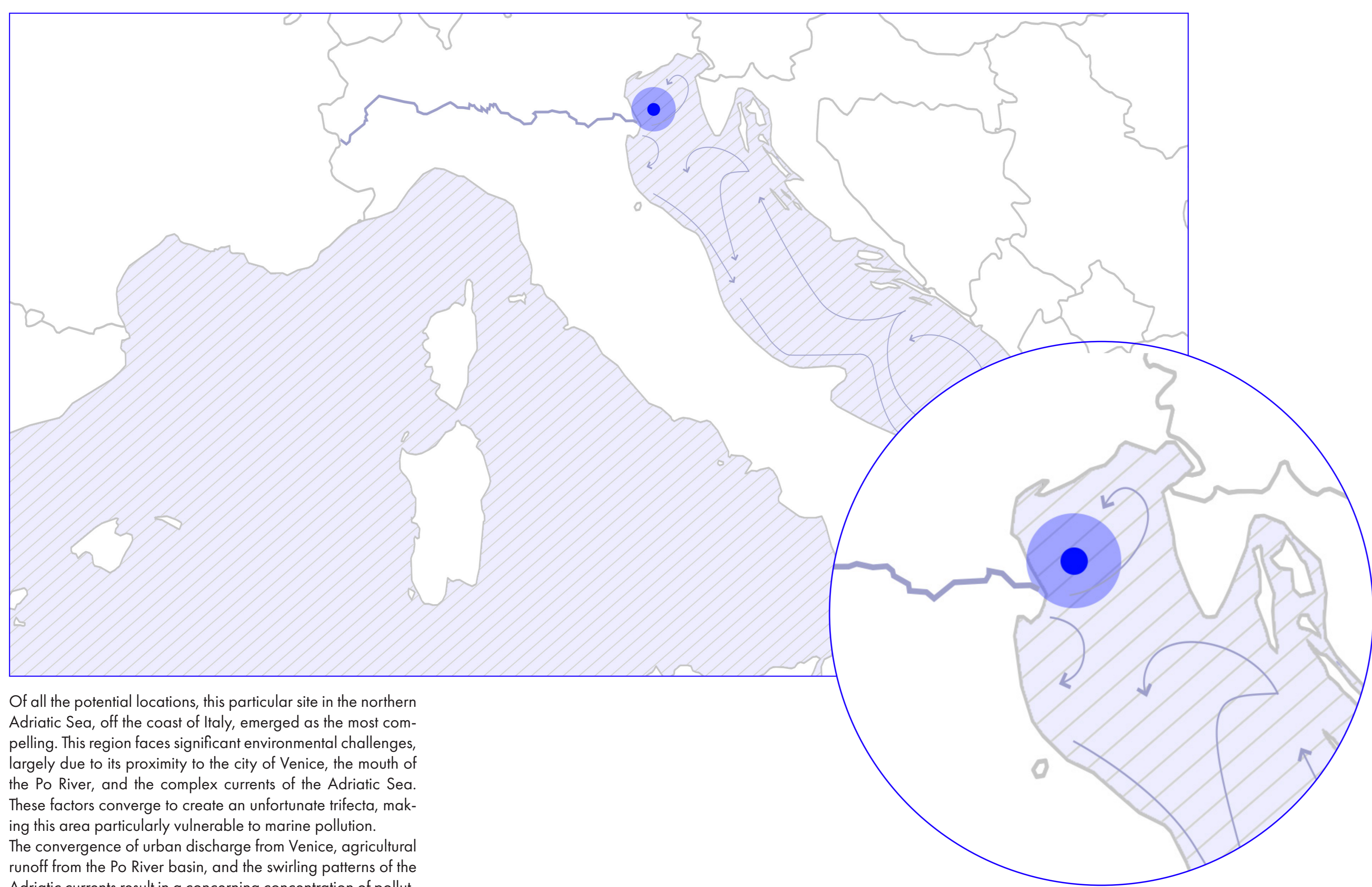


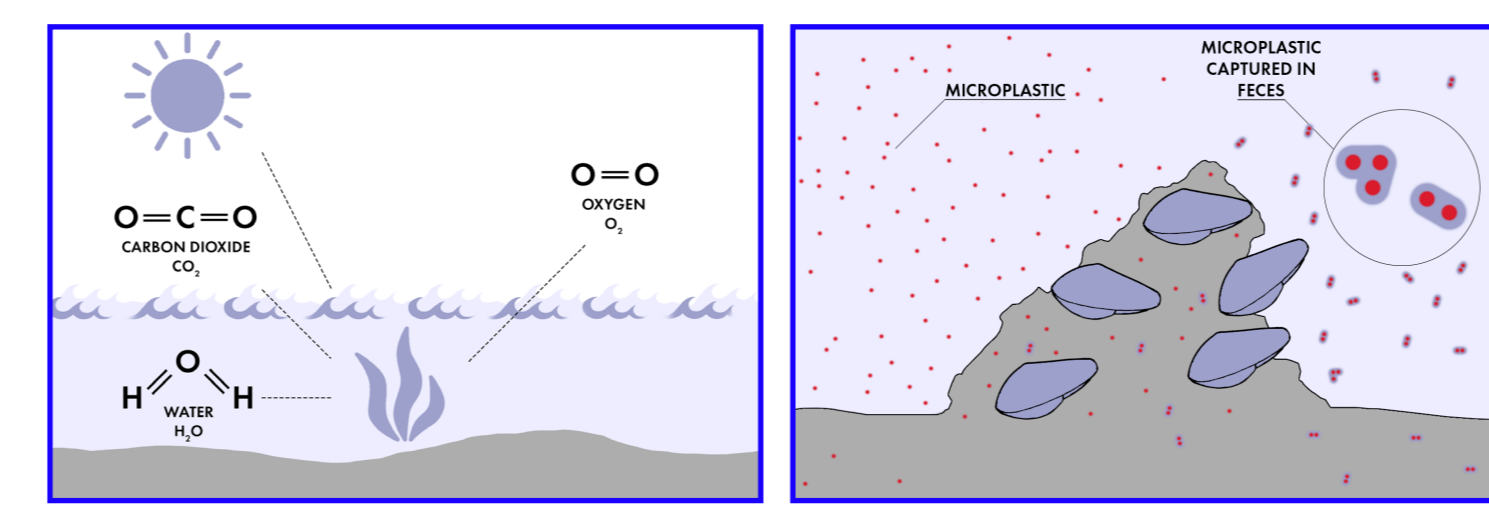
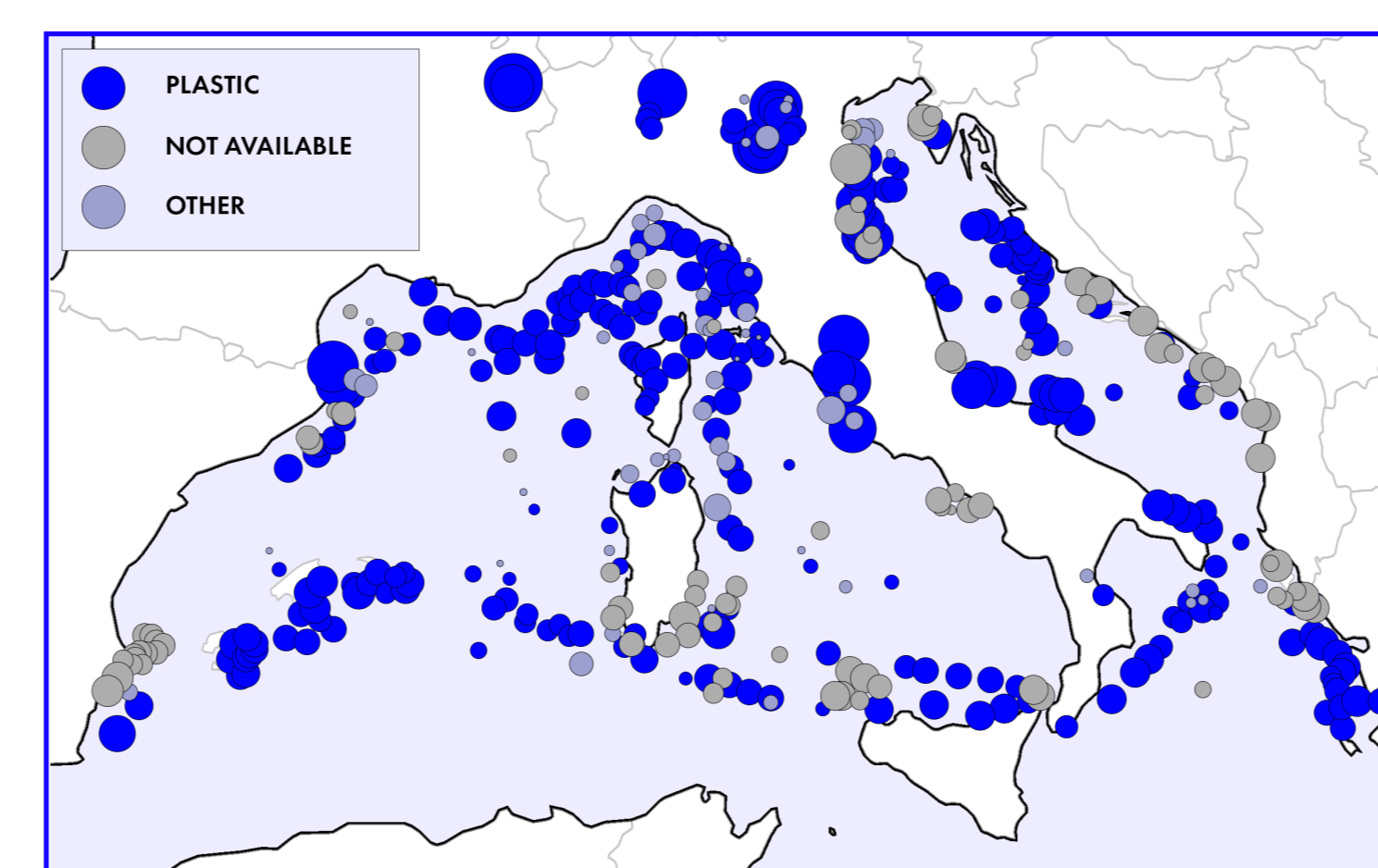
# IRON ISLAND

STUDIO FLOW  
Bc. Ramina Khakimova

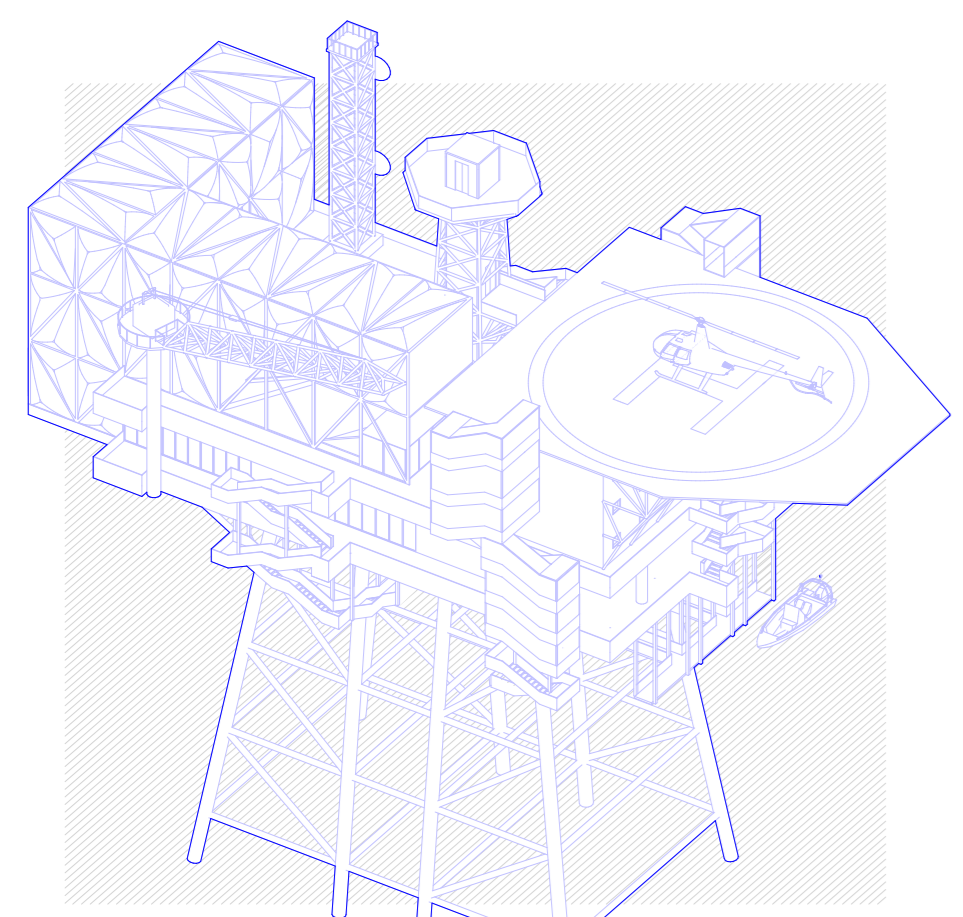


Of all the potential locations, this particular site in the northern Adriatic Sea, off the coast of Italy, emerged as the most compelling. This region faces significant environmental challenges, largely due to its proximity to the city of Venice, the mouth of the Po River, and the complex currents of the Adriatic Sea. These factors converge to create an unfortunate inflection, making this area particularly vulnerable to marine pollution. The convergence of urban discharge from Venice, agricultural runoff from the Po River basin, and the swirling patterns of the Adriatic currents result in a concerning concentration of pollutants in this zone. This site, therefore, presents a unique opportunity—a critical location to study the impacts of pollution and develop innovative solutions for mitigation and remediation.

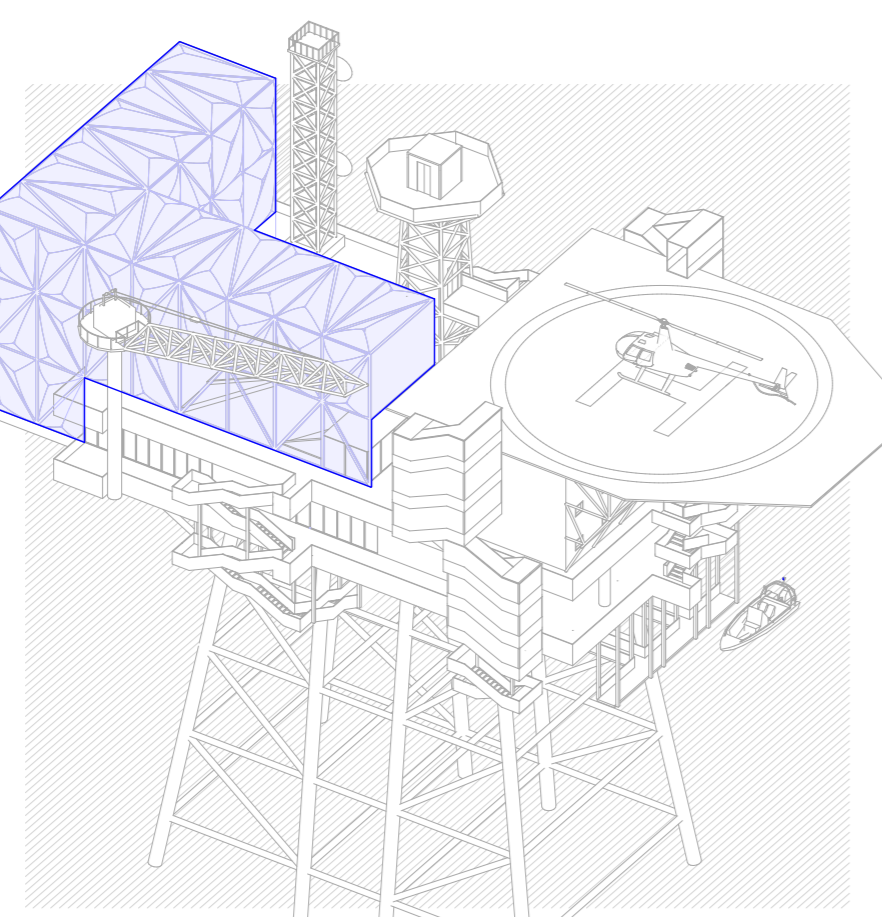
This innovative Science Center, situated at the confluence of architecture and marine research, reimagines the potential of offshore structures as catalysts for ecological regeneration. The platform's design seamlessly integrates state-of-the-art laboratories with active interventions in the marine ecosystem. Mussel farms, strategically incorporated into the structure, act as biofilters, extracting microplastics from the surrounding waters. Simultaneously, cultivated algae farms address ocean acidification, generate oxygen, and provide a platform for biofuel research. The center also serves as a living laboratory for observing and analyzing the formation of artificial reefs, informing strategies for habitat restoration. By harnessing the power of wave and tidal energy to meet its operational needs, the Science Center embodies a tangible commitment to sustainable design, demonstrating how architecture can not only study but also actively contribute to a healthier and more resilient ocean.



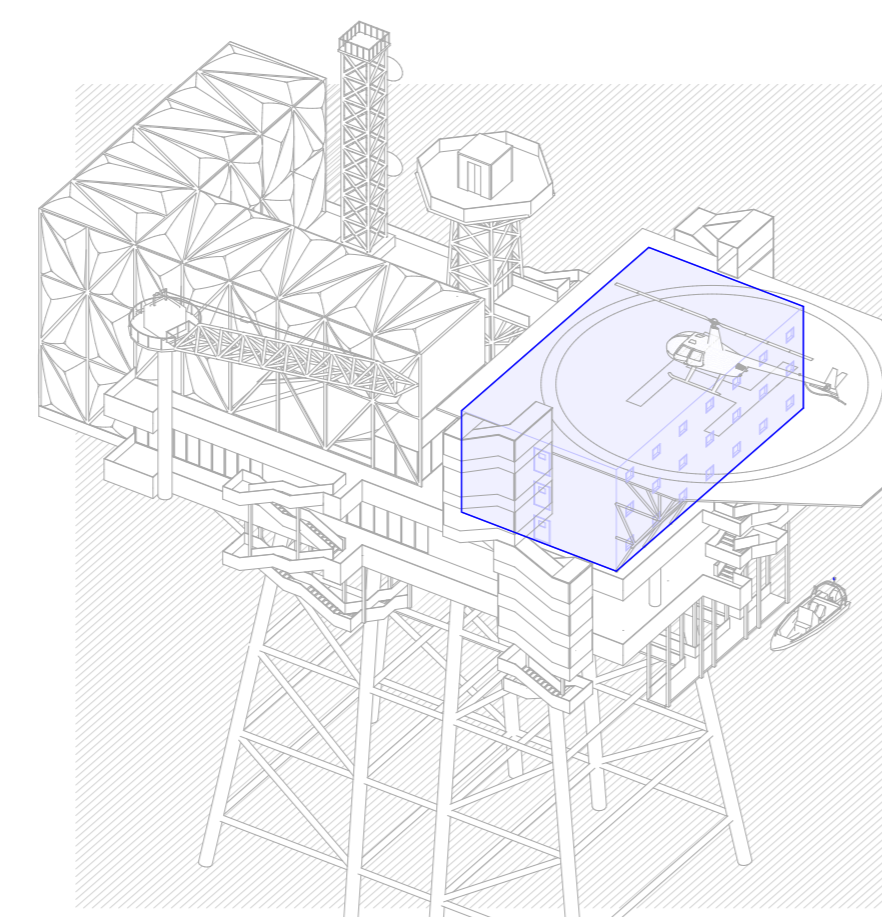
The project divides its robust structure into three distinct yet interconnected zones, each reflecting a different facet of its new identity:



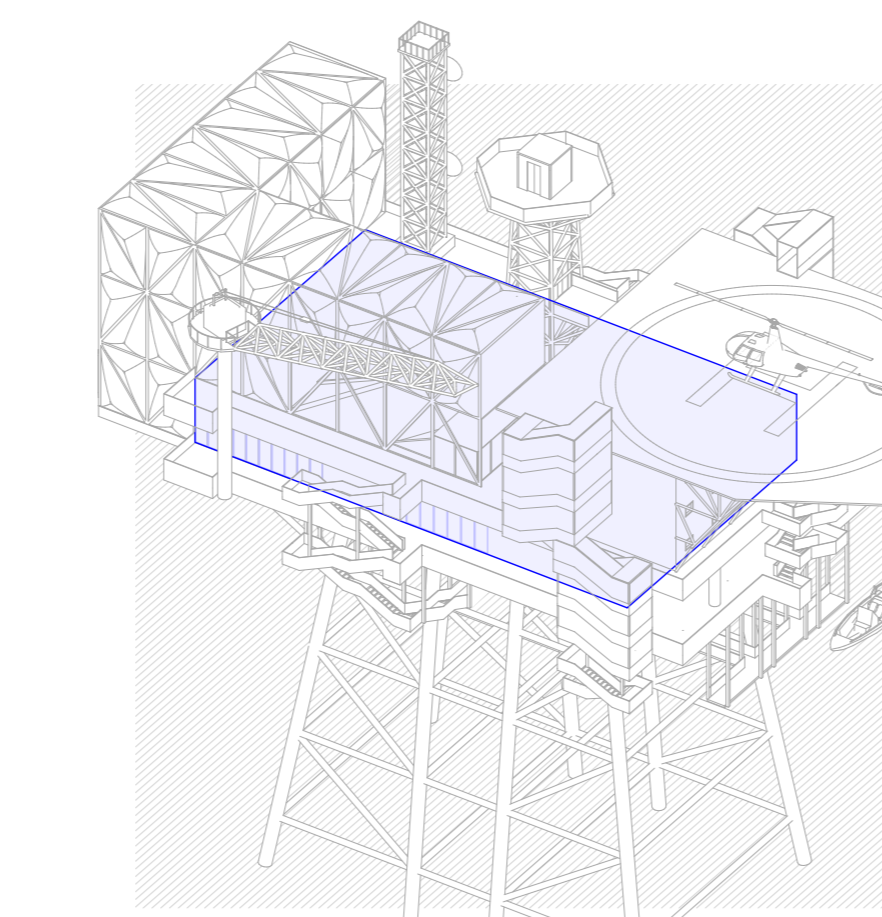
This architectural project reimagines an Adriatic oil platform as a cutting-edge marine research center, showcasing the potential for adaptive reuse in even the harshest environments. Rather than demolishing this industrial giant, the design sees its robust structure and unique location as assets, transforming the platform into a symbol of environmental stewardship and scientific discovery.



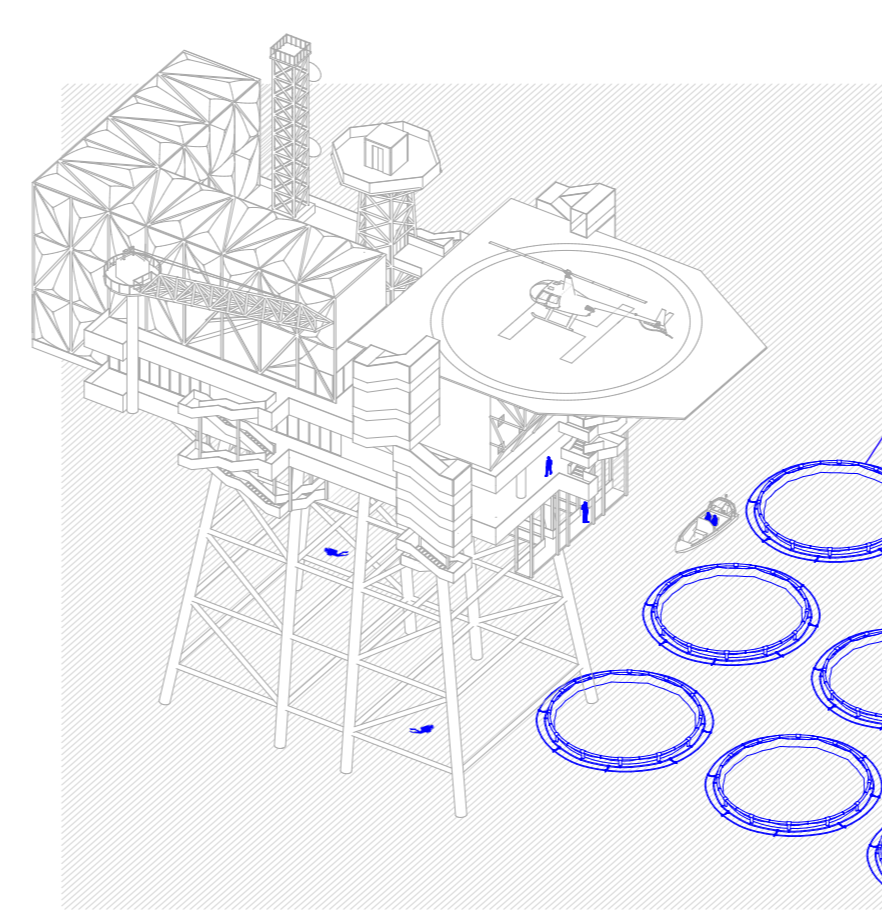
**1. The Inquiry:** The platform's heart beats with the pulse of scientific exploration. This central zone repurposes the former industrial spaces into state-of-the-art laboratories, workshops, and research facilities. Here, amidst the platform's repurposed machinery and rugged framework, cutting-edge technology meets the untamed power of the sea.



**2. The Legacy:** The existing residential quarters, once housing oil workers, now accommodate researchers and staff. These repurposed living spaces, with ocean views, foster a sense of community and provide a comfortable home for those dedicated to unraveling the mysteries of the marine world.

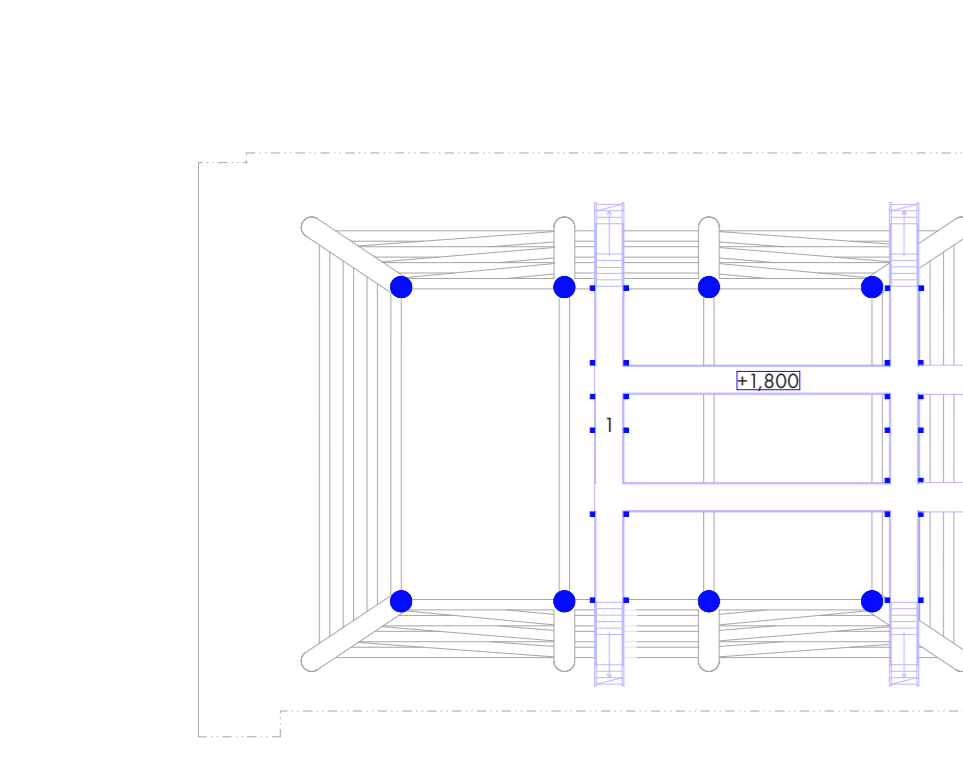
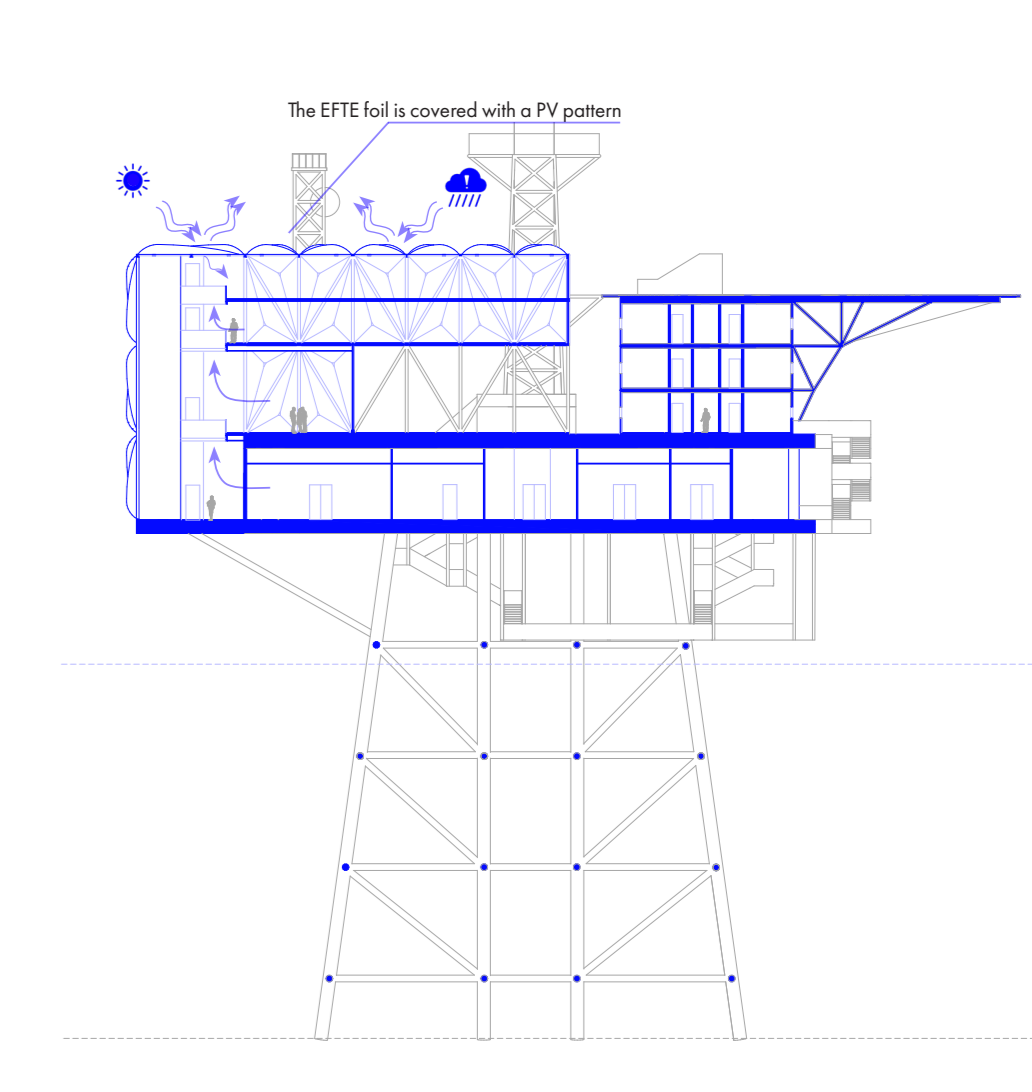
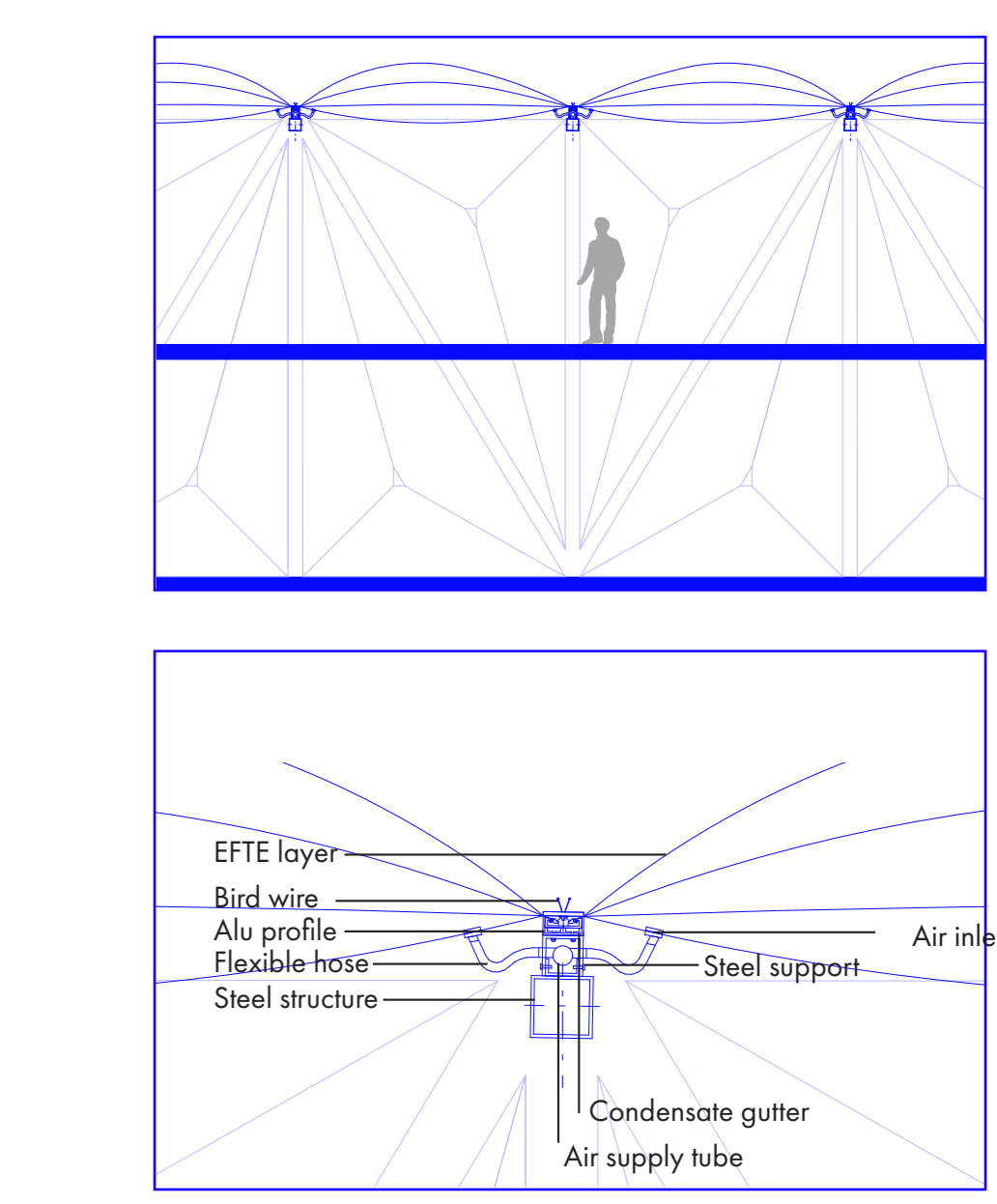
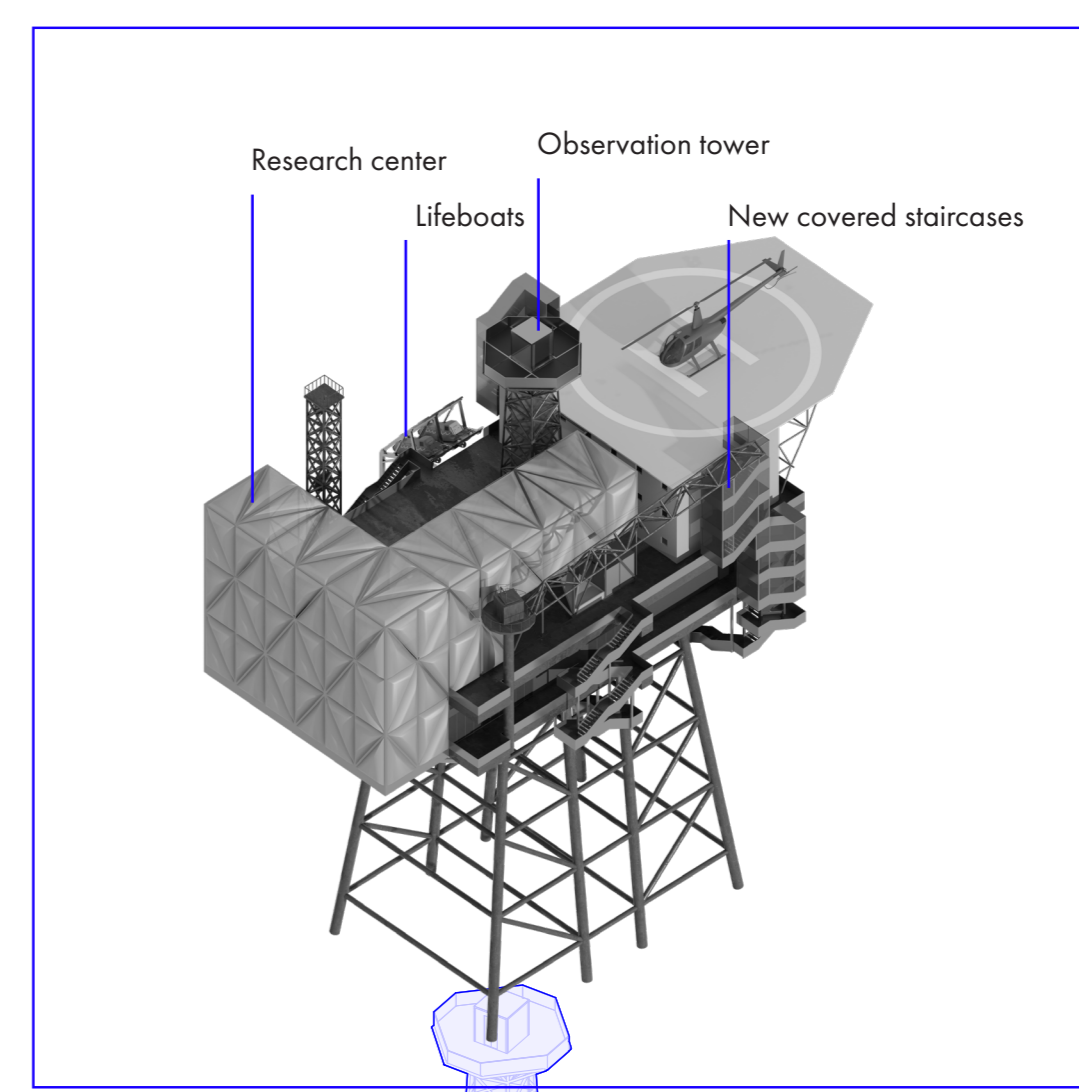
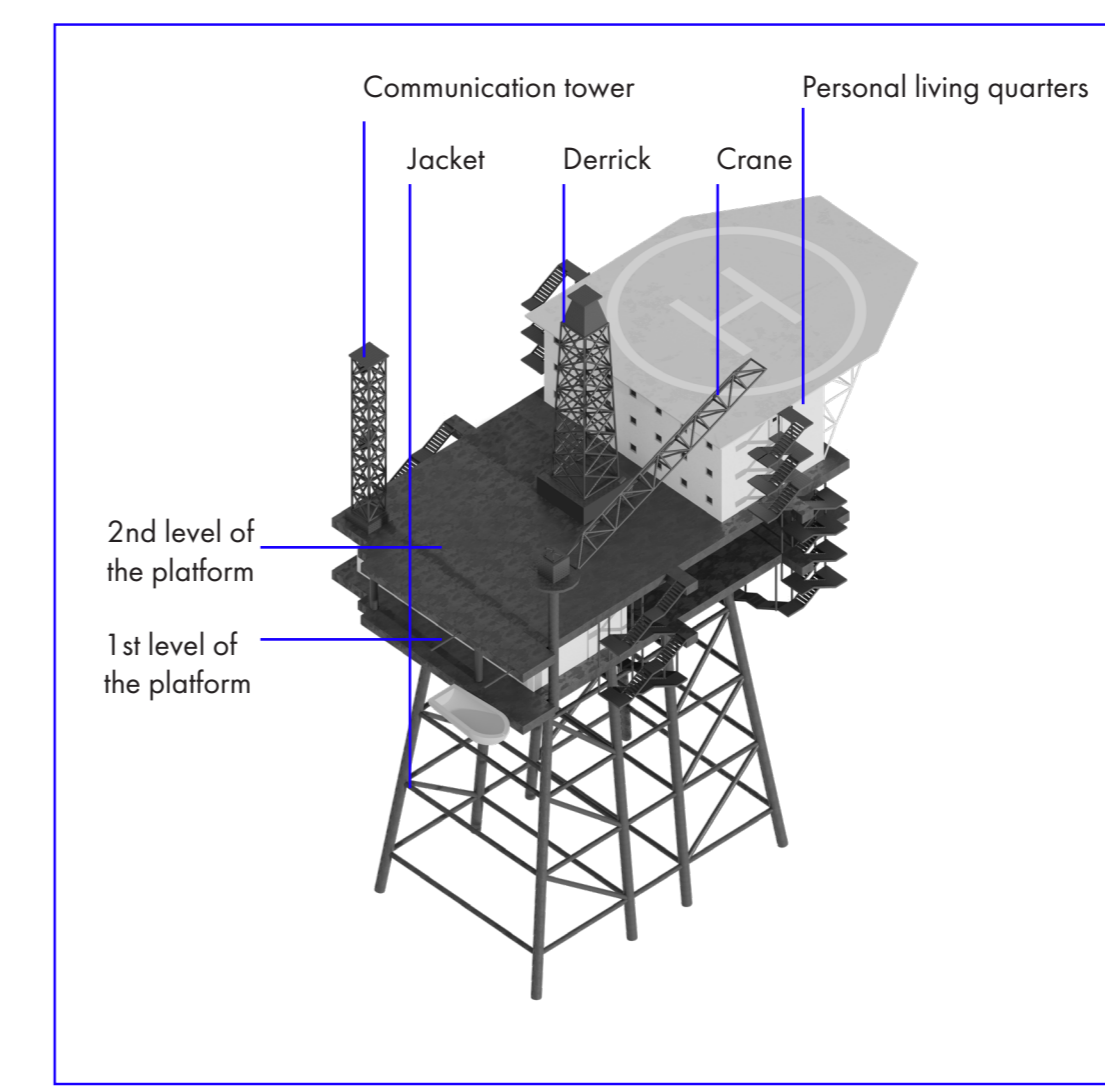
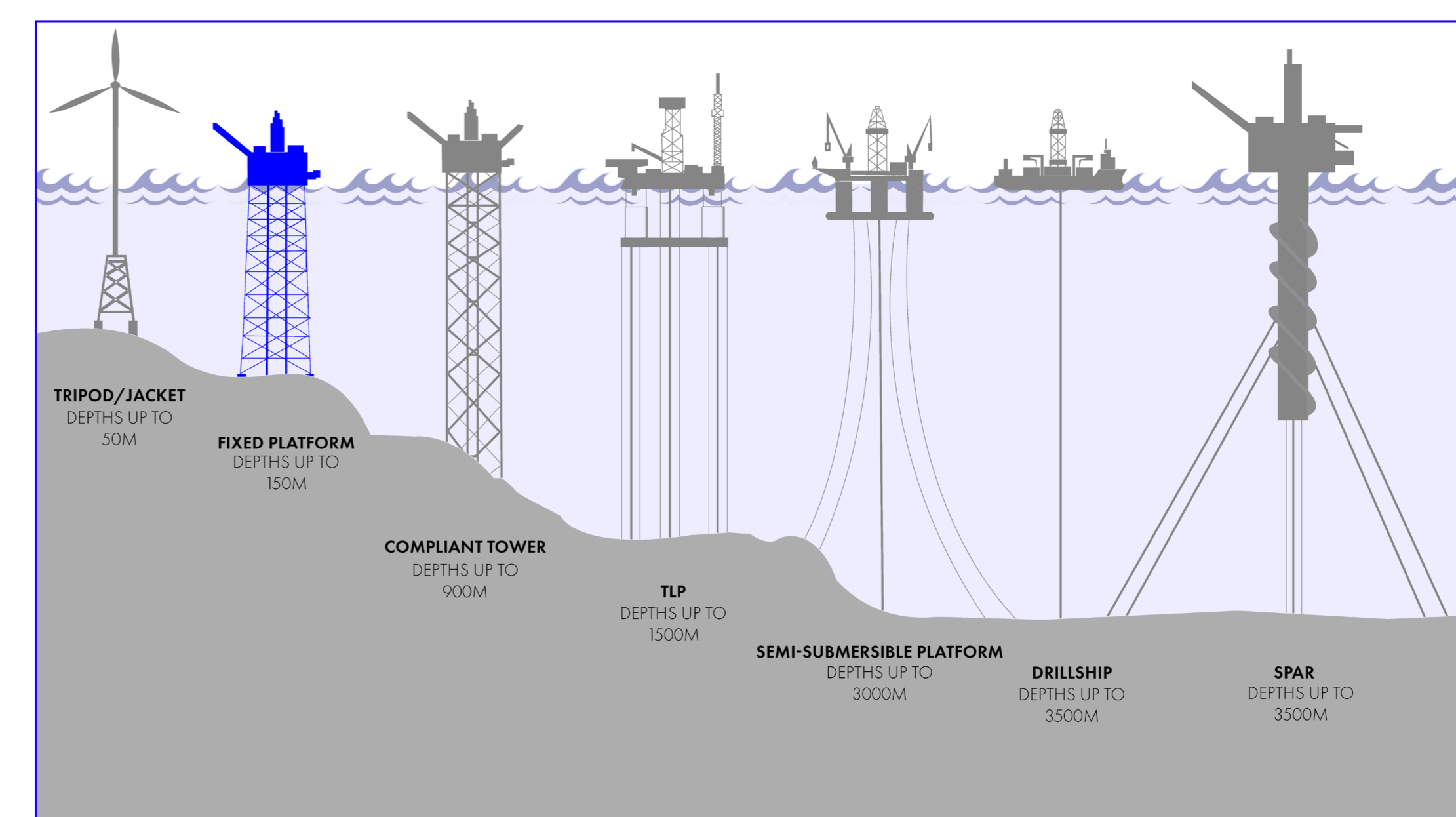


**3. The Respite:** This zone provides researchers with areas for relaxation, social interaction, and a profound connection to the marine environment that surrounds them. Here, the rhythmic ebb and flow of the sea provide a constant reminder of the research center's vital purpose.

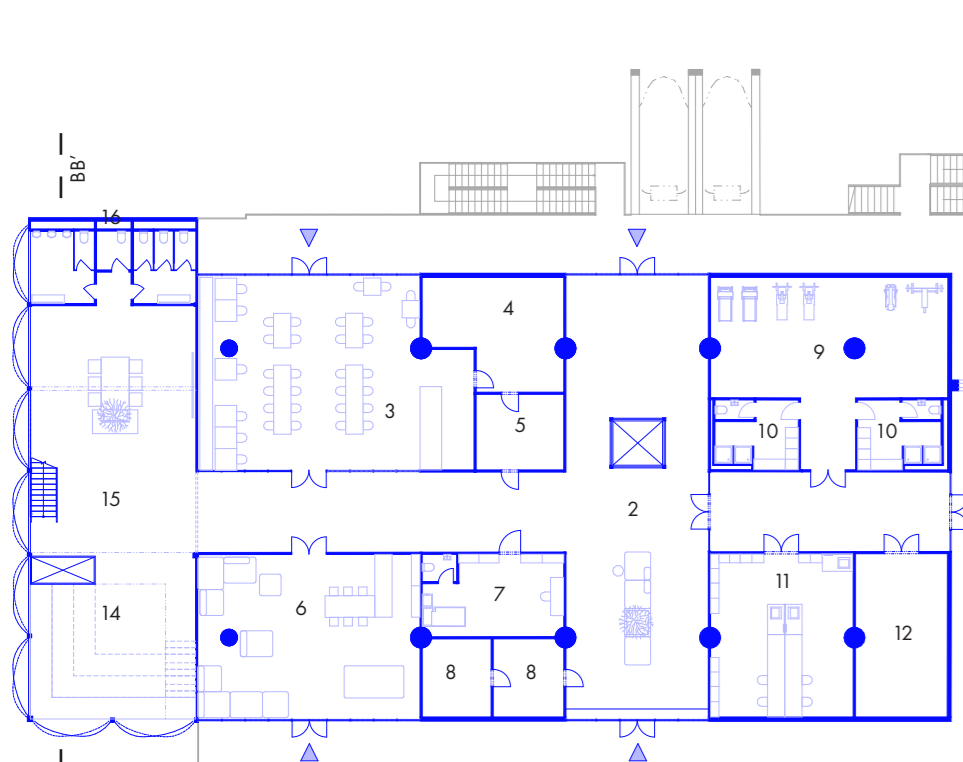


The research platform will utilize multifunctional marine farms for various purposes:

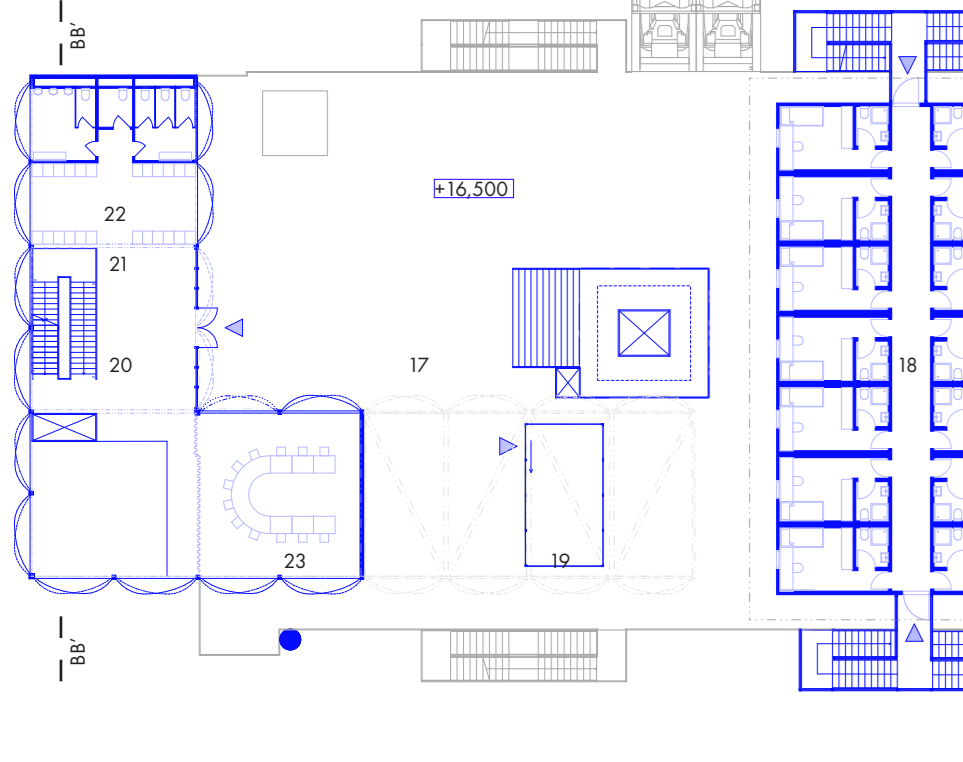
- **Mussel farms:** Investigate their potential for microplastic removal, particularly relevant given the pollution levels near Venice.
- **Algae farms:** Explore carbon sequestration and oxygen production, offering opportunities for species companion and environmental monitoring.
- **Tidal turbines:** Harness renewable energy from underwater currents.
- **Wave energy infrastructure:** Convert kinetic energy from waves into electricity.



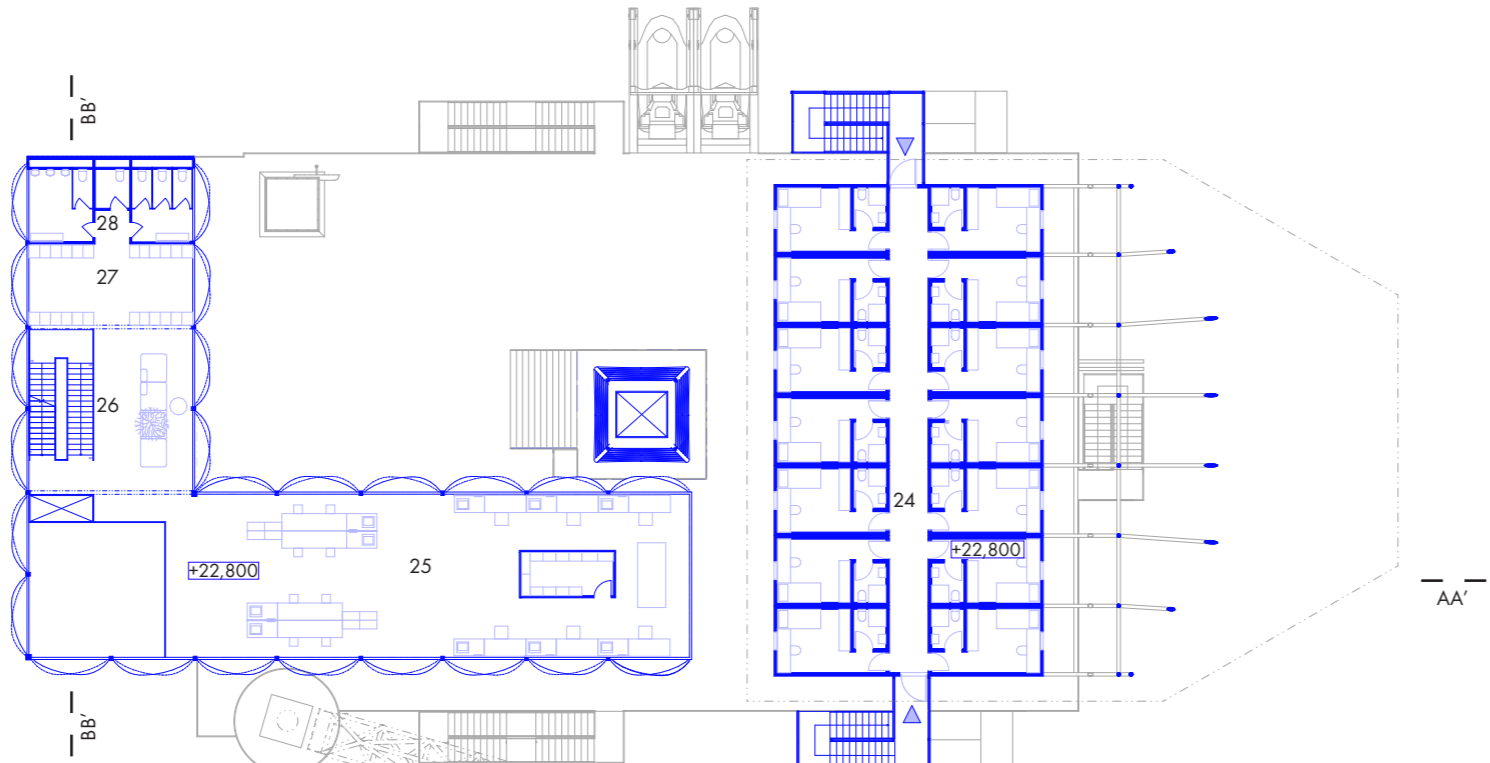
Floor n. -2  
1. Diving platform



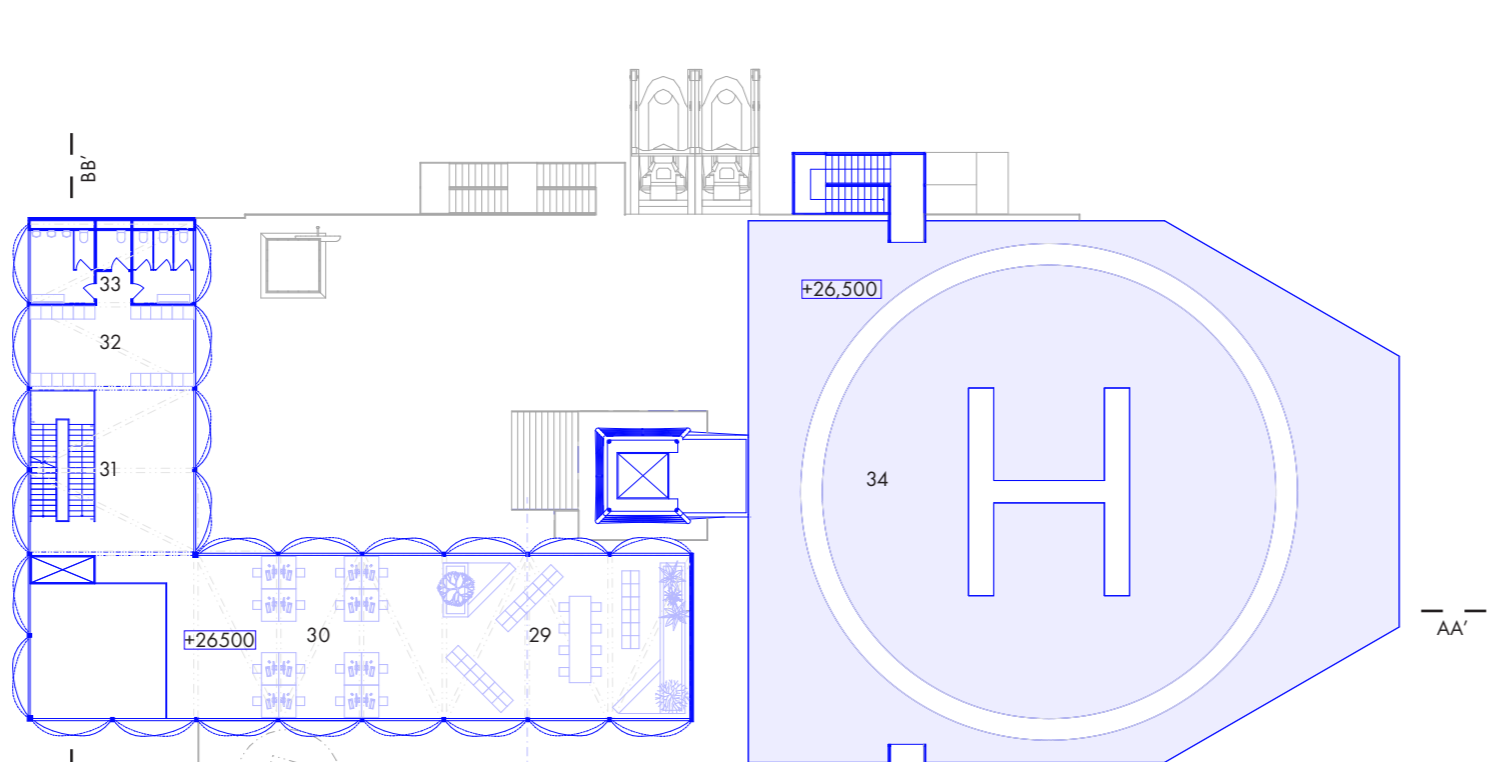
Floor n. -1  
9. Gym  
10. Clock room  
11. Laboratory  
12. Storage  
13. Kitchen  
14. Lounge  
15. Gallery  
16. WC



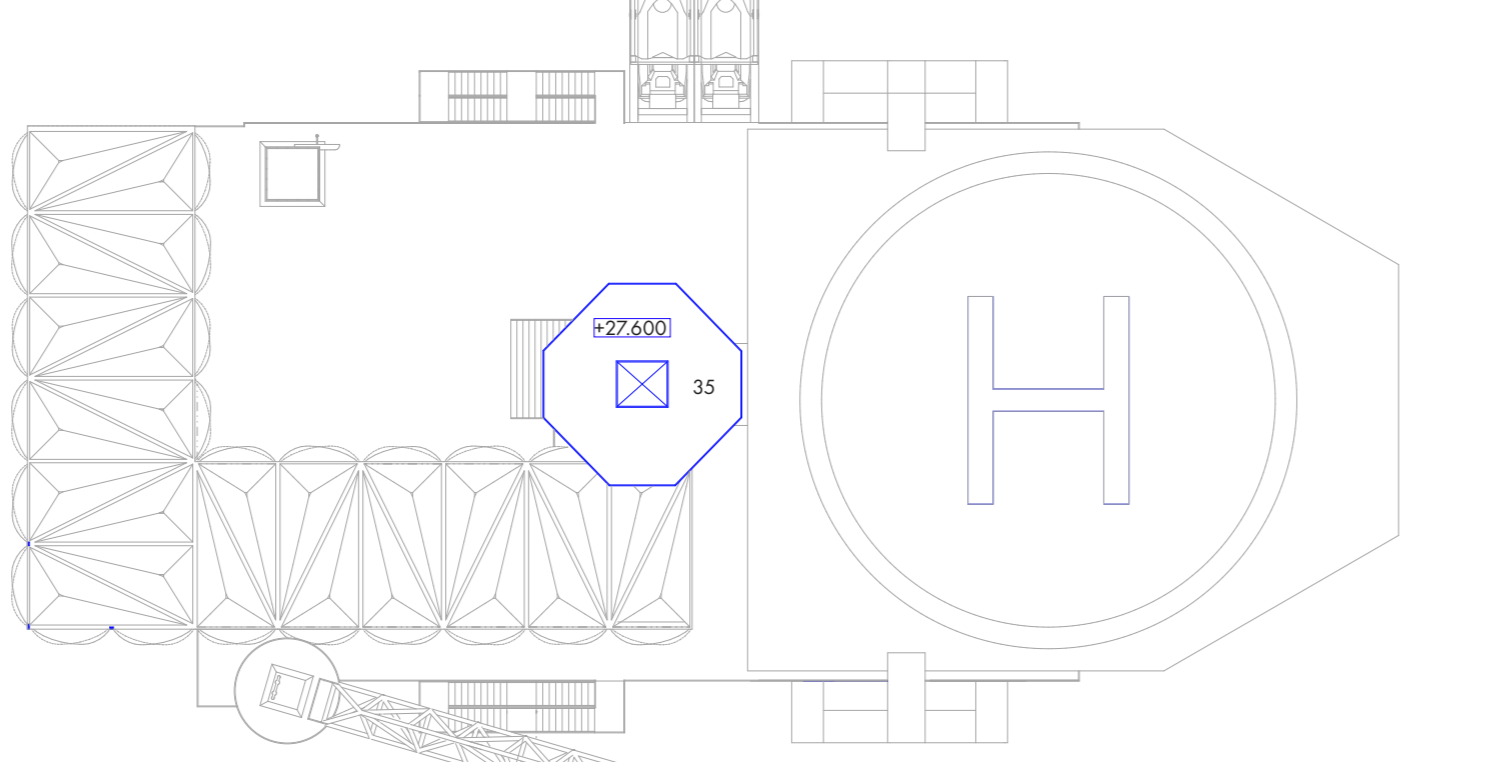
Floor n. 0  
17. Staircase  
18. Personal living quarters  
19. Greenhouse  
20. Hall  
21. Clock room  
22. WC  
23. Meeting room



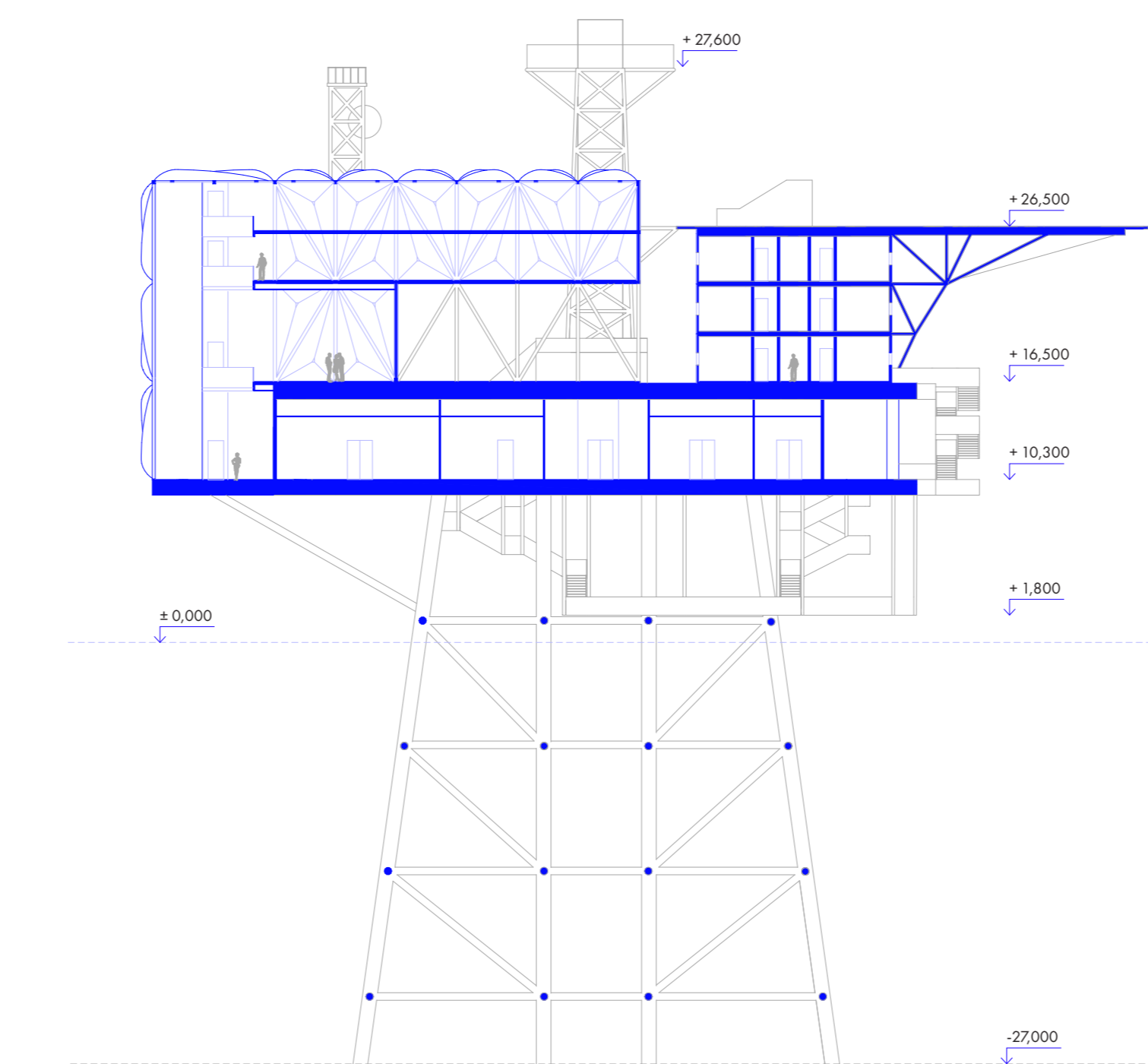
Floor n. 1  
24. Personal living quarters  
25. Laboratories  
26. Hall  
27. Clock room  
28. WC



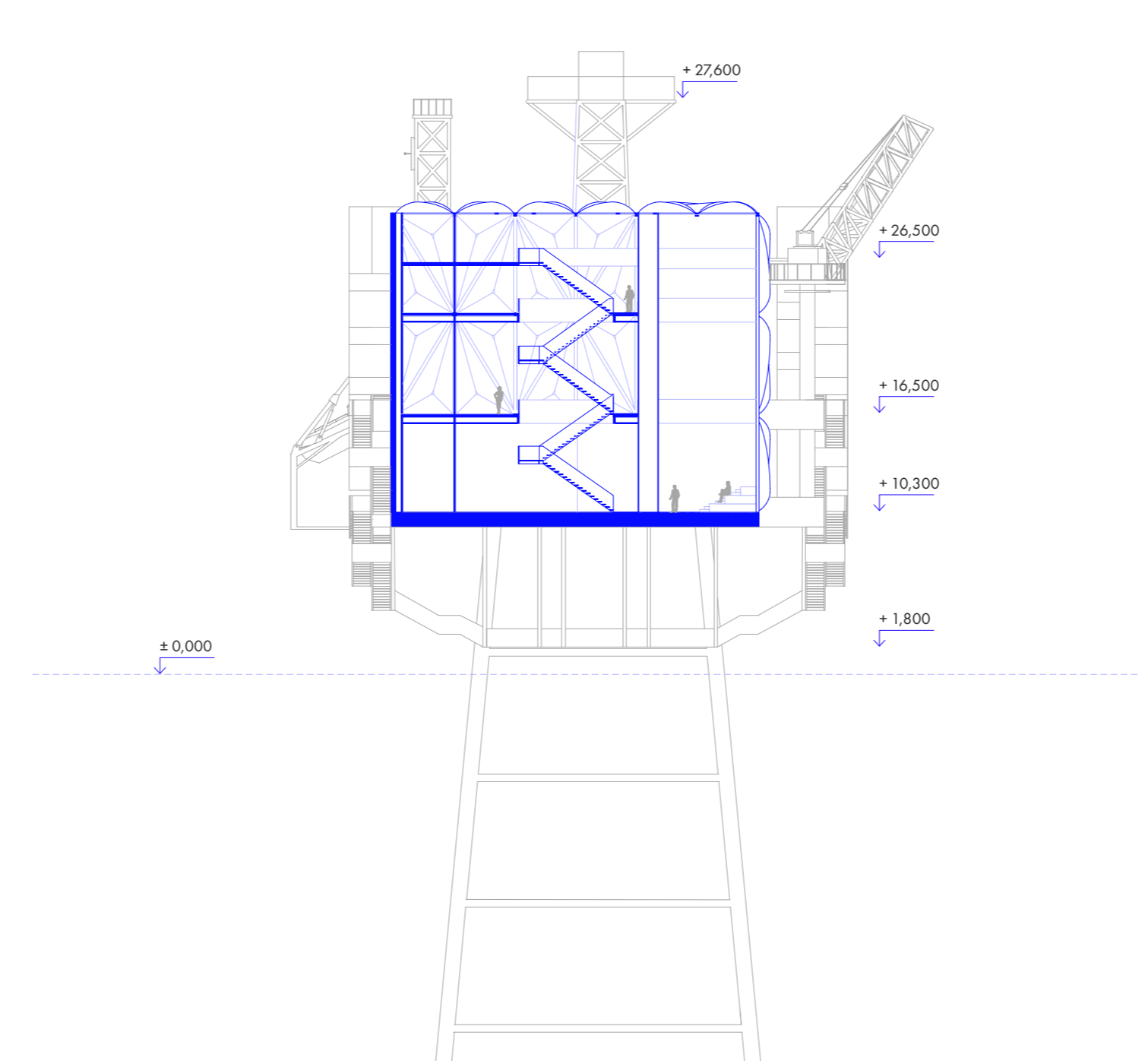
Floor n. 2  
29. Laboratory  
30. Laboratory  
31. Hall  
32. Clock room  
33. WC  
34. Helipad



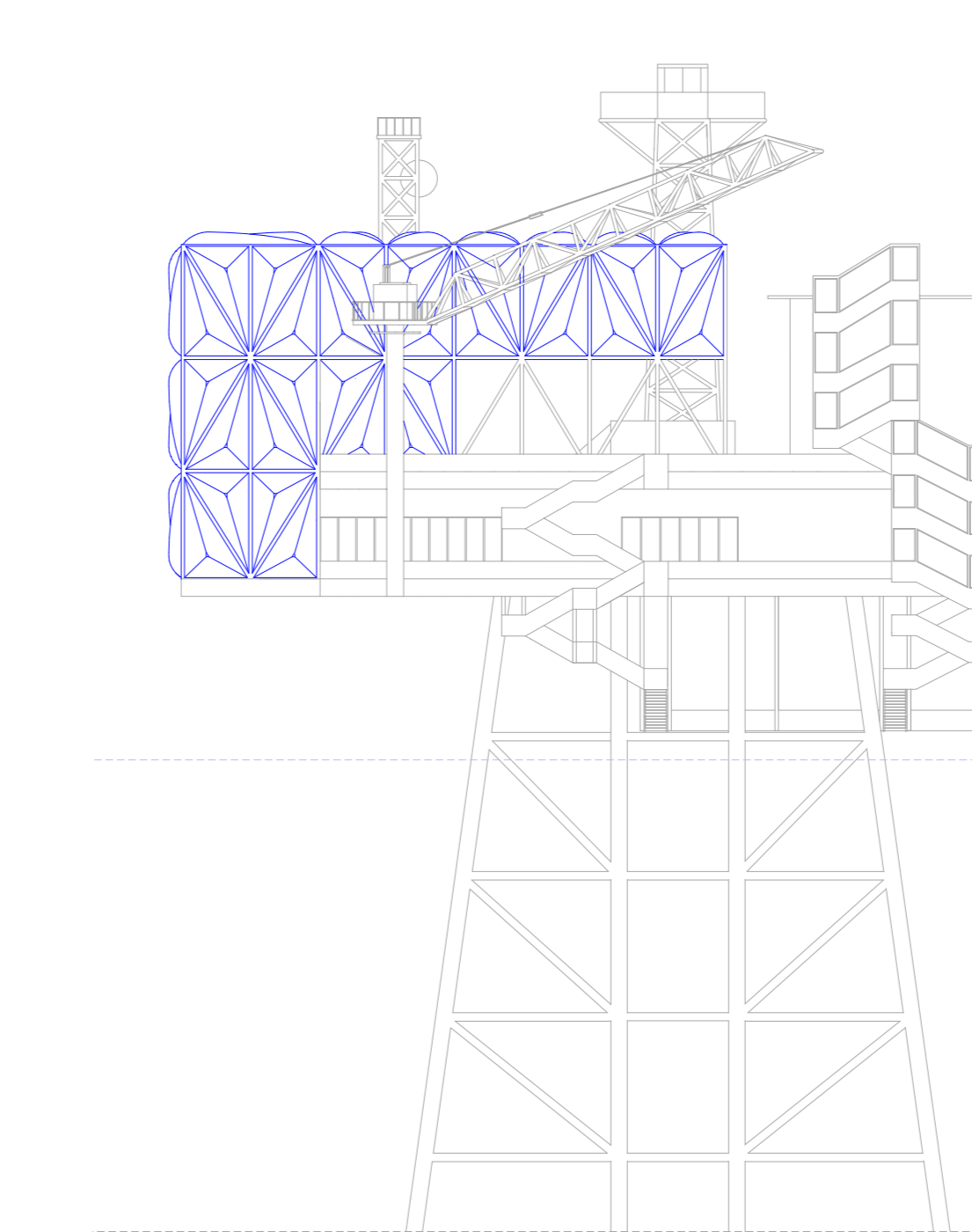
35. Observatory



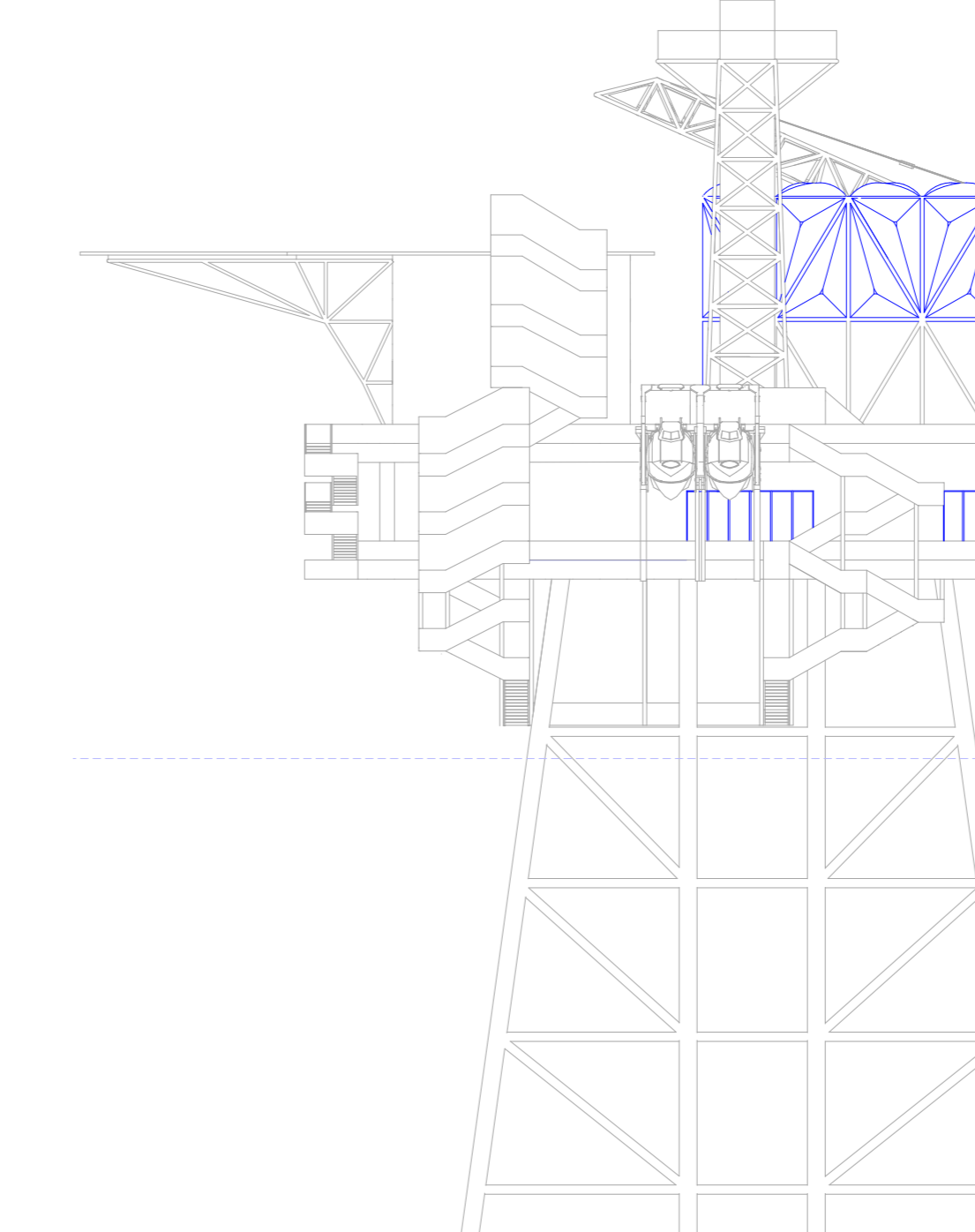
SECTION AA'



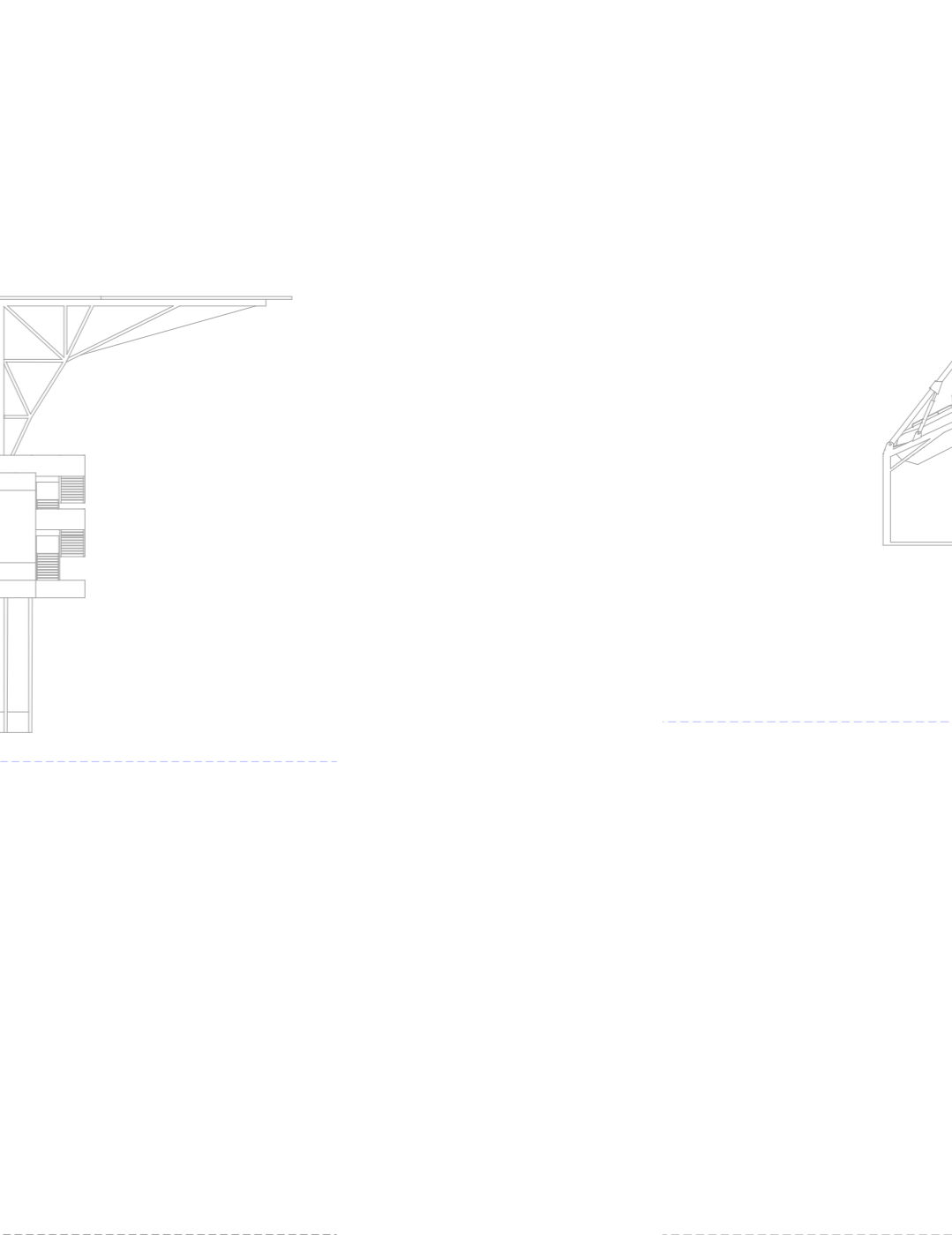
SECTION BB'



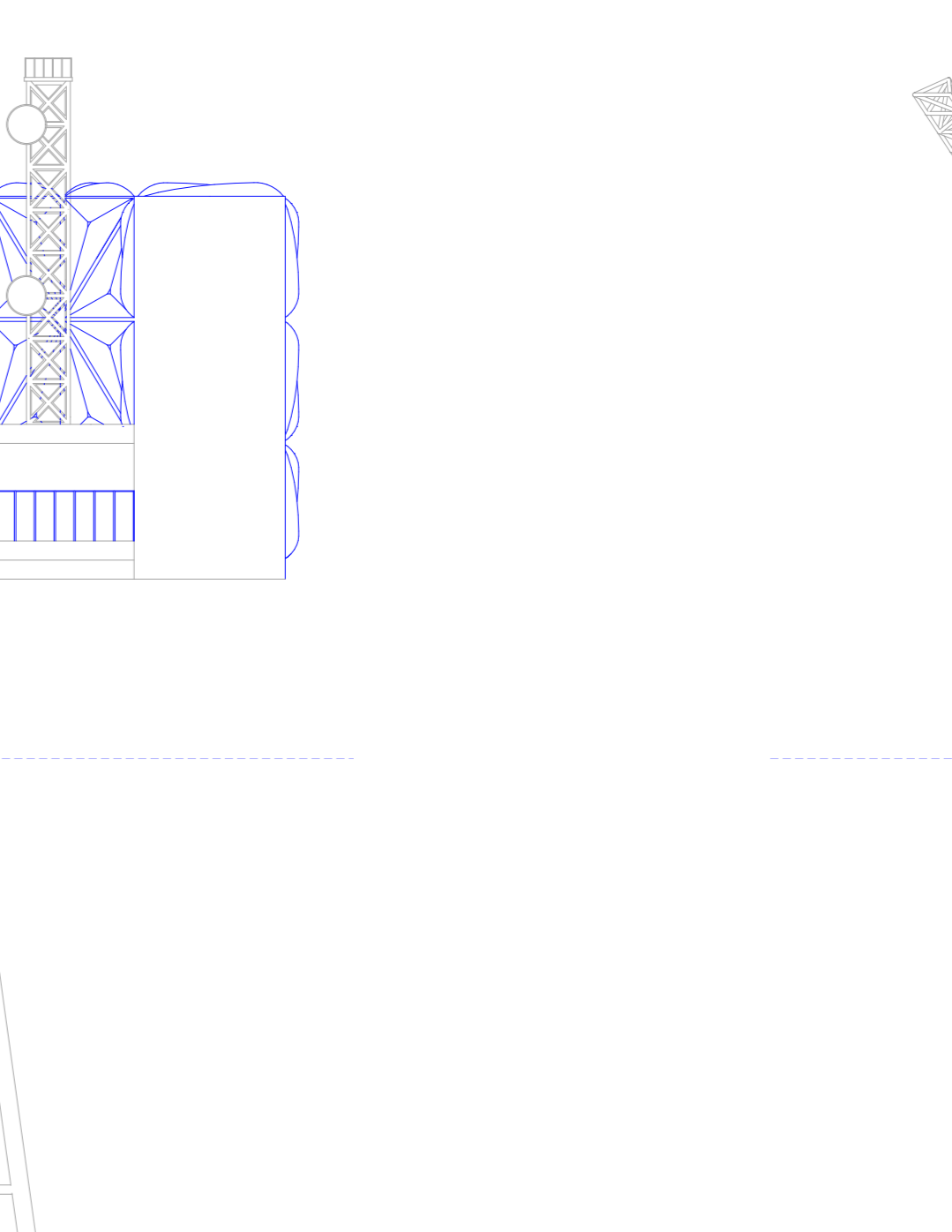
NORTHEAST VIEW



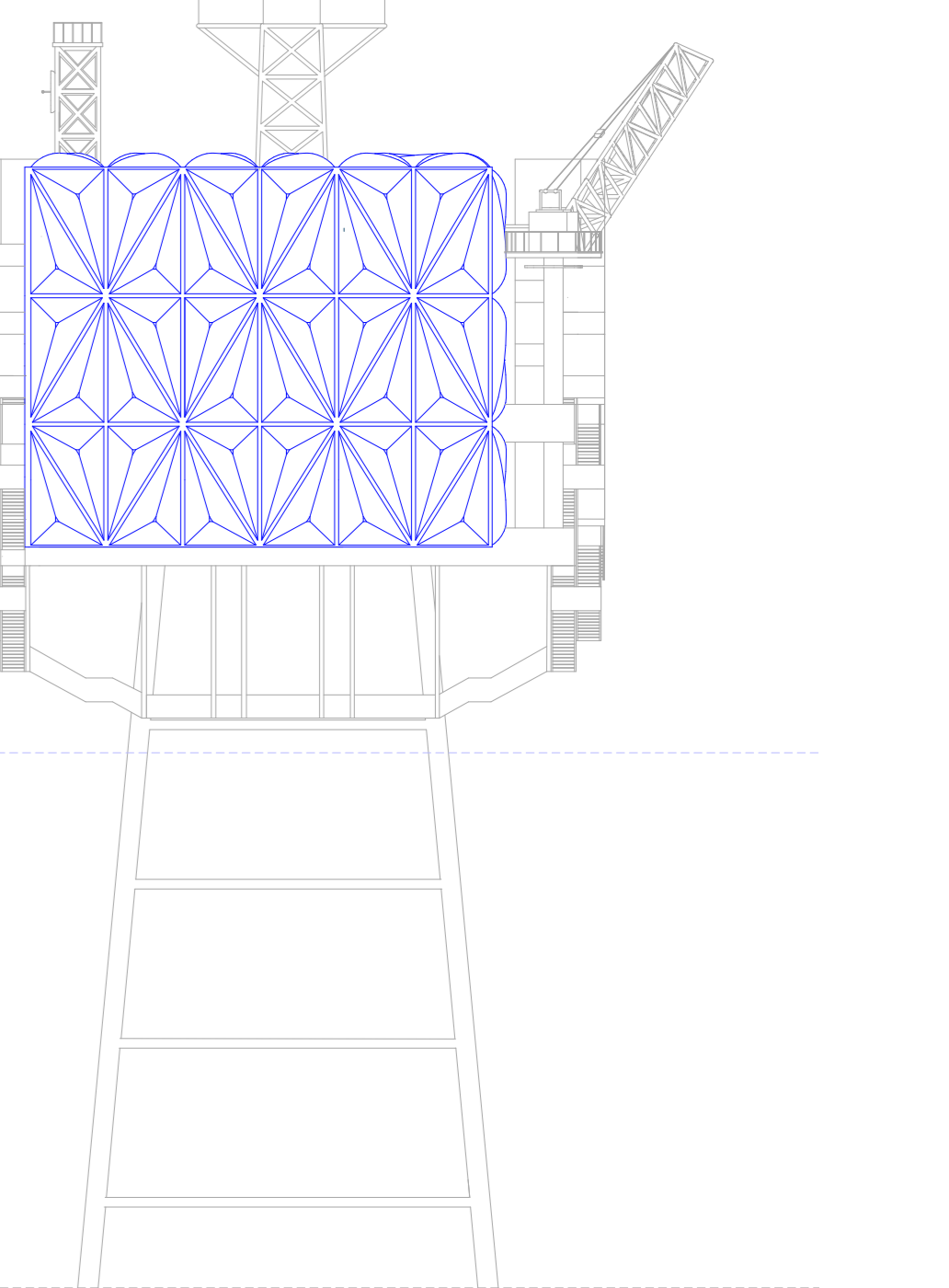
SOUTHWESTERN VIEW



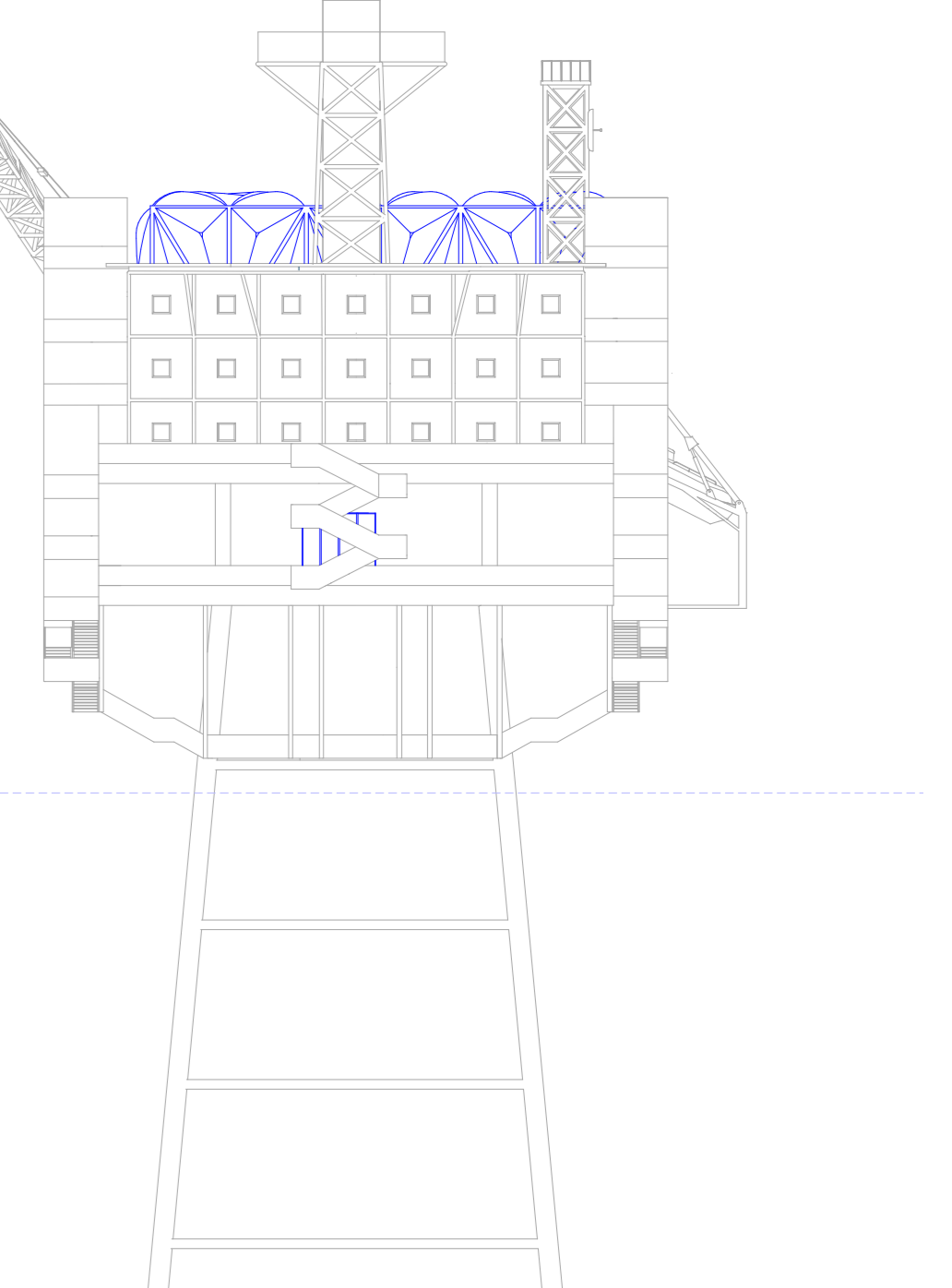
SOUTHEAST VIEW



NORTHWESTERN VIEW



Architectural elevation



Architectural elevation