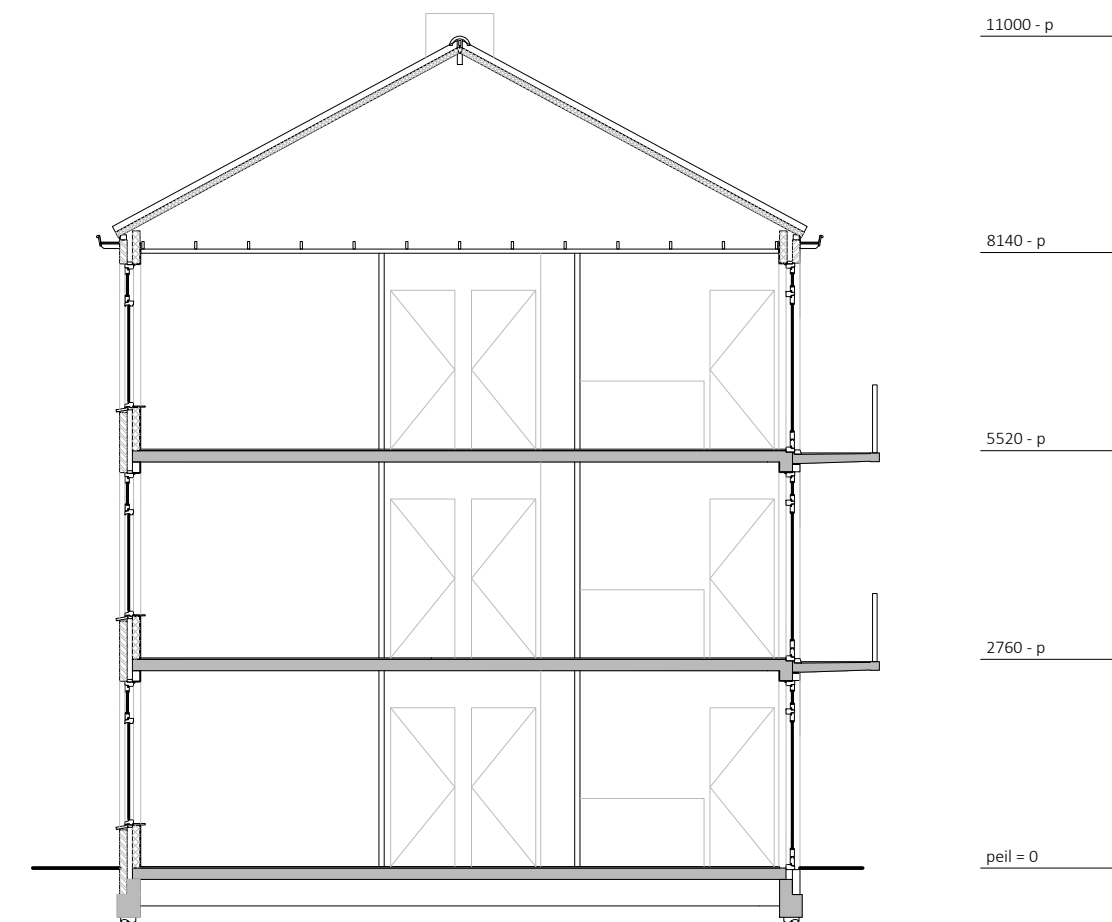
South facade



West facade



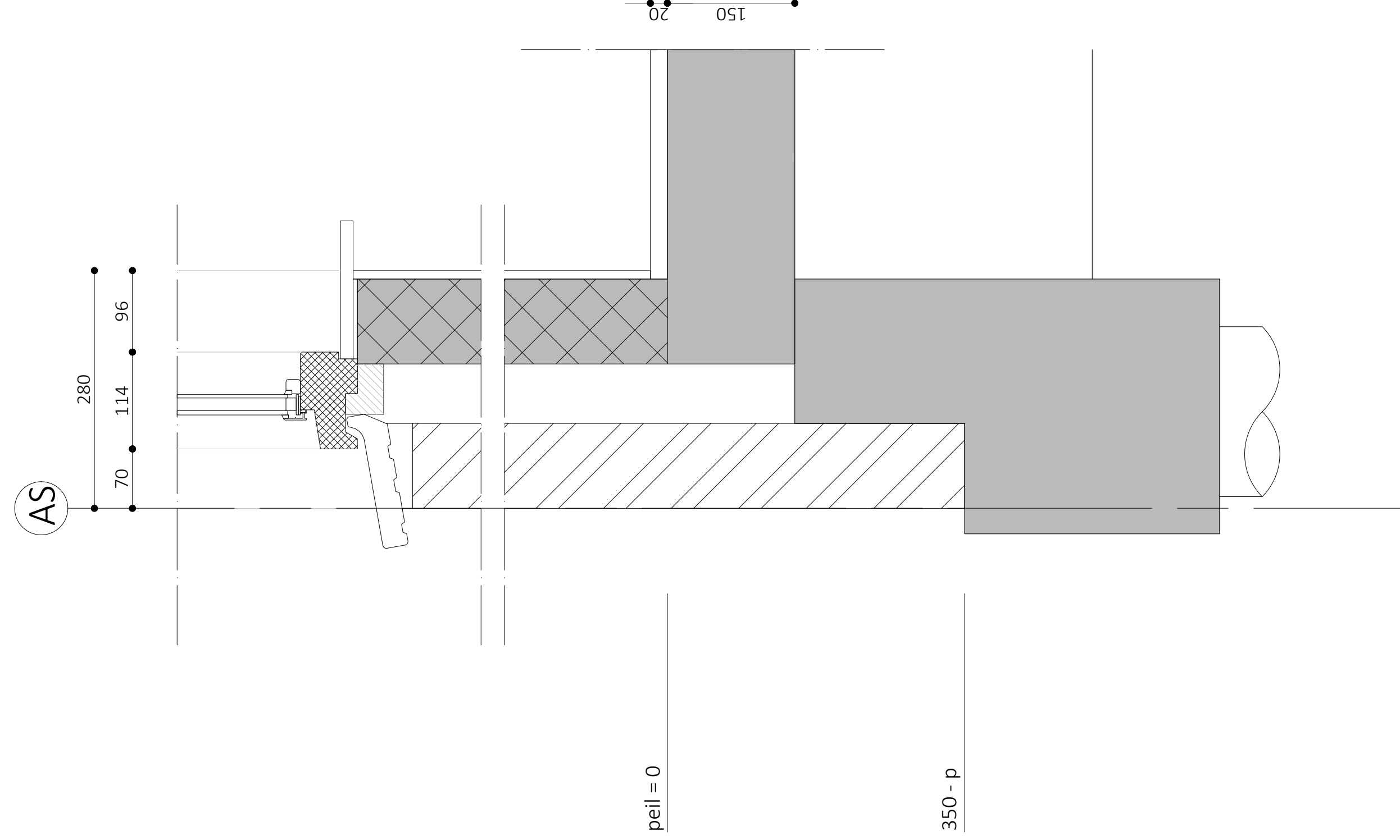
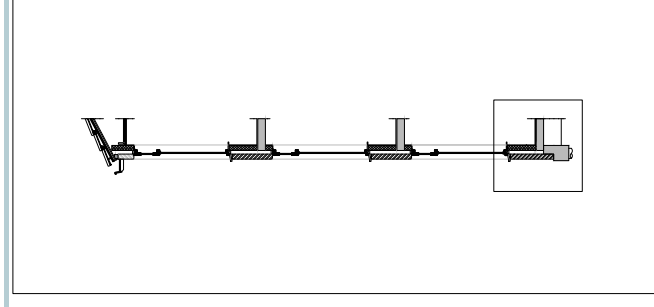
East facade



Section A-A

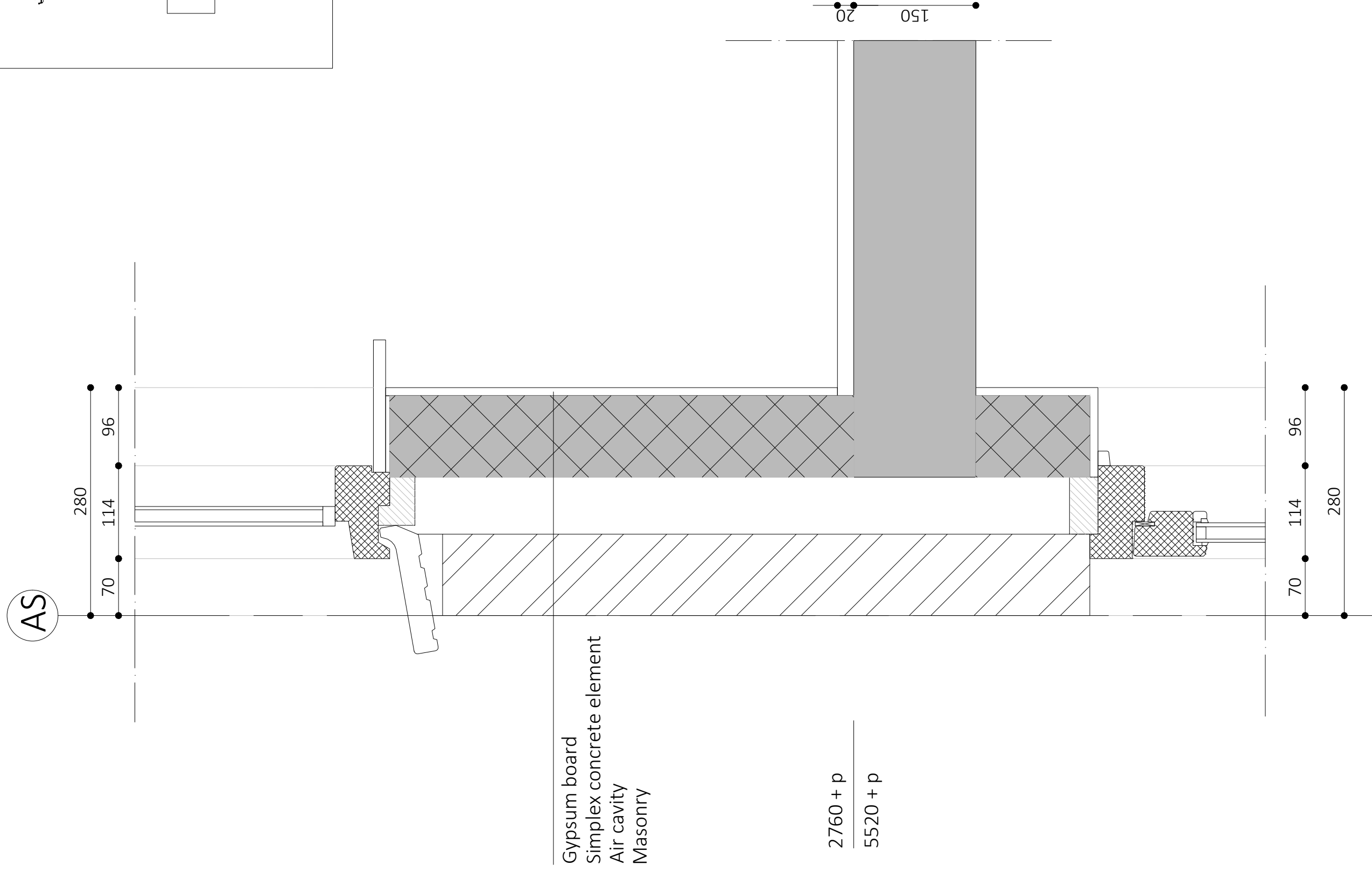
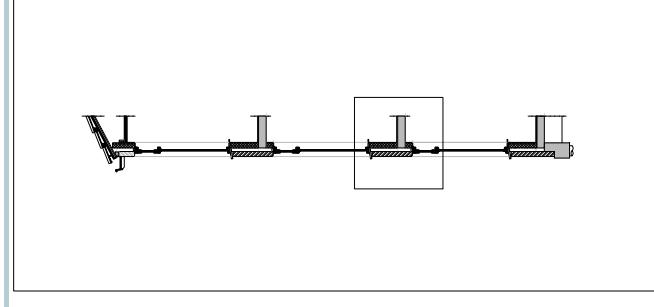
View 1
Scale 1:100

View 2
Scale 1:100



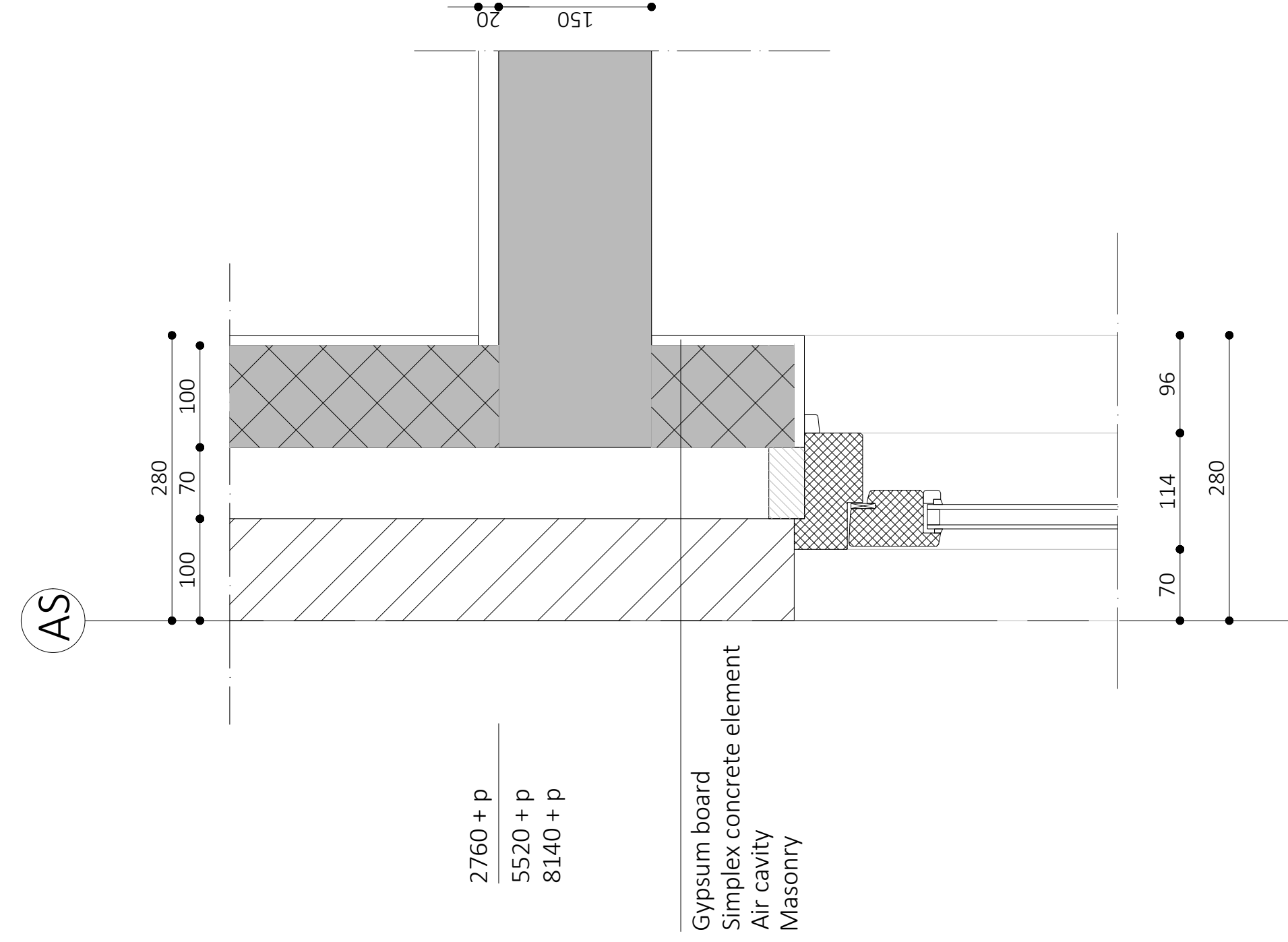
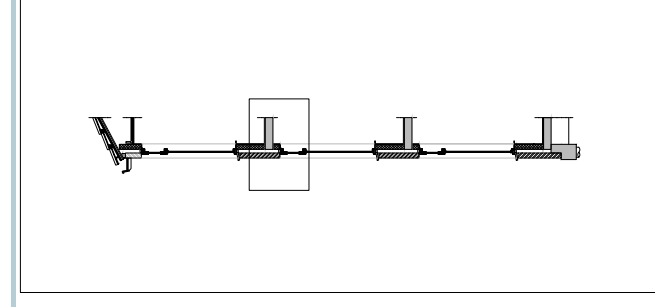
Detail 1

Scale 1:5

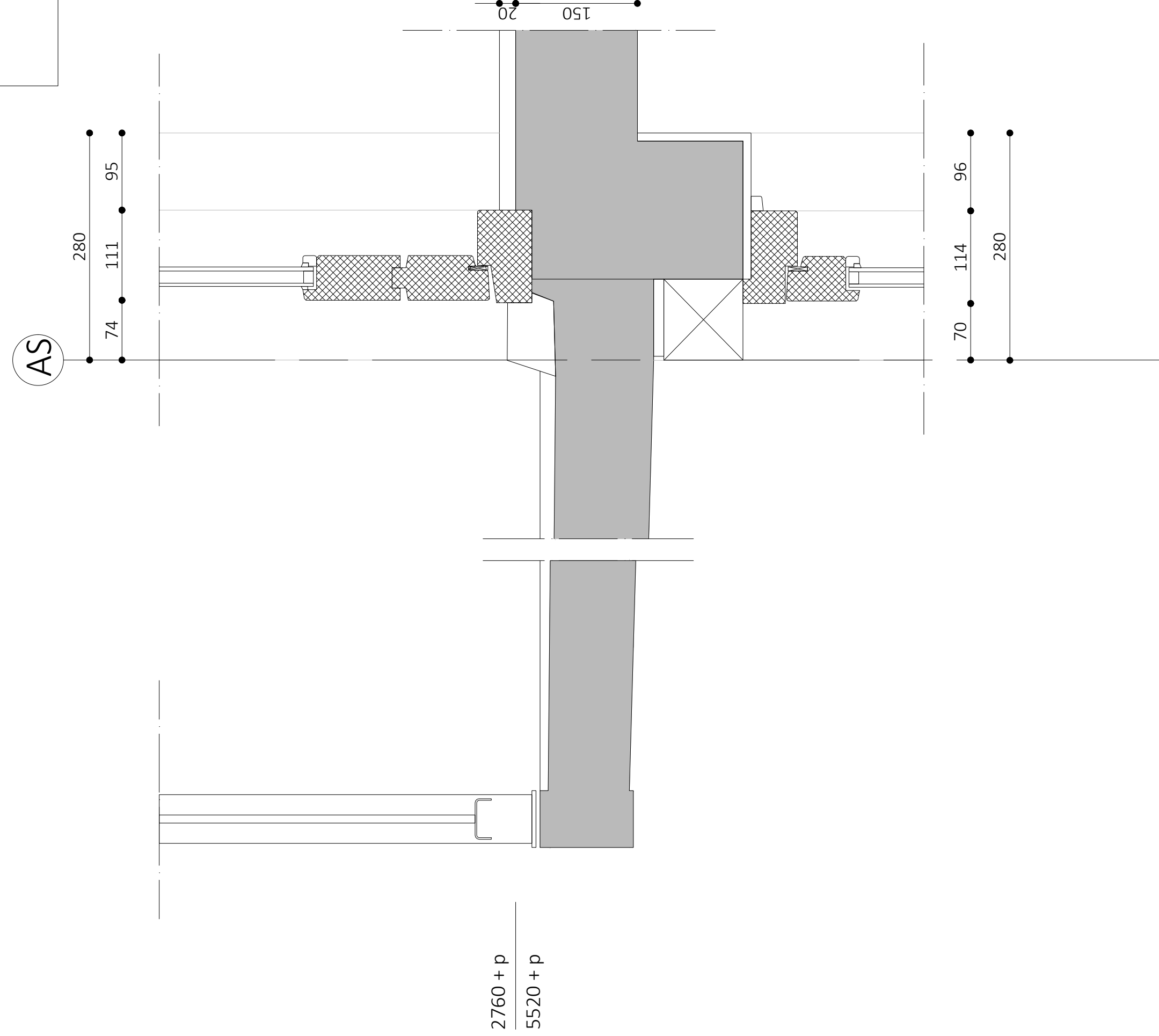
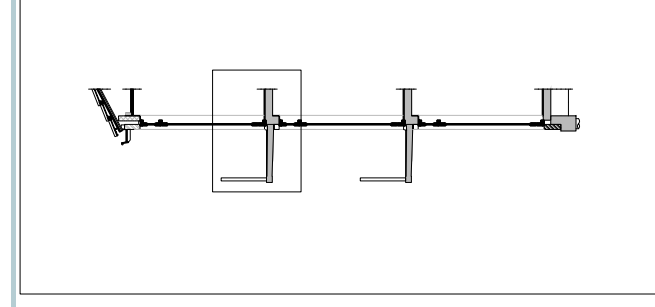


Detail 2

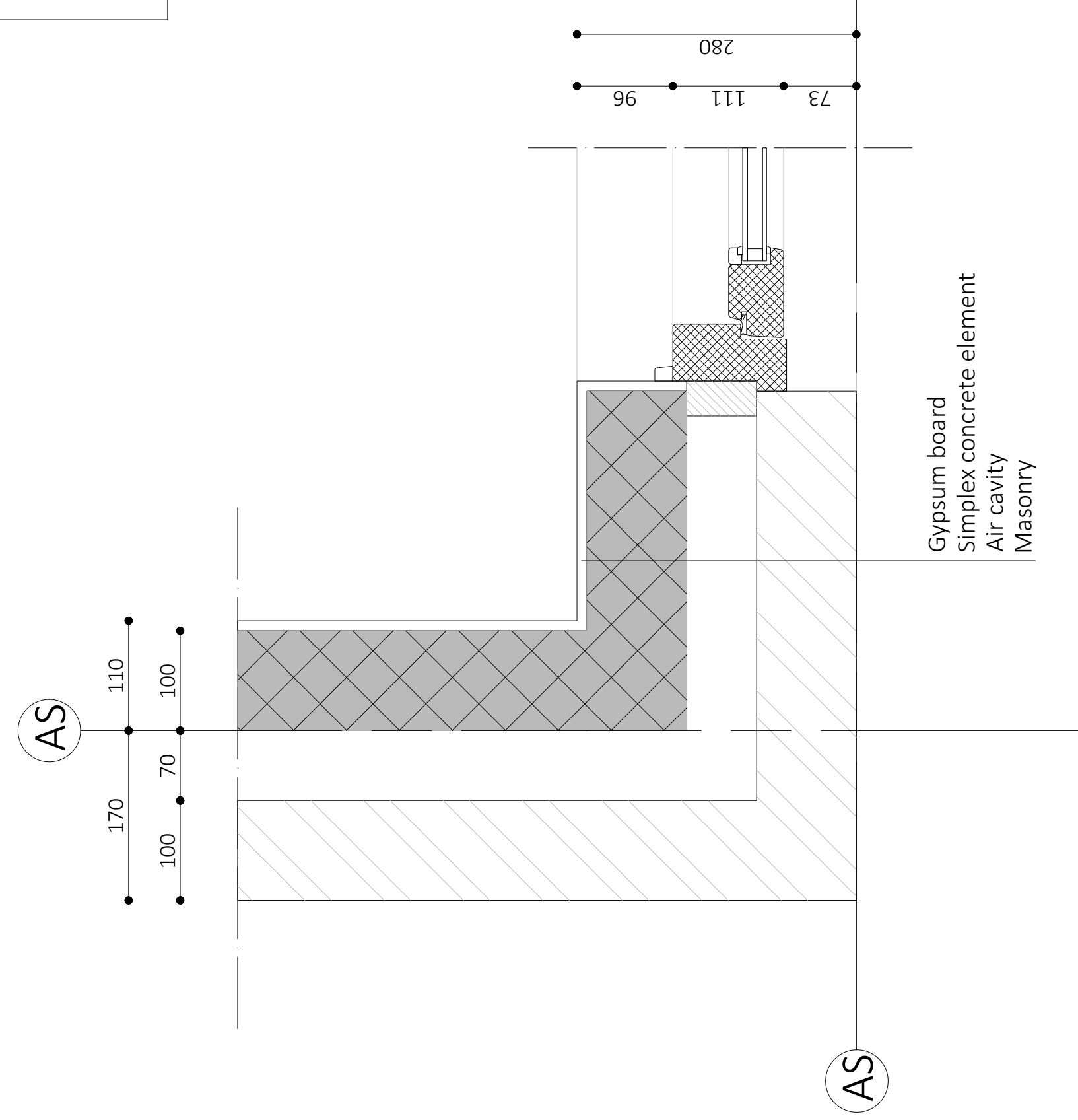
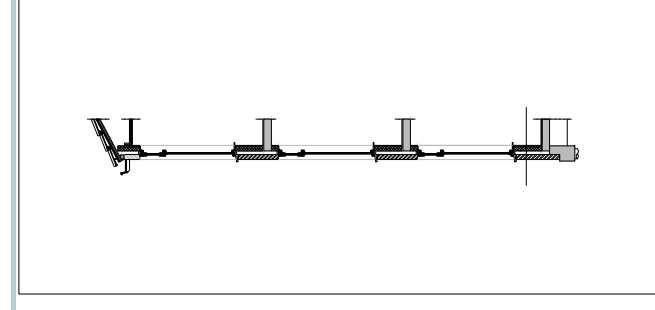
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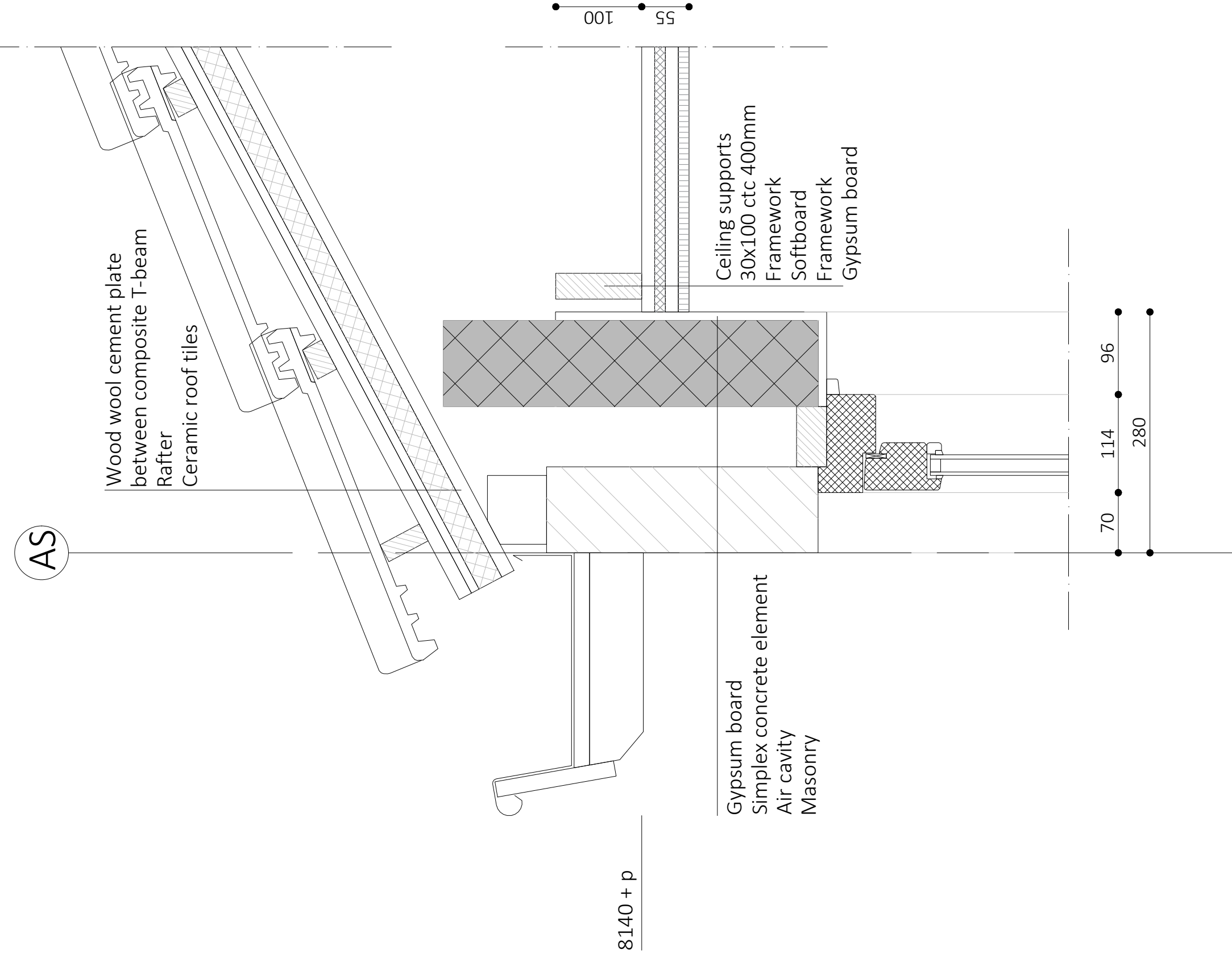
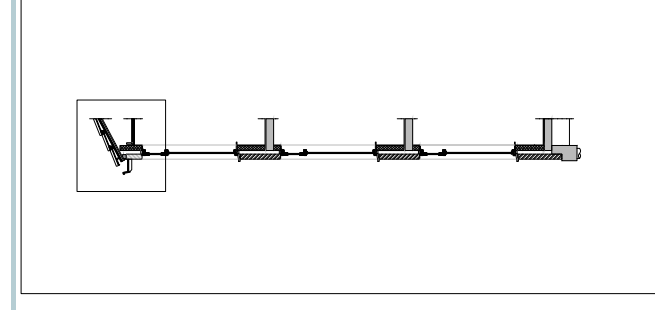
Detail 3
Scale 1:5



Detail 4
Scale 1:5

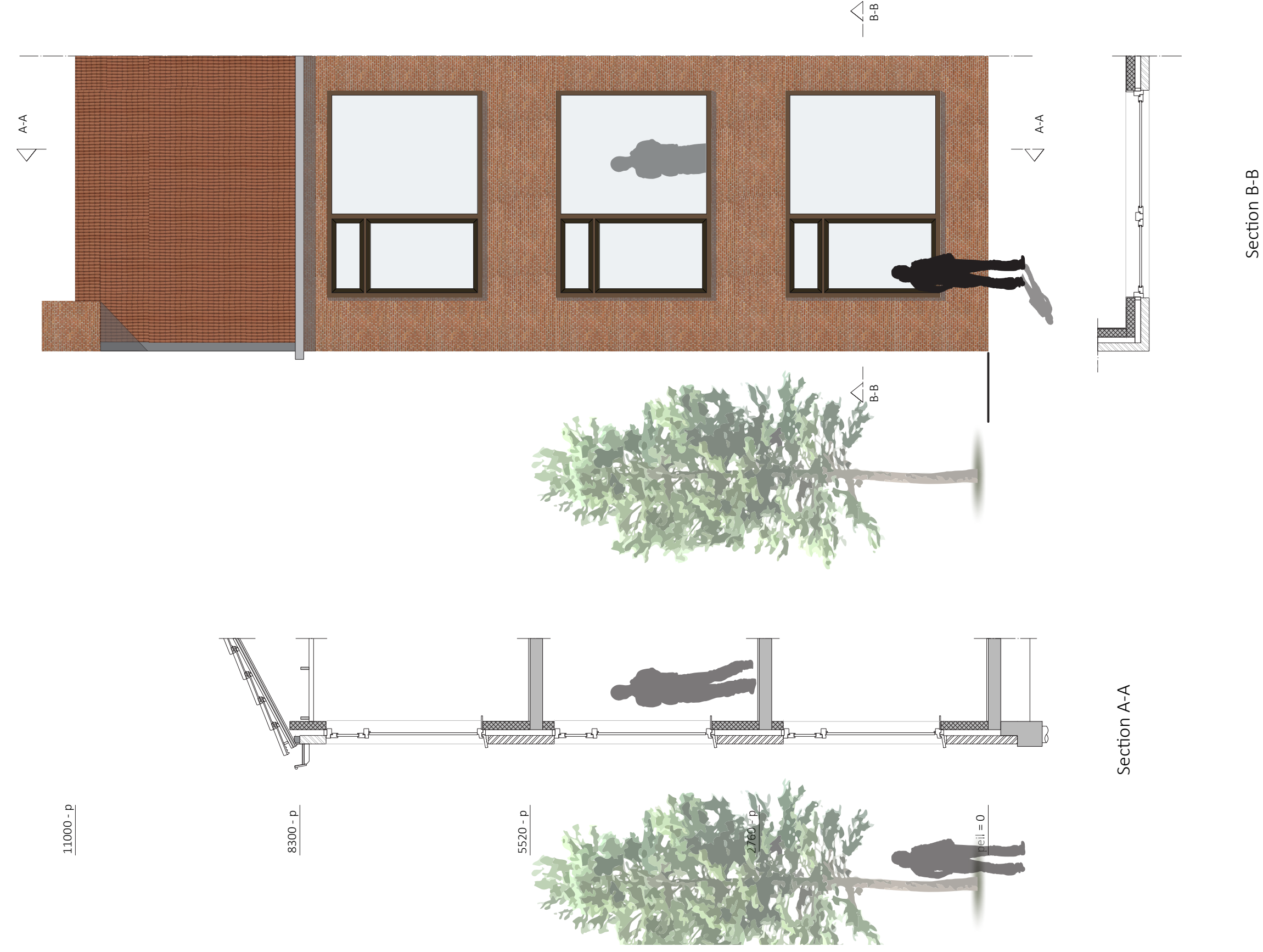


Detail 5
Scale 1:5

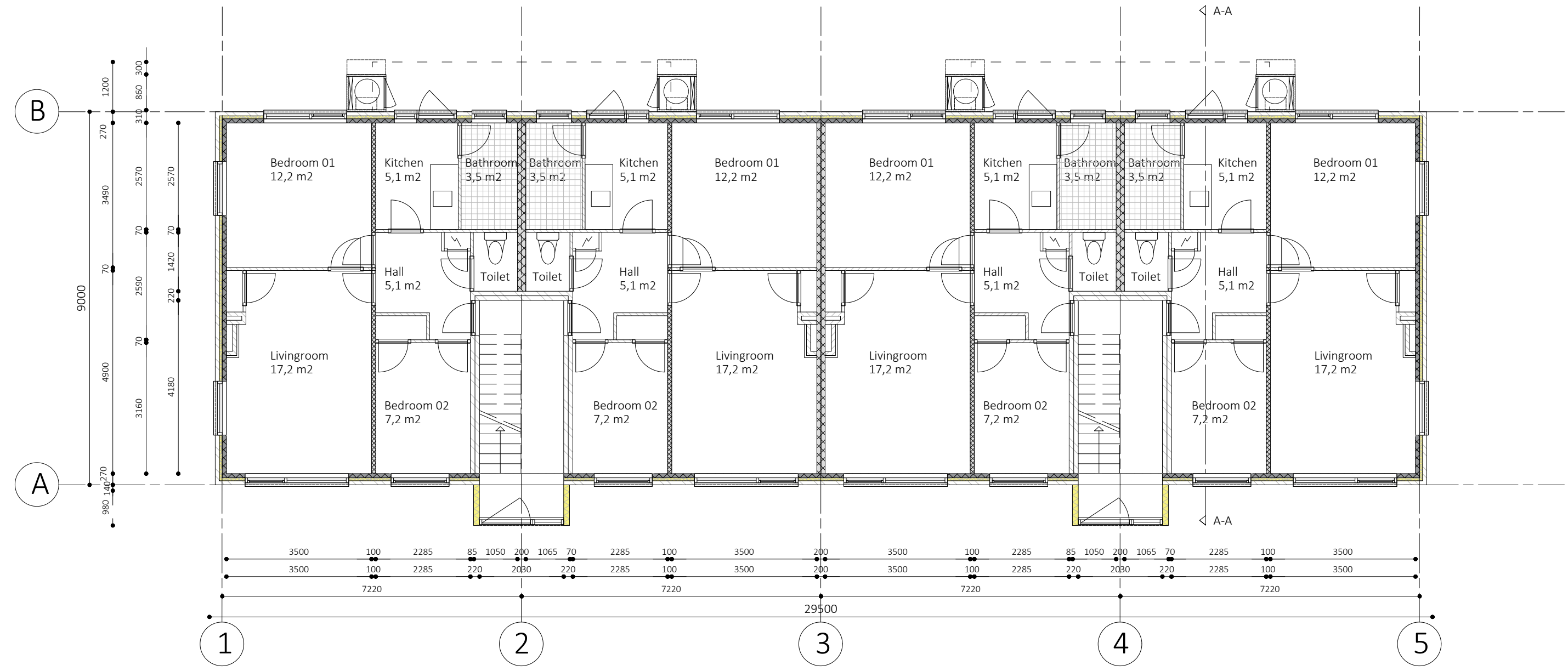


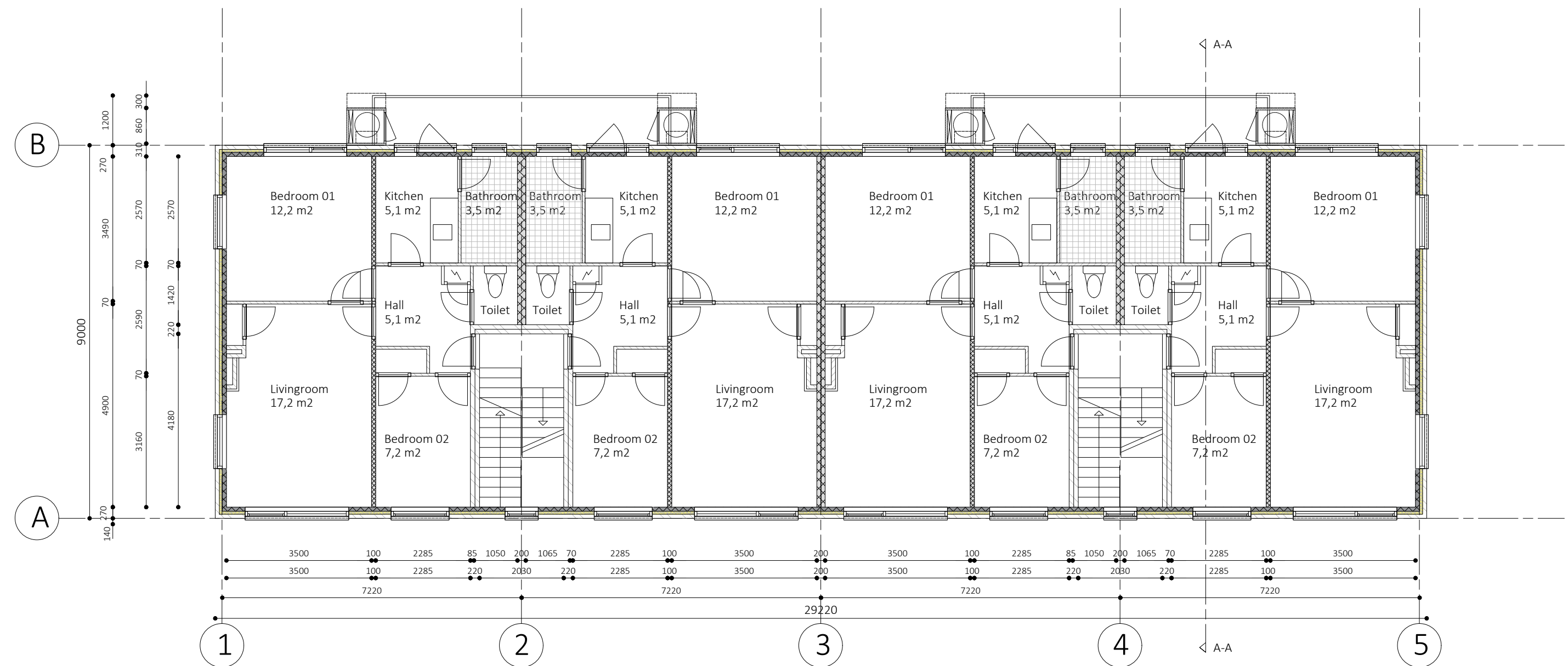
Detail 6
Scale 1:5

Existing situation

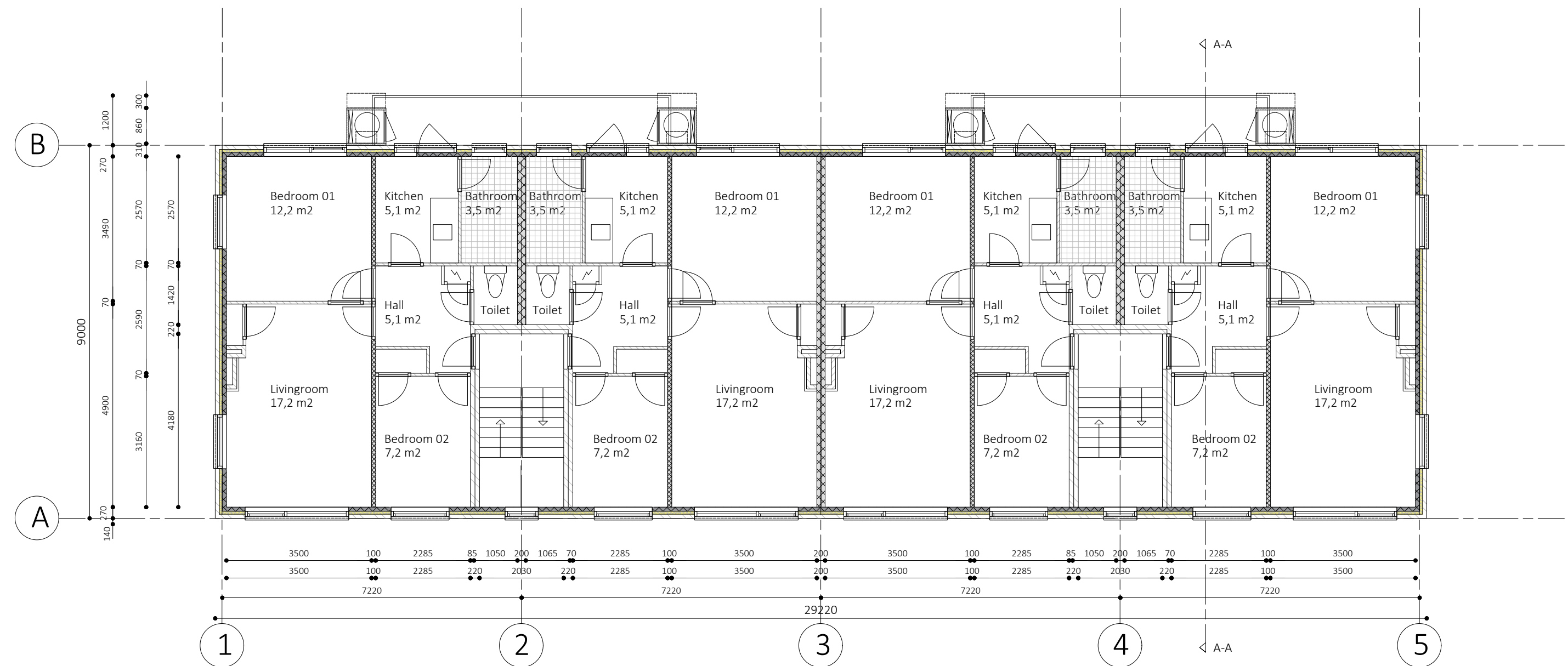


LOW IMPACT

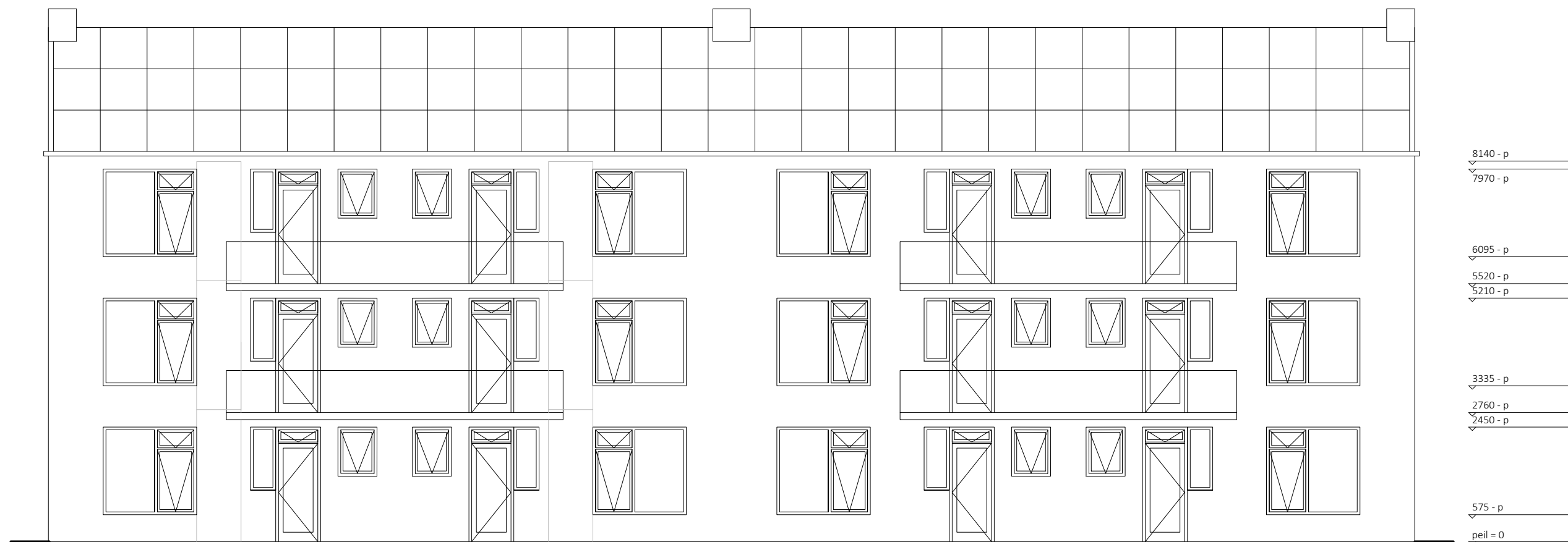




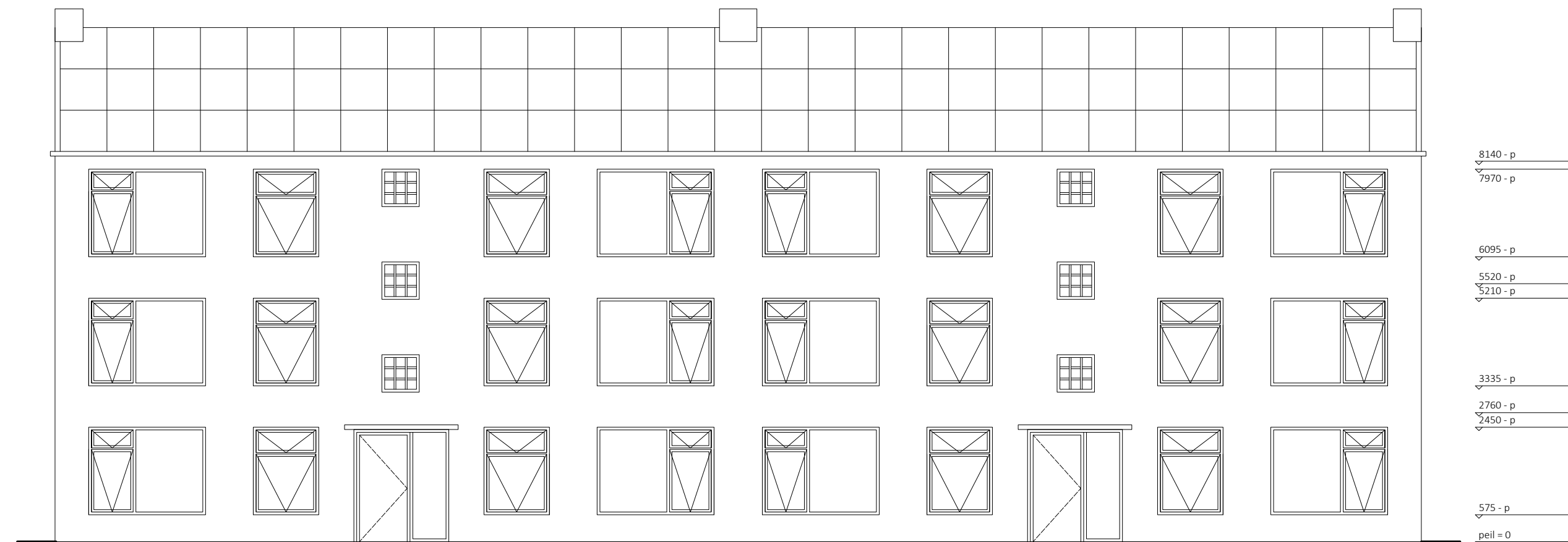
N
 First floor
 Scale 1:100



N
 Second floor
 Scale 1:100



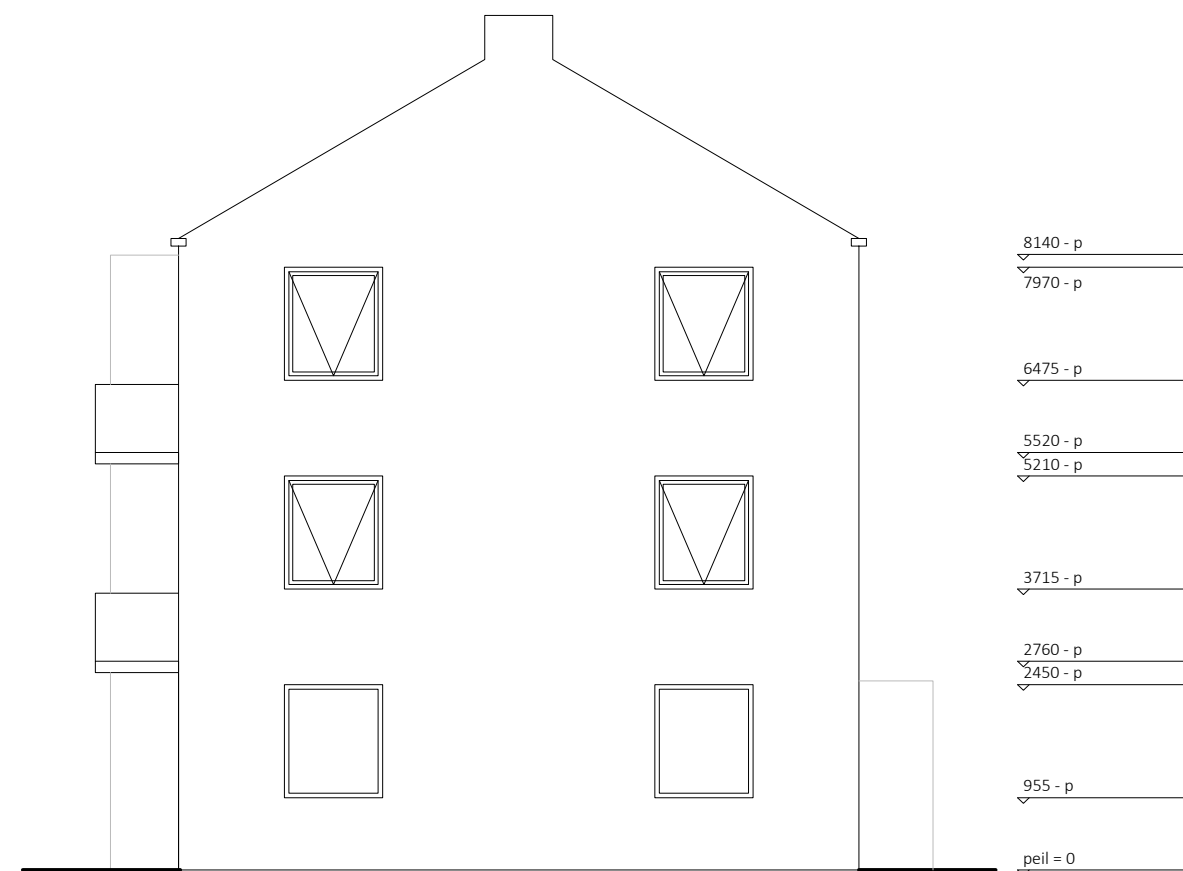
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 7970 - p
 6095 - p
 5520 - p
 5210 - p
 3335 - p
 2760 - p
 2450 - p
 575 - p
 peil = 0



8140 - p
 7970 - p
 6095 - p
 5520 - p
 5210 - p
 3335 - p
 2760 - p
 2450 - p
 575 - p
 peil = 0

North facade

South facade



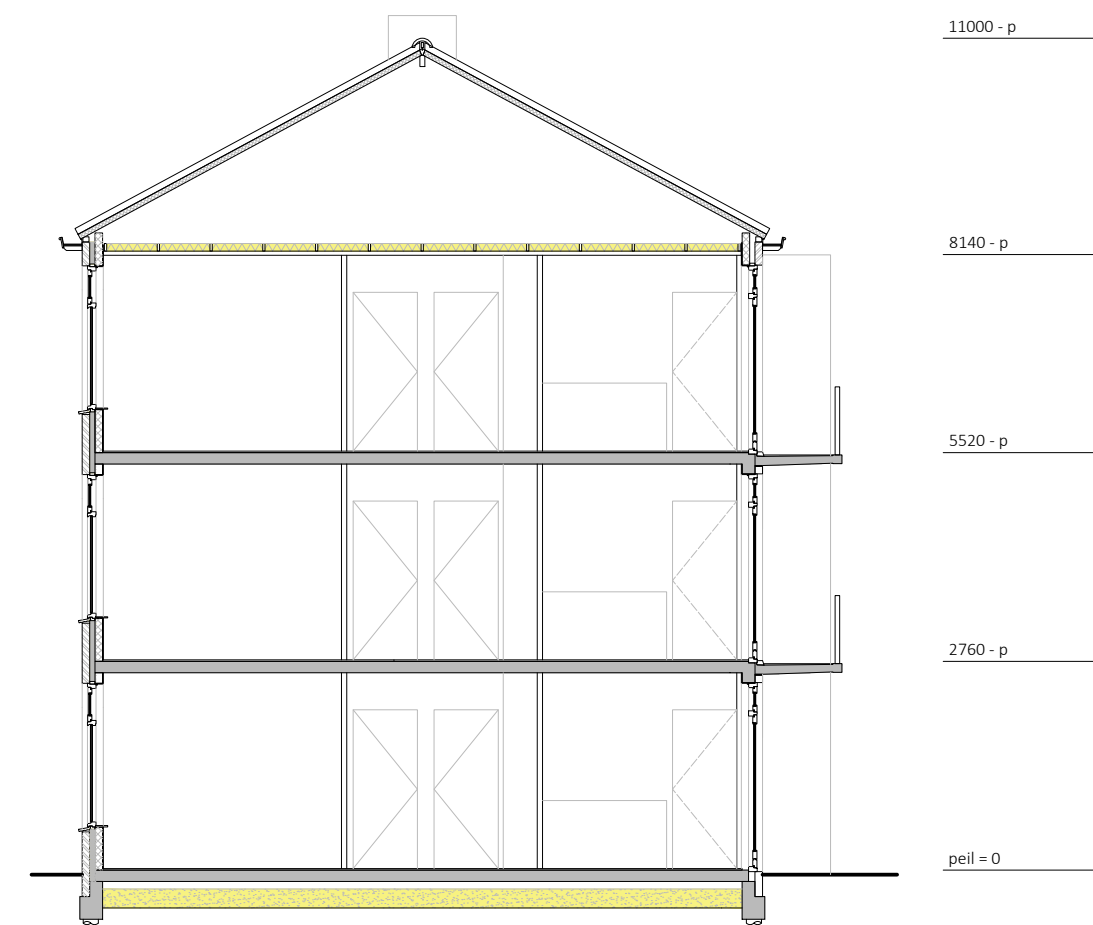
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 3715 - p
 2760 - p
 2450 - p
 955 - p
 peil = 0



8140 - p
 7970 - p
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 3715 - p
 2760 - p
 2450 - p
 955 - p
 peil = 0

West facade

East facade

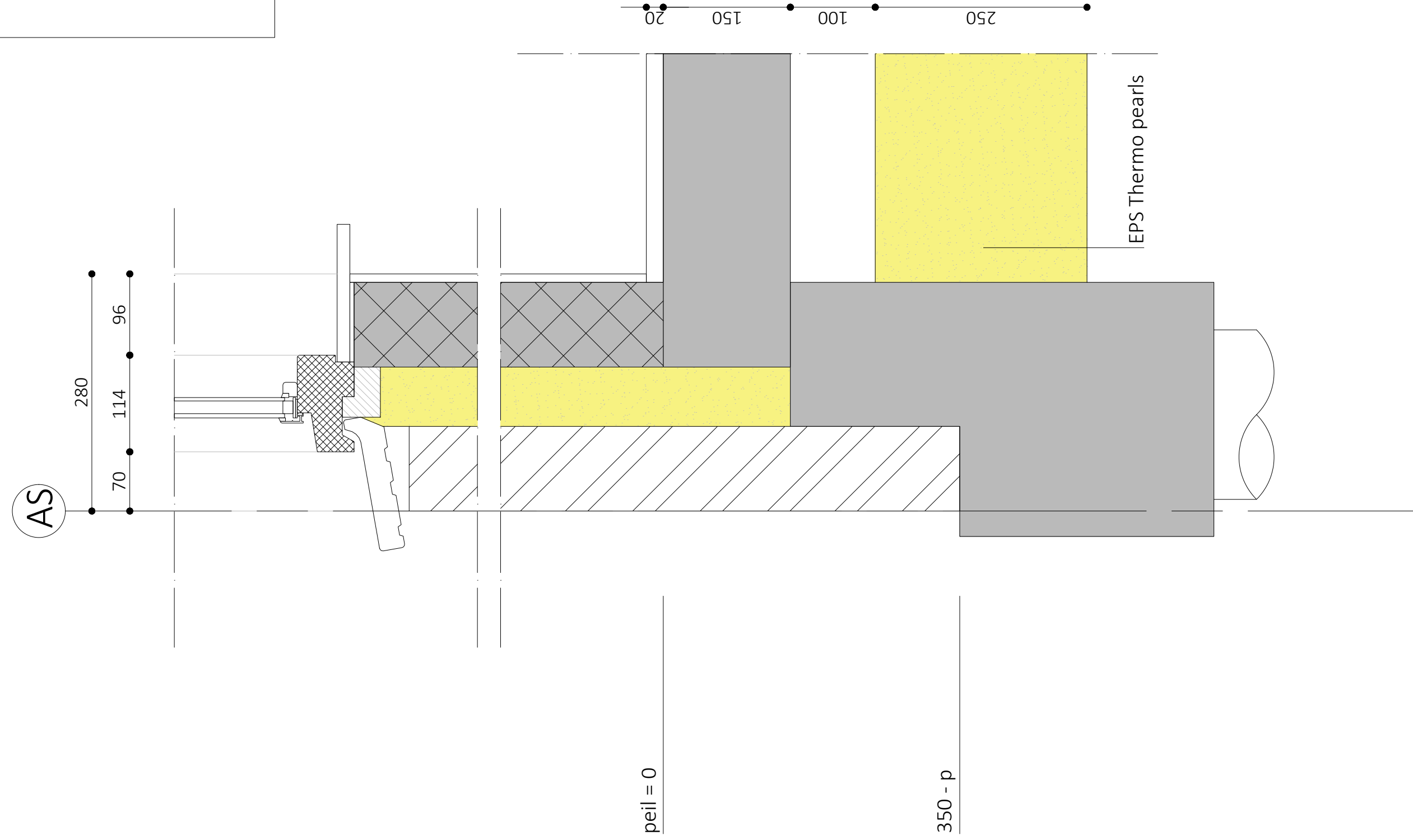
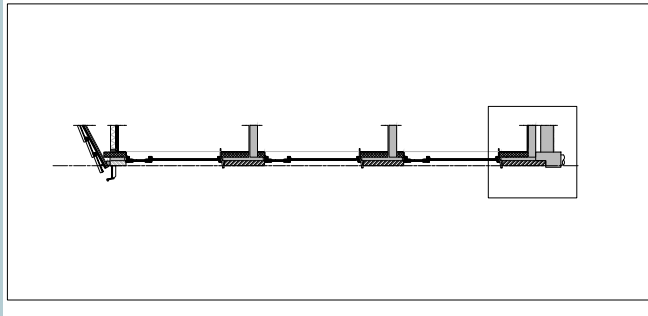


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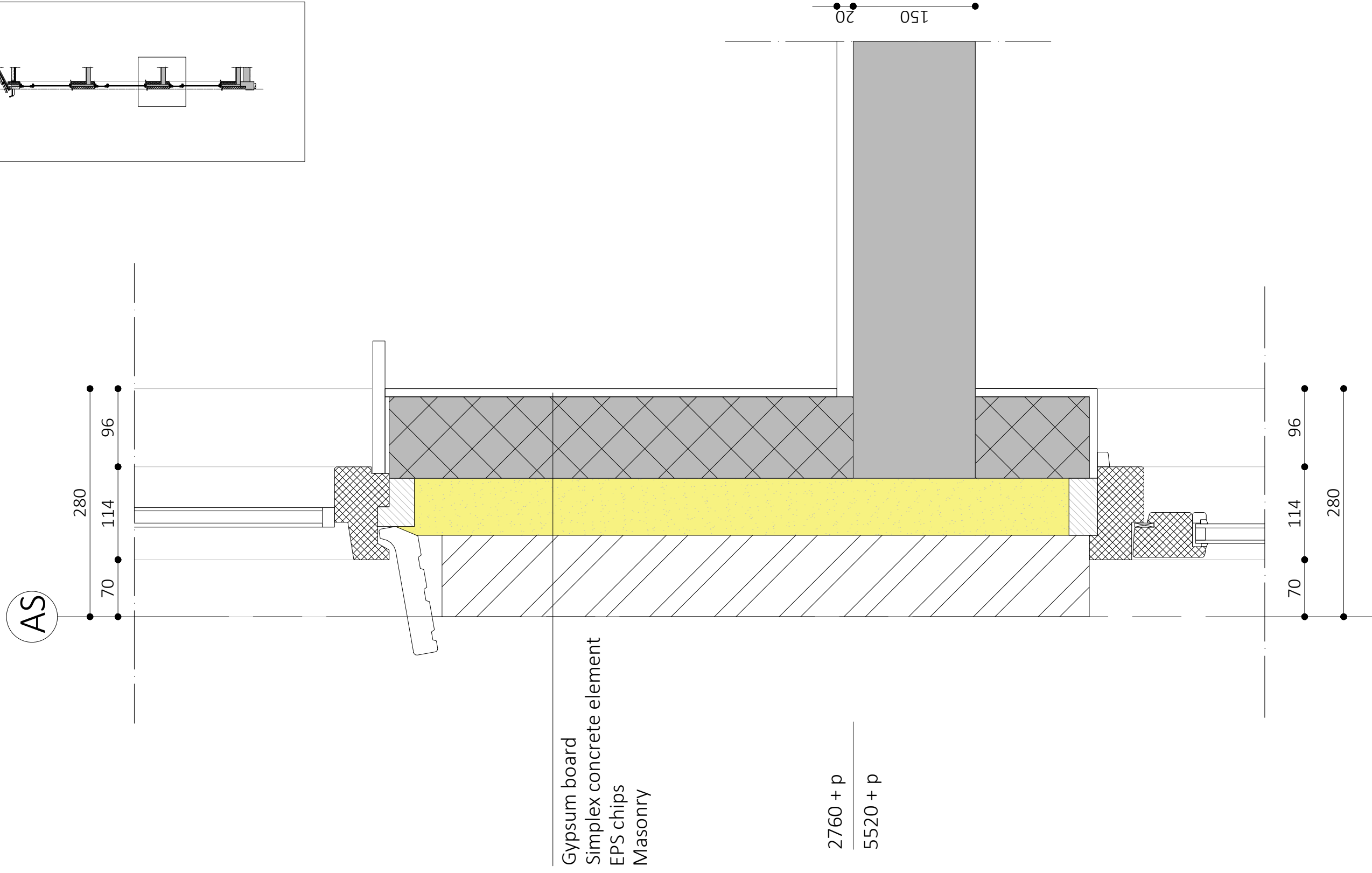
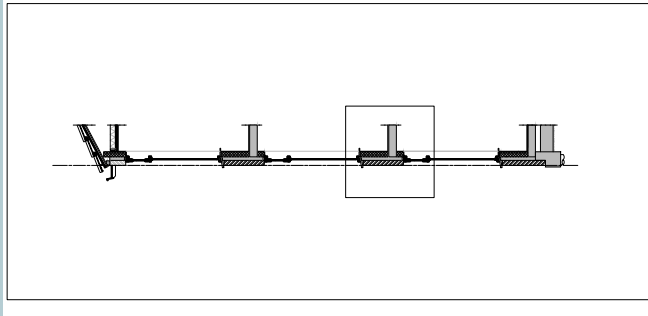
Section A-A

View 1
Scale 1:100

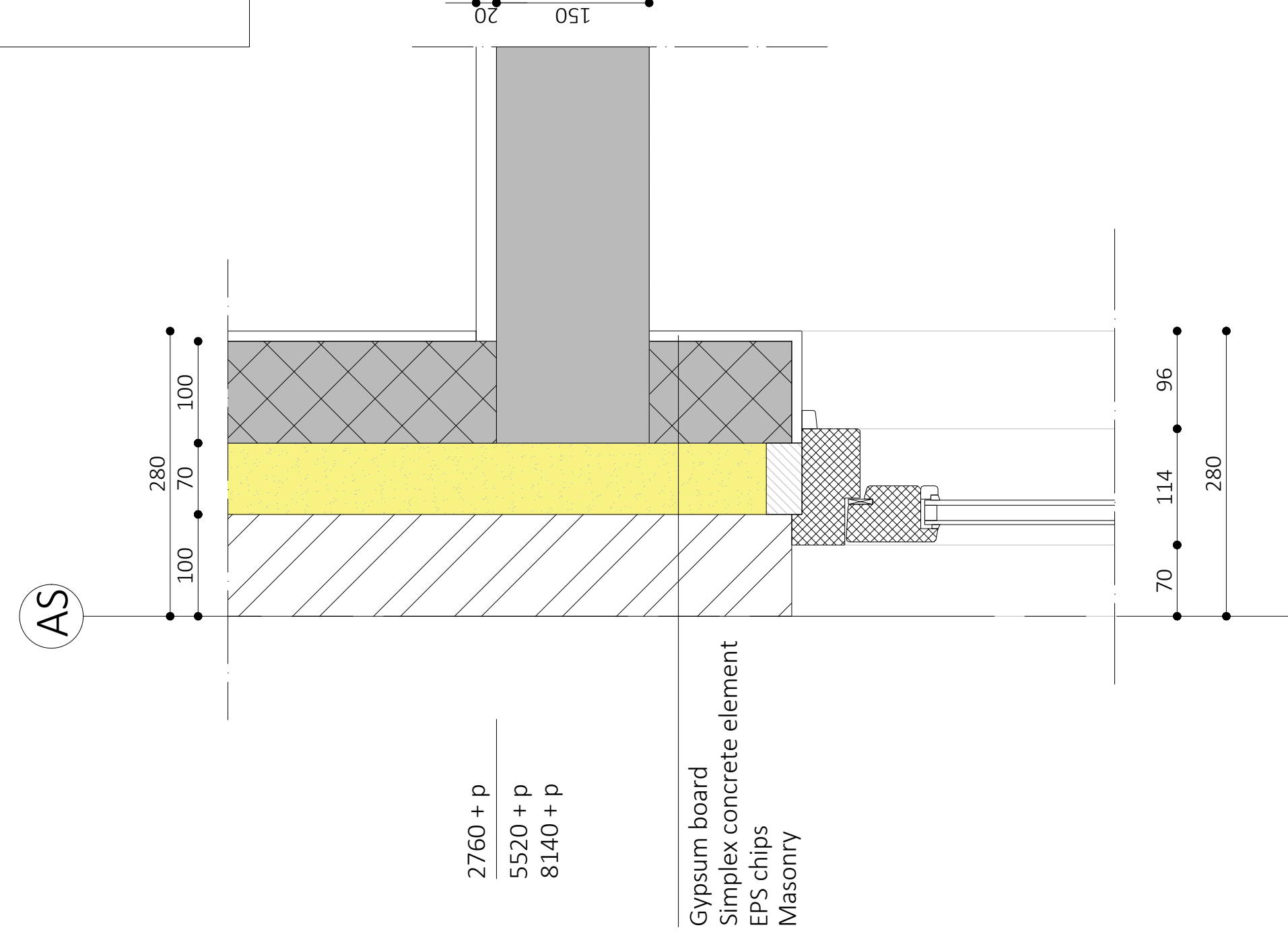
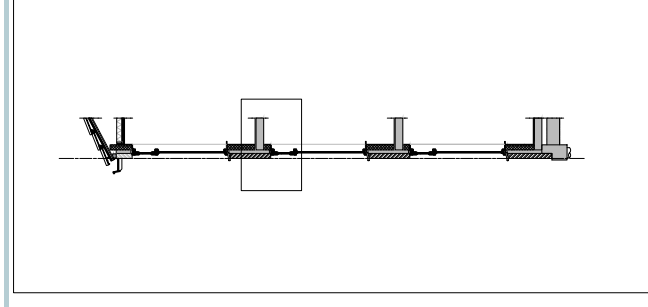
View 2
Scale 1:100



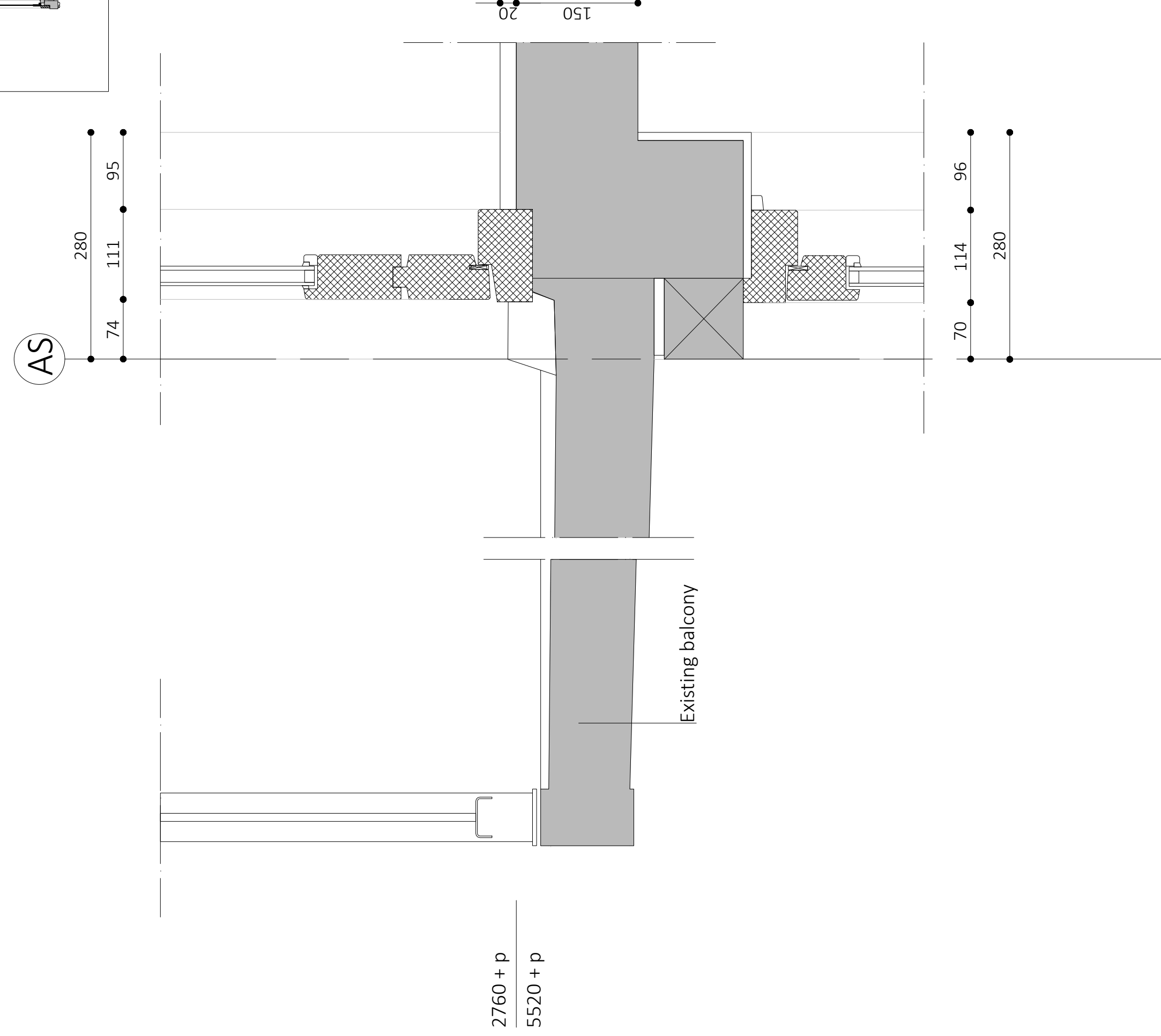
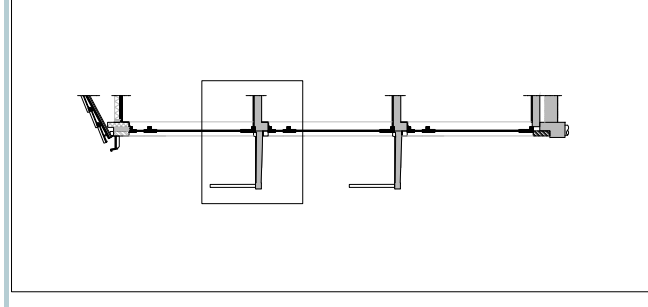
Detail 1
Scale 1:5



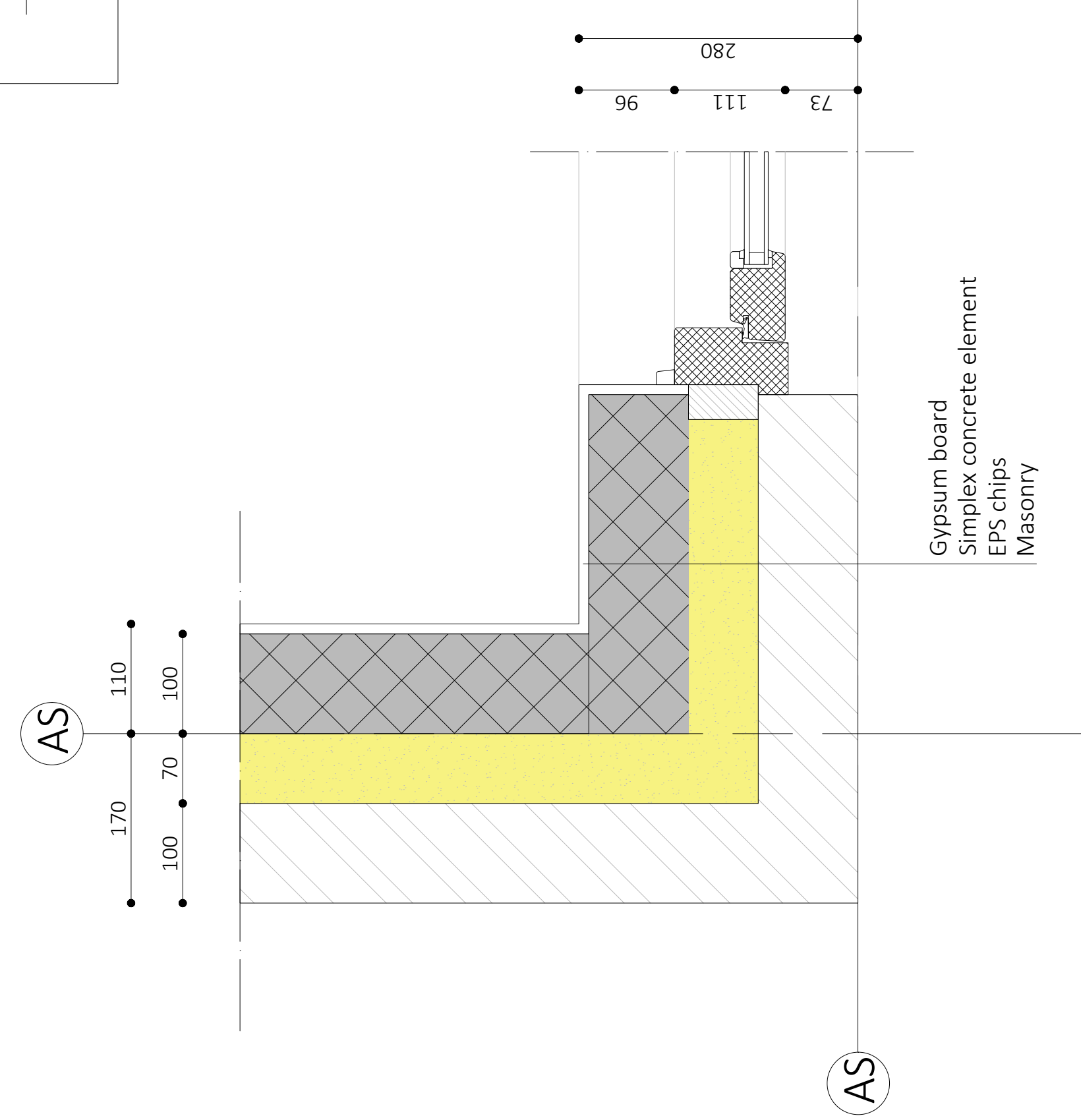
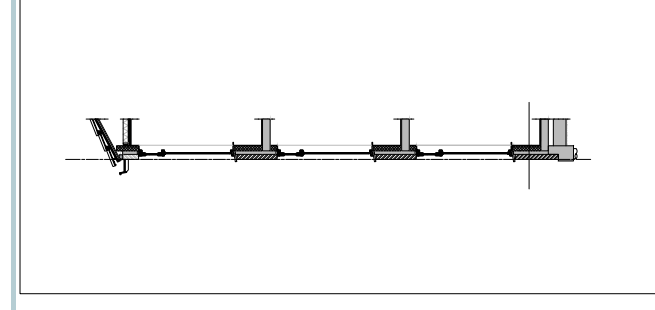
Detail 2
Scale 1:5



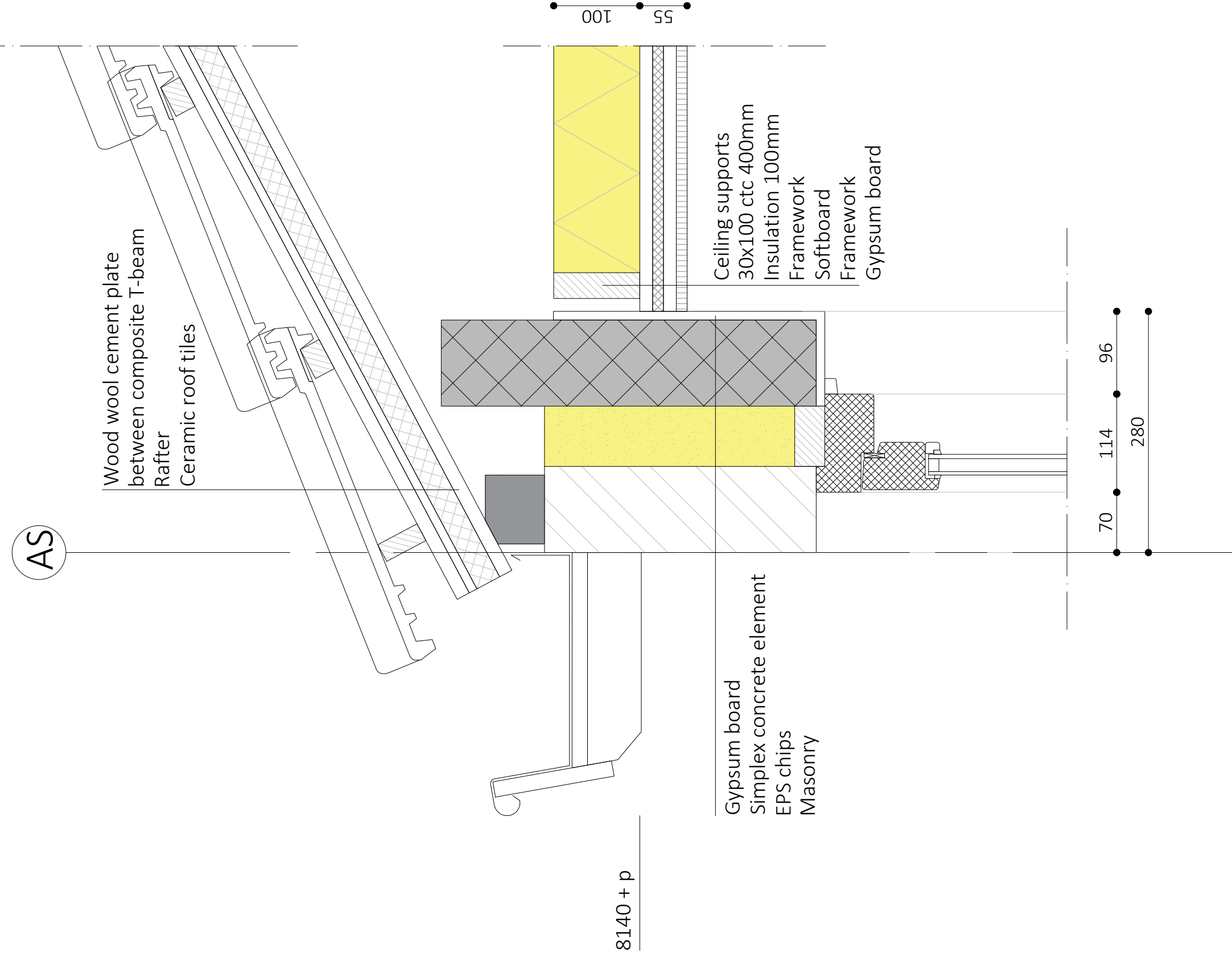
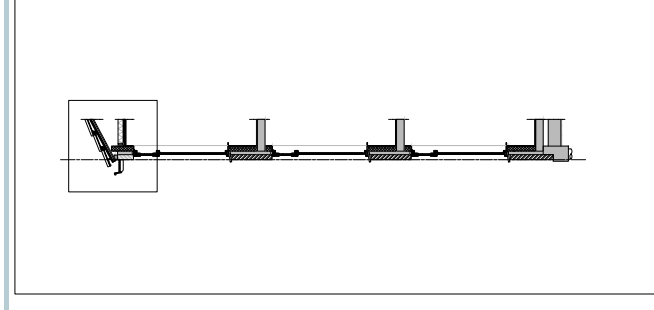
Detail 3
Scale 1:5



Detail 4
Scale 1:5

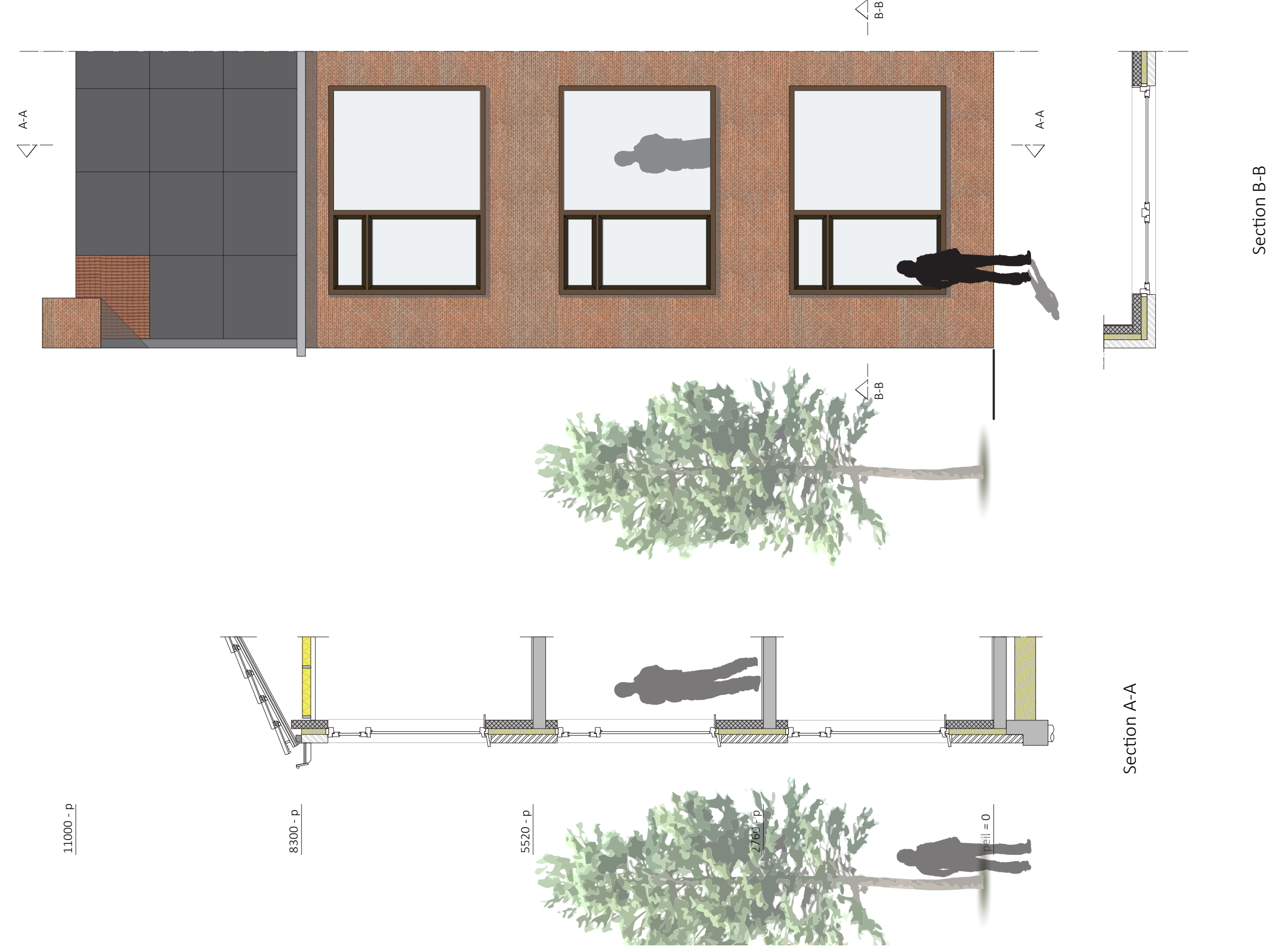


Detail 5
Scale 1:5

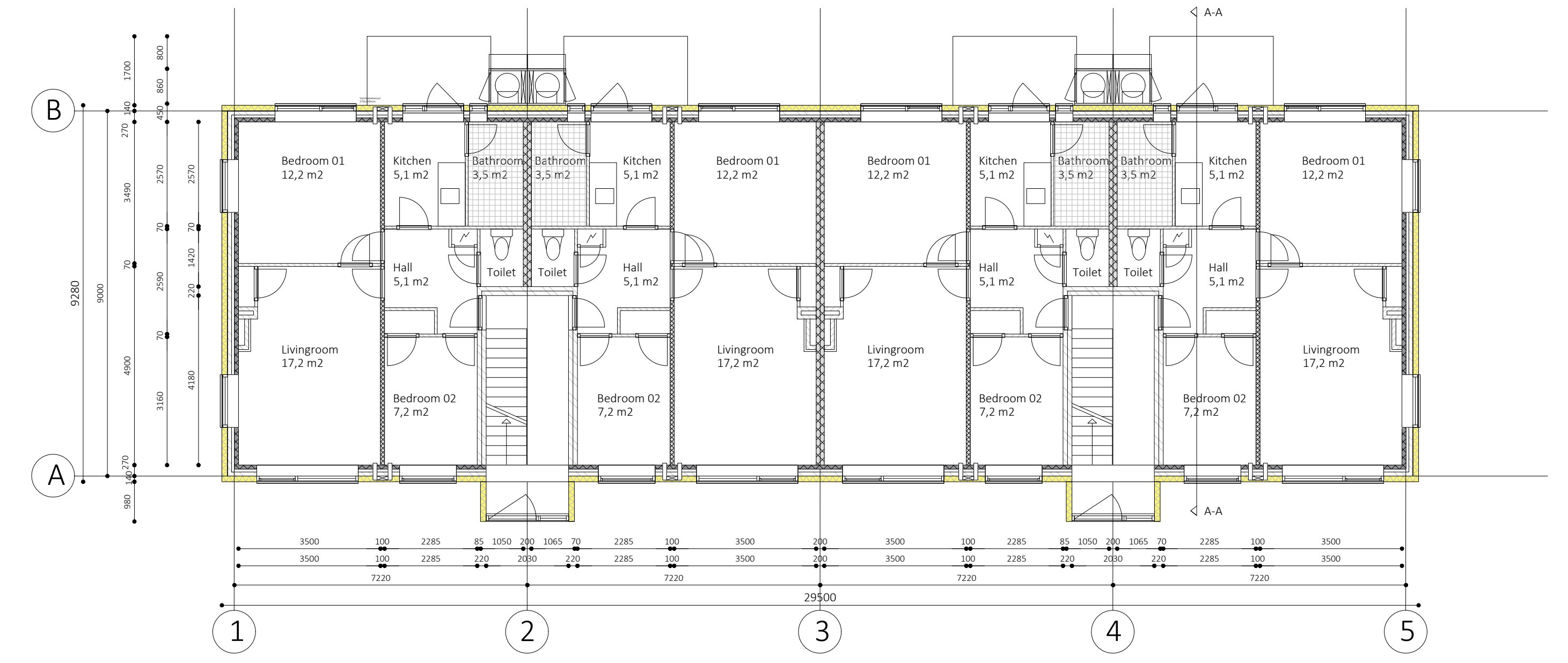


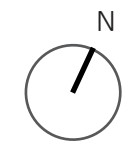
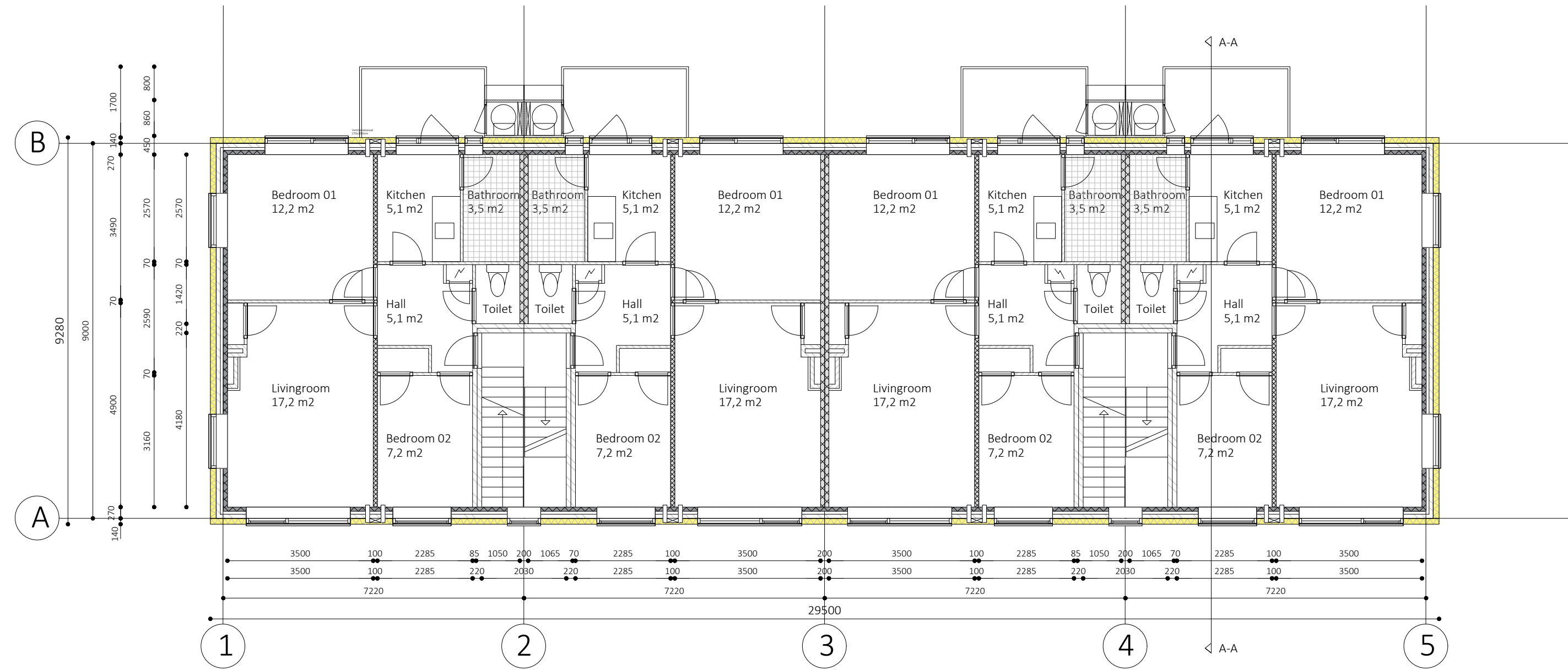
Detail 6
Scale 1:5

Low impact

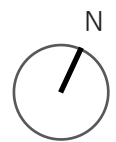
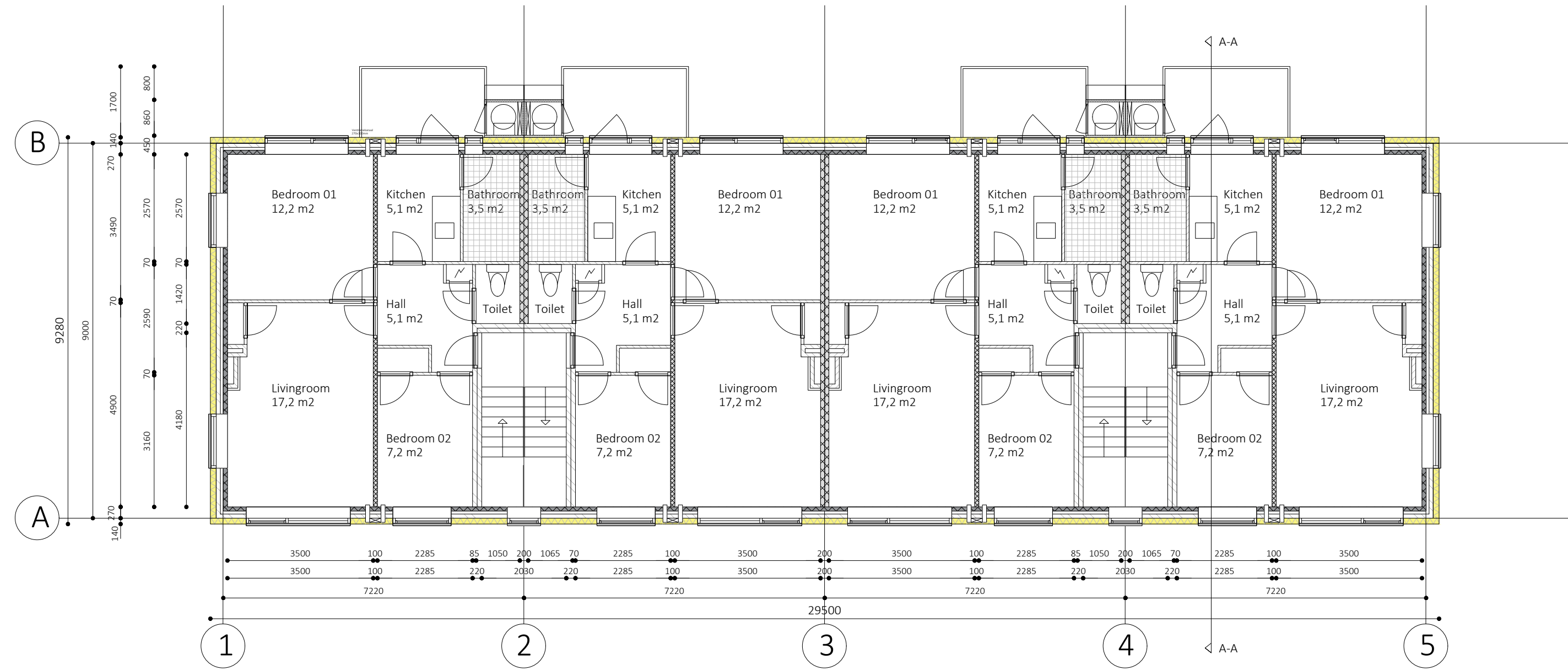


HIGH IMPACT

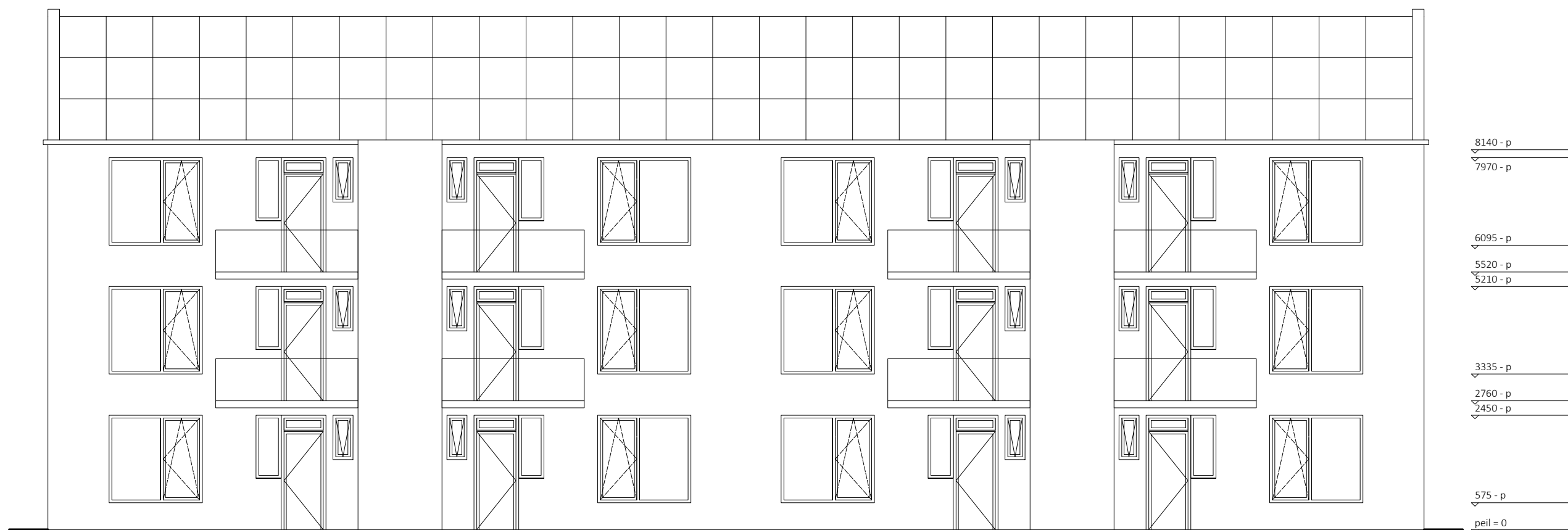




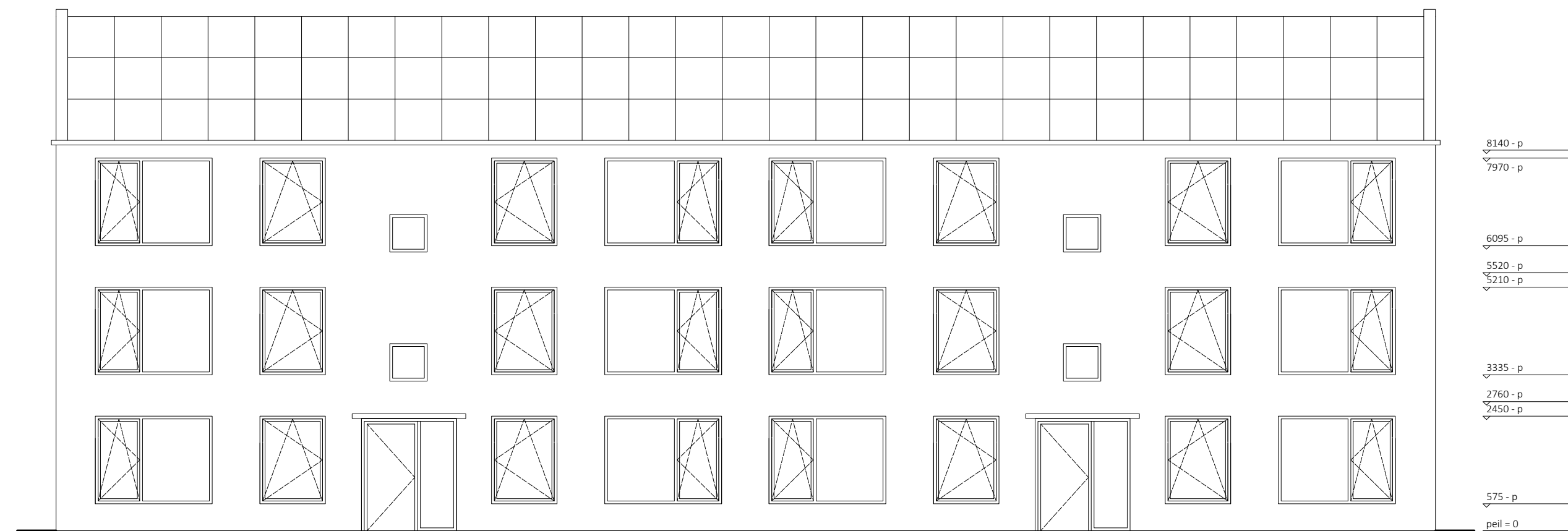
First floor
Scale 1:100



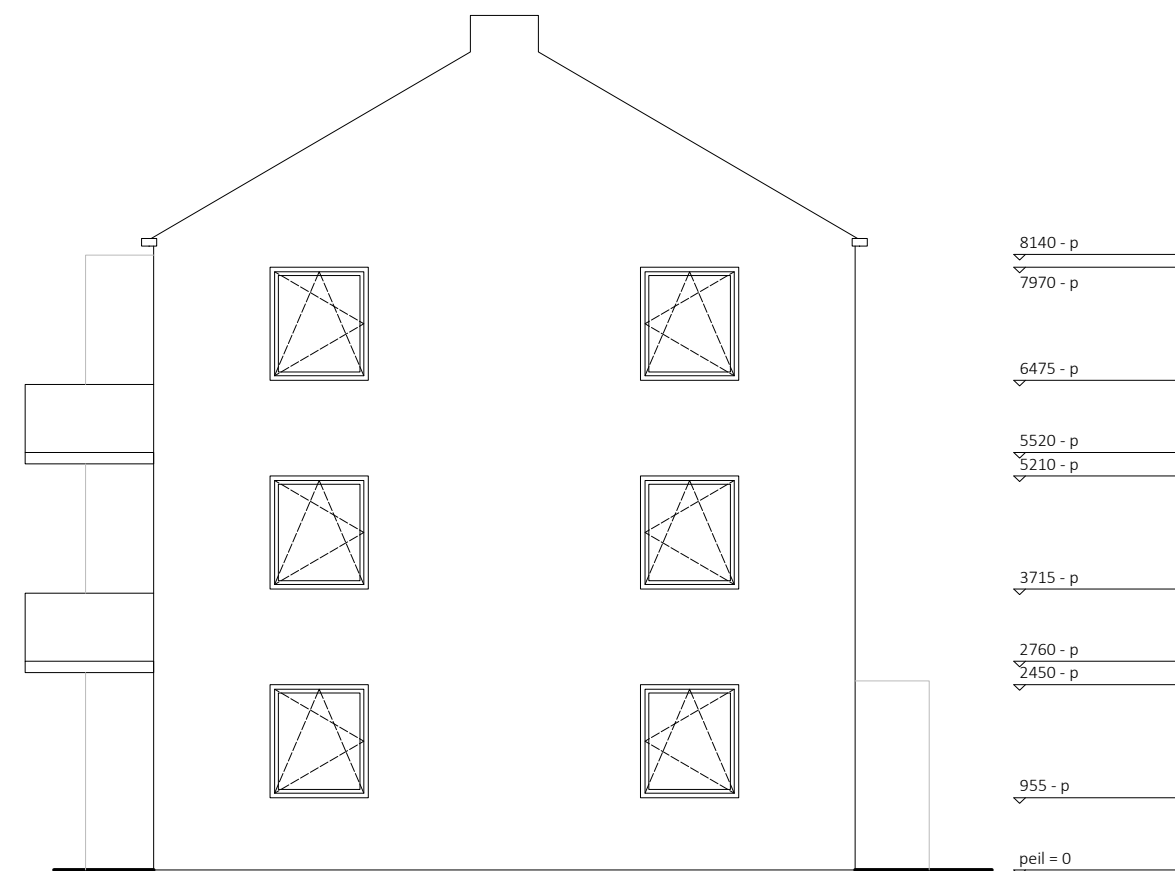
Second floor
Scale 1:100



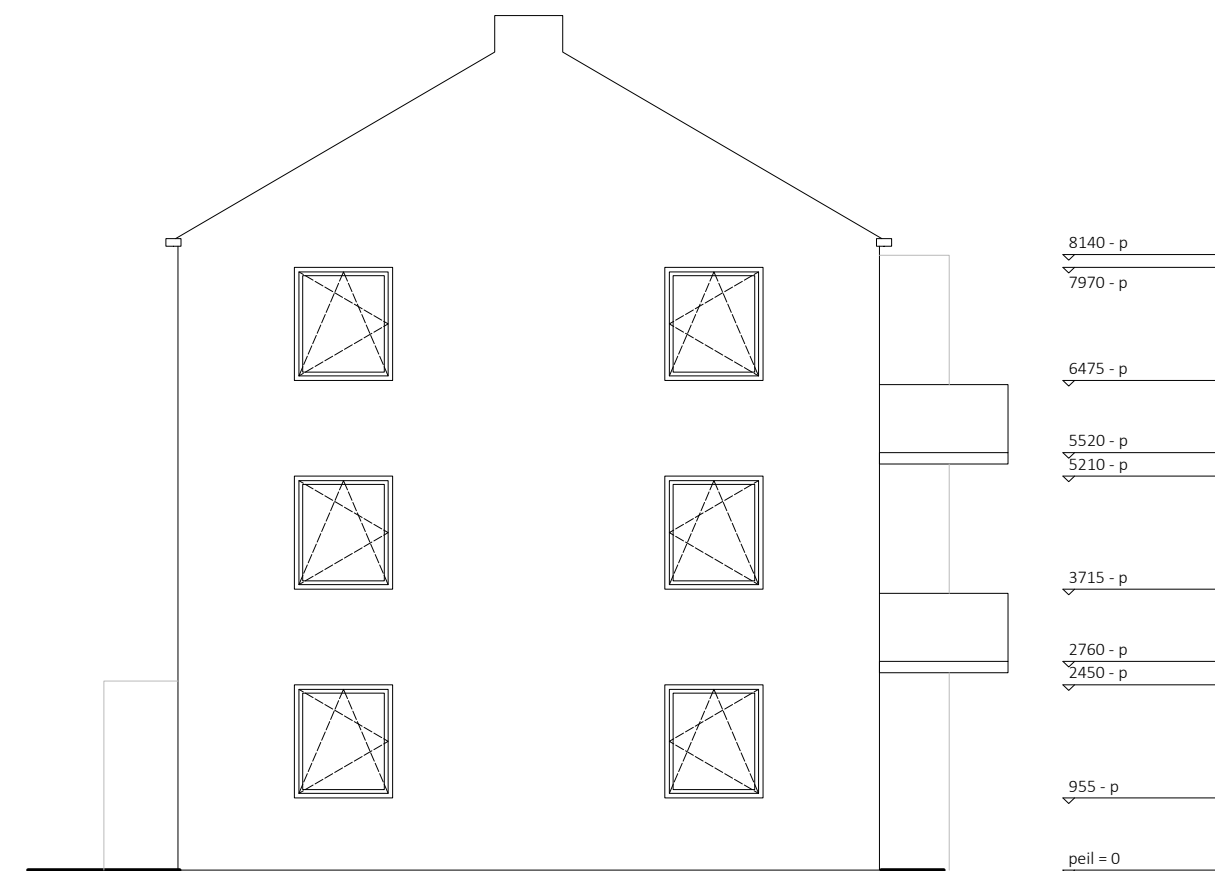
North facade



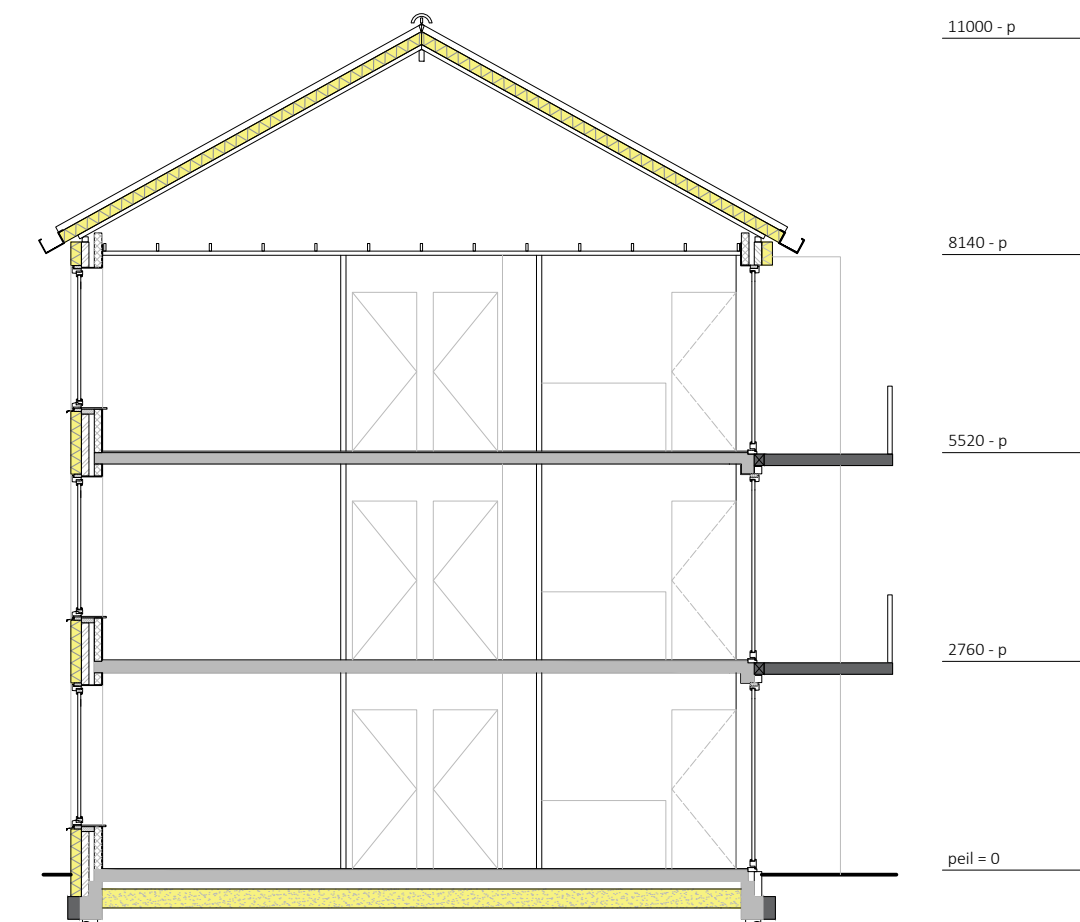
South facade



West facade



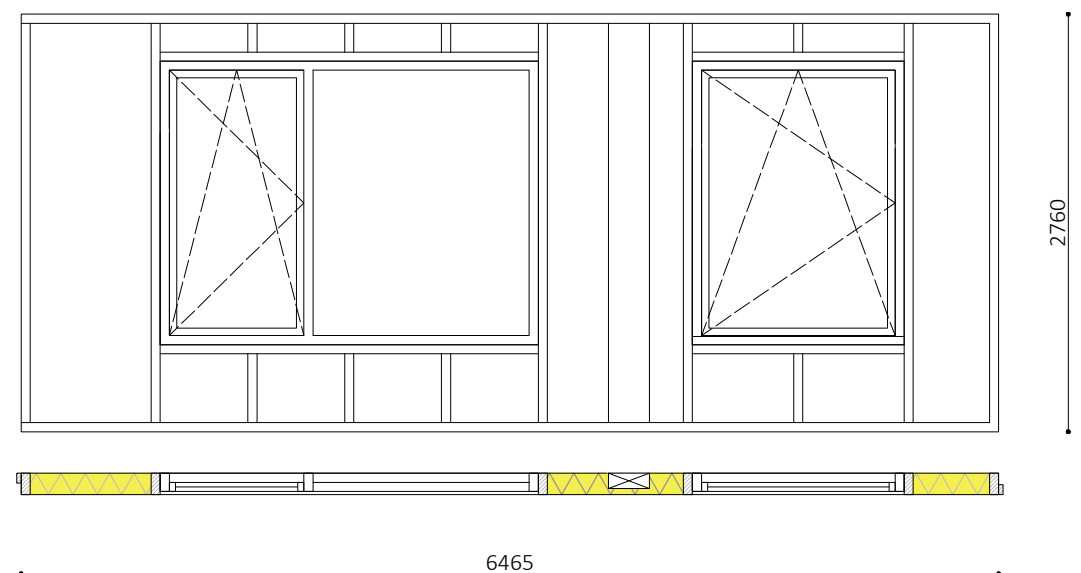
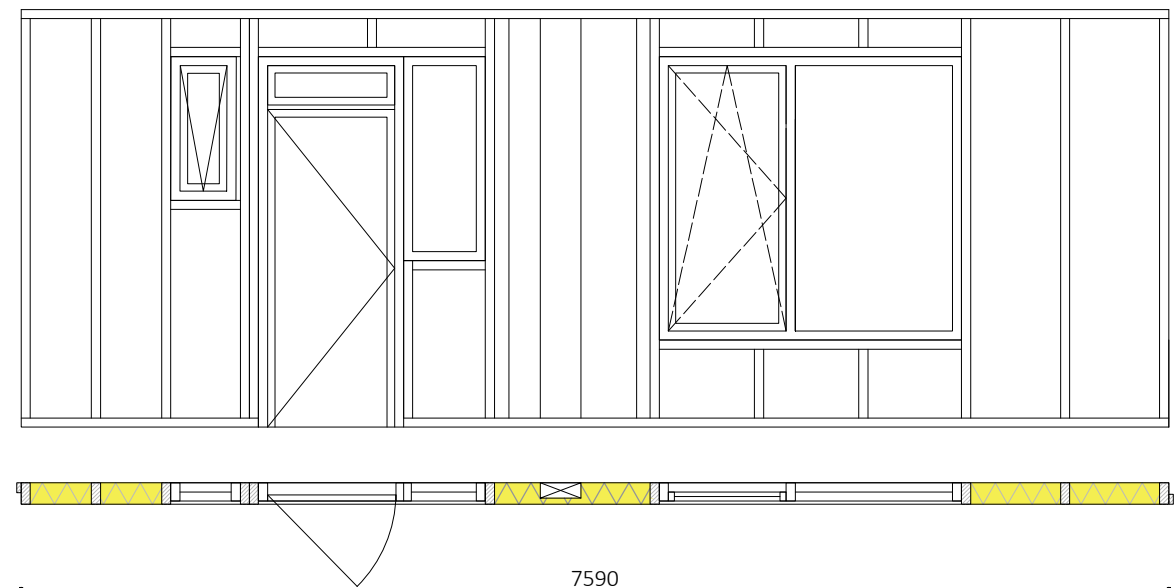
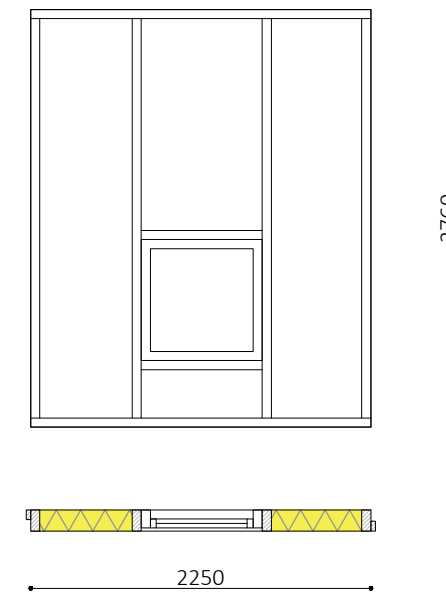
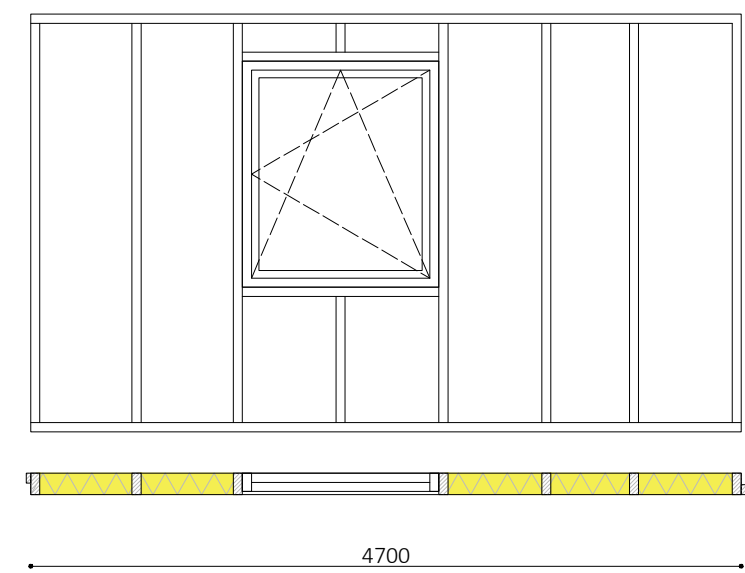
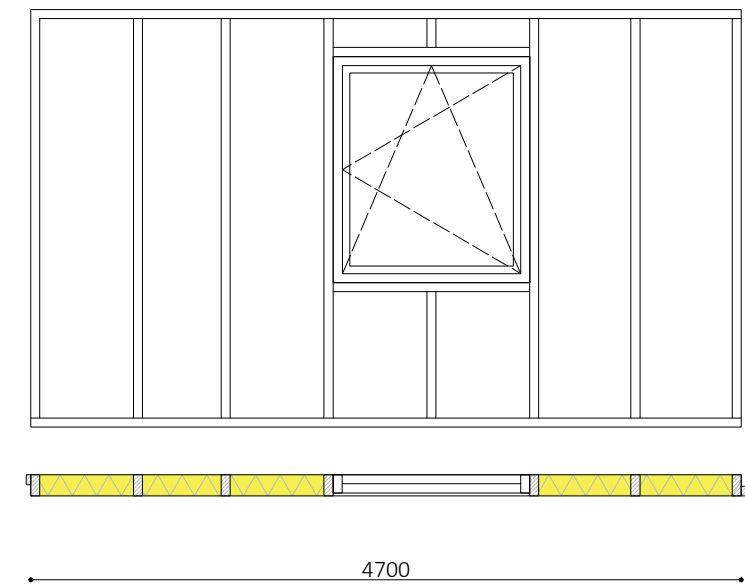
East facade



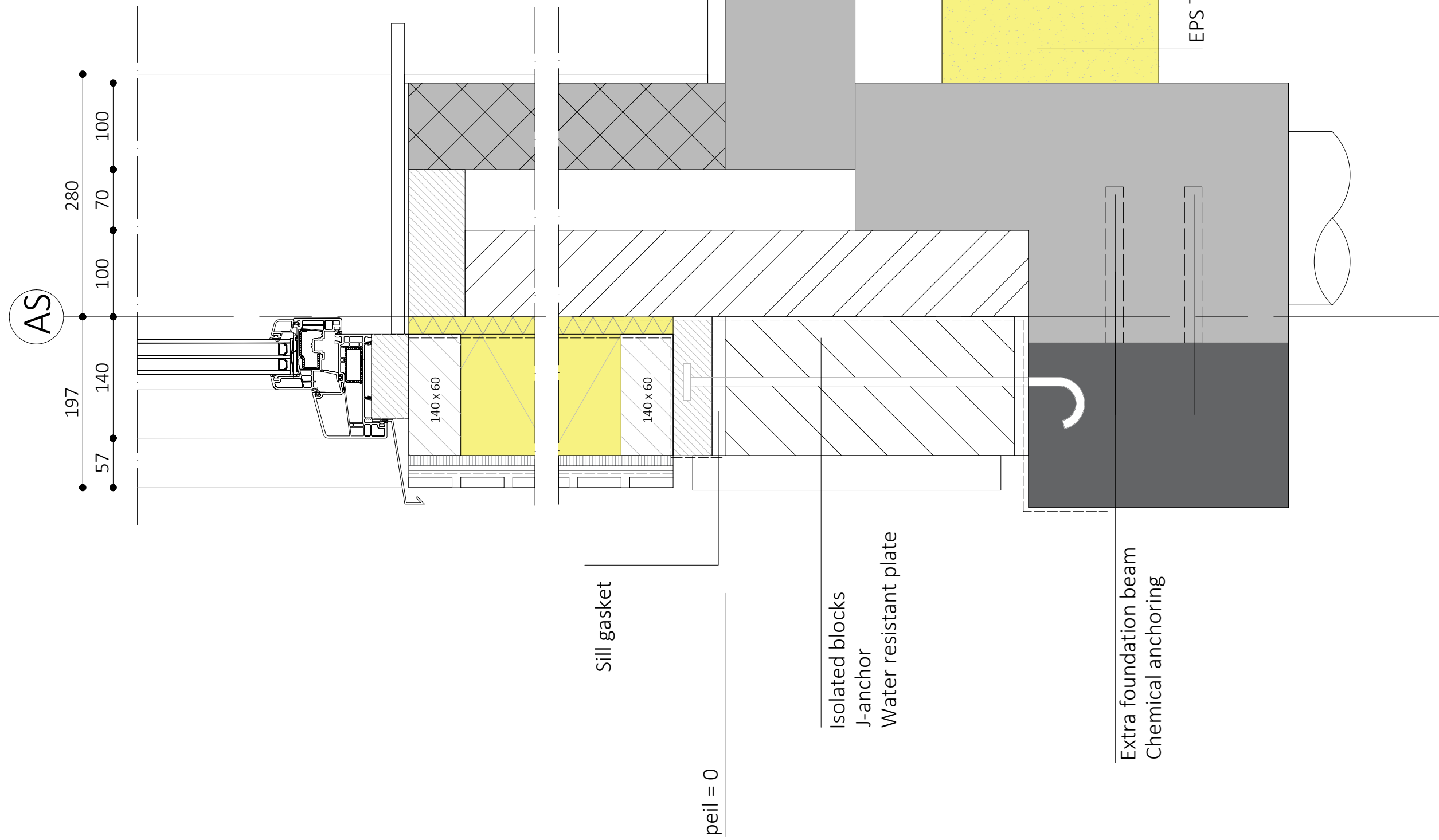
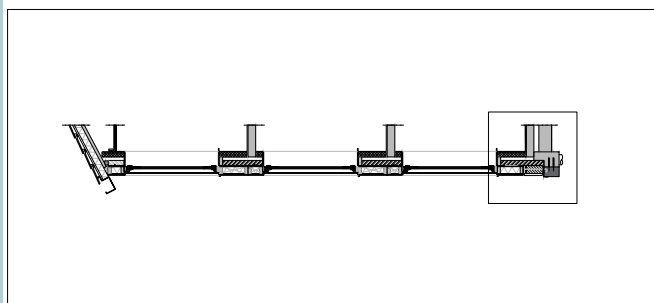
Section A-A

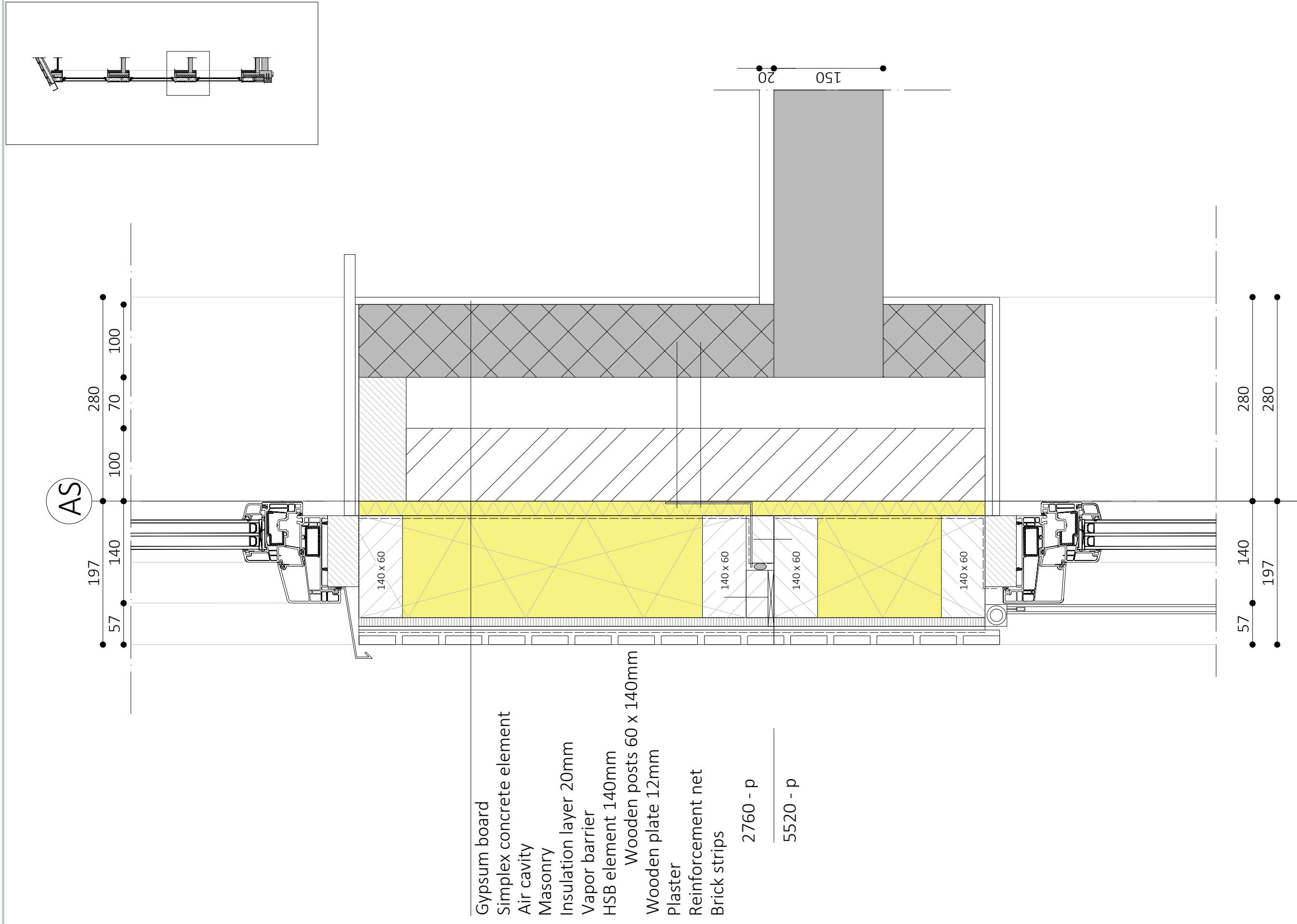
View 1
Scale 1:100

View 2
Scale 1:100

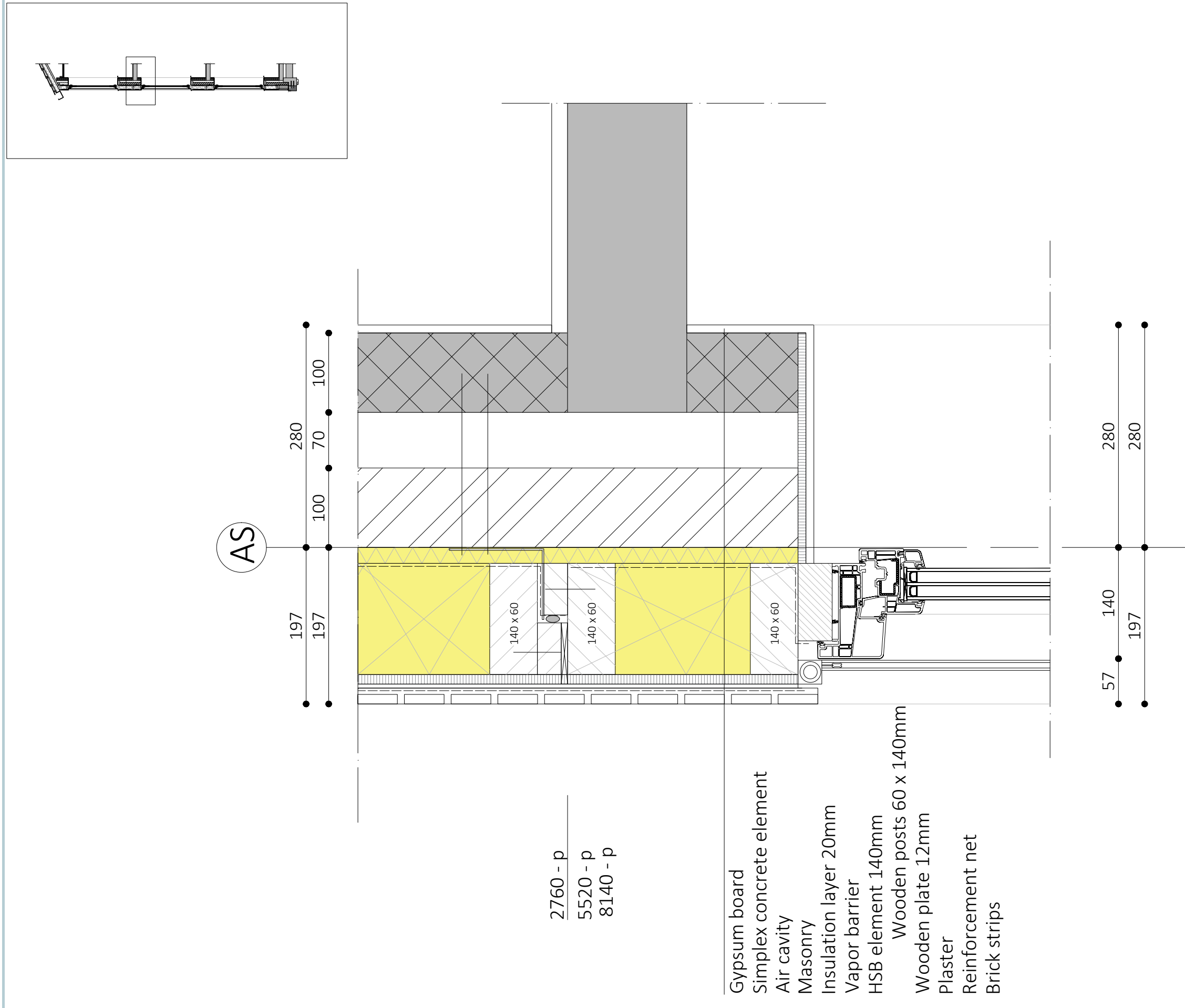


Prefabricated elements
Scale 1:50

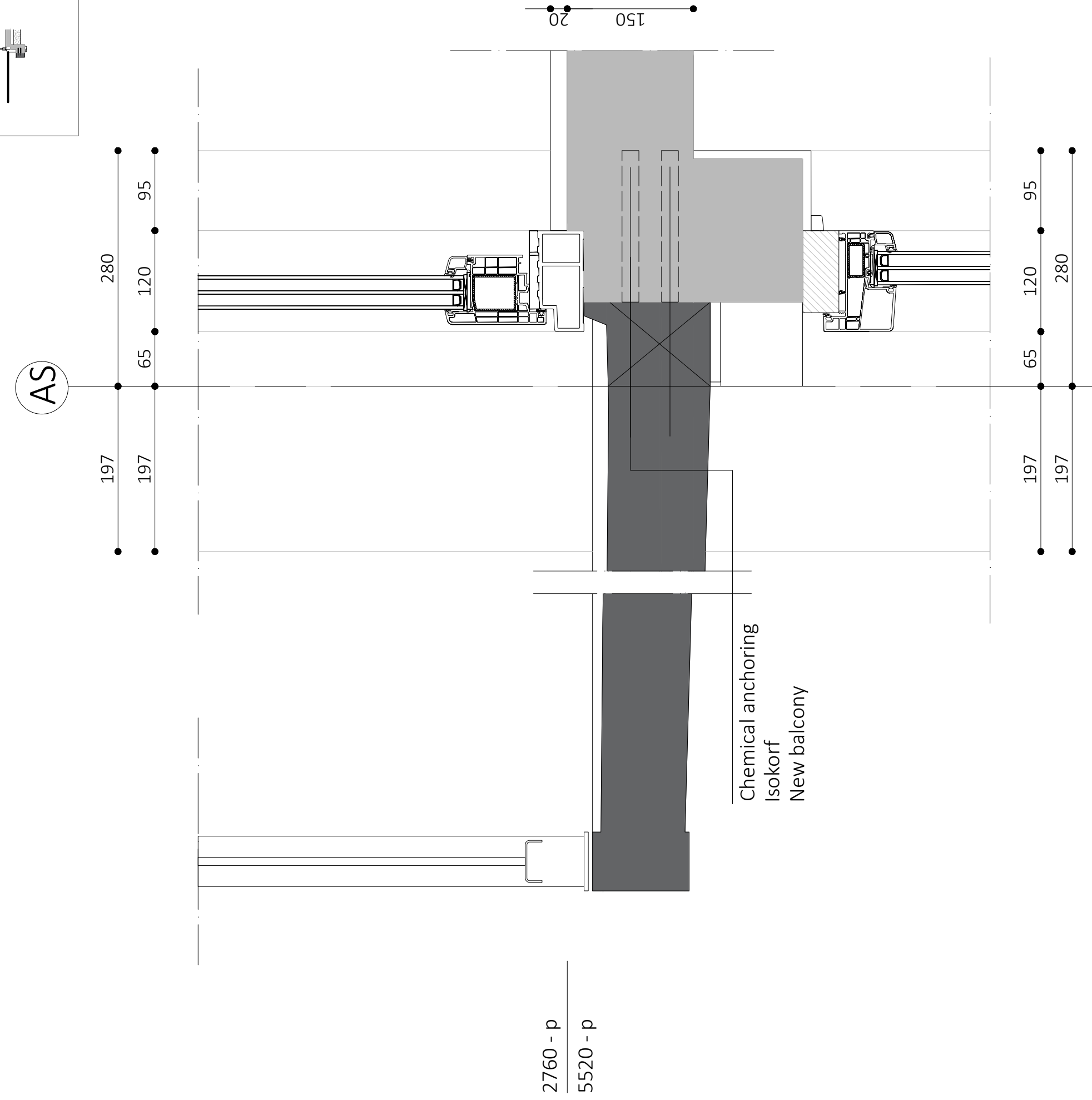
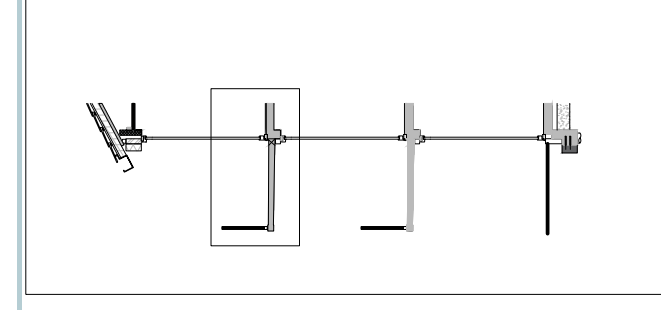




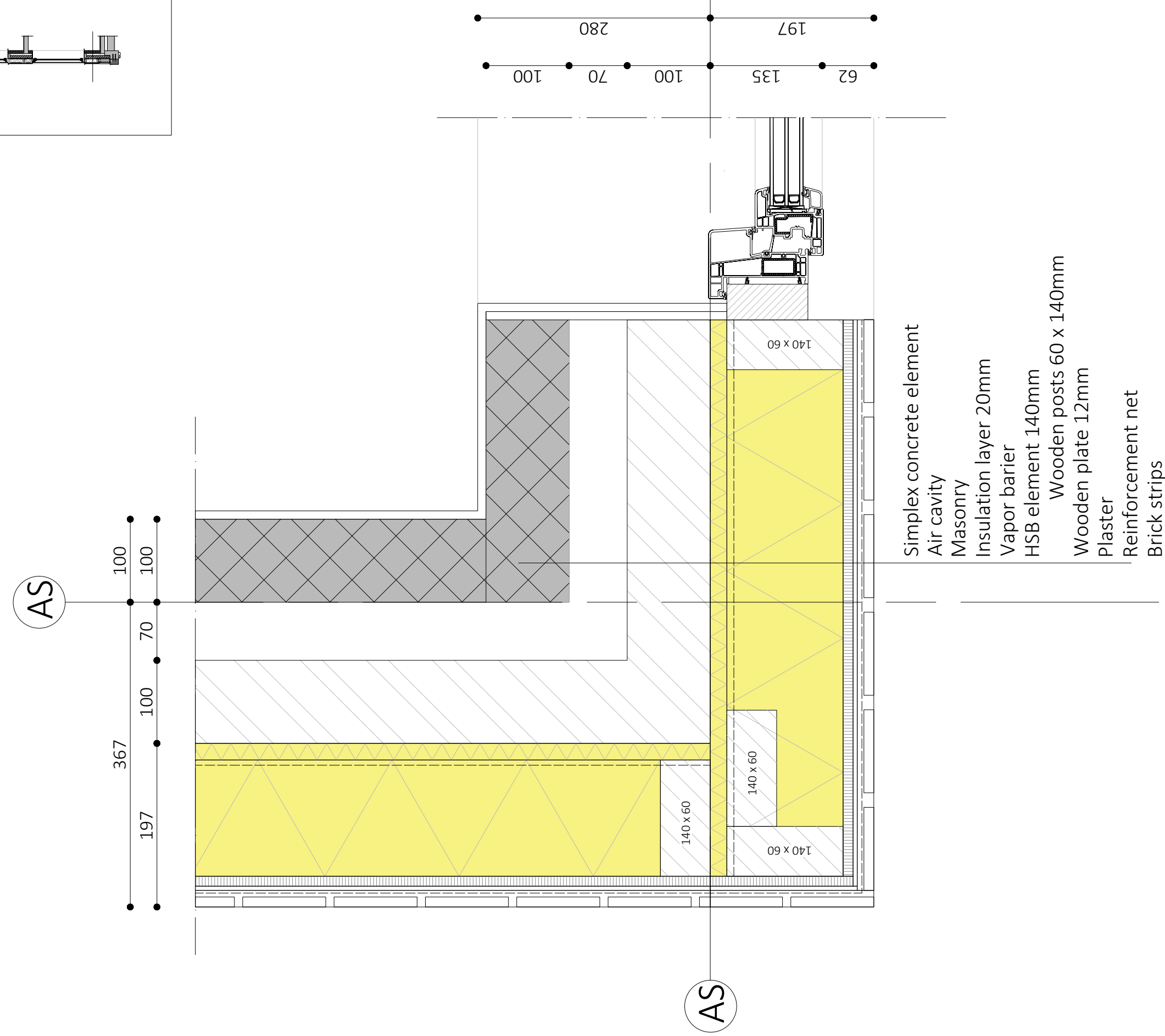
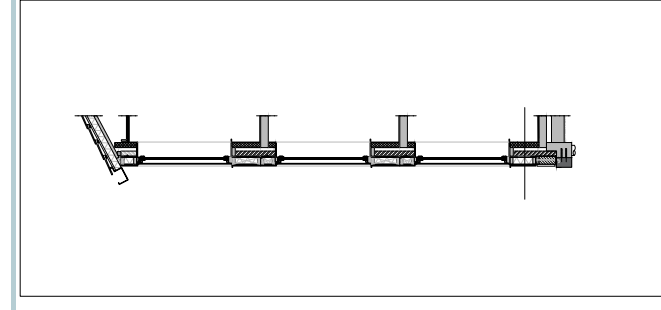
Detail 2
Scale 1:5



Detail 3
Scale 1:5

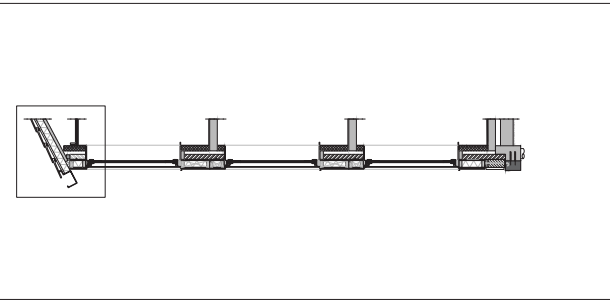


Detail 4
Scale 1:5

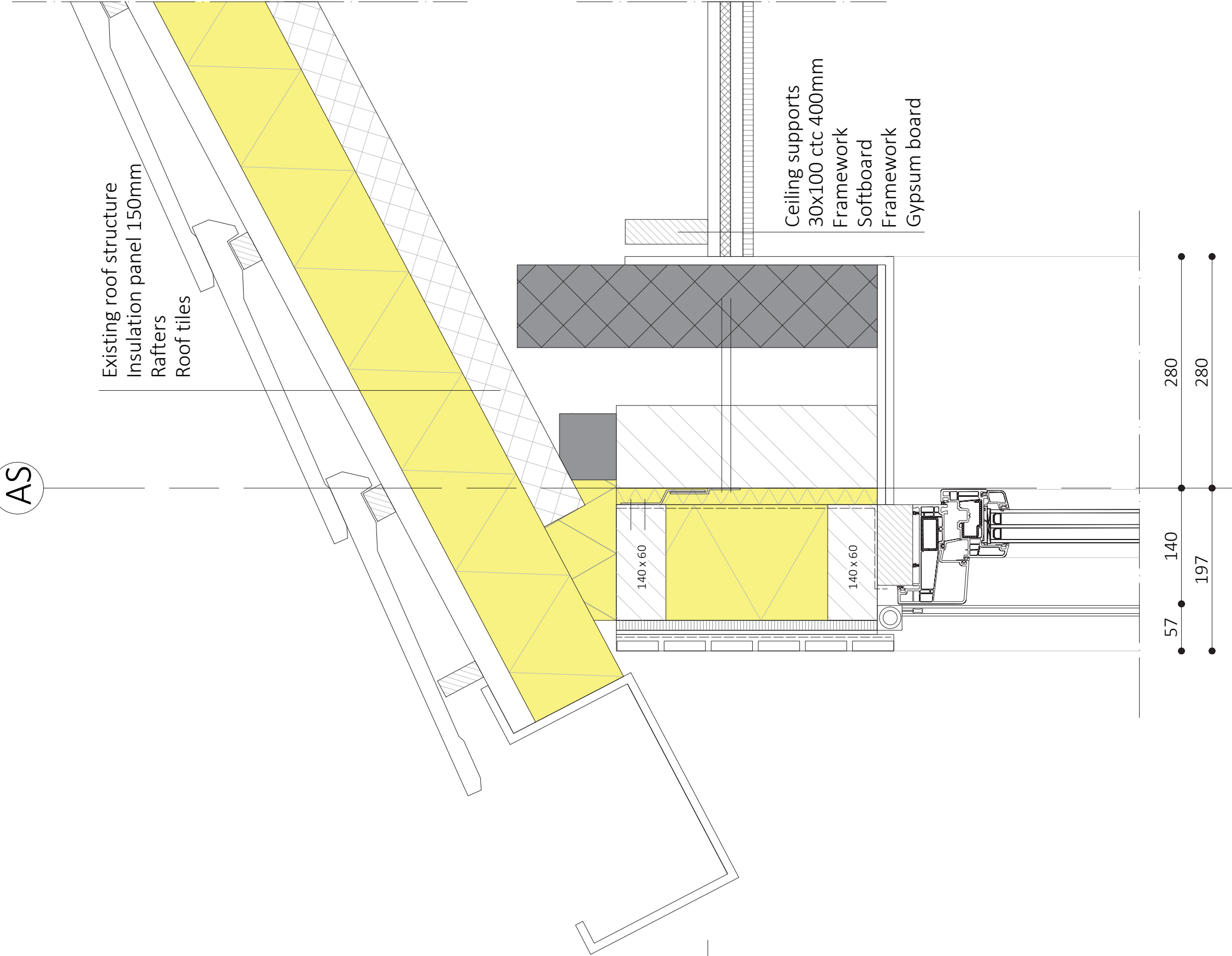


Detail 5
Scale 1:5

High impact



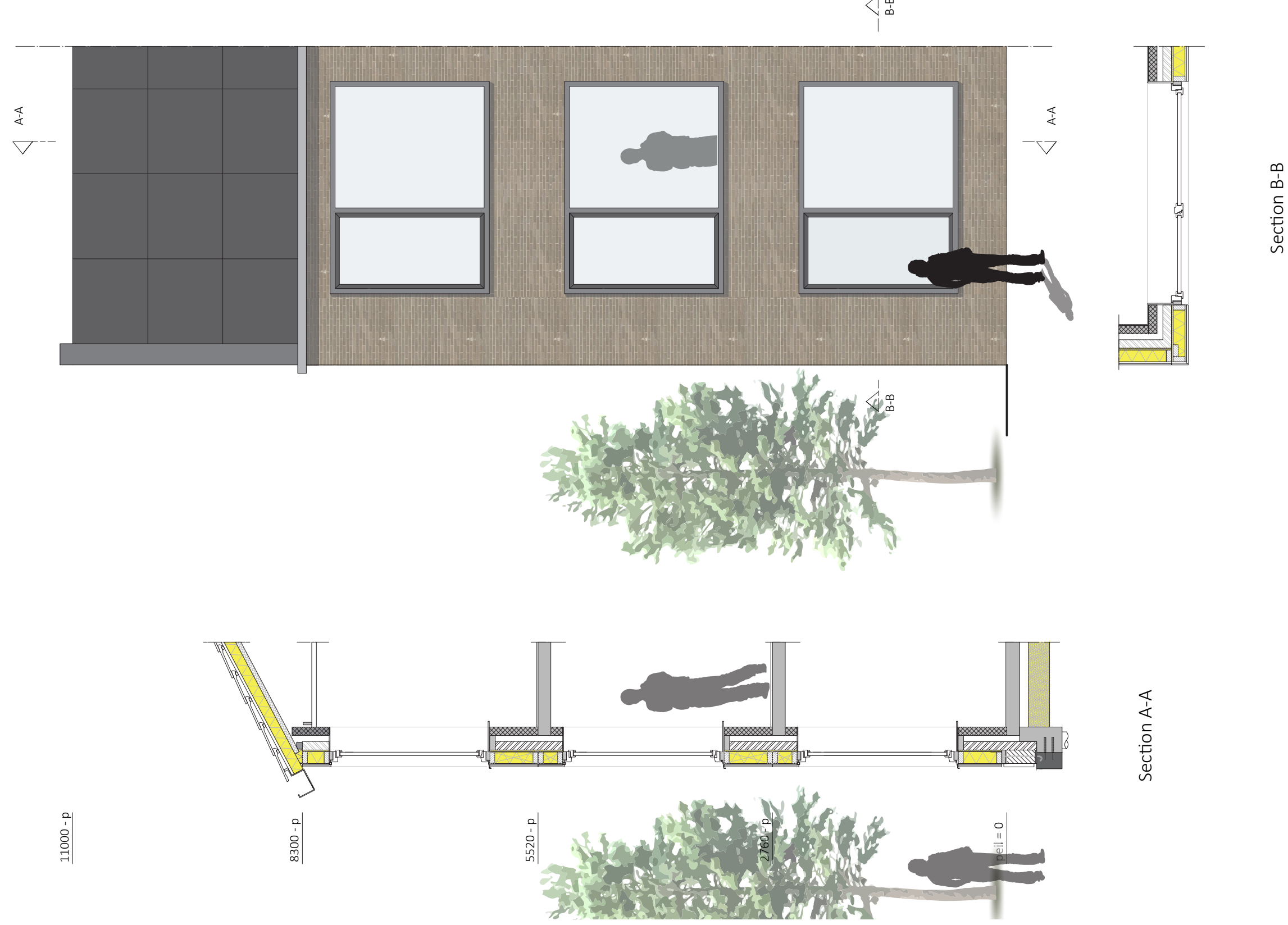
AS



8140 - p

Detail 6
Scale 1:5

High impact



Section B-B

Facade fragment
Scale 1:50

