CONSTRUCTION

TRANSFORMATION **STRUCTURALISM**

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FUTURE OF STRUCTURALISM
TUDELFT
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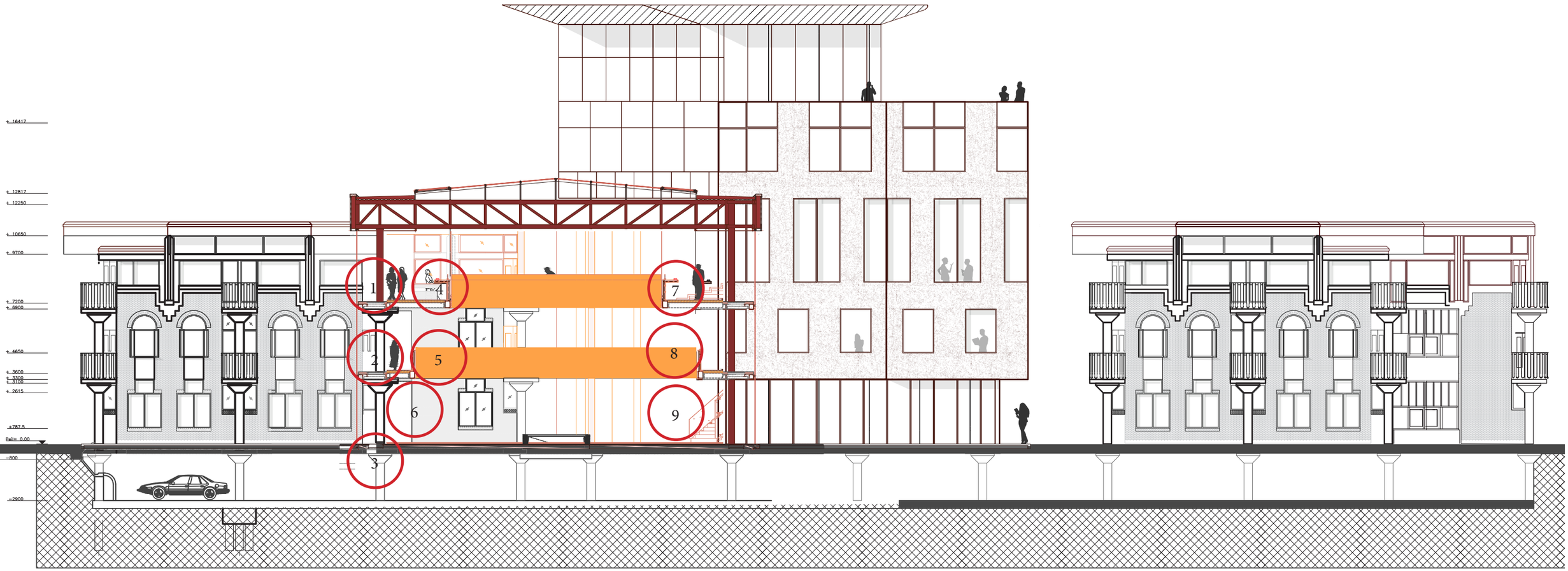
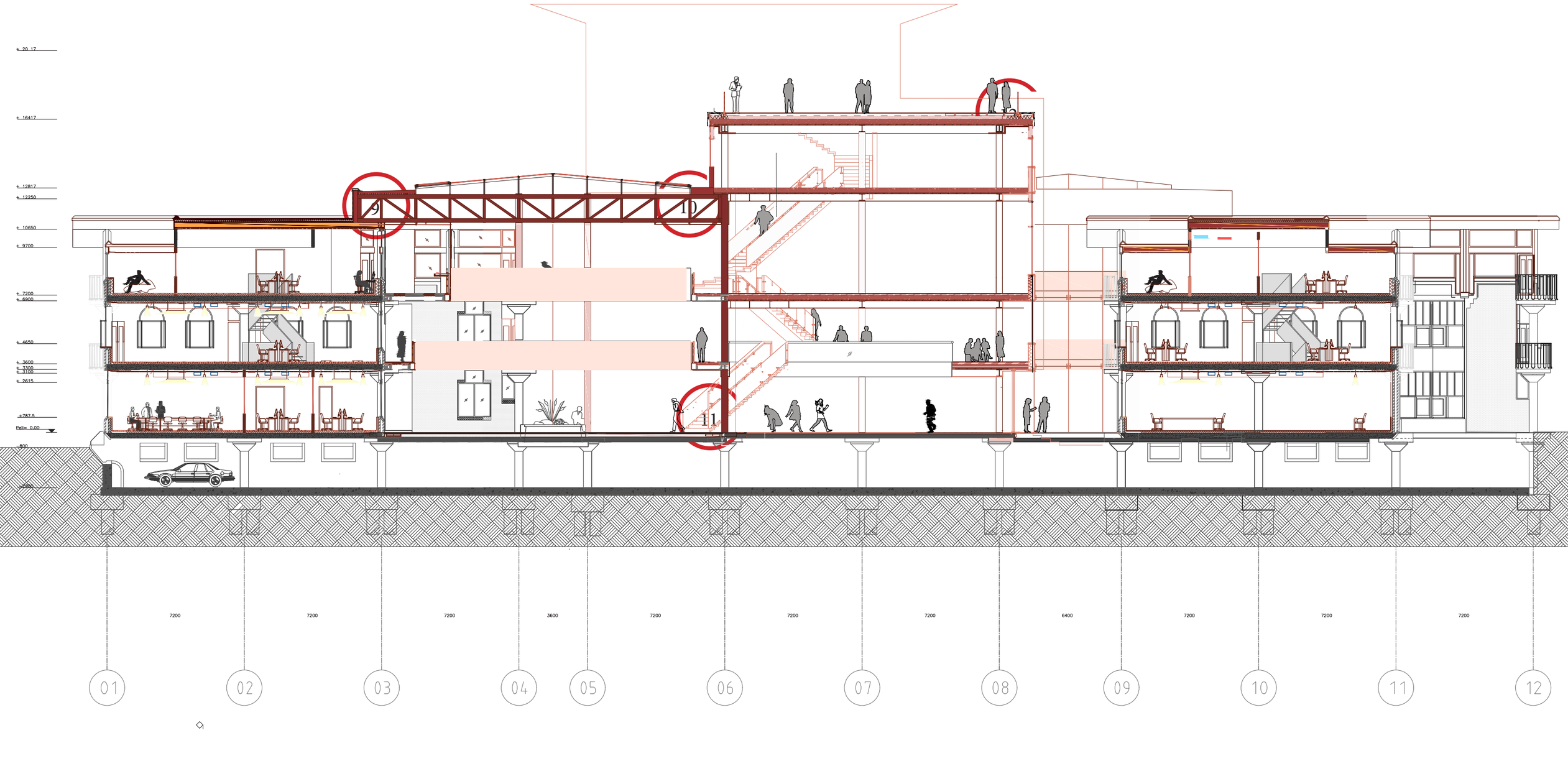
THIS BOOKLET CONTAINS FINISHED PRODUCTS OF TECHNICAL CONSEQUENCES OF THE TRANSFORMATION OF THE FACULTY OF HUMANITIES. ALL DRAWINGS IN THIS BOOKLET ARE MADE BY VALERY ESHUIS.

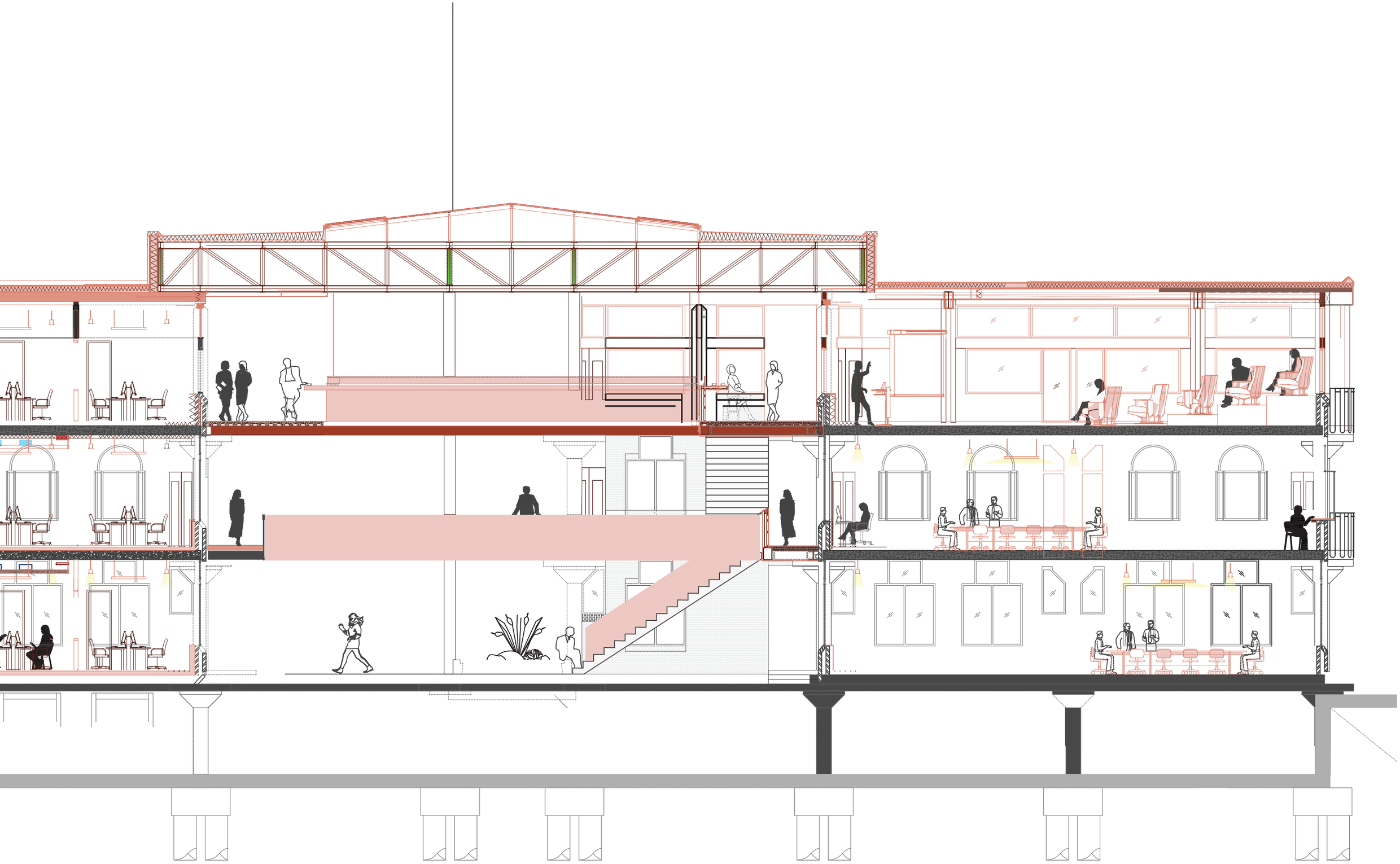
SECTION BB' 1:200



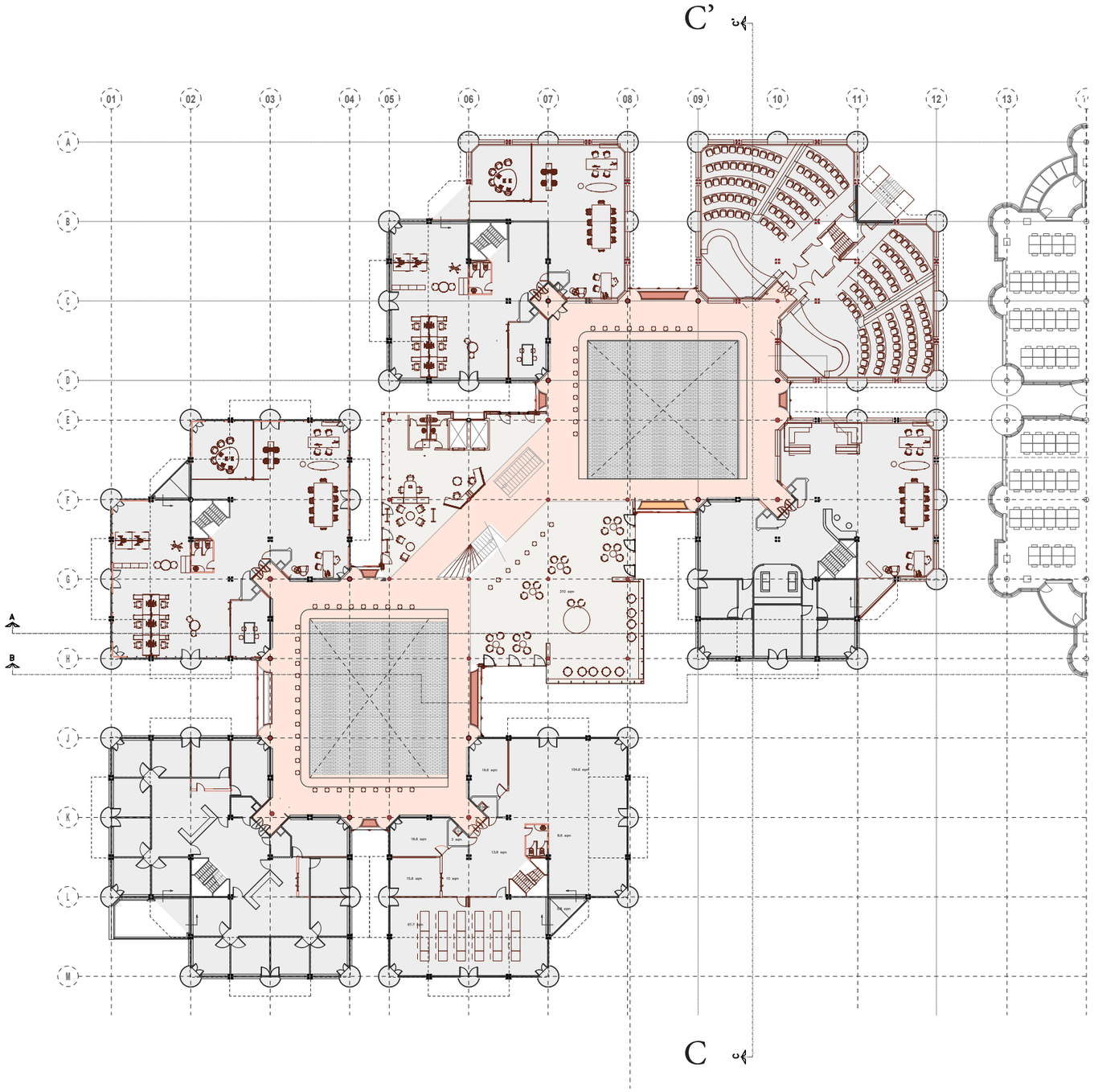
SECTION AA' 1:200



SECTION CC’ 1:200



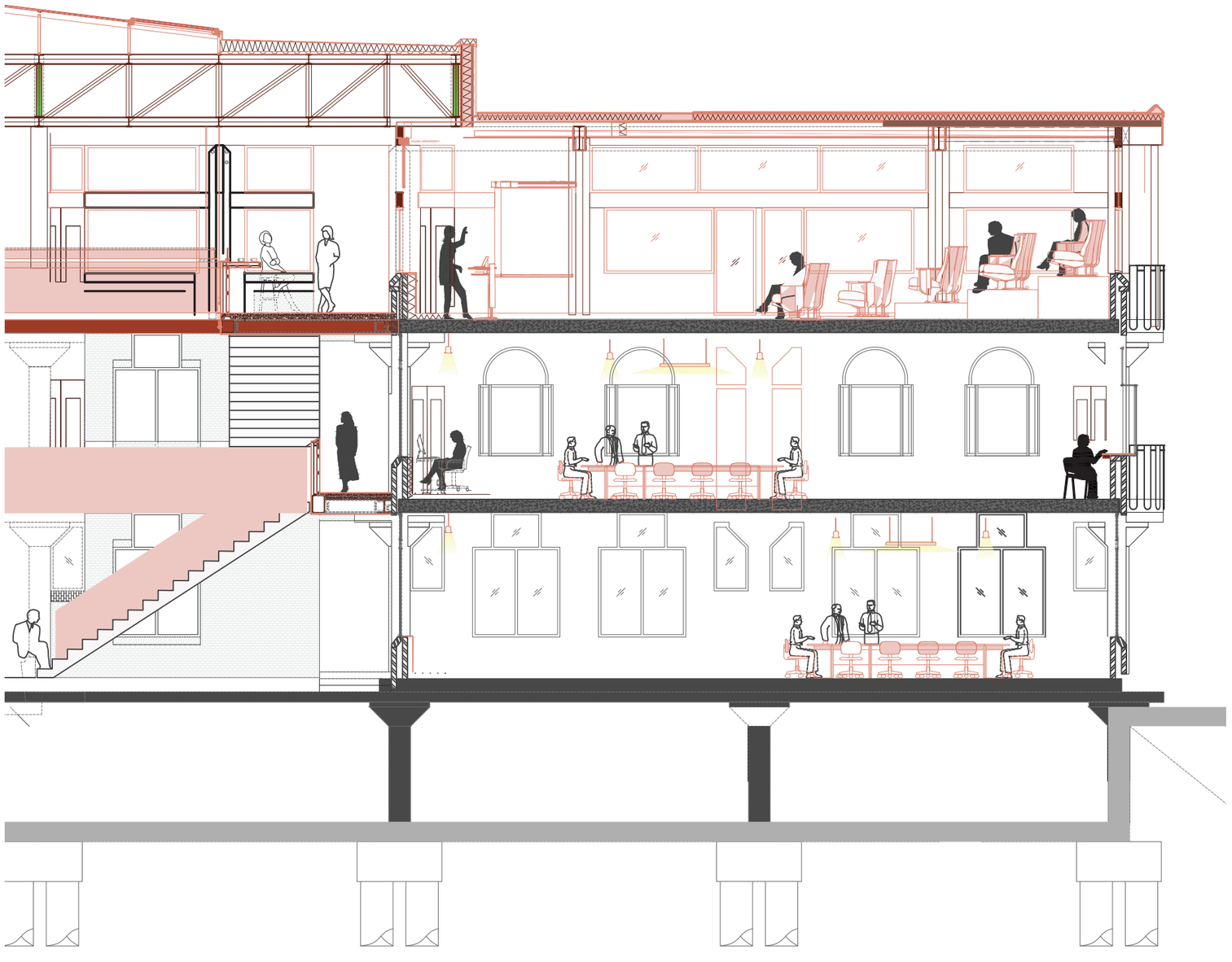
FLOOR PLAN NEW LECTURE HALL 1:100

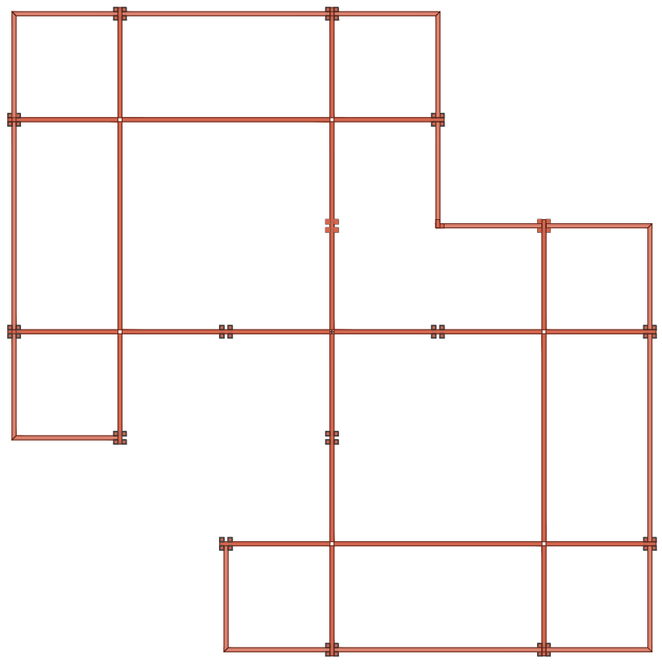


NEW LECTURE HALLS SEAT 75 PEOPLE.

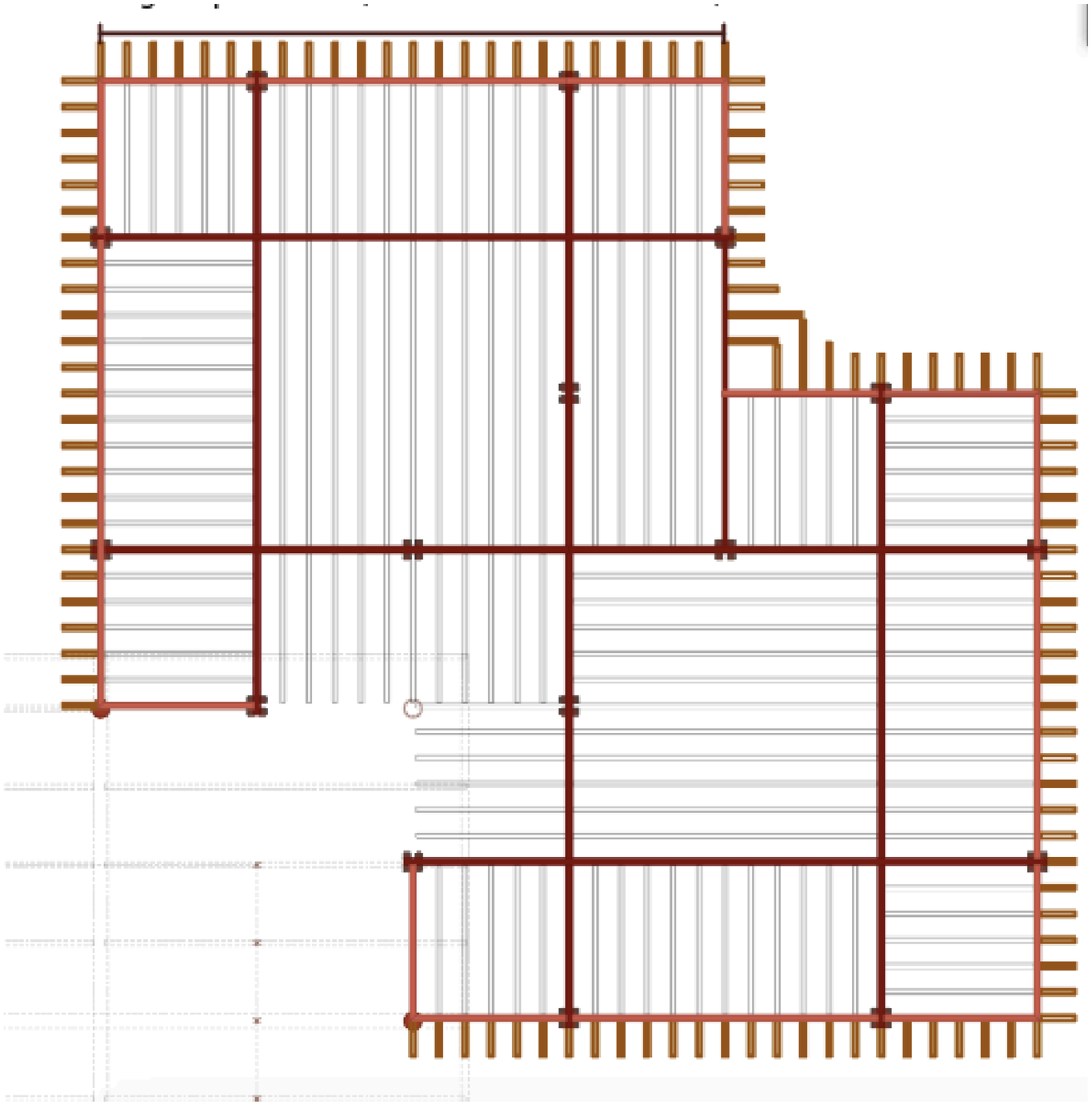
I-BEAMS FOR NEW LECTURE HALL

THE LARGE I BEAMS CAN MAKE THE 14400MM SPAN WITH DIMENSIONS OF 480MM HEIGHT WHICH IS A LOT LESS THEN THE 950MM HIGH WOODEN BEAMS USED IN THE PREVIOUS DESIGNS, THIS LEAVES MUCH MORE HEIGHT FOR BETTER VISUAL LINES IN THE LECTURE HALLS.

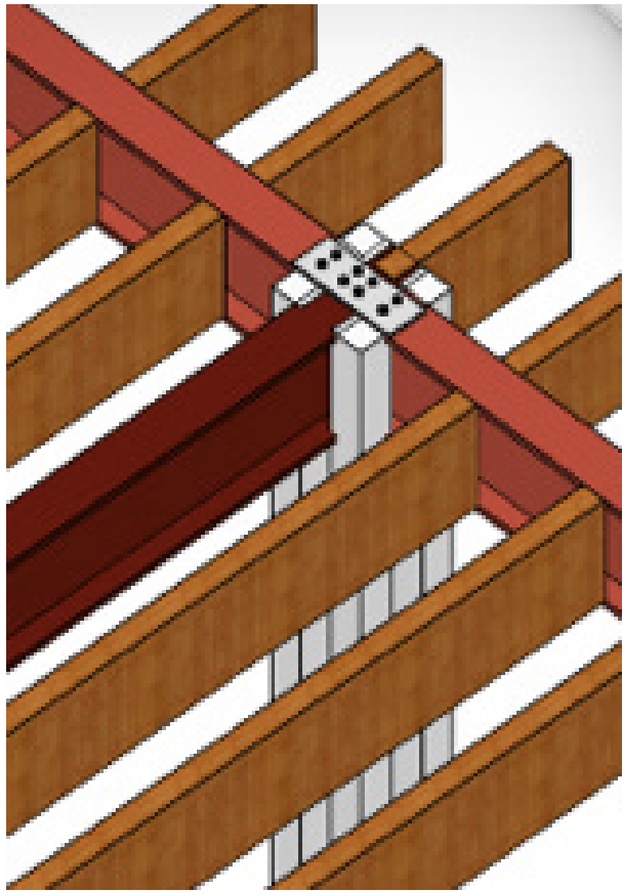




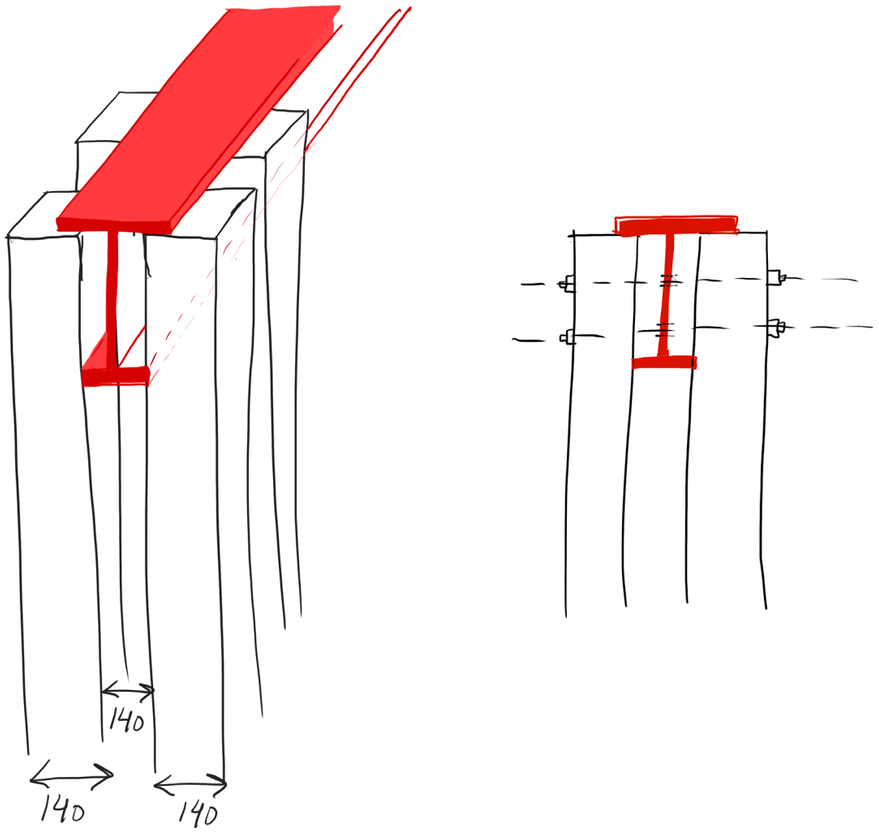
DETAIL



DETAIL NEW BEAM SAME COLUMN
STRUCTURE



1.

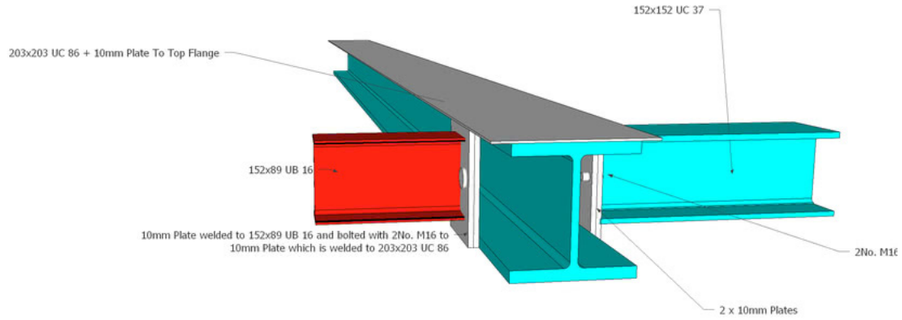


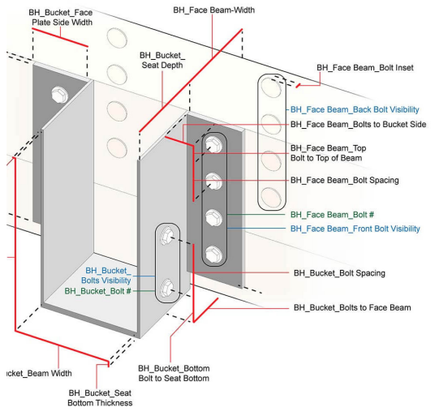
2.

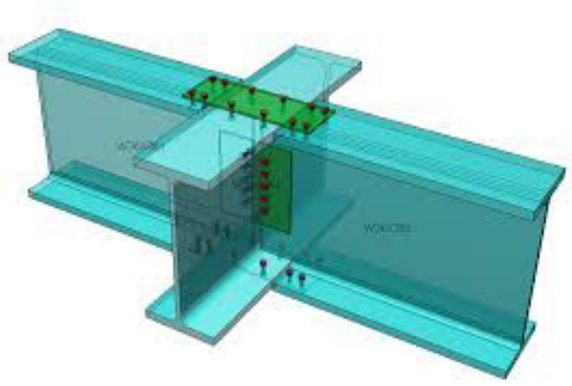
1. THE SAME DESIGN IS USED FOR THE WOODEN COLUMNS MADE UP OF 4 SMALLER COLUMNS ALSO THE SAME DIMENSIONS OF 140X140MM PER COLUMN IS USED JUST LIKE IN THE EXISTING BUILDING STRUCTURE.

2. THE NEW I-BEAMS ARE ADJUSTED AT THE OUTER ENDS TO FIT INTO THE COLUMNS.

EXTRA BOLTS ARE USED TO KEEP THE CONNECTION TOGETHER. (SO THE 4 COLUMNS DONT PRESS AWAY FROM EACHOTHER.)







1. THE BUCKET BRACKET IS TO BE USED AT THE ENDS OF A WOOD BEAM.THE WOODEN BEAMS CANB BE BOLTED TO THE STEEL I-BEAMS VIA THE BUCKET BRACKET (STALEN SCHOEN).

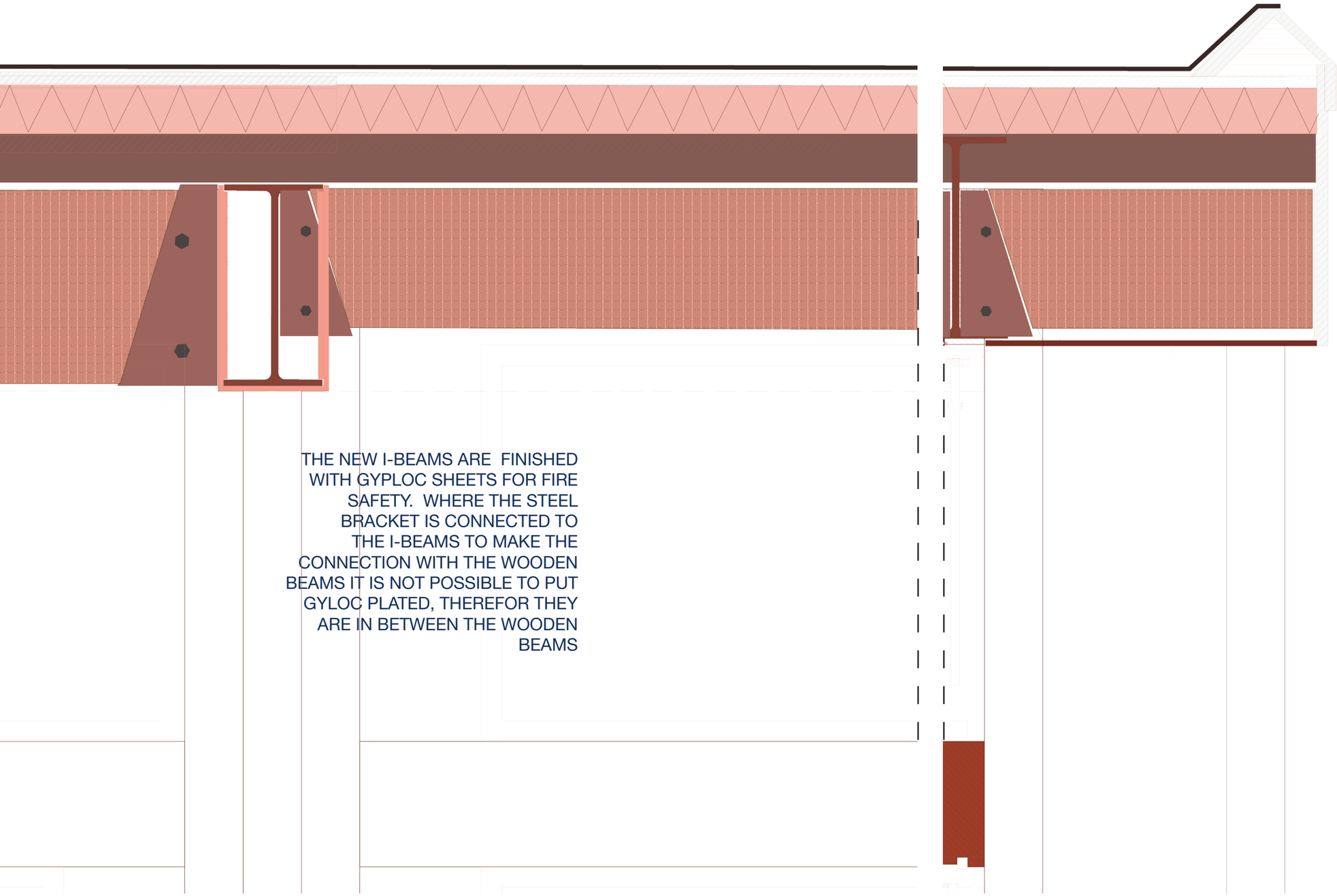
THE WOODEN BEAMS HAVE A H.O.H. (HART-OP -HART AFSTAND) OF 600MM. FROM ONE ANOTHER.

TO MAKE THE CANTILEVERS OF THE ROOF WOODEN BEAMS ARE USED. THEY ARE ATTACHED TO A RINGBAR. BECAUSE THE STEEL I-BEAM RINGBAR HAS TO BE AT THE SAME HEIGHT AS THE REST OF THE CONSTRUCTION SO IT WILL STAY IN LINE WITH THE FACADE DI-MENSIONS (AIMED FOR HEIGHTS OF WINDOWS AND ROOF SAME AS EX-ITING BUILDING) AND THE RINGBAR CANNOT GO THROUGH THE STEEL I BEAMS, THEY WILL BE BOLTED ON THE TOP (SEE A) AND SIDES (B). (THE STRENGHT OF THE I BEAM IS IN THE ‘FLENS’)

THE WOODEN BEAMS OF 800MM THAT CARRY THE CANTILEVER (ARE CONNECTED TO A STEEL RINGBAR AROUND THE ENTIRE PERIMETER OF THE BUILDING EXCEPT WHERE THE ATRIUM ROOF OVERLAPS THE NEW ROOF.

THIS OVERLAP IS USED TO PUT AWAY INSTALLATIONS.

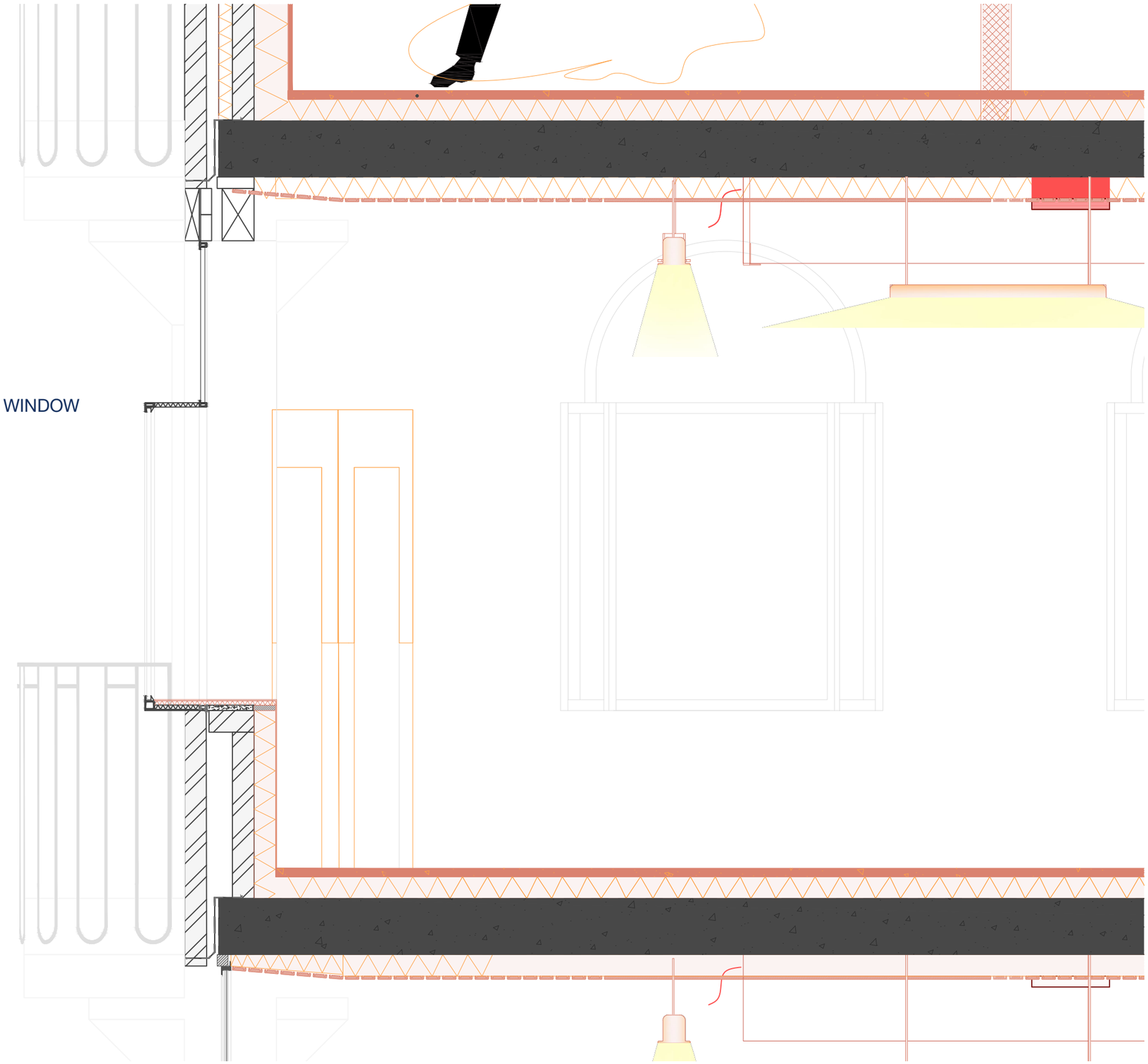
DETAIL ROOF EDGE NEW LECTURE HALL 1:10



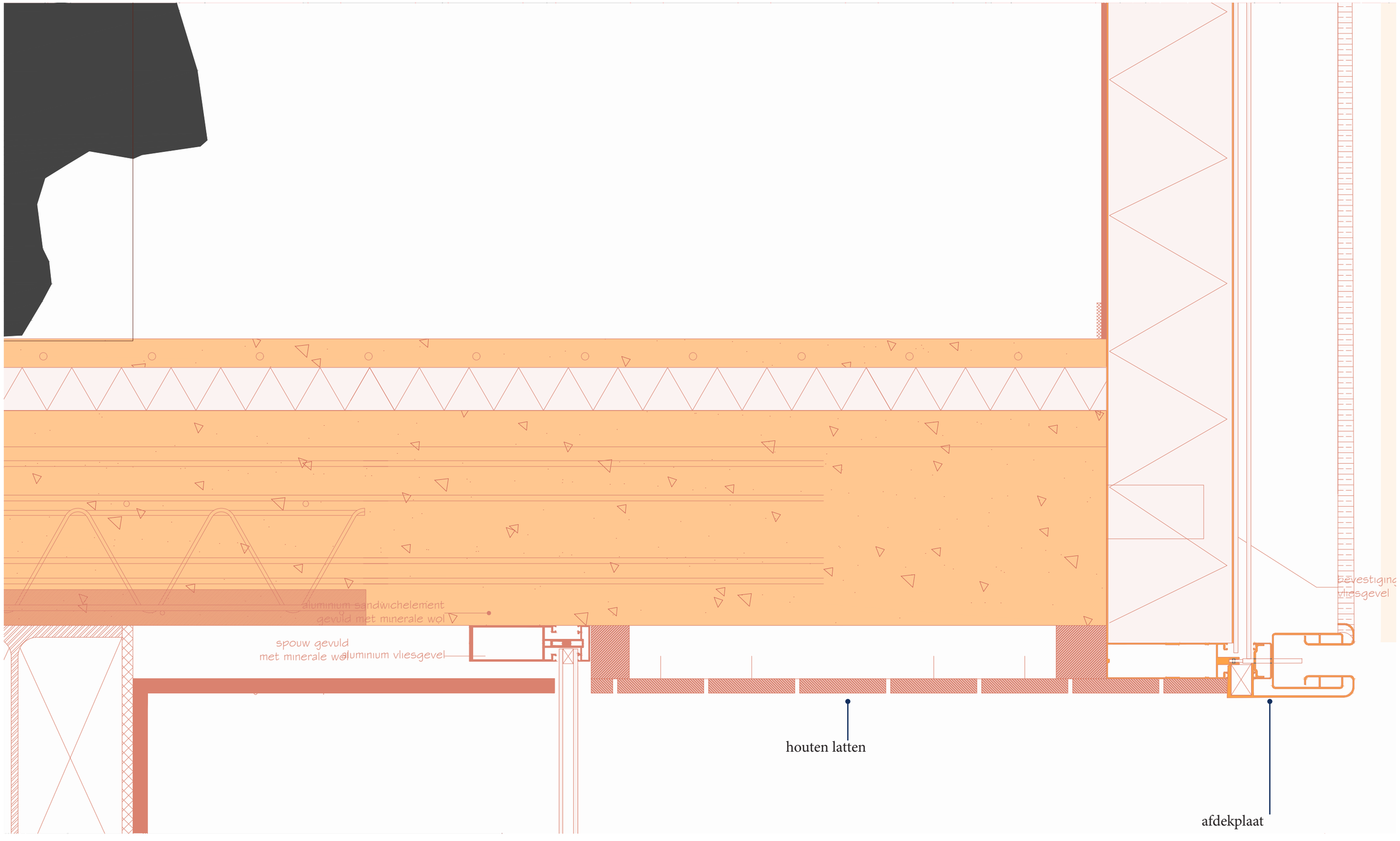
ON TOP OF THE WOODEN BEAMS WOODEN SHEETS (MULTIPLEX HOUTEN PLATEN) CAN BE PLACED TO CARRY THE INSULATION. THE INSULATION IS THEN TOPPED OFF WITH MULTIPLEX SHEETS AGAIN AND A WATERPROOF LAYER OF BITUMEN.

THE NEW I-BEAMS ARE FINISHED WITH GYPLOC SHEETS FOR FIRE SAFETY. WHERE THE STEEL BRACKET IS CONNECTED TO THE I-BEAMS TO MAKE THE CONNECTION WITH THE WOODEN BEAMS IT IS NOT POSSIBLE TO PUT GYLOC PLATED, THEREFOR THEY ARE IN BETWEEN THE WOODEN BEAMS

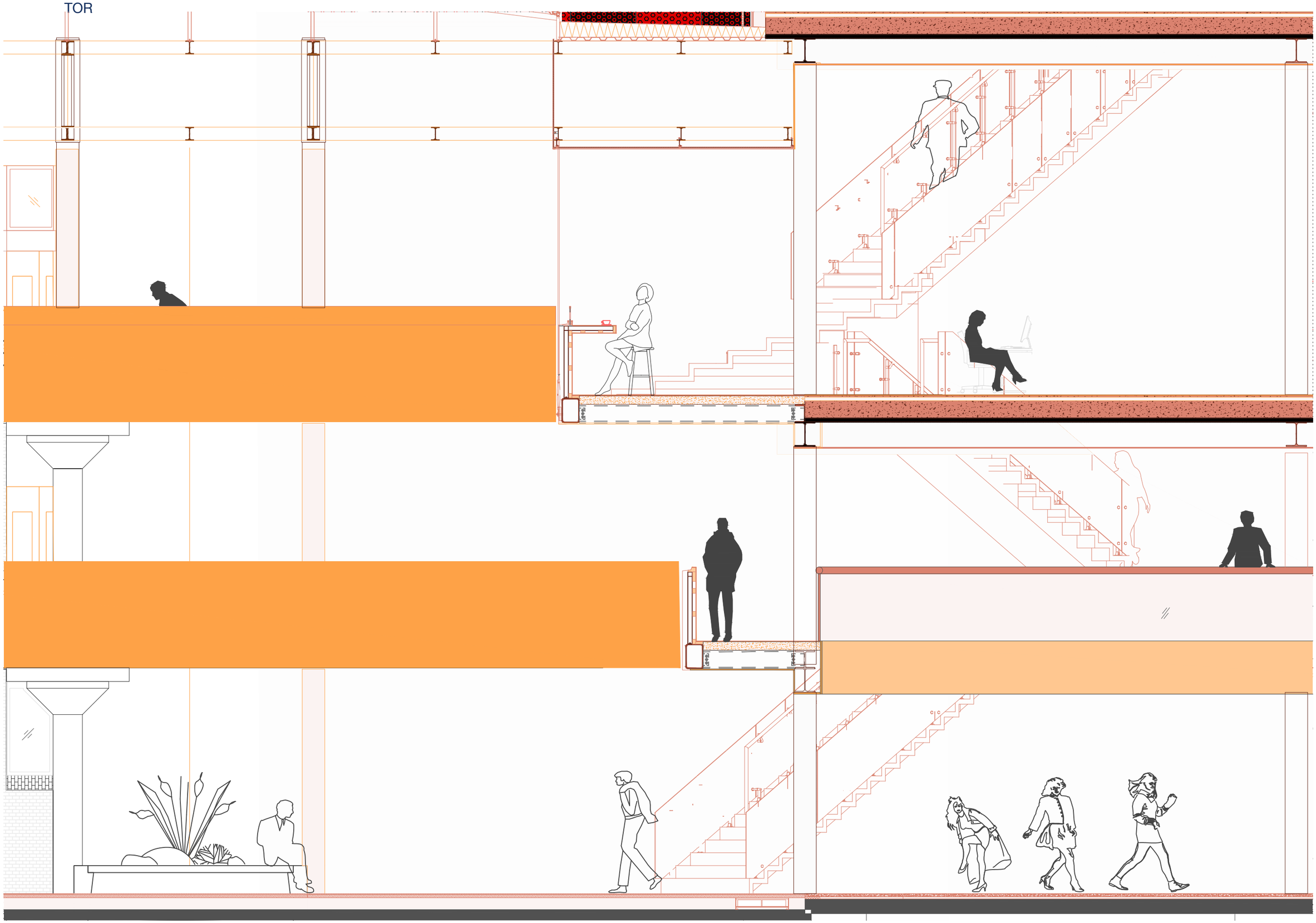
DETAIL XX 1.20
BAY WINDOW / ERKER



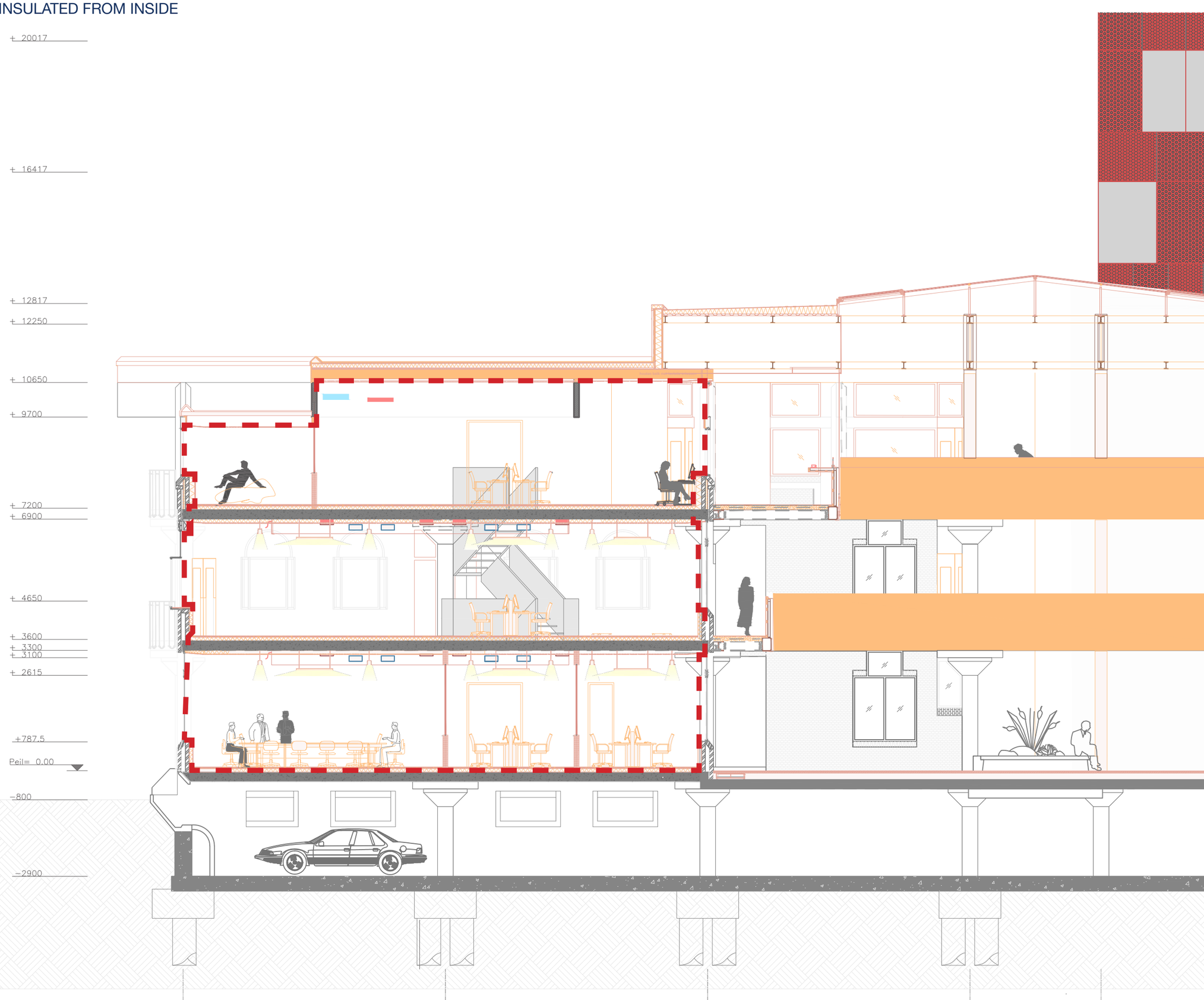
DETAIL XX 1:5
OVERSTEK INGANG



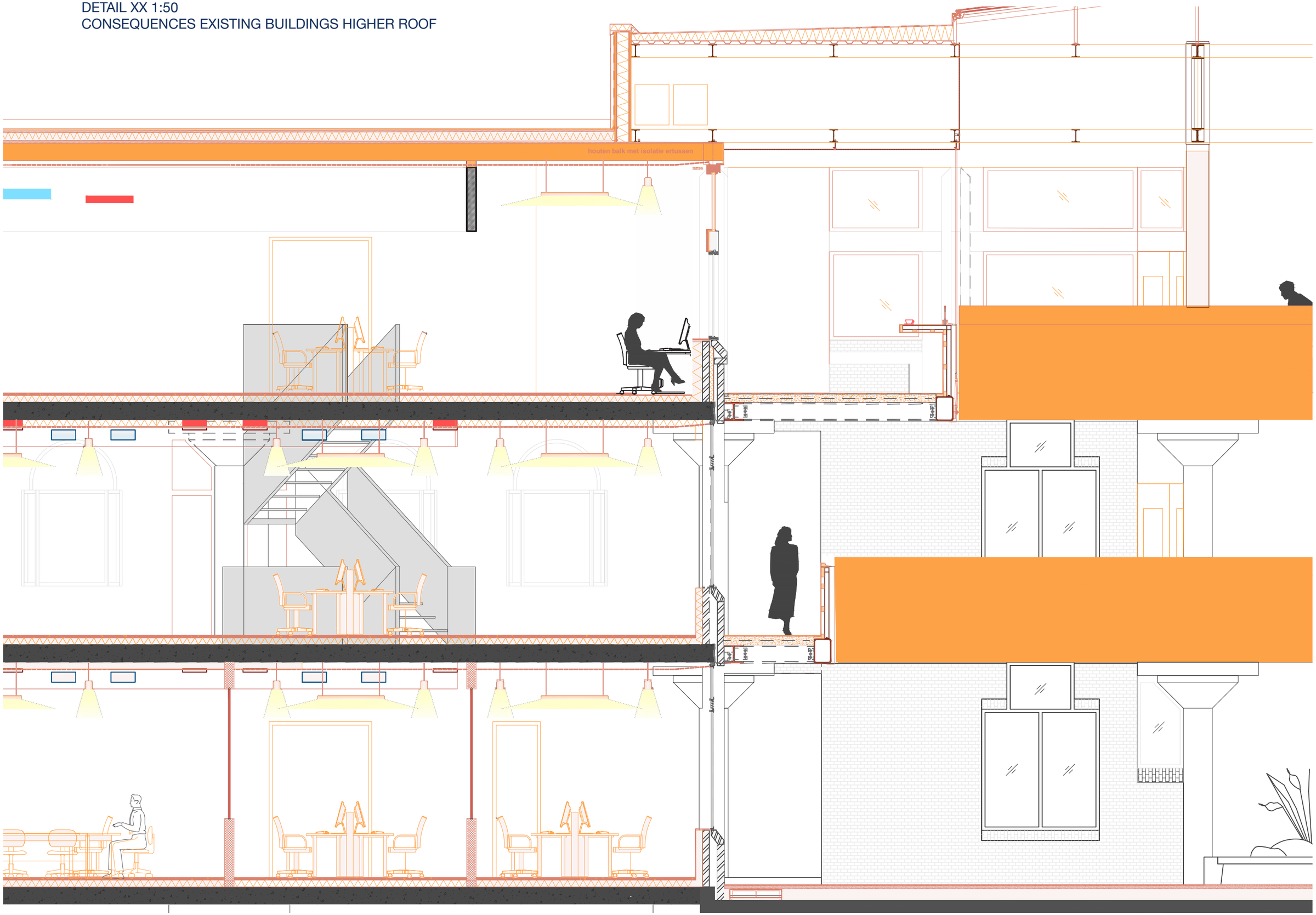
DETAIL 1.50
SMOOTH TRANSITION FROM GALLERIES TO INCUBA-
TOR



DETAIL XX 1:100
CLIMATE DESIGN
EXISTING BUILDING FULLY INSULATED FROM INSIDE



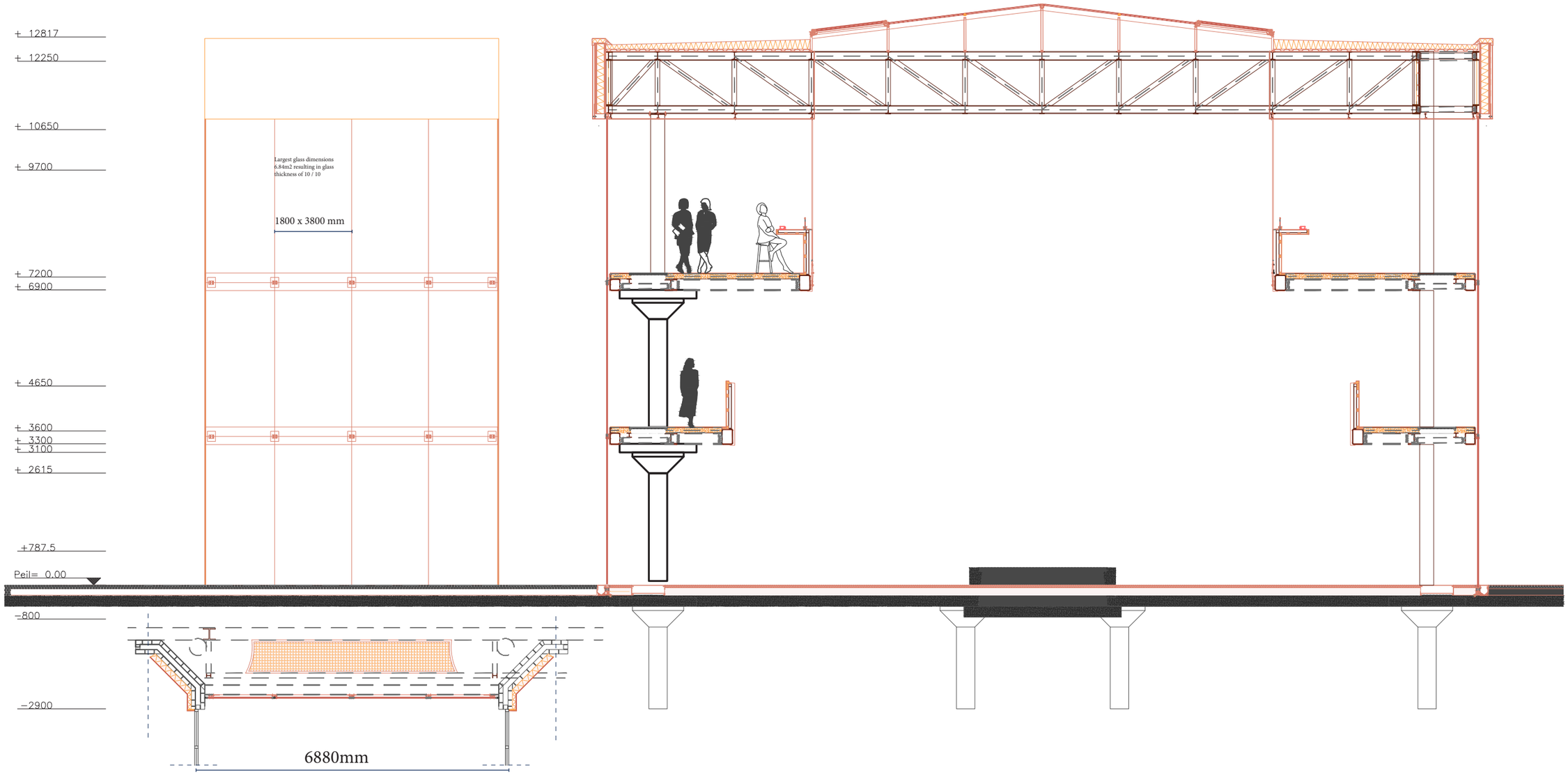
DETAIL XX 1:50
CONSEQUENCES EXISTING BUILDINGS HIGHER ROOF



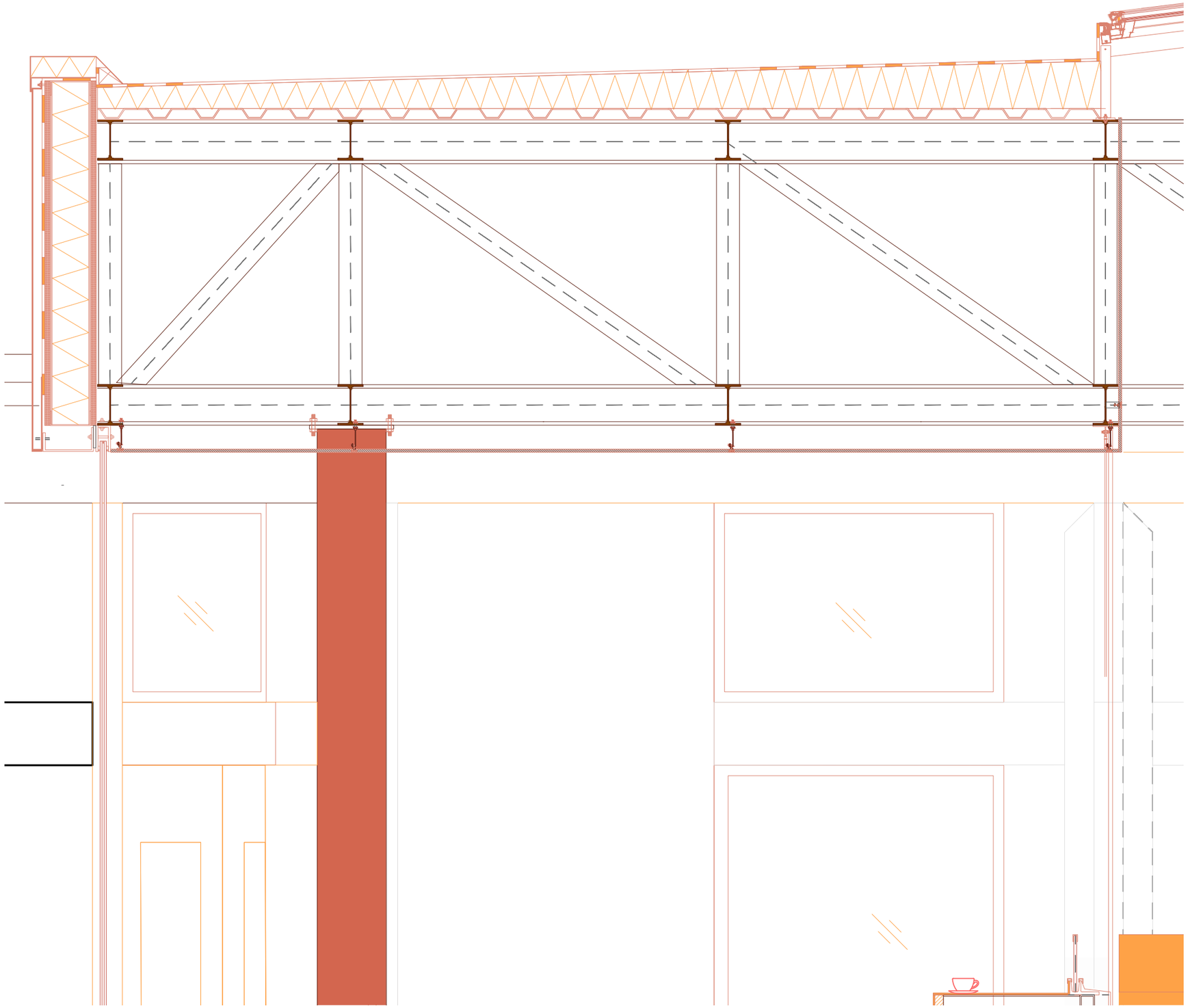
DETAIL 1:100
CURTAIN WALL AND TRUSS OVERVIEW

Je bepaald de minimum glasdikte volgens NEN 2608 voor isolatieglas

Glasdikte buiten/binnen	Maximum oppervlakte	Bijvoorbeeld
5 / 4	2.26 m2	150cm x 150cm = 2.25 m2
6 / 4	2.84 m2	170cm x 167cm = 2.84 m2
6 / 5	3.46 m2	190cm x 180cm = 3.42 m2
8 / 5	4.84 m2	250cm x 192cm = 4.80 m2
10/ 8	7.98 m2	220cm x 360cm = 7.92 m 2

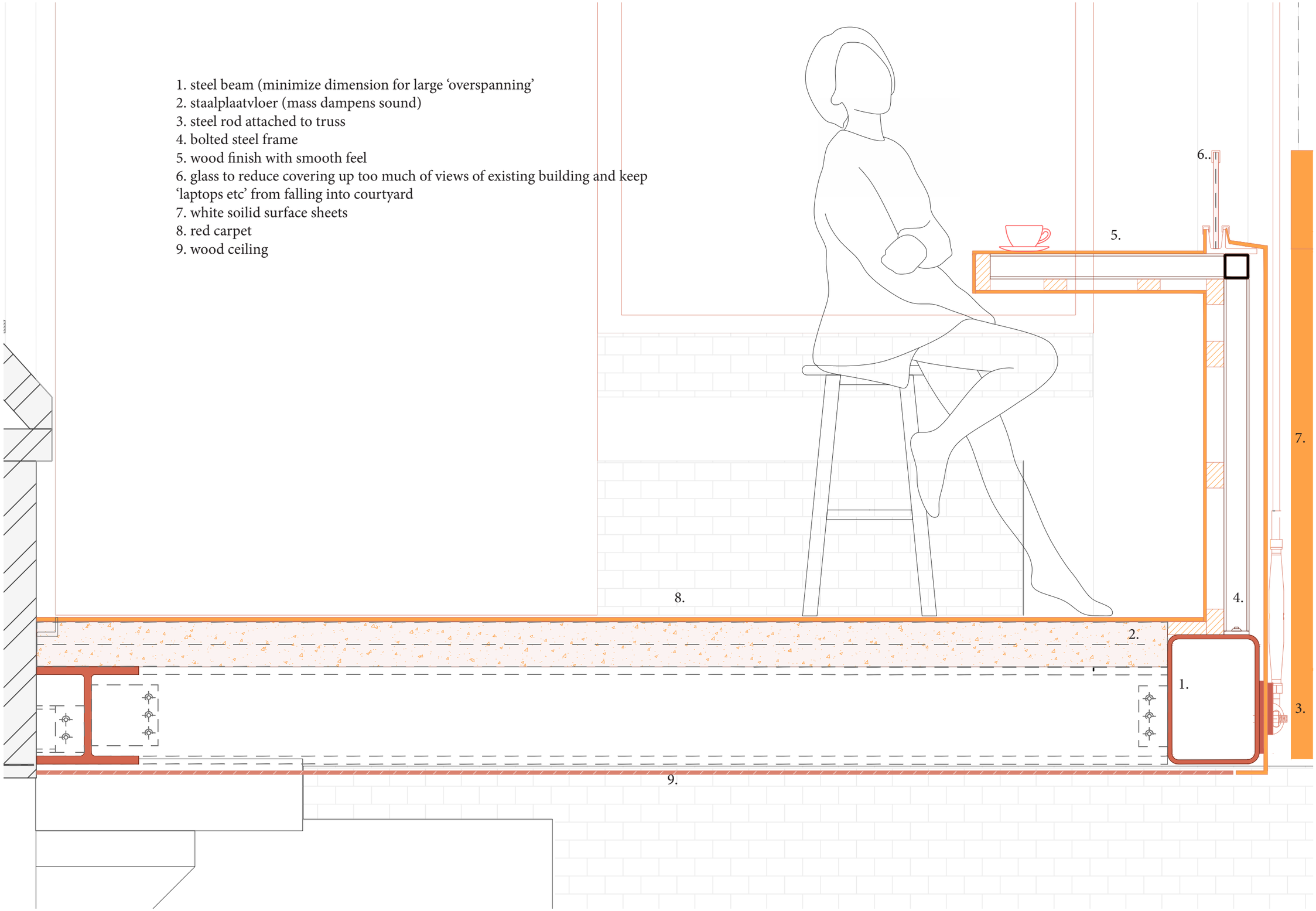


DETAIL 01 1:20
NEW ATRIUM ROOF

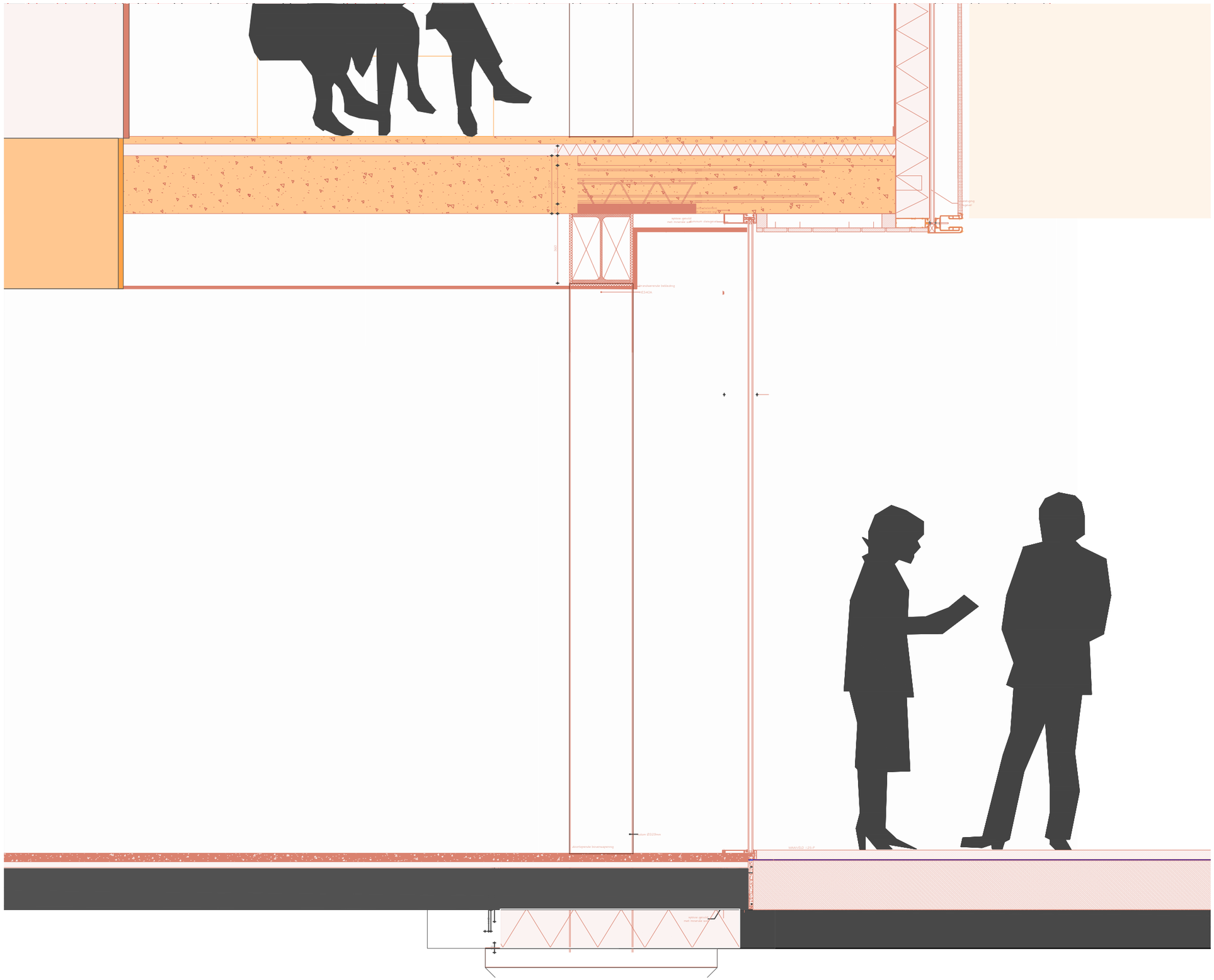


DETAIL 1:10
MATERIALS GALLERY

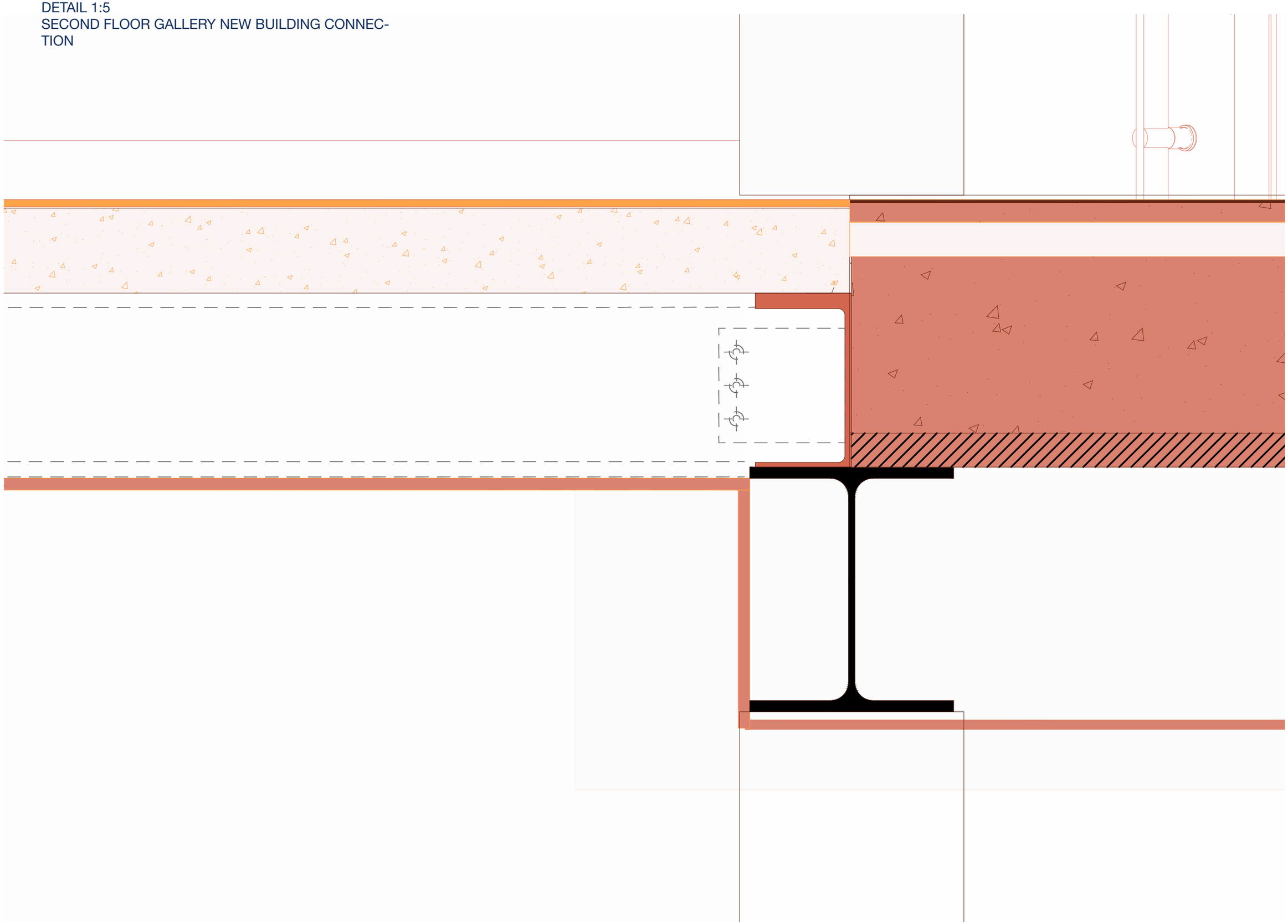
1. steel beam (minimize dimension for large ‘overspanning’
2. staalplaatvloer (mass dampens sound)
3. steel rod attached to truss
4. bolted steel frame
5. wood finish with smooth feel
6. glass to reduce covering up too much of views of existing building and keep ‘laptops etc’ from falling into courtyard
7. white soilid surface sheets
8. red carpet
9. wood ceiling



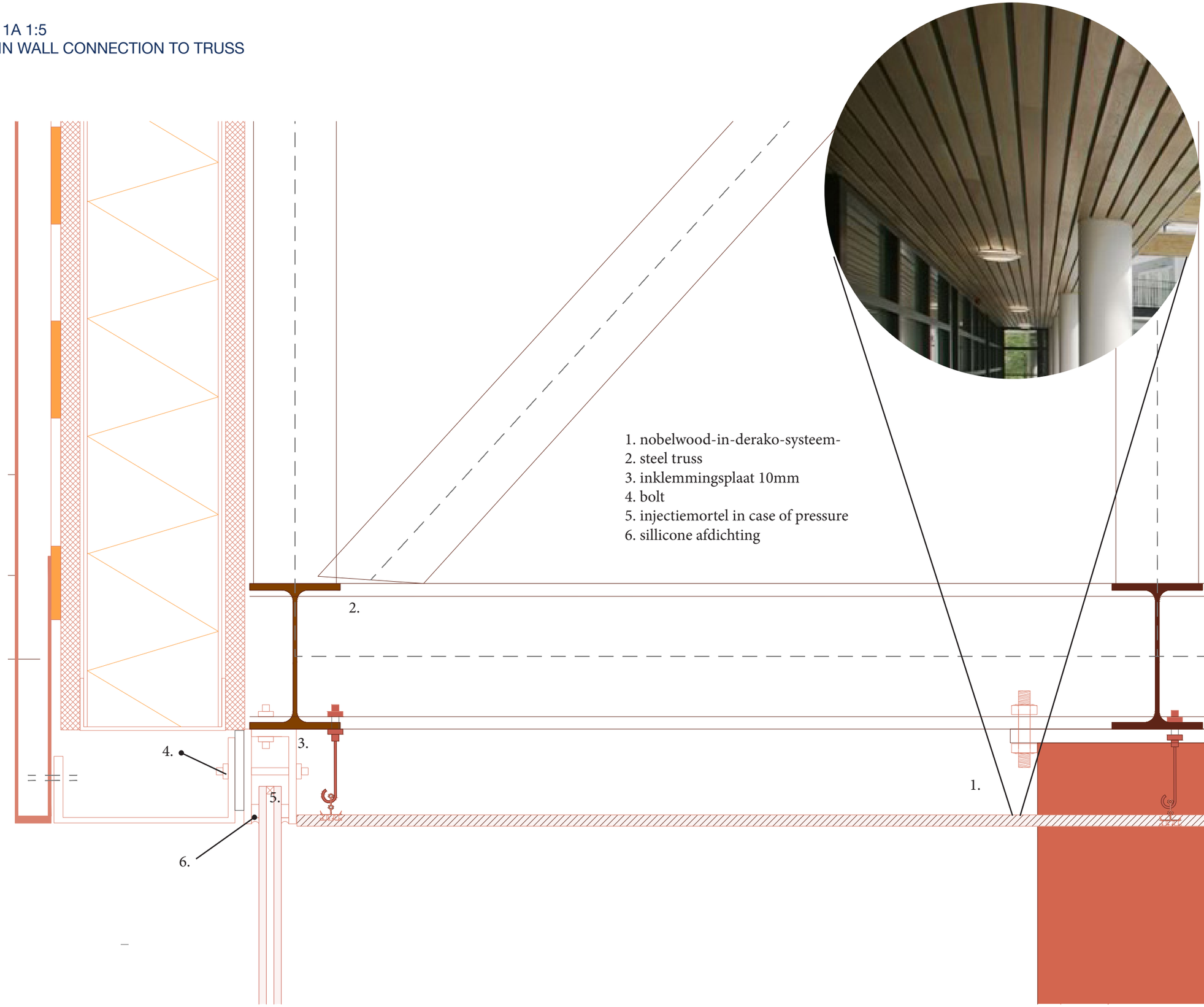
DETAIL 1:20
ENTRANCE HALL MAIN ENTRANCE



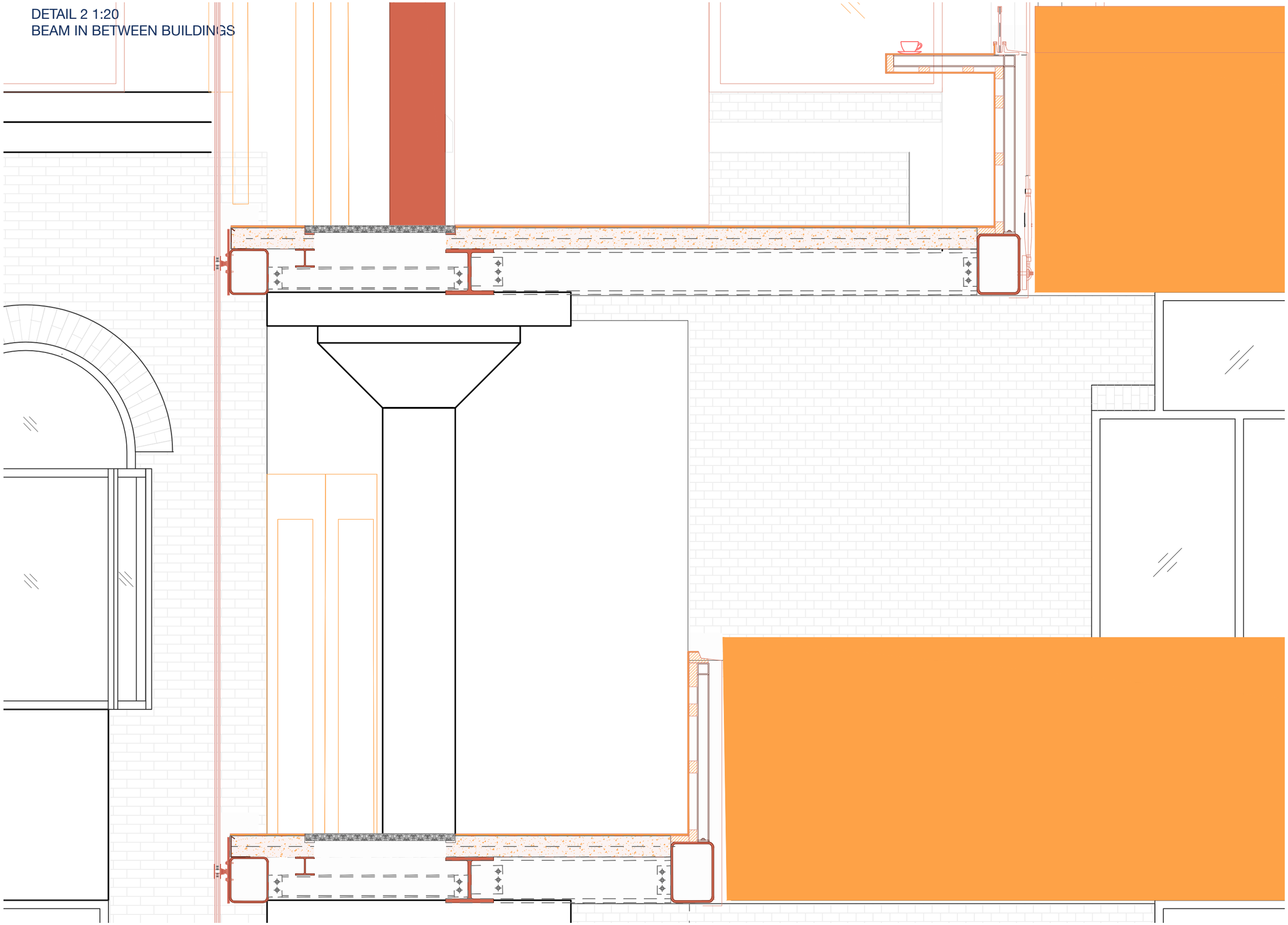
DETAIL 1:5
SECOND FLOOR GALLERY NEW BUILDING CONNEC-
TION



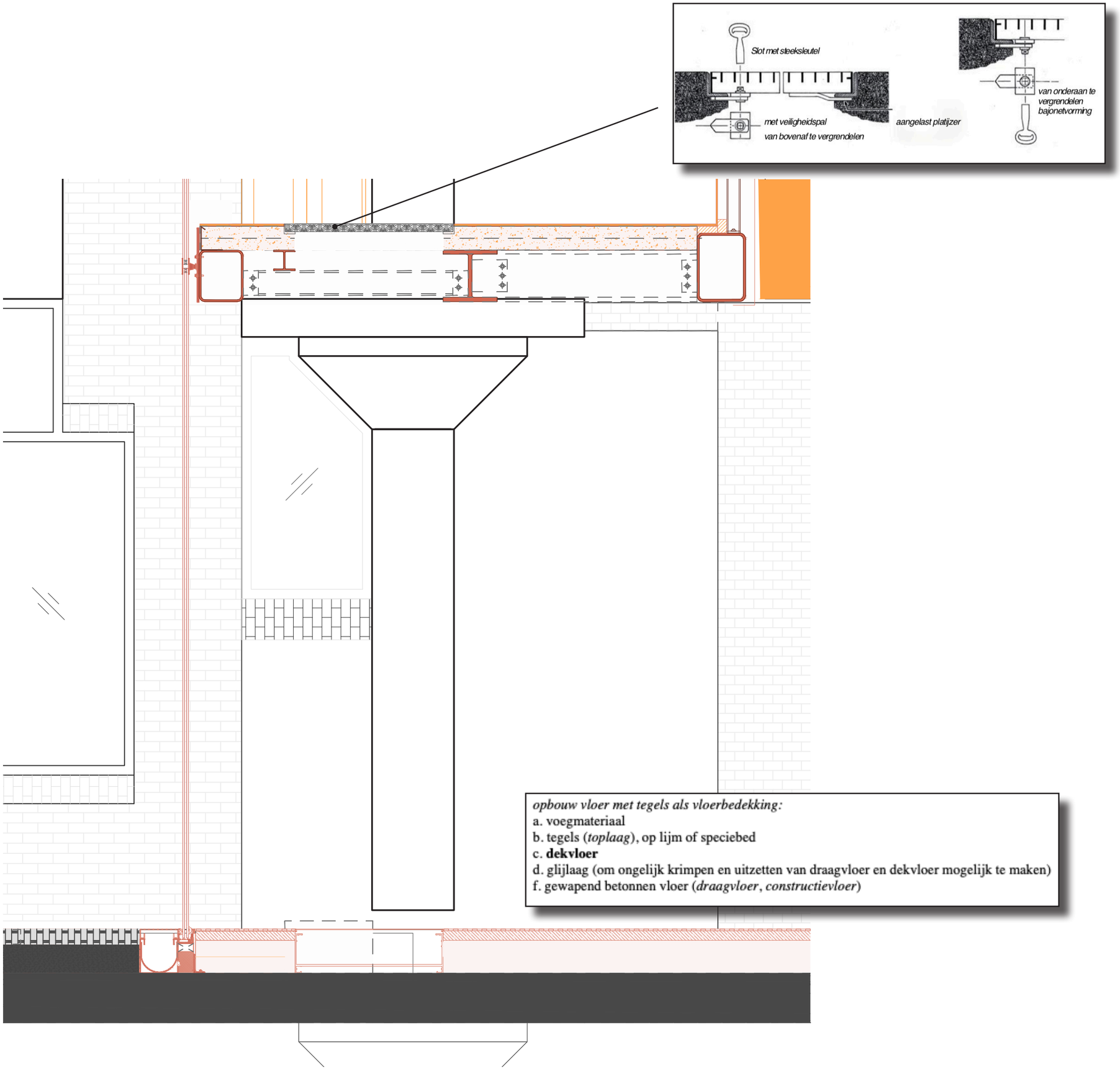
DETAIL 1A 1:5
CURTAIN WALL CONNECTION TO TRUSS



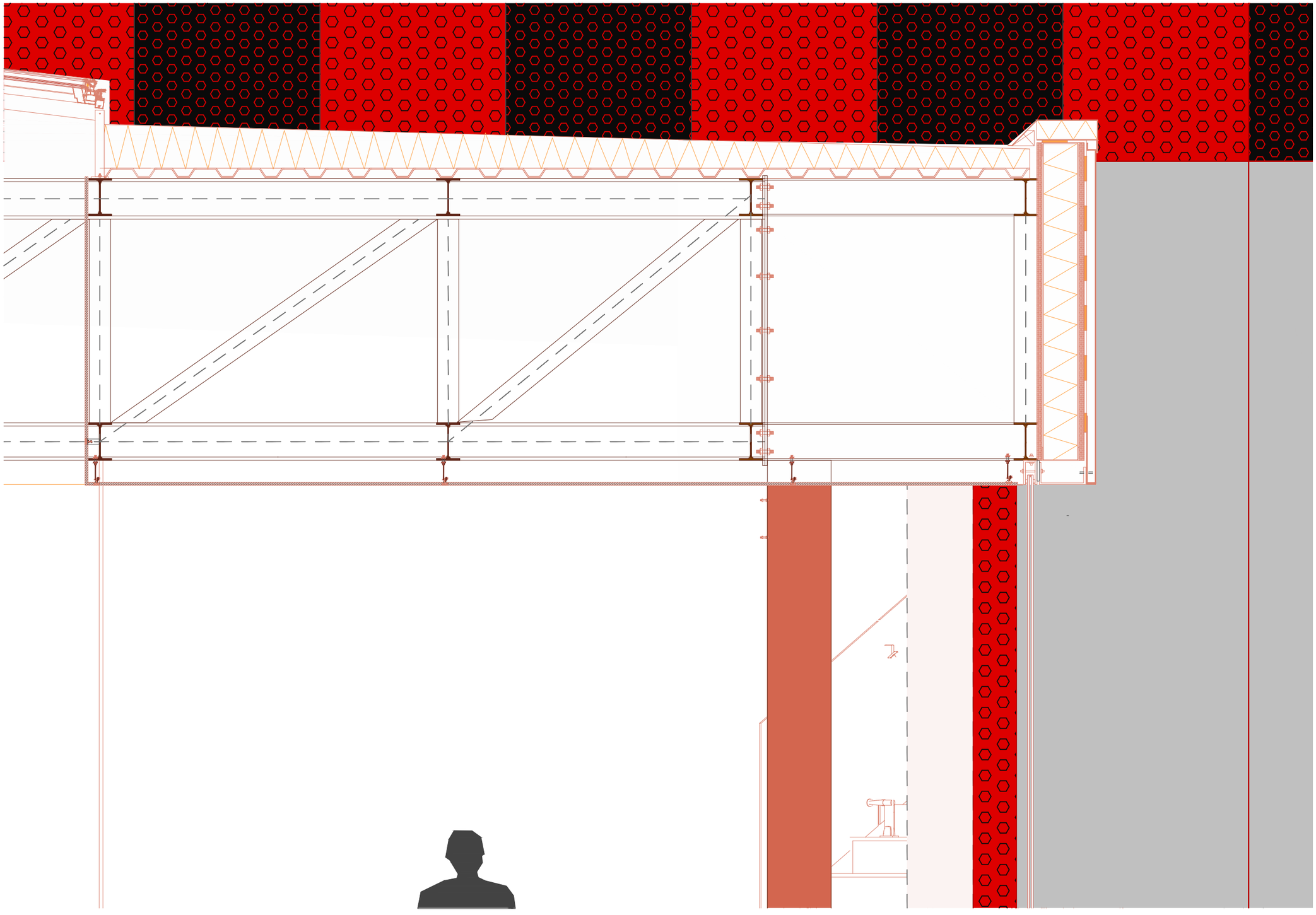
DETAIL 2 1:20
BEAM IN BETWEEN BUILDINGS



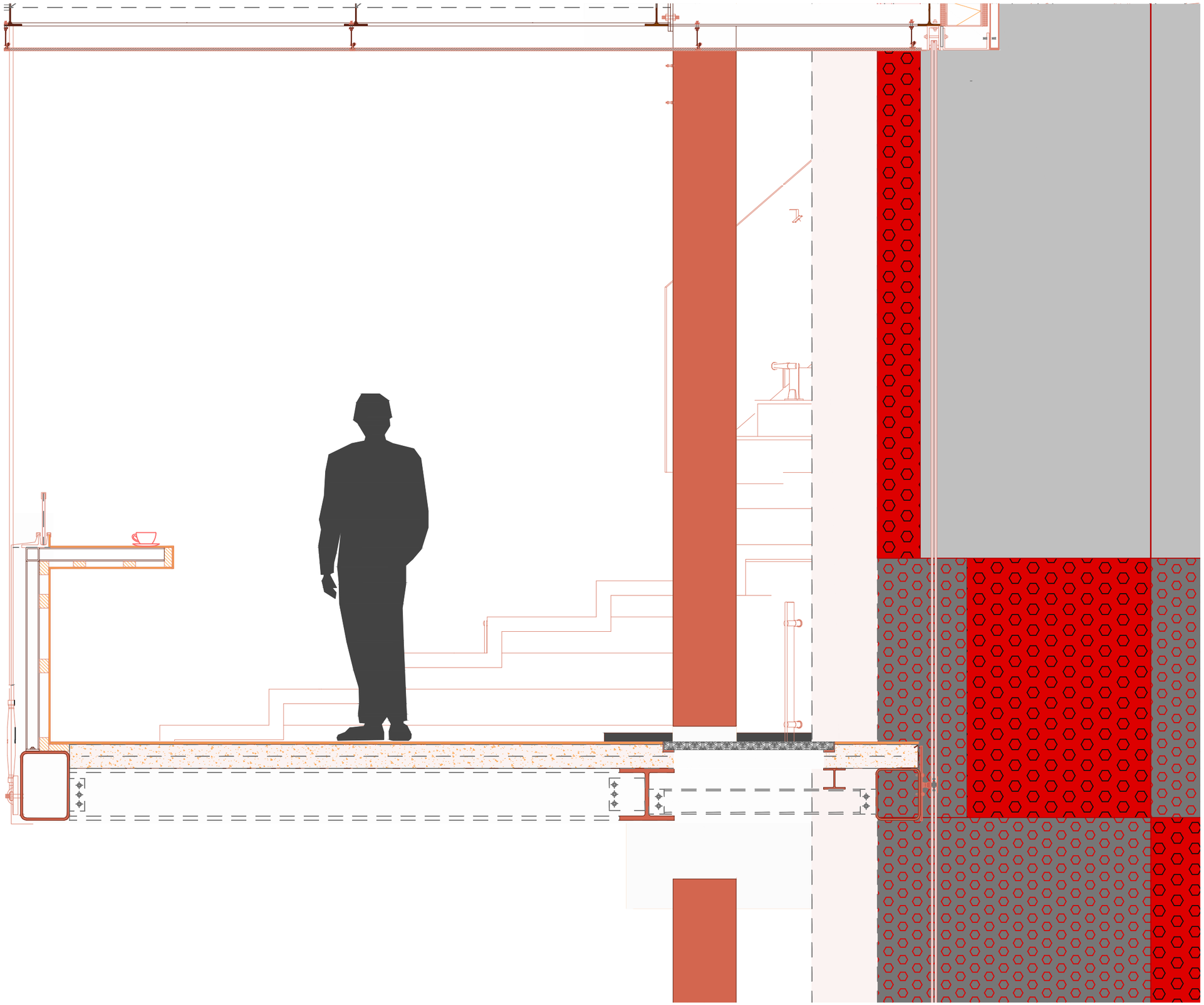
DETAIL 3 1:20
CURTAIN WALL SUNKEN INTO GROUND



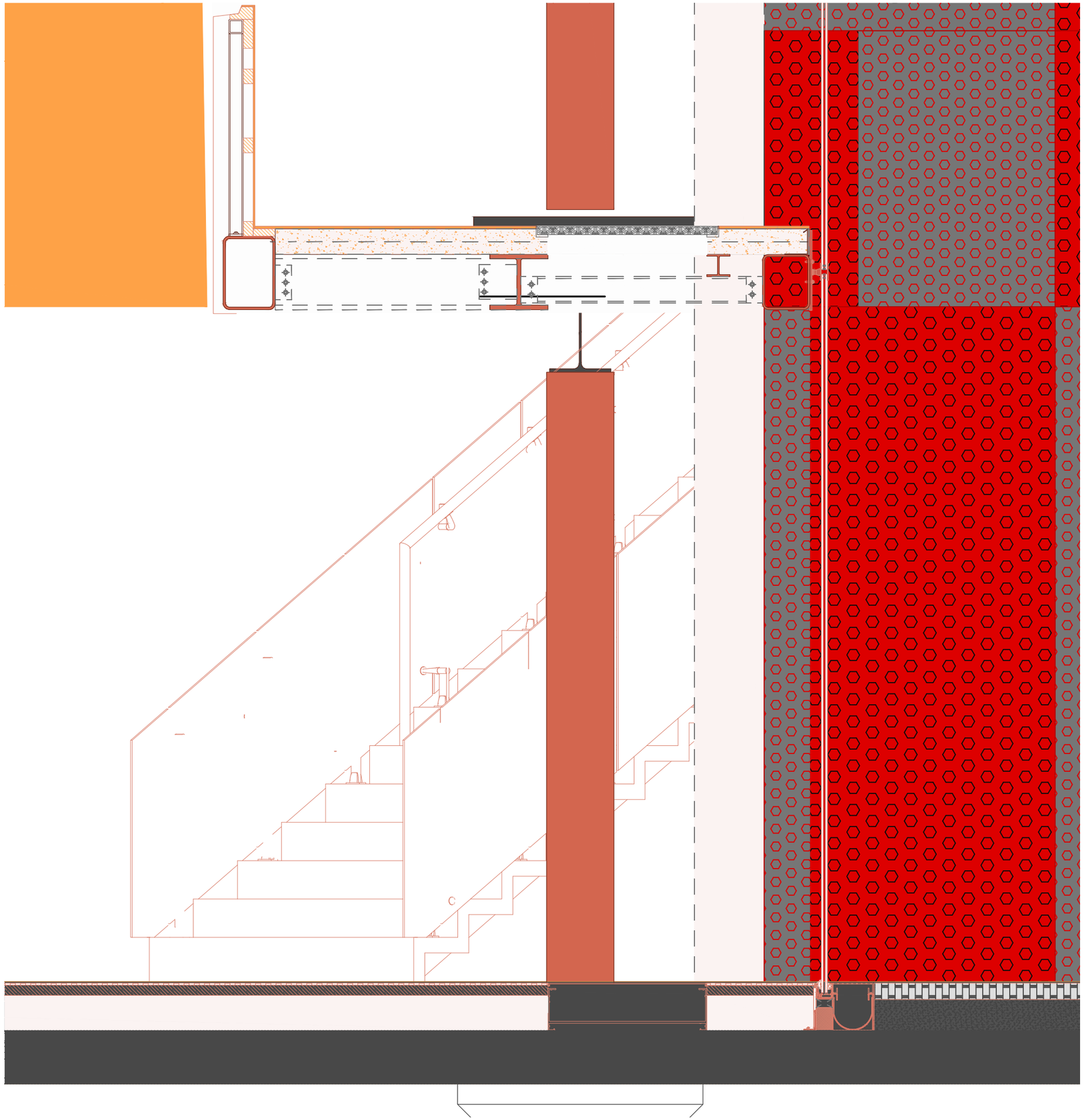
DETAIL 07 1:20
NEW TRUSS CONNECTION TO NEW BUILDING



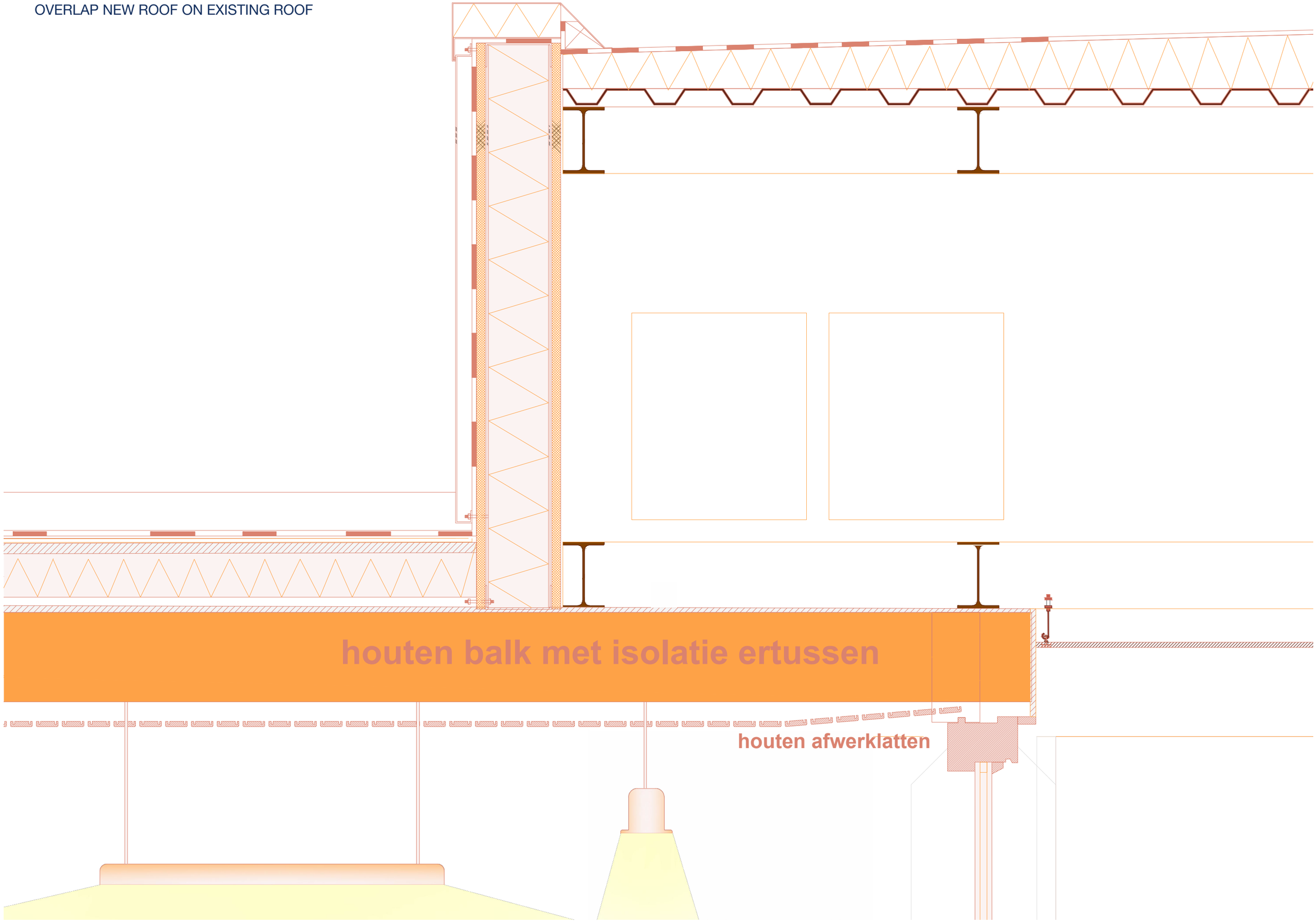
DETAIL 8 1:20



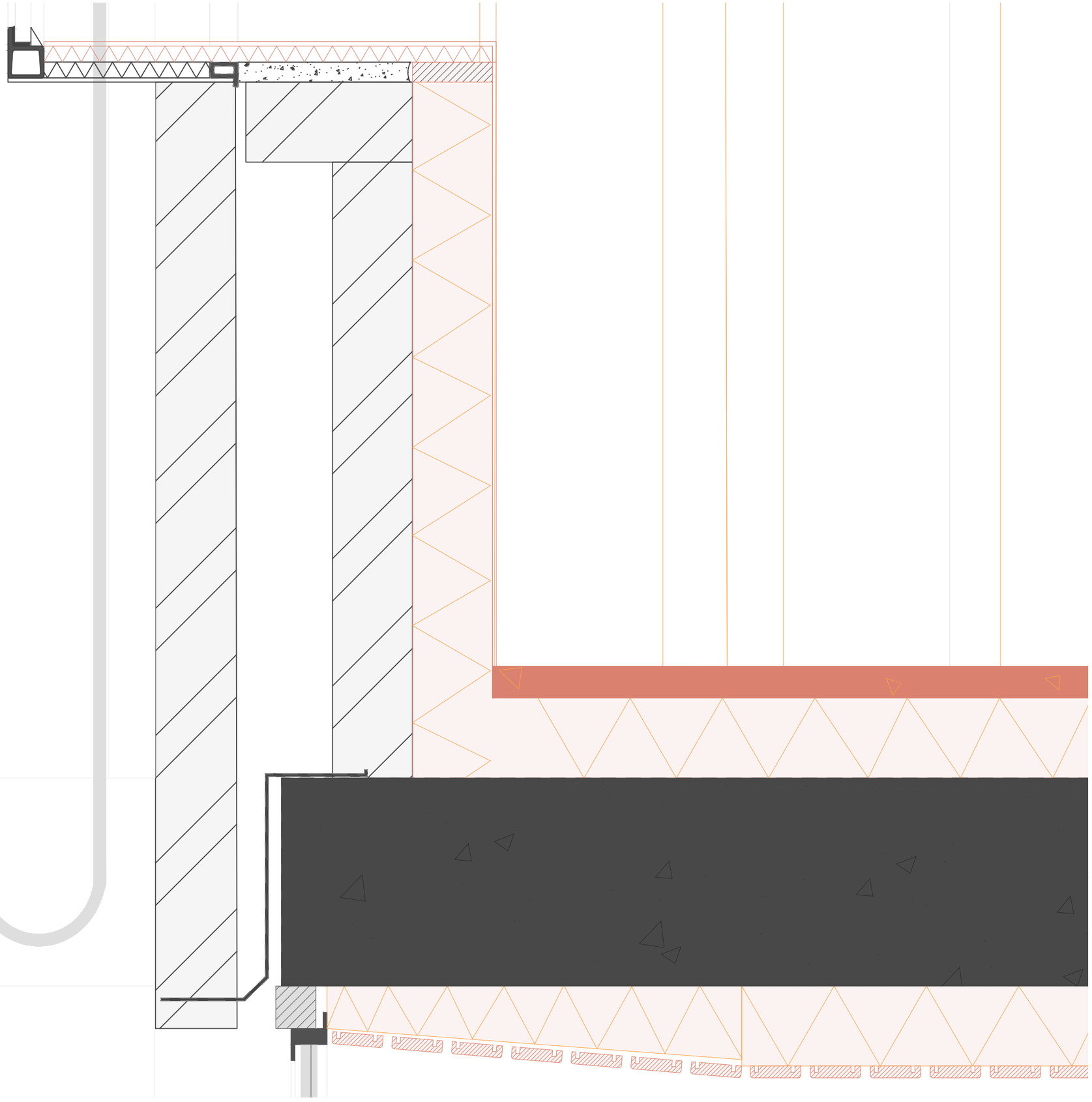
DETAIL 9 1:20



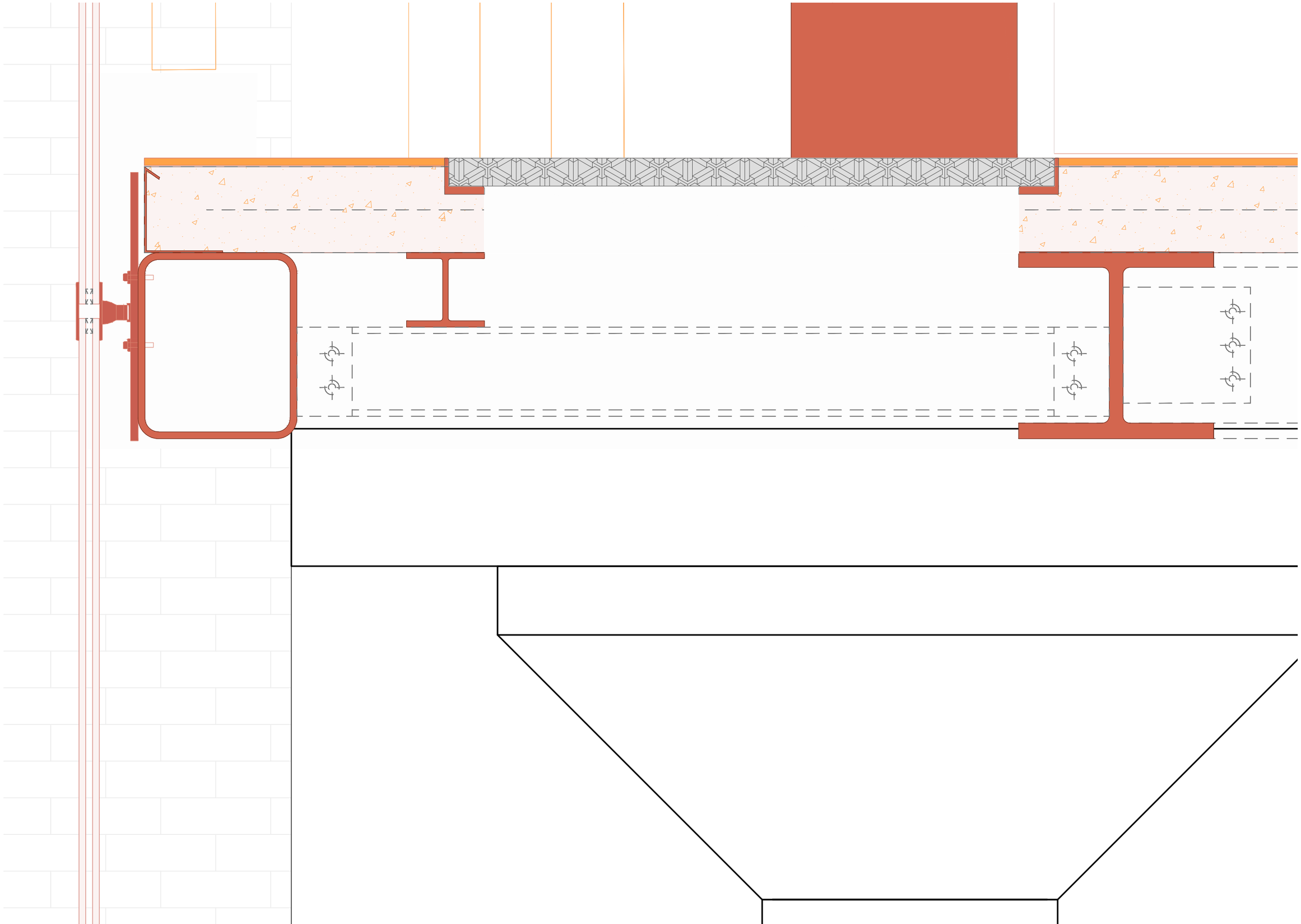
DETAIL 1:10
OVERLAP NEW ROOF ON EXISTING ROOF



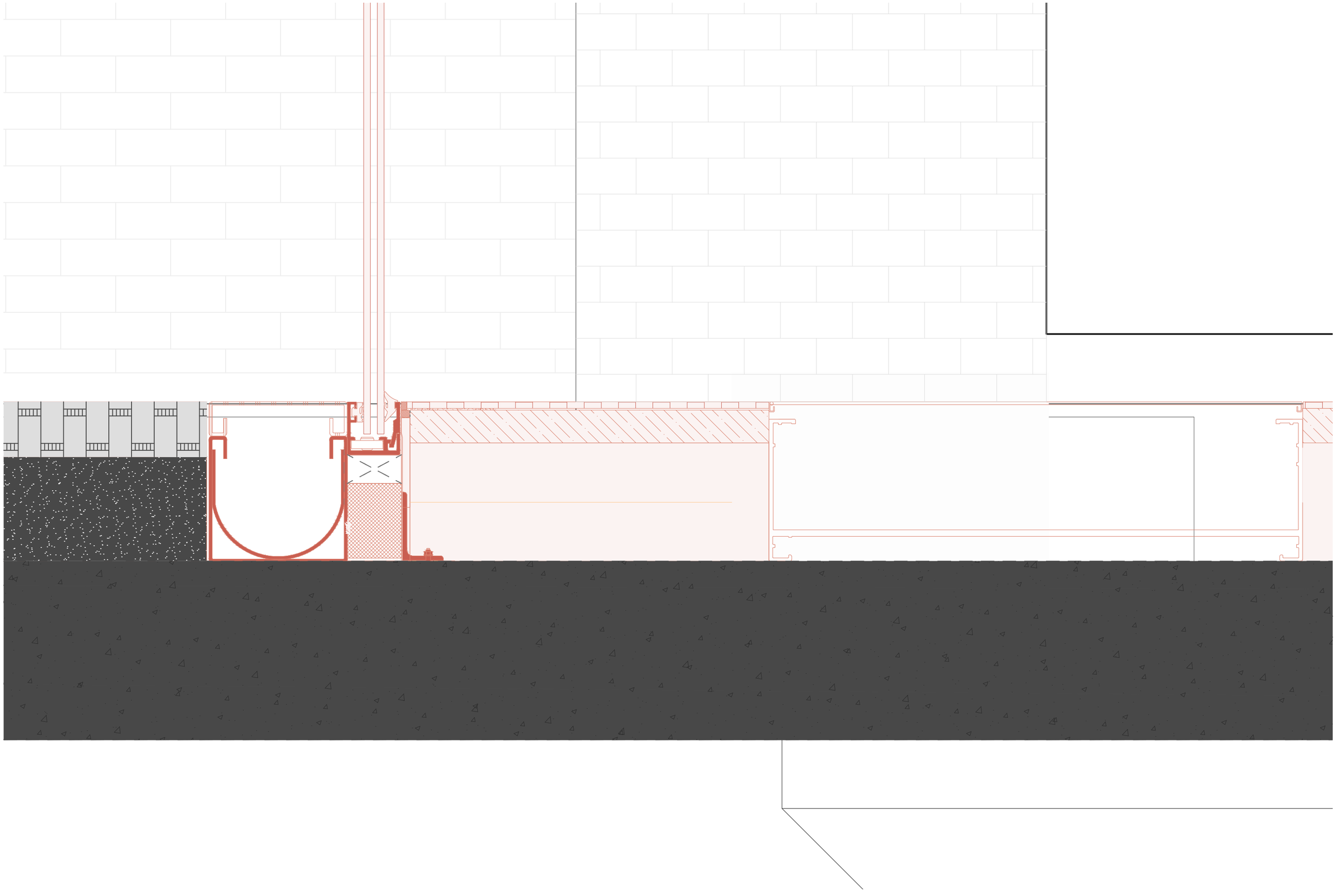
DETAIL 1:
BAY WINDOW



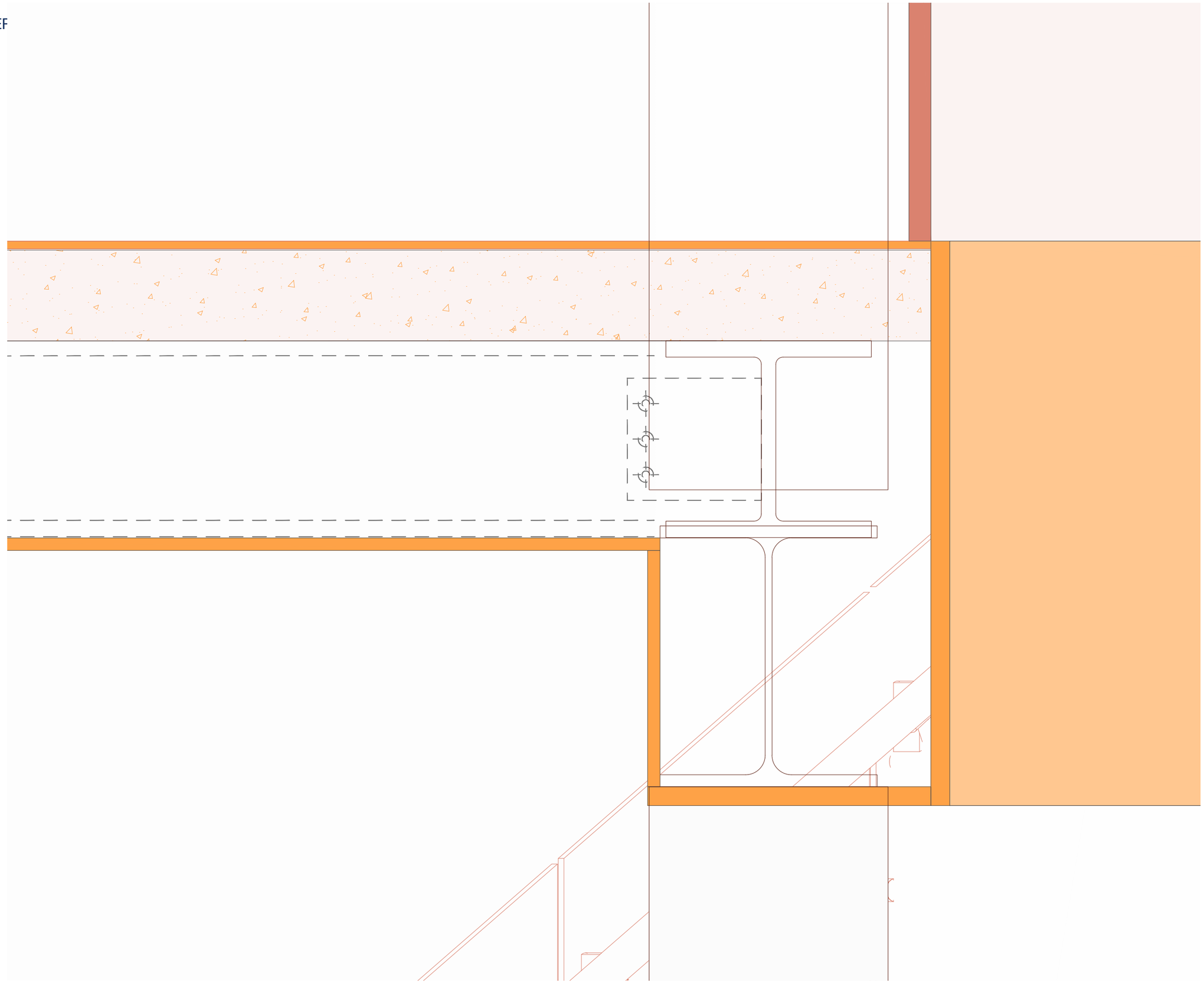
DETAIL 1:5
CURTAIN WALL POINT SUPPORT FIXING



DETAIL 1:5
SUNKEN SILL WITH DRAINAGE



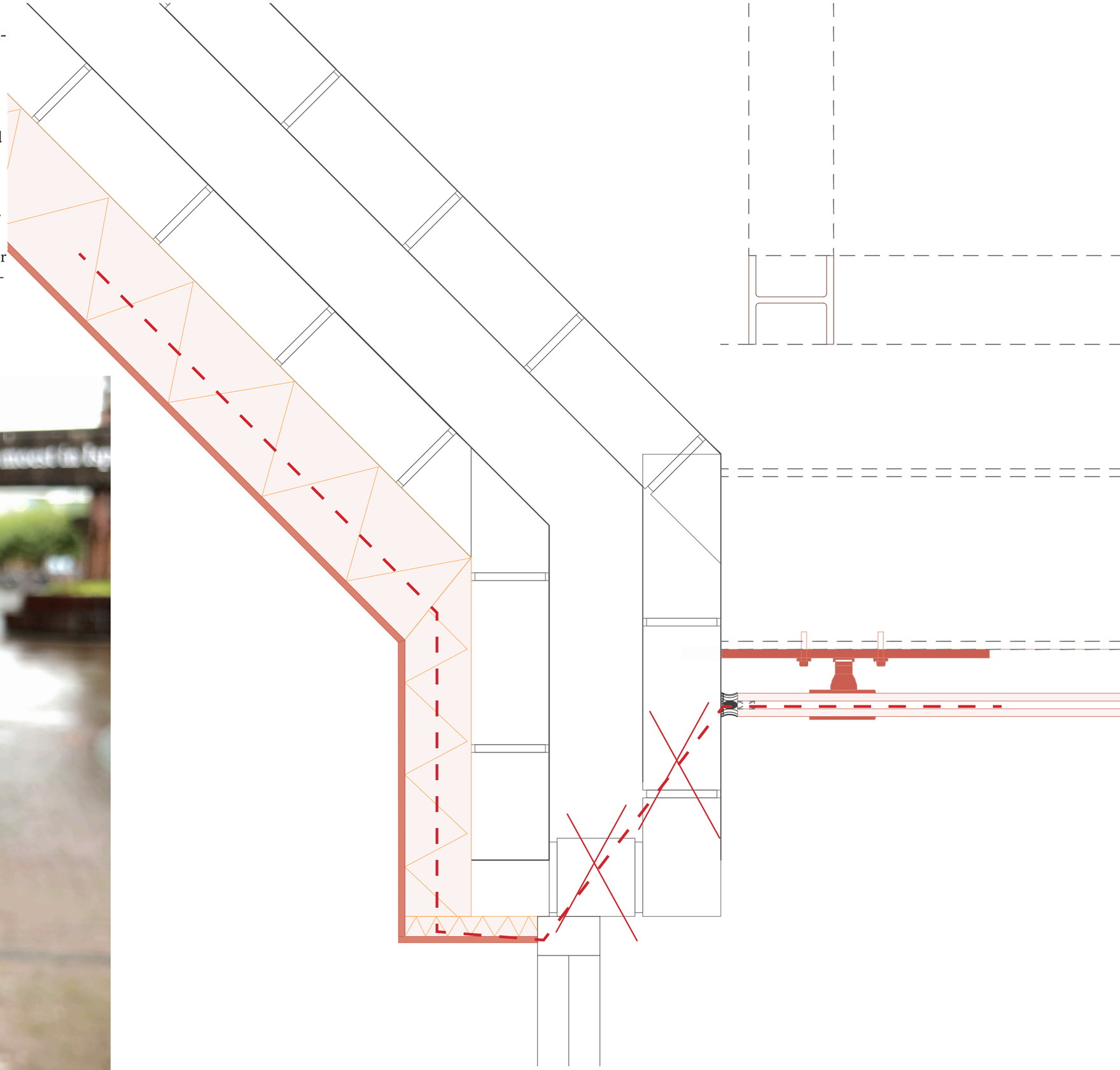
DETAIL 1:5
FIRST FLOOR GALLEF
ING



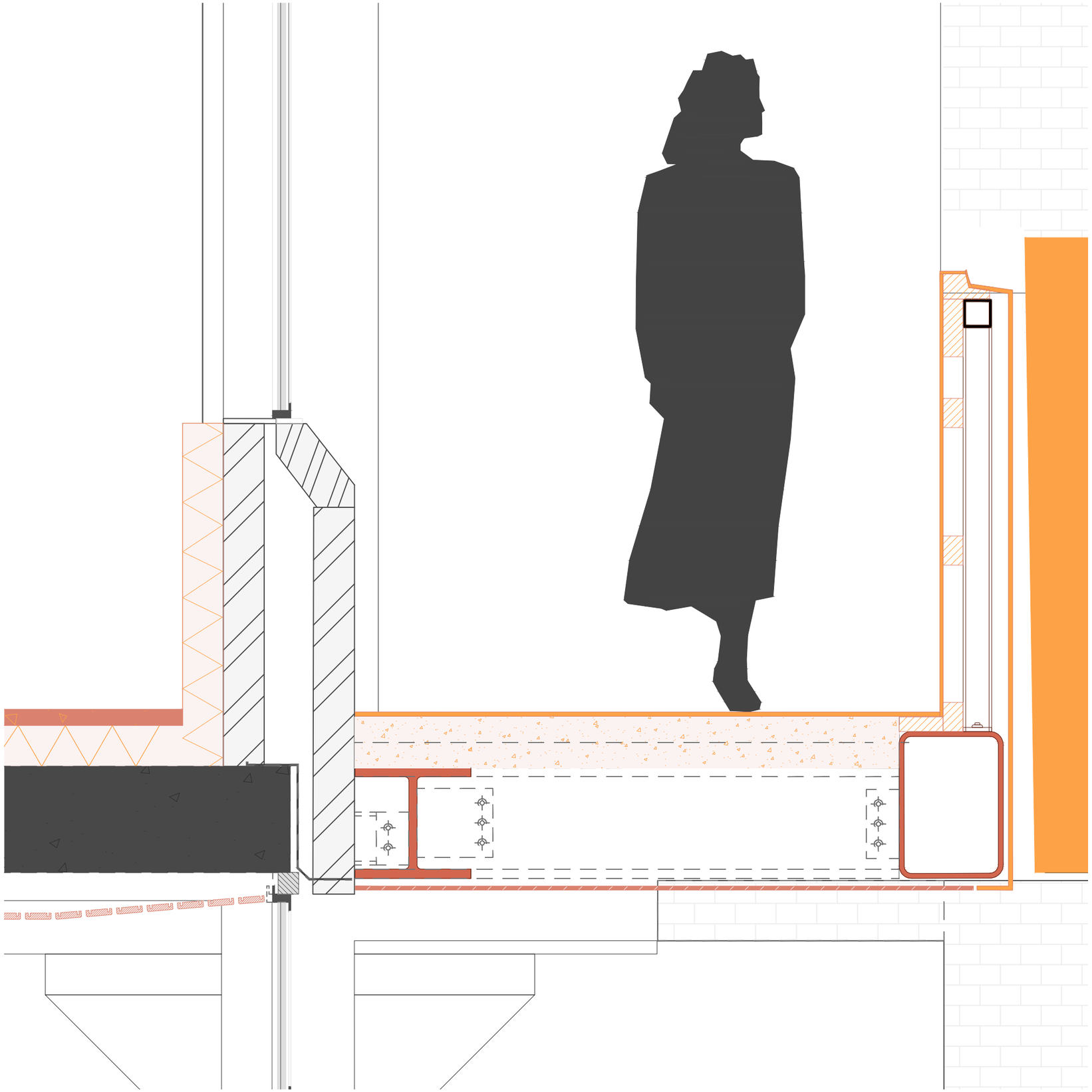
DETAIL X 1:5
HORIZONTAL CURTAIN WALL CONNECTION TO EXISTING BUILDING

Omdat bakstenen soms niet helemaal vlak zijn eerst wat afvlakkingsmortel . vervolgens met silliconenvulling wind en waterdicht afsluiten.

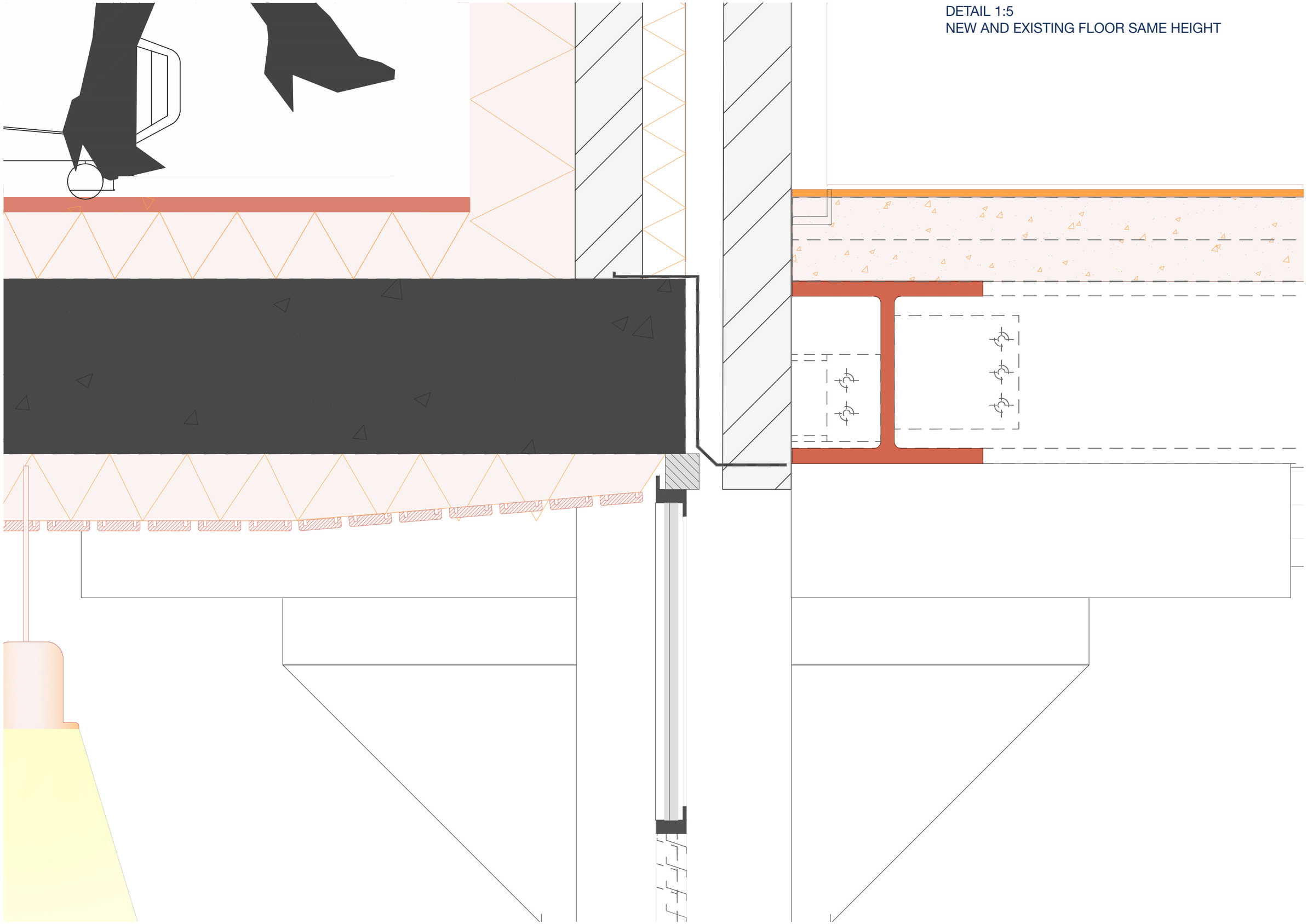
Isolatielijn moet doorlopend zijn. Helaas is dat hier niet het geval. Er kan een koudebrug ontstaan op de plek waar de vliesgevel de bakstenen gevel aanraakt. Omdat ik het beeld niet wil aantasten accepteer ik dit. De ventilatie door de wtw installaties zorgen ervoor dat er toch een behaaglijke temperatuur behaald kan worden. (als ze hard genoeg blazen).



DETAIL 1:10
MATERIAL GALLERIES FIRST FLOOR



DETAIL 1:5
NEW AND EXISTING FLOOR SAME HEIGHT



NEW BUILDING FACADE
1:100

New entrance

Meeting point

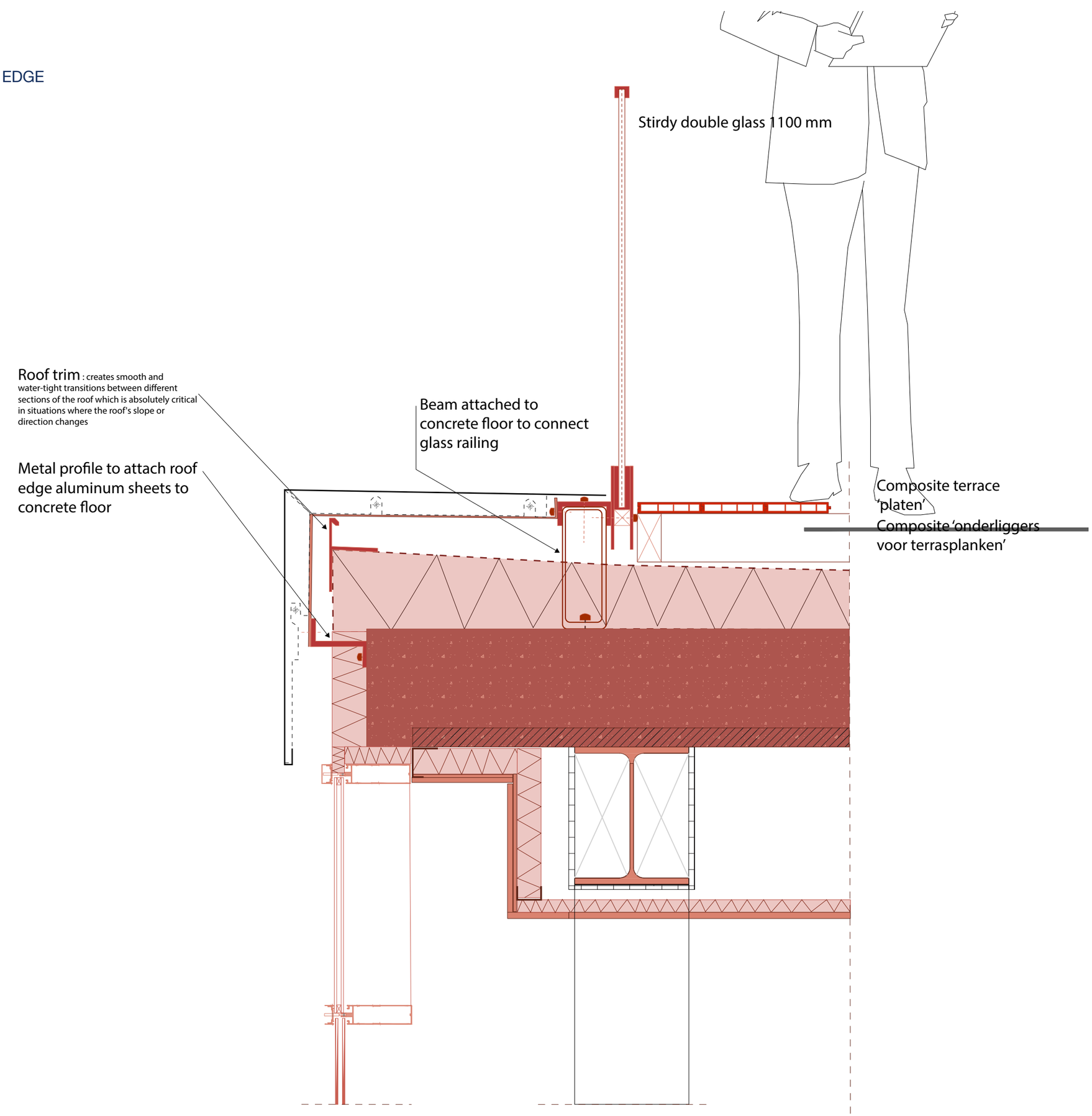
Tochtportaal

New main entrance

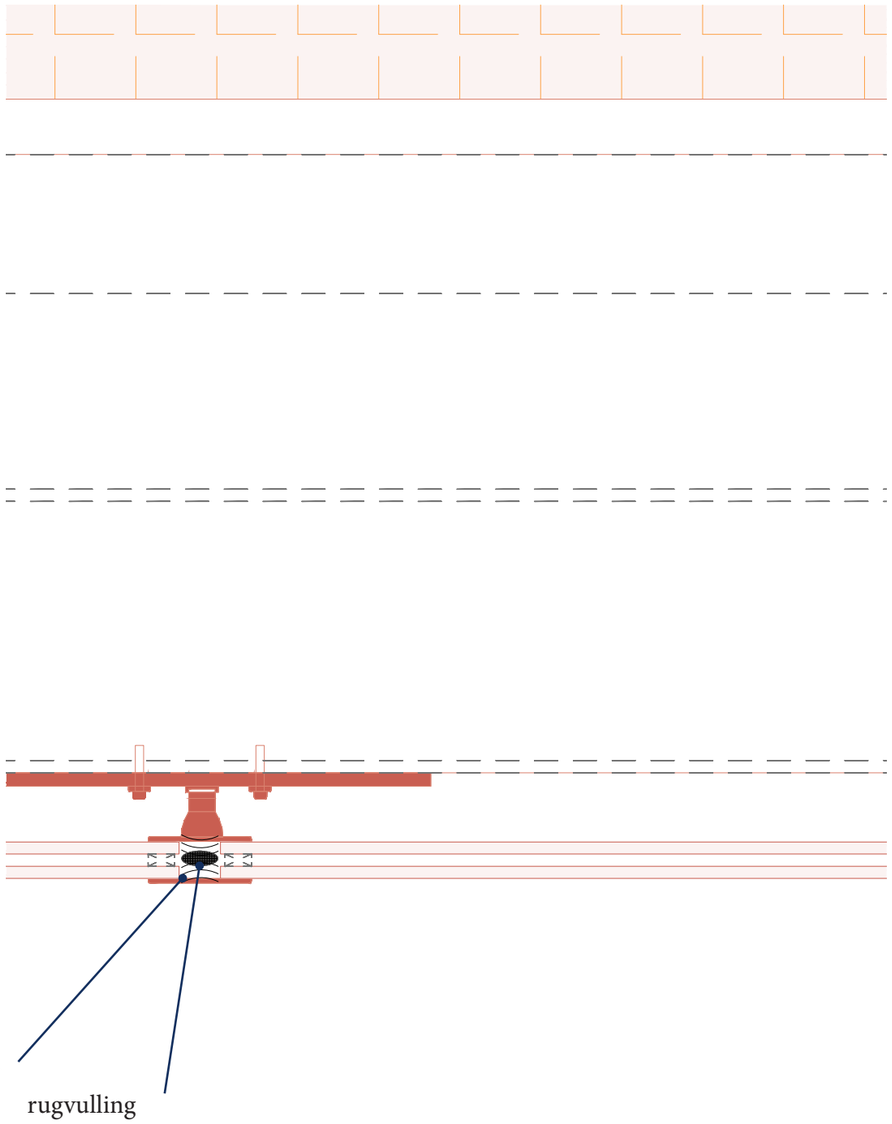
A

A'

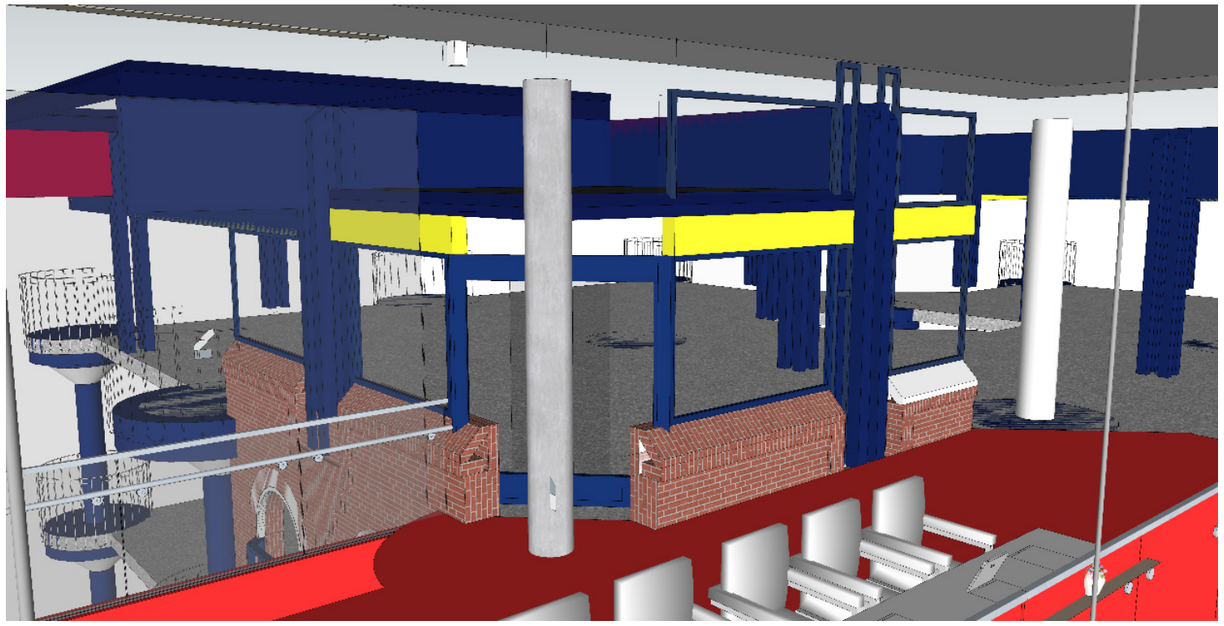
DETAIL 1:10
BALUSTRADE NEW BUILDING ROOF EDGE



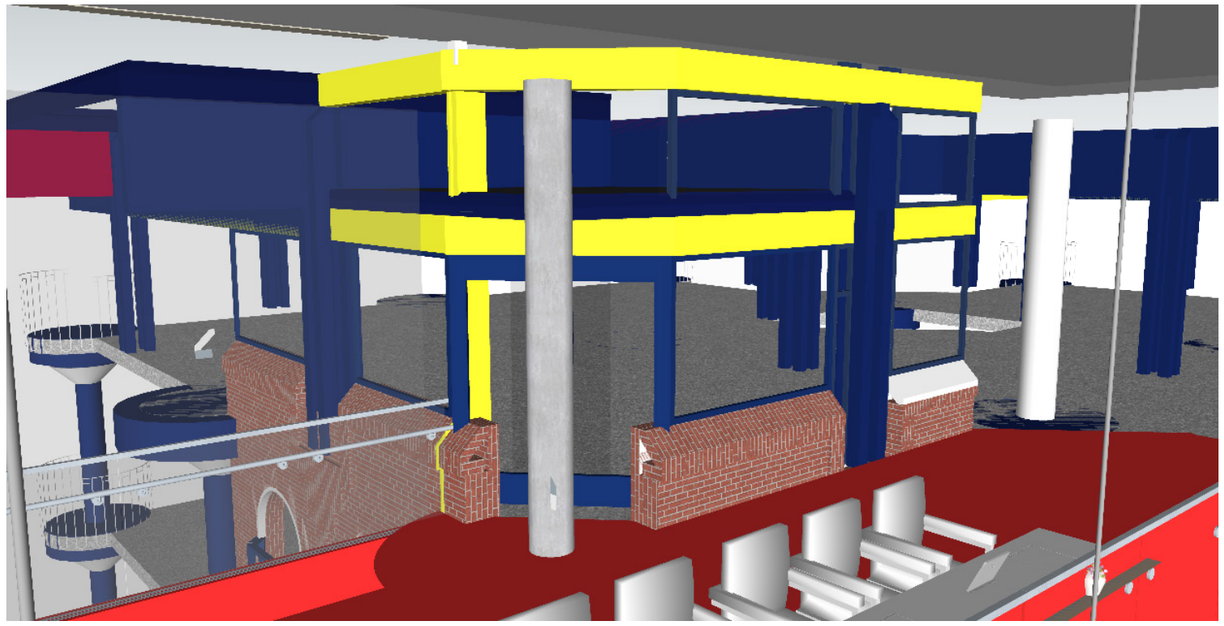
DETAIL 1:5
WATERPROOF WINDOW WEATHER SEAL



3D SIMPLIFY ROOF



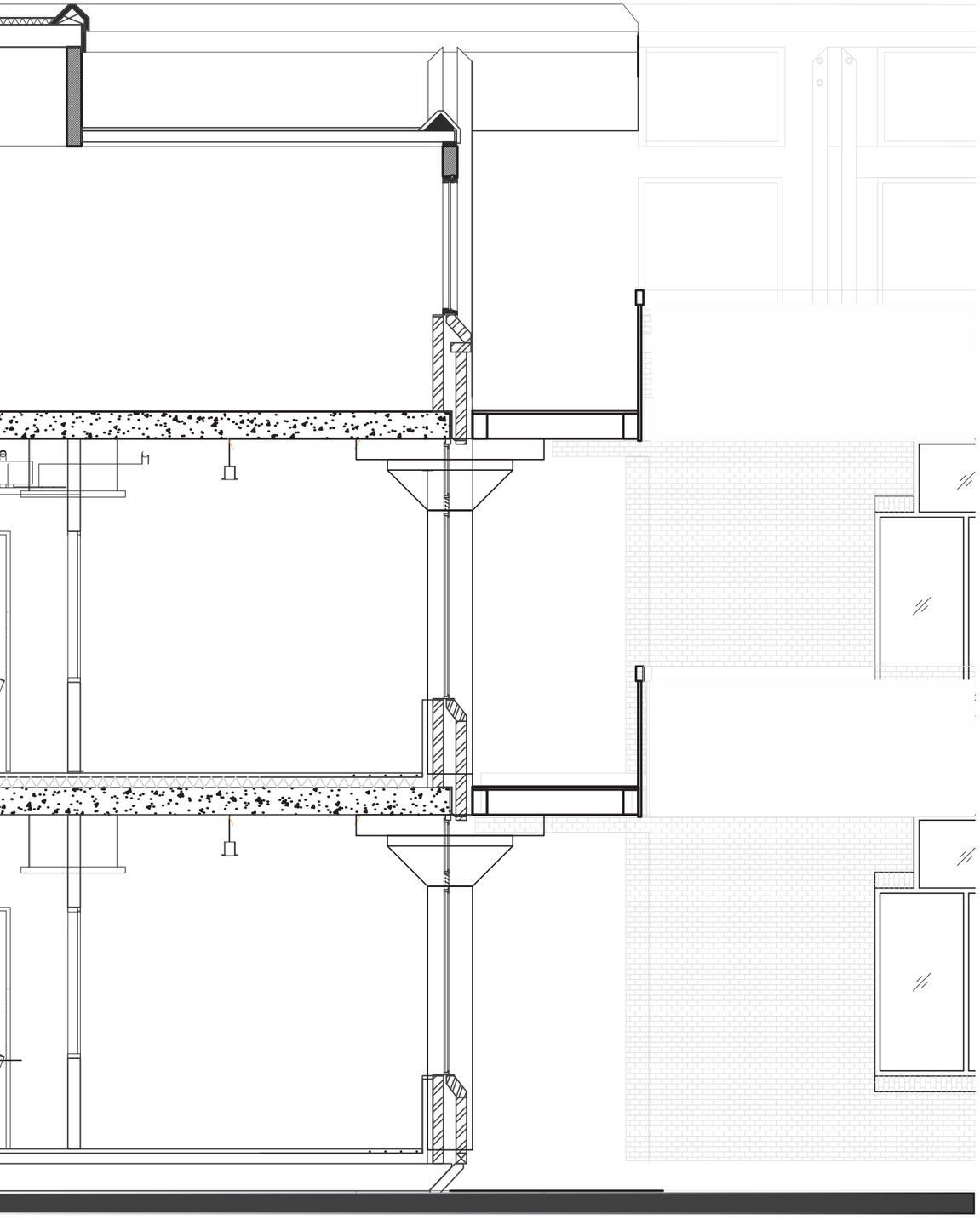
ROOF BEFORE



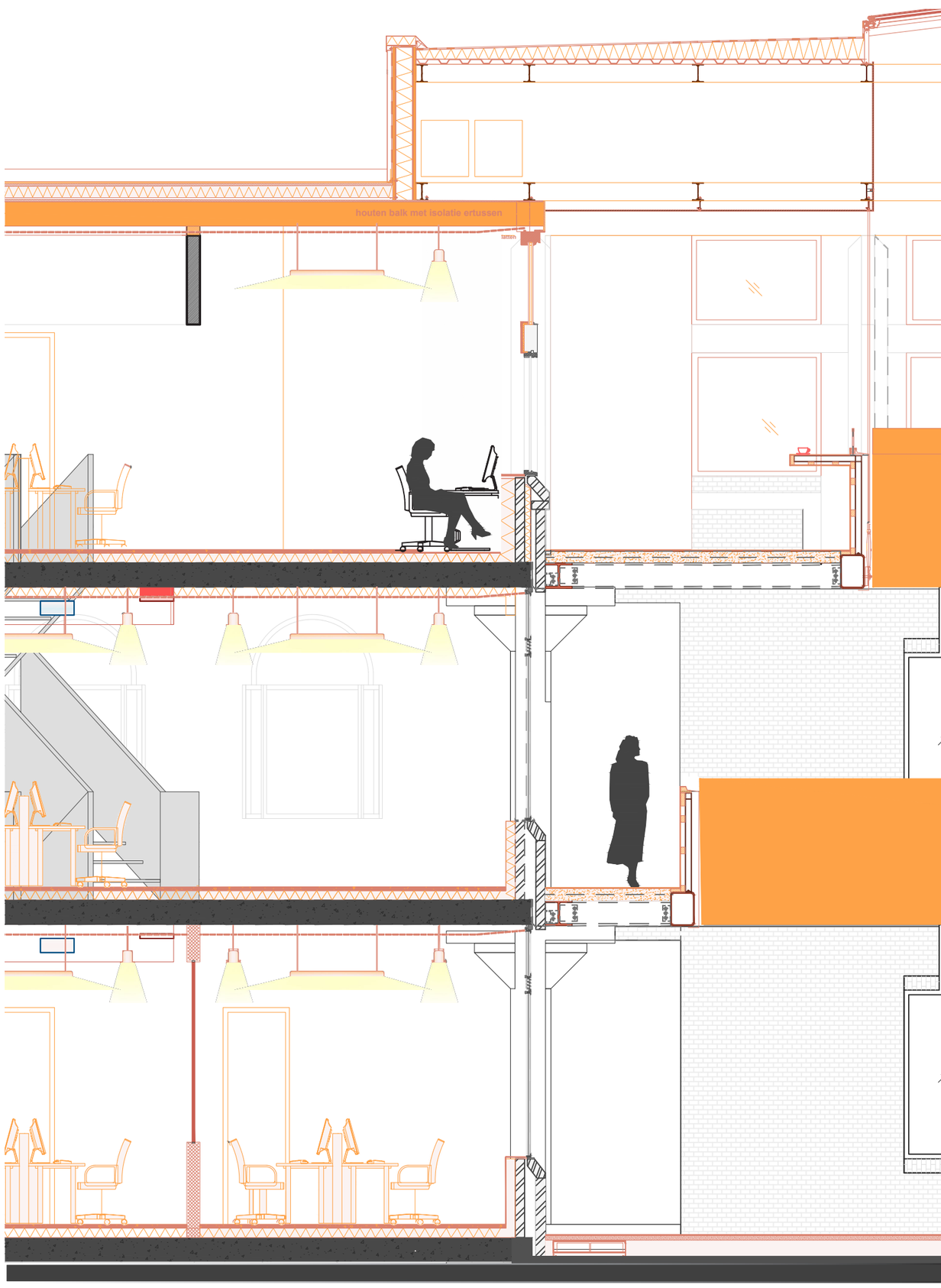
ROOF NOW

making the roof in the corner higher
gives more light
better connection with courtyard
simplifies roof for better connection with atrium

1:50

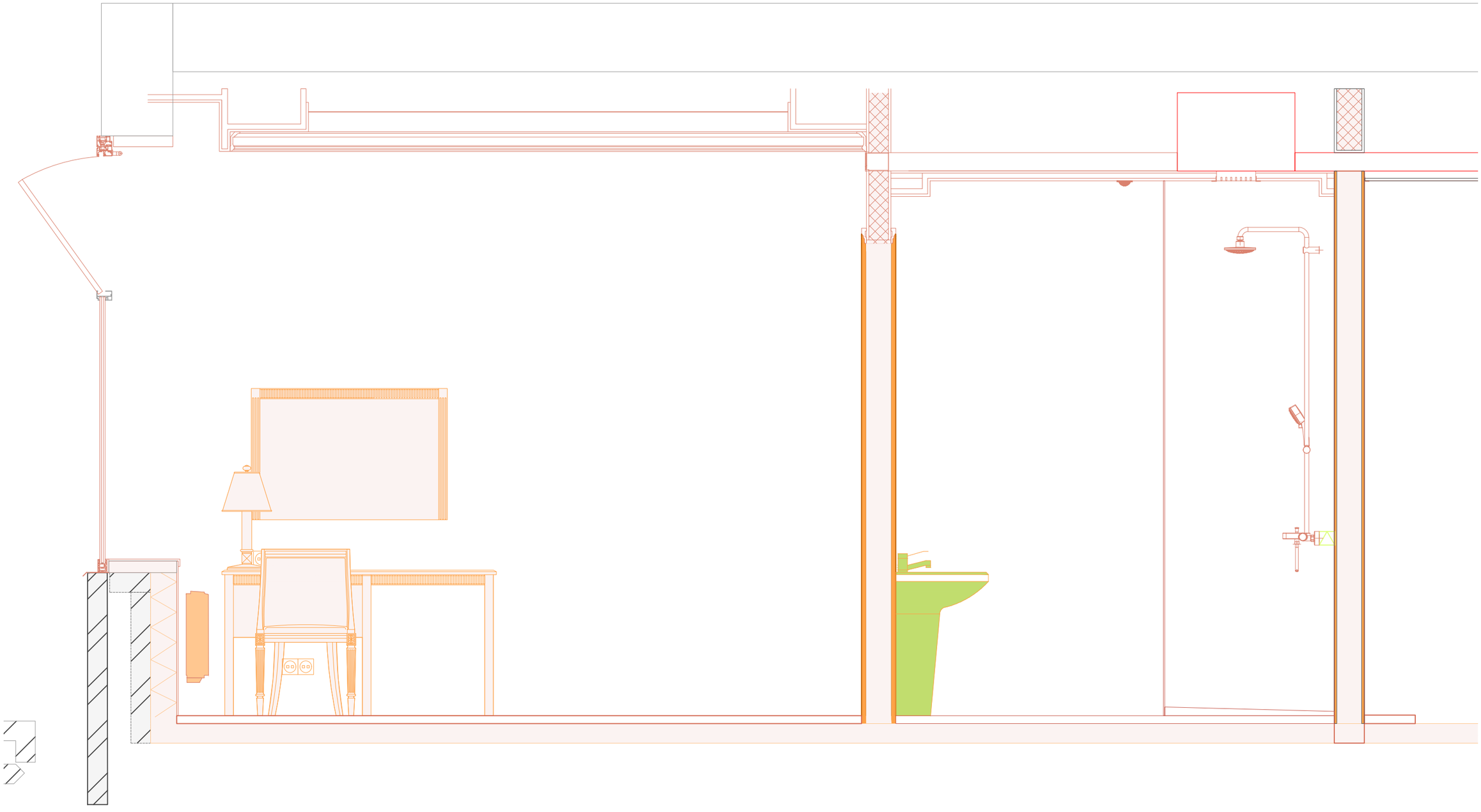


ROOF BEFORE

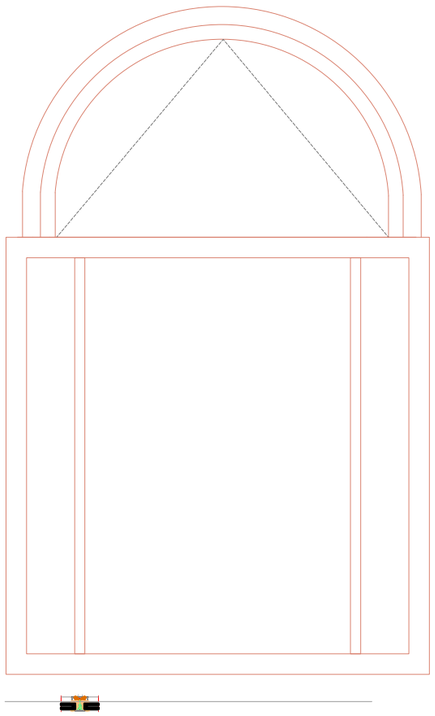


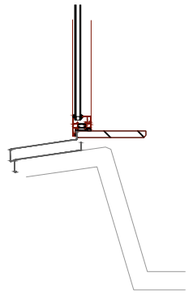
ROOF NOW

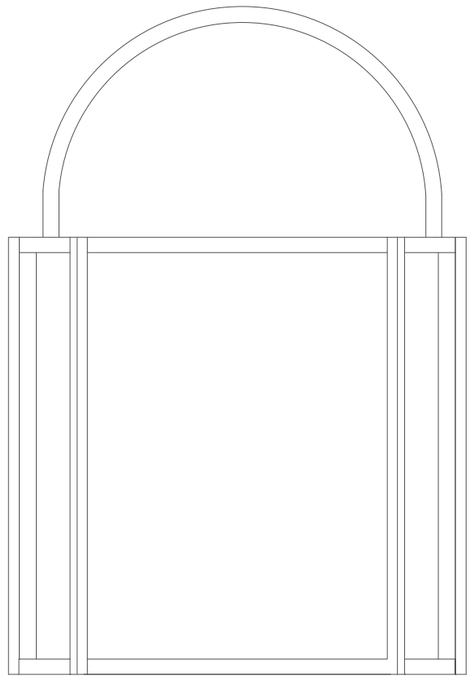
DETAIL 1:20
APARTMENTS

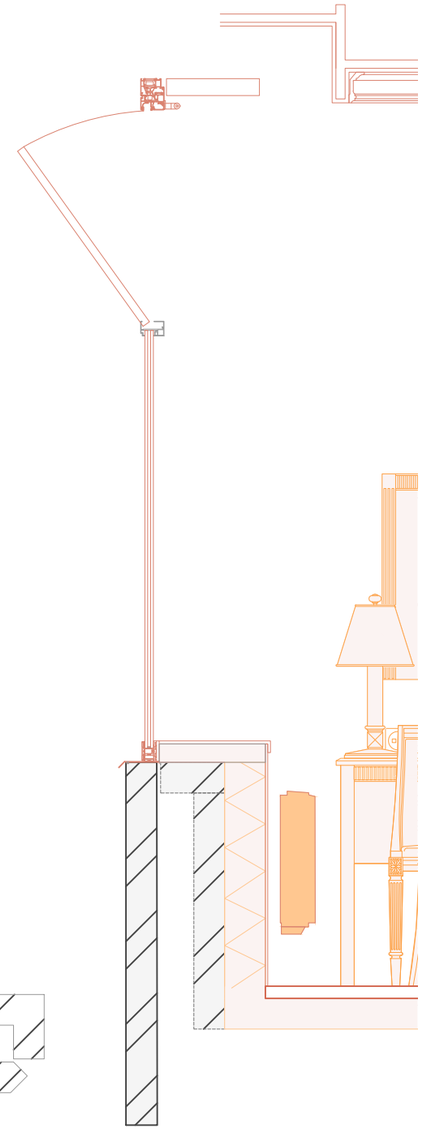


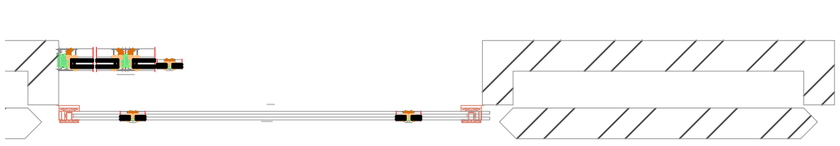
DETAIL 1:20
NEW WINDOWS APARTMENTS



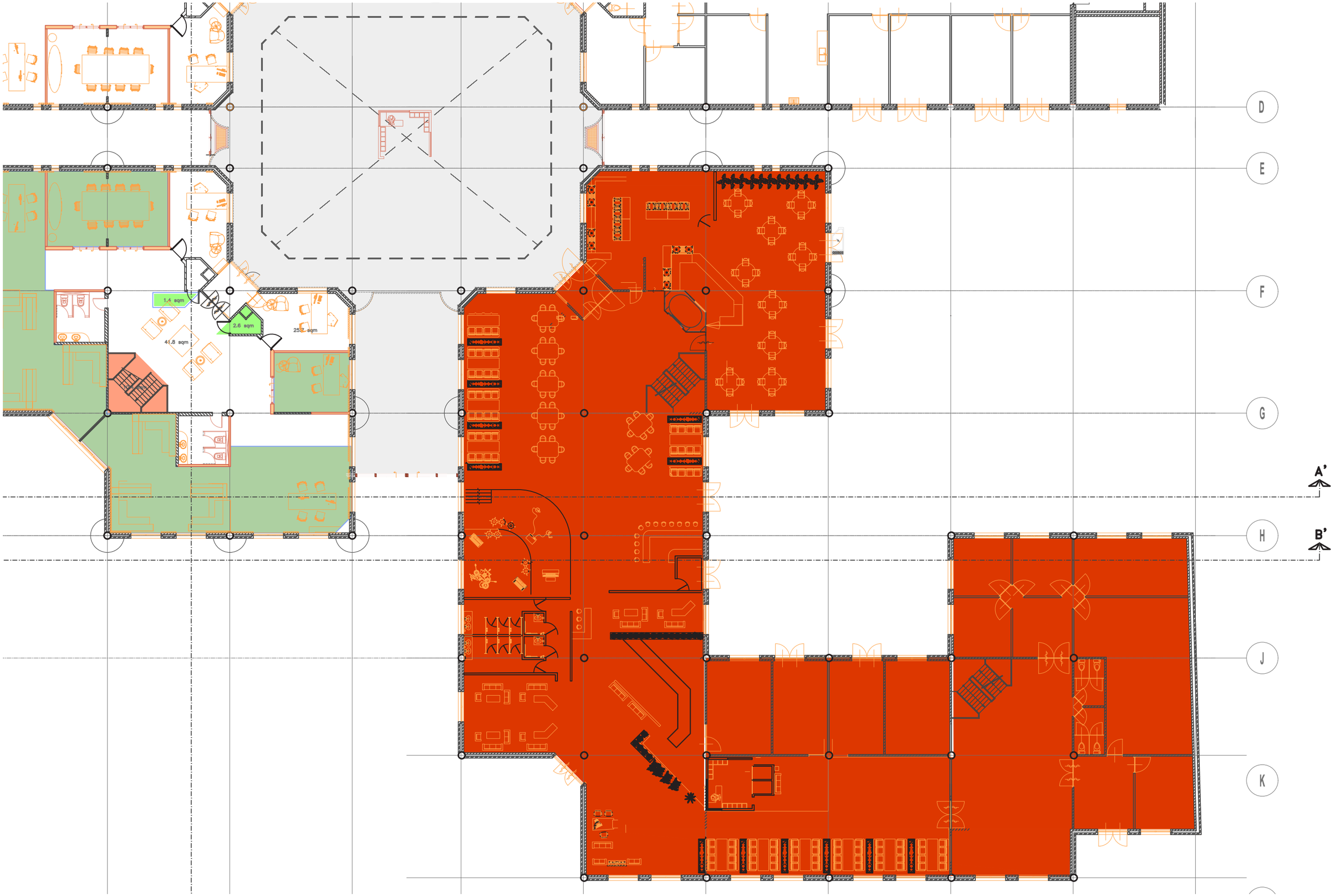




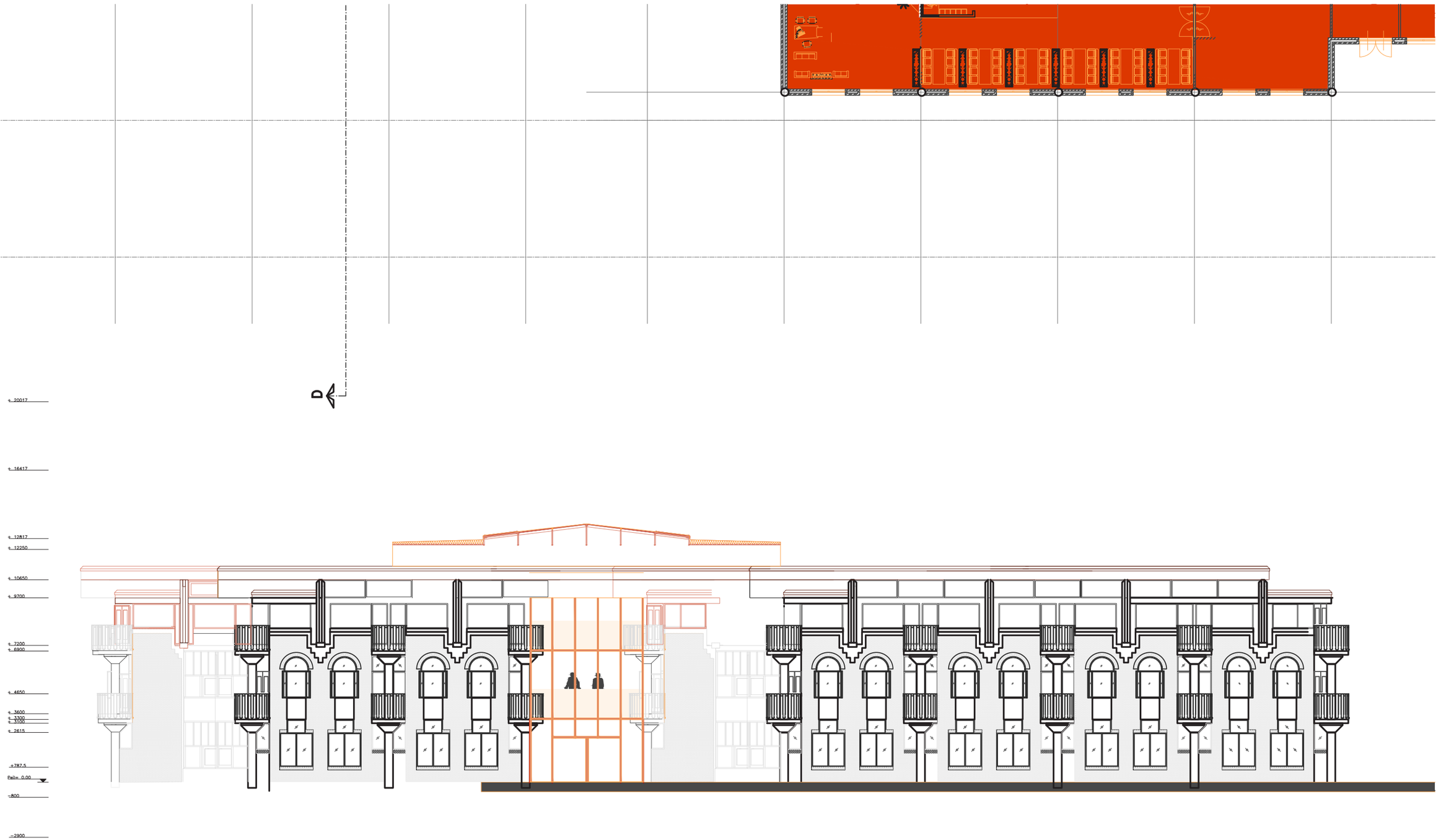




1.200 LARGE RESTAURANT

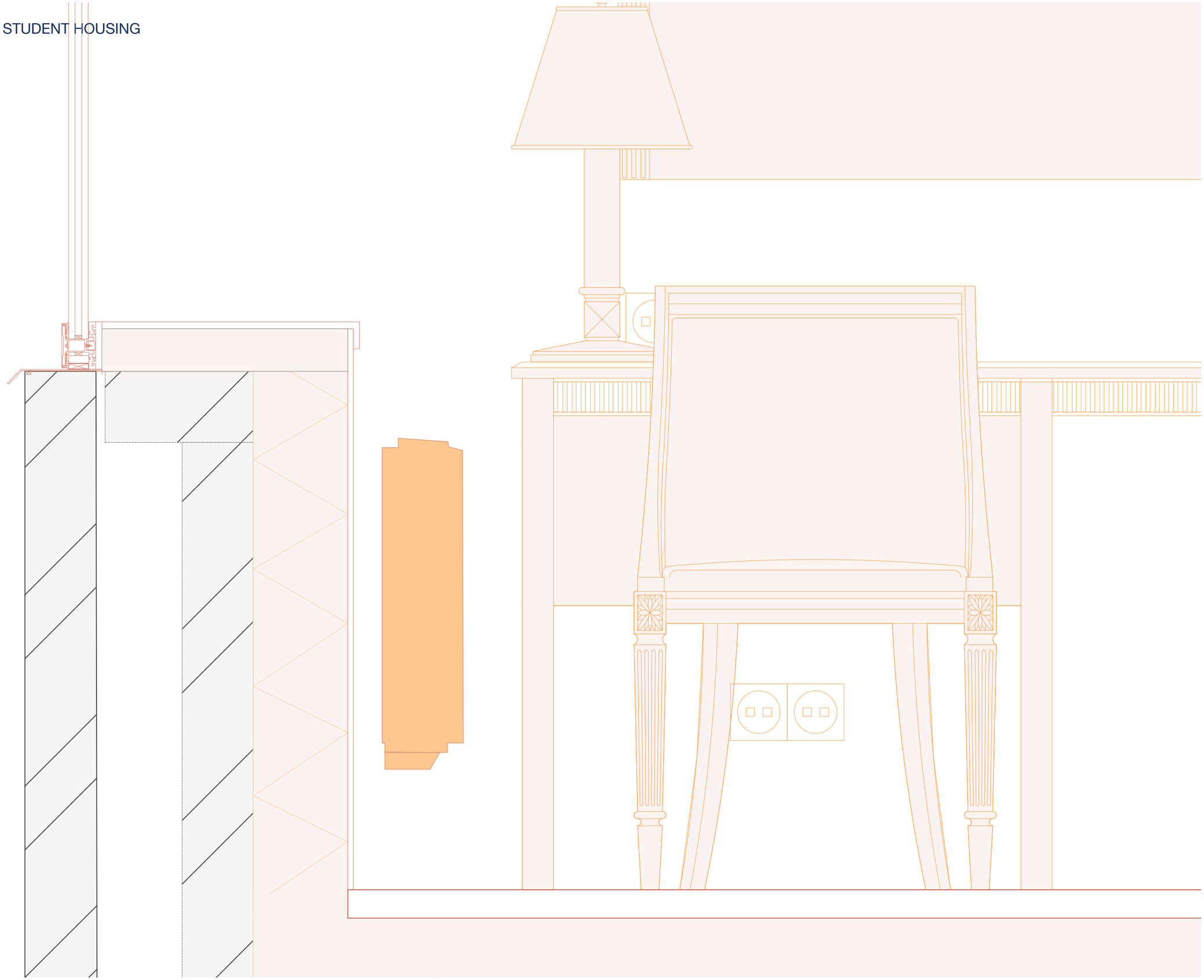


DETAIL 1:200
FACADE



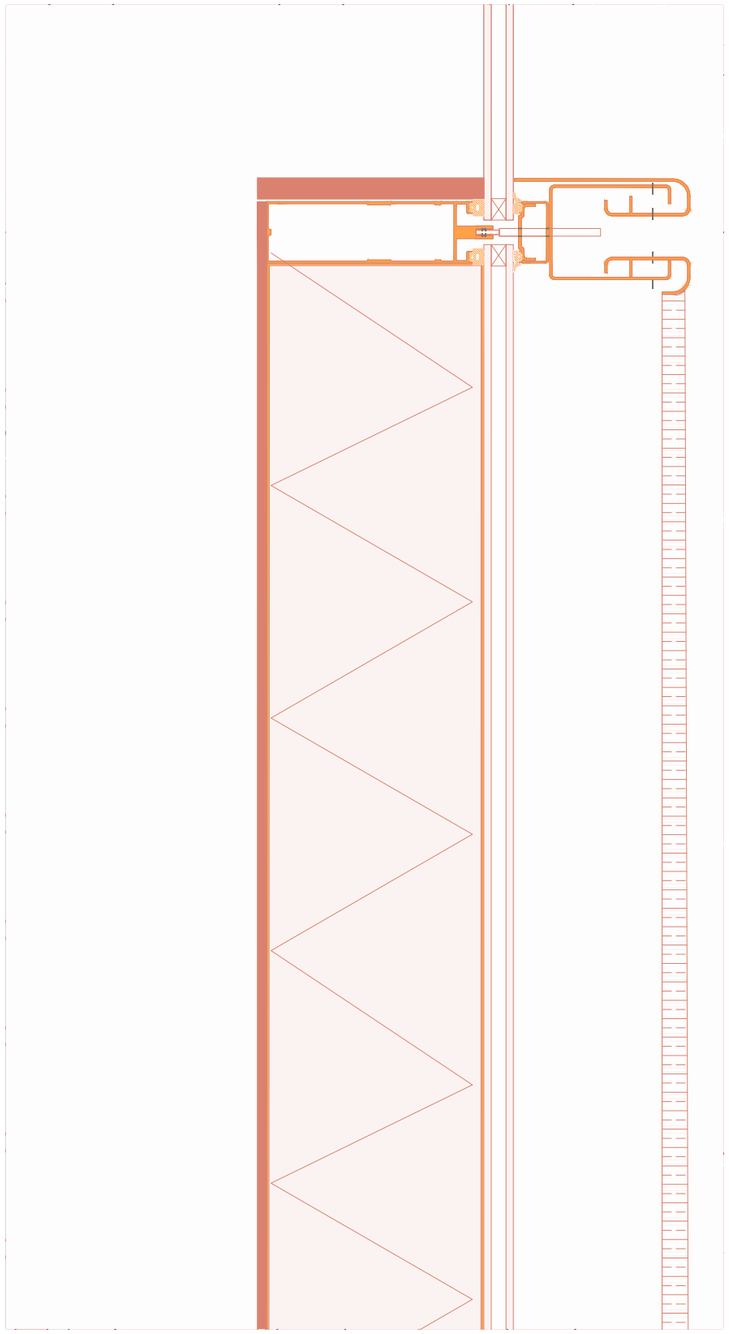
1:300 constructie atrium and nieuw gebouw

DETAIL 1:5
WINDOW FRAME STUDENT HOUSING



DETAIL 1:5
NEW FACADE MULLION ENTRANCE HALL

NOT USED ANYMORE DUE TO CHANGE IN DESIGN
NOT USING PERFORATED SHEETS ANYMORE. ONLY OPEN AND CLOSED PARTS. SO THE EFFORT TO MAKE THIS IS NOT HANDY FOR MY DESIGN ANYMORE.



inspiration
NYU, Center for Academic and Spiritual Life