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## The Necessary Architecture

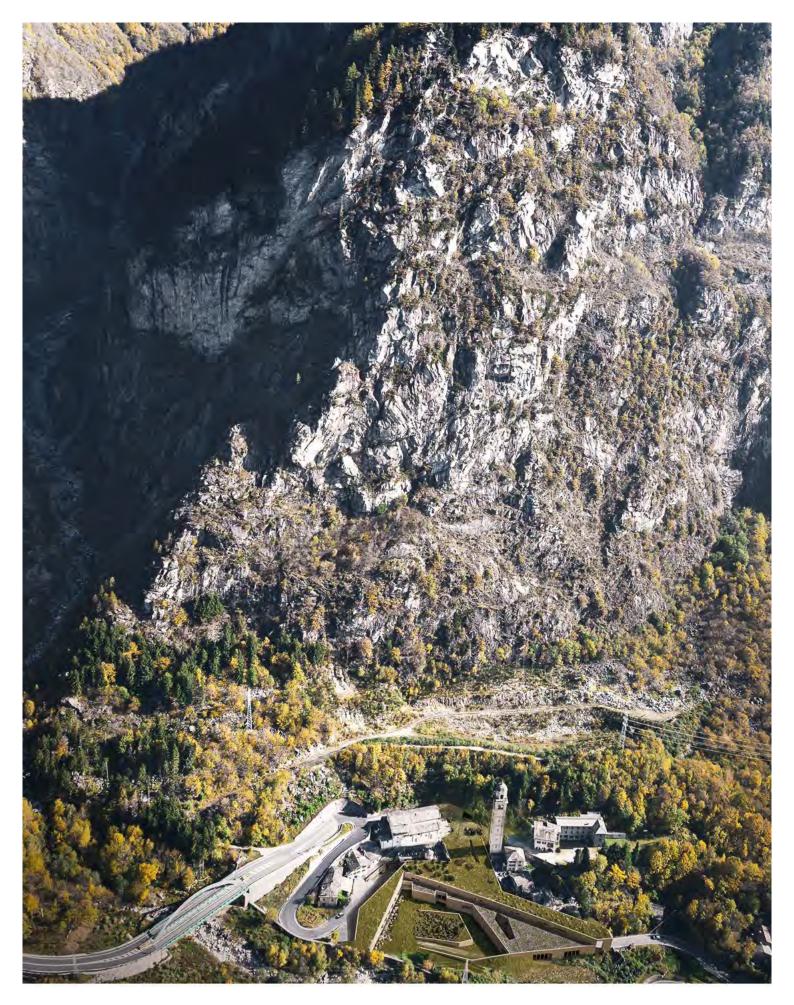
Hydrogeological Risk and Infrastructure in the Spluga Valley. Methods, strategies and projects for securing and regenerating a specific mountain territory.

Italy is a vulnerable country, constantly exposed to the risk of hydrogeological problems, where the obsolescence of infrastructures threatens built-up are—as as well as environmental, historical and cultural heritage. The drawing up of detailed data and inventories allows to visualize the complexity and geographical extension of the emergency. Such phenomena are paramount in inner areas, especially those where mountains are present, thus exposing transport routes to constant danger. The testing area is an Alpine road (a section of state road SS36 connecting the small town of Chiavenna and the Spluga pass in the Sondrio province), where it is necessary to mitigate the risk of traffic disruption.



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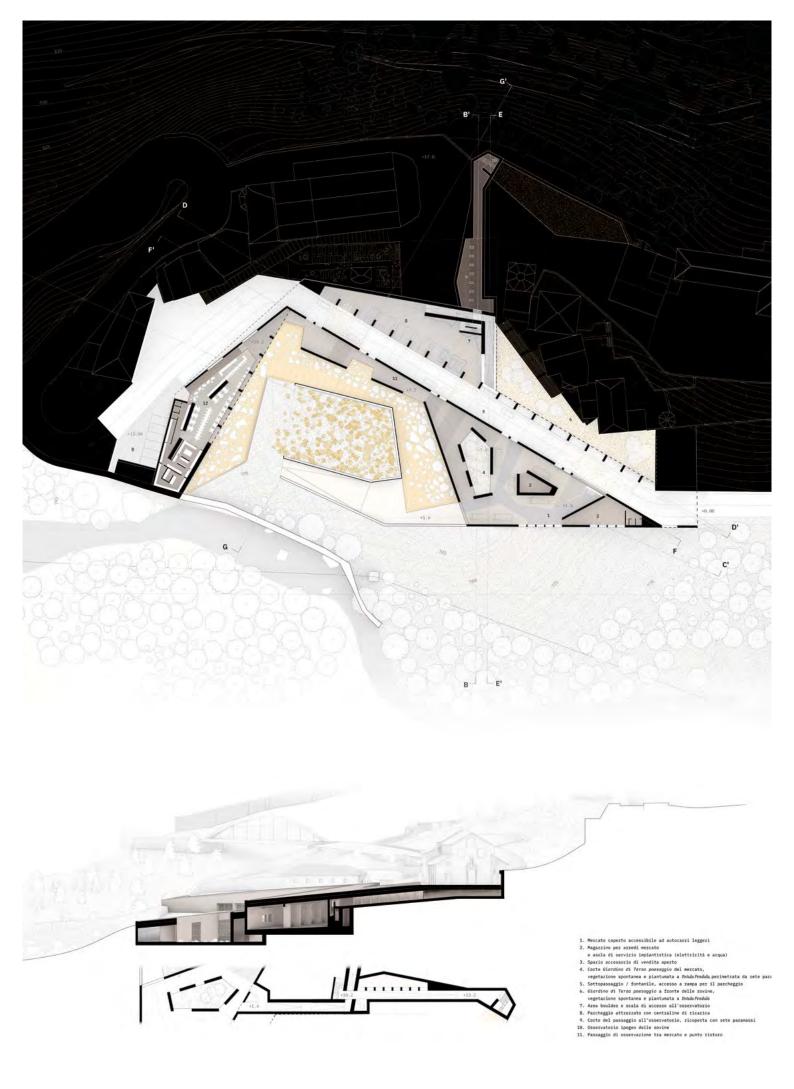
Hydrogeological Risk and Infrastructure in the Spluga Valley. Methods, strategies and projects for securing and regenerating a specific mountain territory.



The first project is part of the SS36 state road nearby the Gallivaggio Sanctuary, dating back to the 15th century, today in a state of complete devastation after repeated landslides.

The urgency to protect the fundamental stretch of road through an artificial gallery, becomes an opportunity to create new spaces for contemporary

travellers and reinterpret the third landscape between nature and ruins, crossed by infrastructure. The monolithic roofed architecture is divided in to three main bodies (a market, a parking lot with a climbing wall and observation point, a restaurant) connected together by means of stairs, ramps and tunnels.









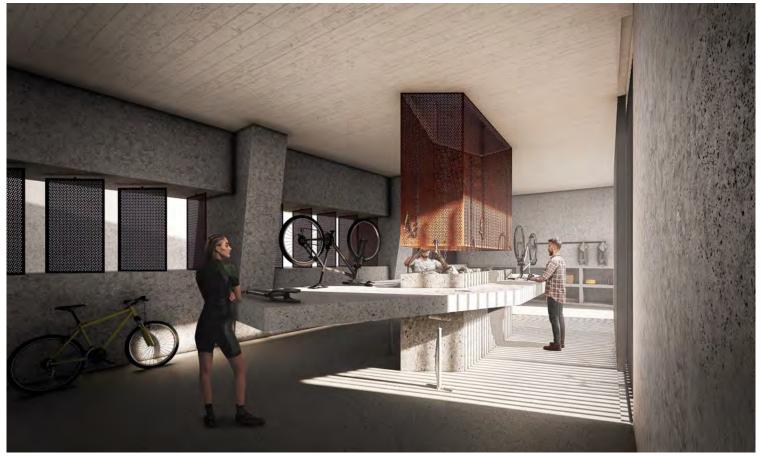




The second project is set on a huge expanse of rocks, threatening traffic and two villages. A wall is made at the most looming and sublime point. After a broken direction, the path continues through a narrow covered passage, and then reopens in a trapezoidal room, oriented towards the ruins of Gallivaggio. Wide nets with intertwined rings hang embedded into the inclined reinforced concrete wall. A continuous seat marks the lower side of the wall and the flooring is thrown irregularly around the huge boulders. The project hybridizes two solutions for the containment of danger and tries to dare a poetics through an architecture that aspires to the Sacred.







The third project develops along a curve, after the village of Cimaganda, which owes its name to the paleo-landslide that characterizes the surrounding wild landscape. The new mass fall cut off all communication with the valley and subsequently arranged with an embankment. The new retaining concrete walls host a small cycle-workshop do-it-yourself and a fountain, which acts as an entrance door and link to the path to Avero.









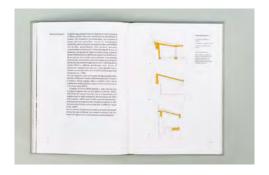
















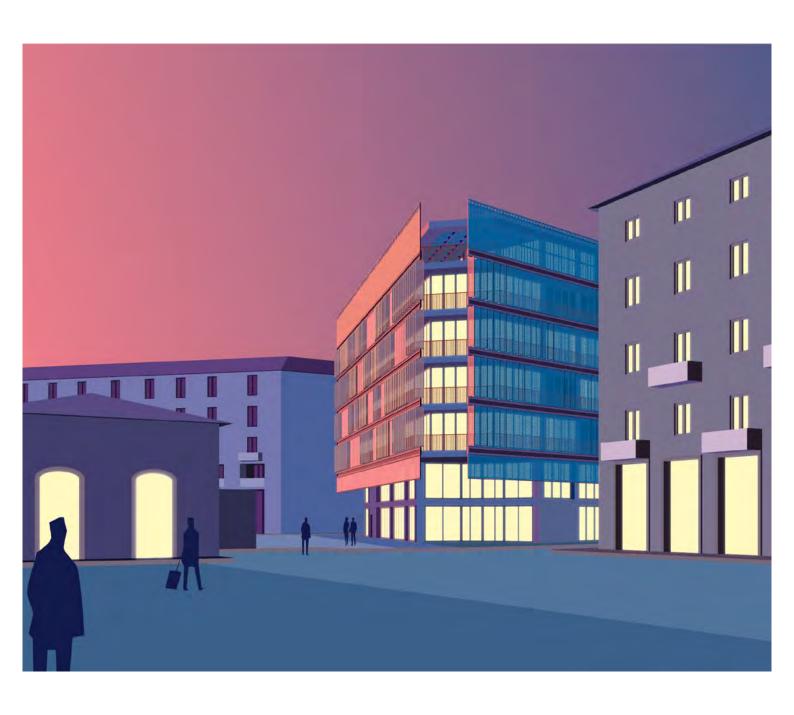




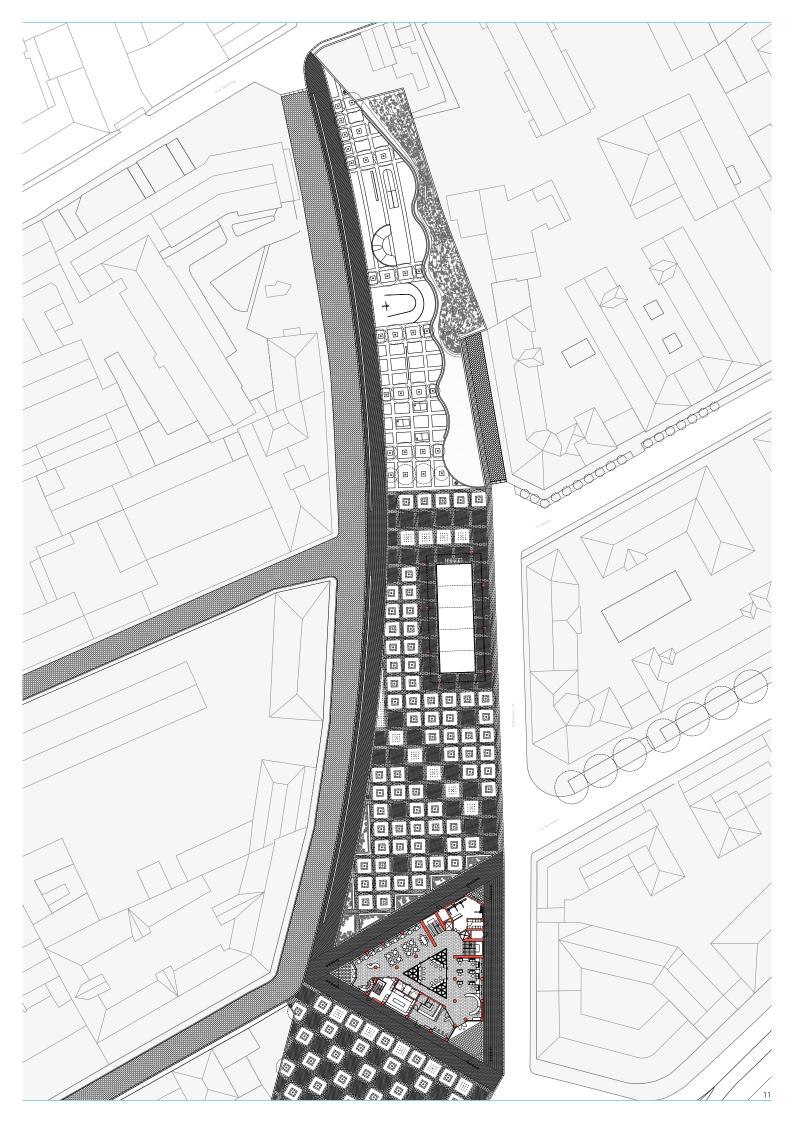


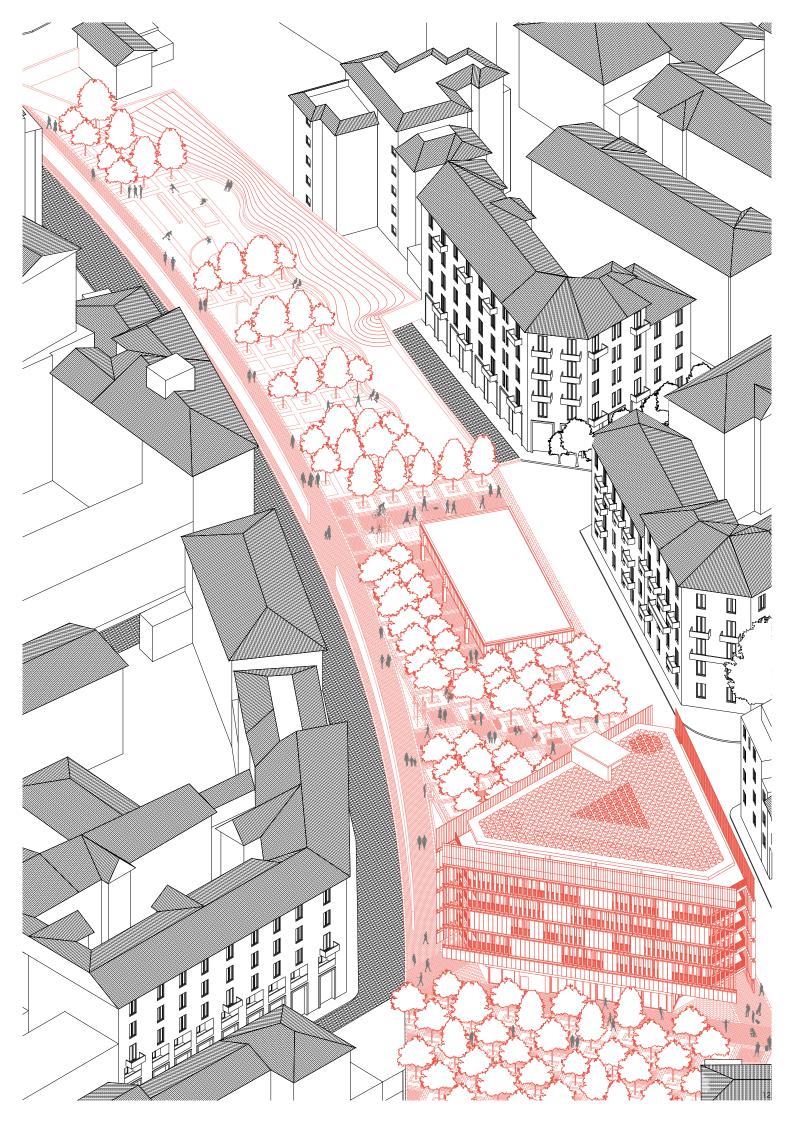


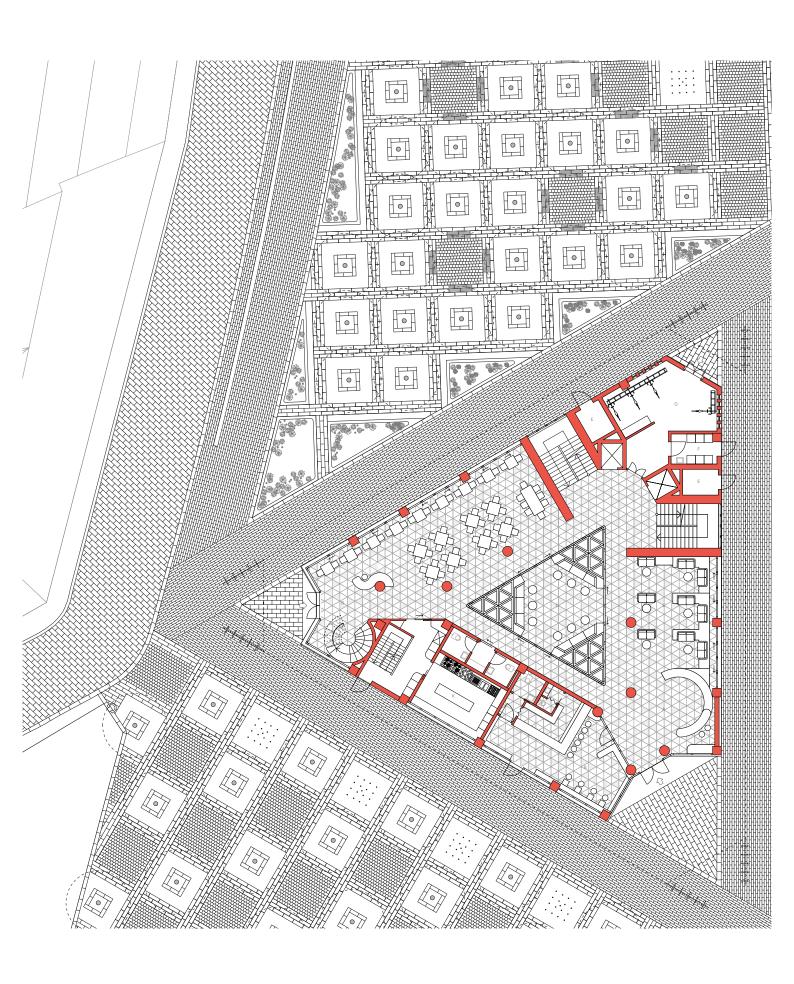
A 240 page book explains the research work that supported the whole design process: landslides data analysis, mapping, photographic surveys, historical research about the valley and the already existing mitigating structures, contemporary protection techniques and typological analysis, rock-falling behaviours, architectural references and the evolution of Western Thought towards the image of the Mountain.

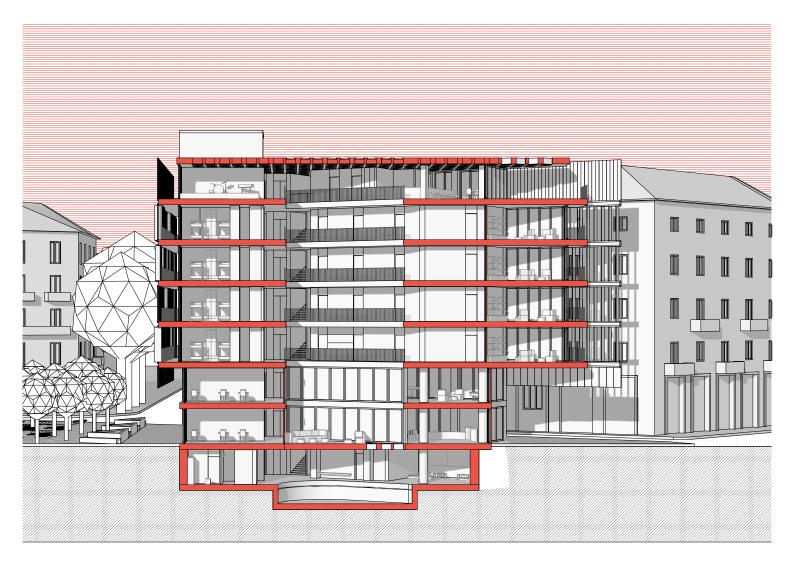


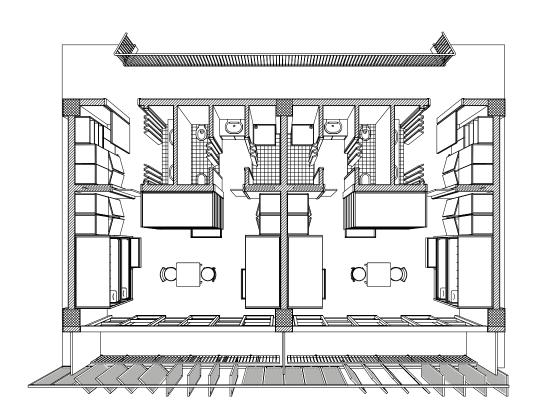
New hostel for Porta Genova Milan

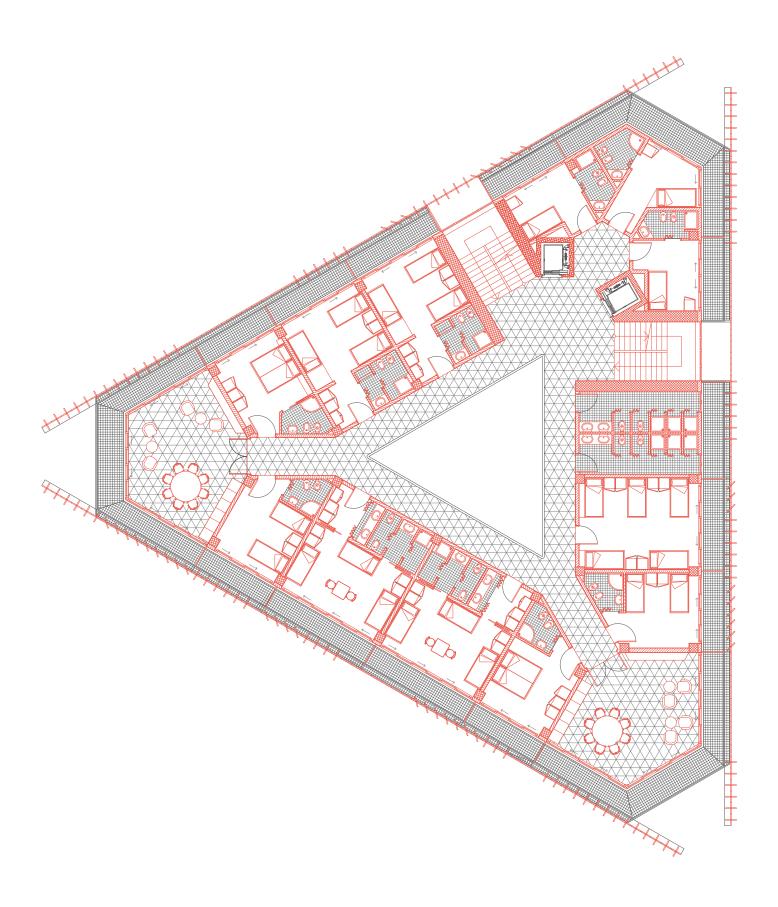




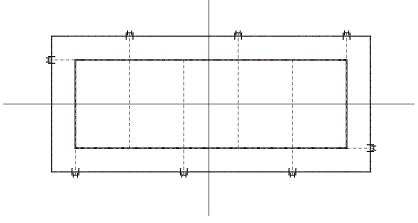




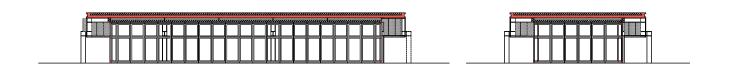


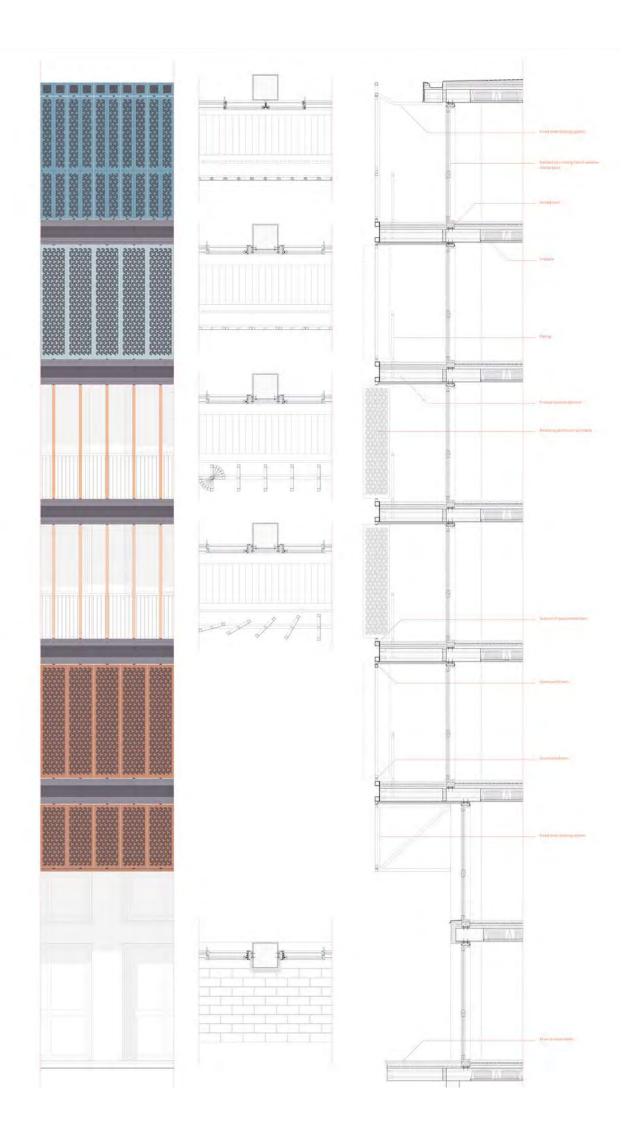








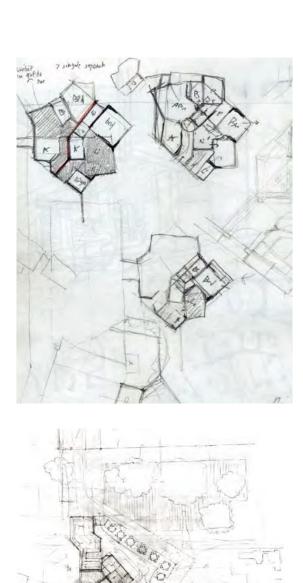


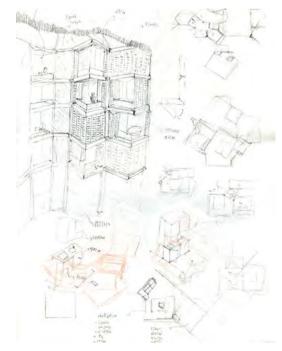


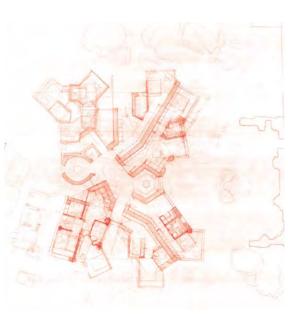


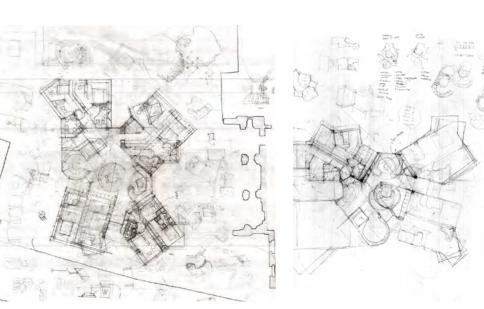


Students' apartments in Corso di Porta Vigentina Milan













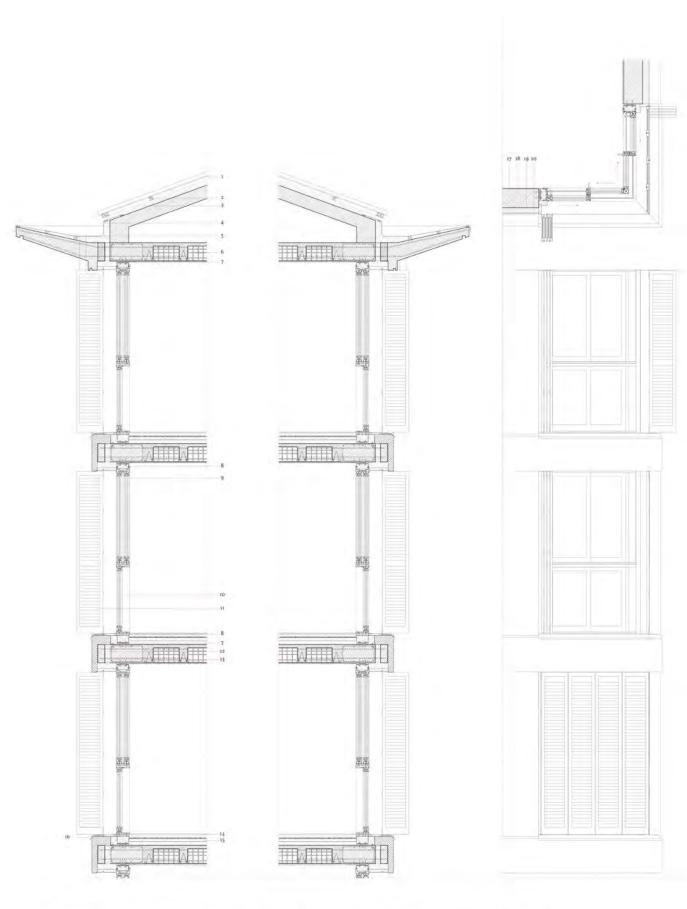












- 1 Lamiera grecata Rheinzink
- 2 Travetti in legno somm × 50 mm
- 3 Isolamento termico
- 4 Canale e lattoneria in Rheinzink
- g Gronda in cemento armato a vista
- 6 Solaio in latero cemento 24+5 cm 7 Elemento distanziatore isolante
- 8 Controtelaio in profilați a "U" e a "I"
- 9 Serramento in acciaio verniciato, modello tipo Secco, profili EB 85 AS (alzante scorrevole)
- io Sottofinestra fisso in acciaio verniciato. modello tipo Secco, profili EB 85
- ii Persianea pacchetto scorrevole in alluminio, tipo Shucko
- 13 Elemento marcapiano prefabbricato in calcestruzzo alleggerito
- 14 In sequenza:
  - pavimento in grès porcellanato - massetto livellante con rete elettrosaldata - pannelli radianti in tubi in PEX/Al guaina isolante
- 15 In sequenza:
- isolamento termico e acustico - massetto per impianti in cls alleggerito con funzione di isolamento
- 16 Davanzale / scossalina in Rheinzink con 20 Rete e intonaco rustico fine guida per persiane scorrevoli
- 17 Intonaco 1,5 cm
- 18 Tamponamento in Gasbeton
- 19 Isolamento termico

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