



Municipality of Soverato

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Municipality of Satriano

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The Tourist Marina of the Soverato-Satriano Bay **Innovation and Sustainable Development for the Ionian Coast of Calabria**

The Soverato-Satriano Bay Tourist Marina project represents a strategic initiative for the territorial development of the Ionian coast of Calabria, combining architectural elegance with sustainability.

Situated along a coastal strip of high scenic value, the marina will accommodate 412 berths, in addition to those reserved for the local fishing fleet, and will provide a wide range of integrated services designed to ensure a comprehensive experience for its users.

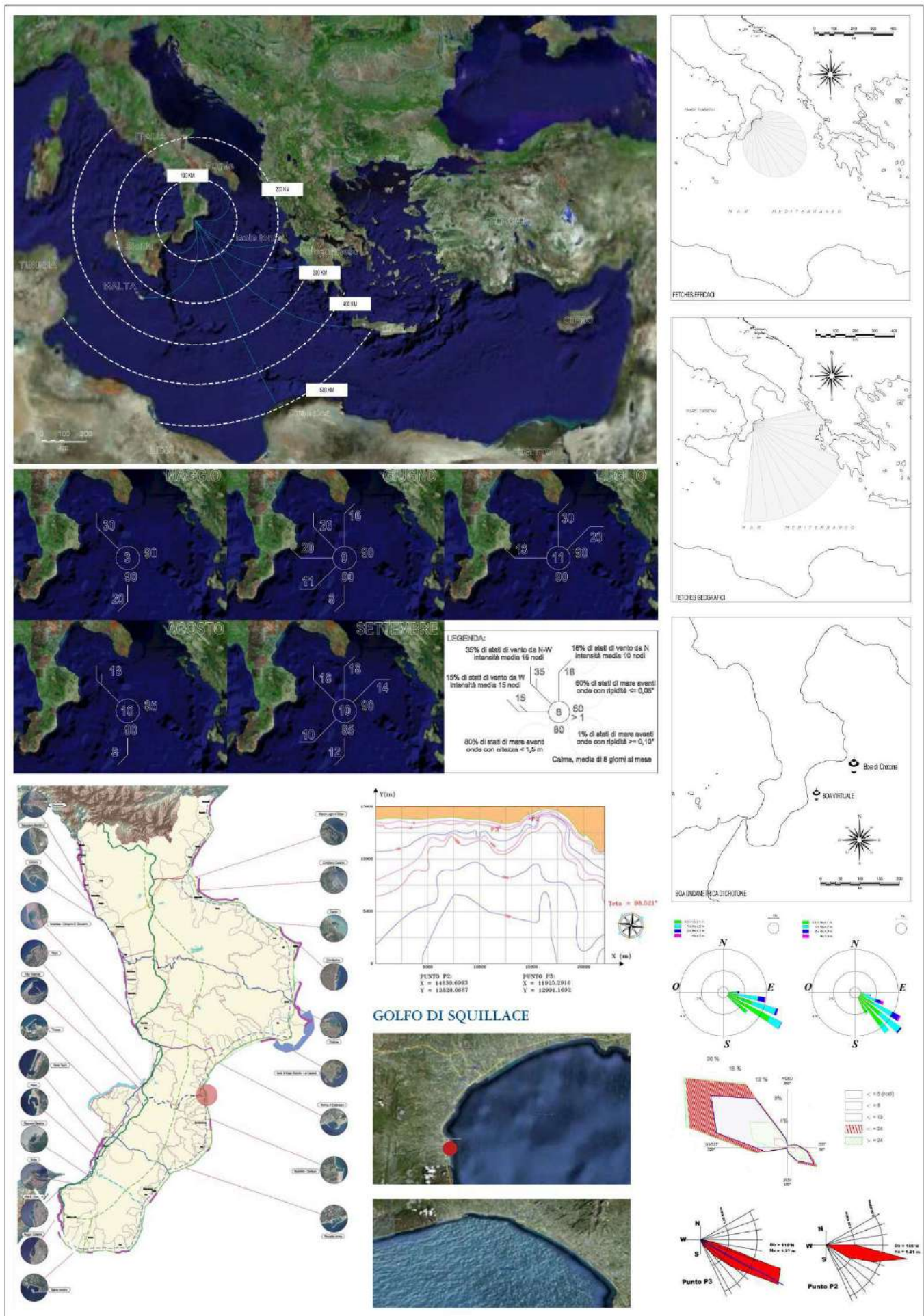
The facility will also include a hospitality area covering 25,700 square meters with a total of 770 beds, a 16,500-square-meter exhibition and conference area, an 8,626-square-meter commercial/office/restaurant area, 26,000 square meters of parking, and 19,450 square meters dedicated to road networks.

The project fits into the broader context of the masterplan for Calabria's port system, outlining an integrated, sustainable vision for the development of the Ionian coastline. Particular attention has been given to marine and meteorological factors, taking into account local climatic and oceanographic conditions to ensure efficient and safe design. This intervention meets the need for well-defined urban and port zoning, establishing the functional distribution of urban and service areas, and promoting continuity between Soverato and Satriano.

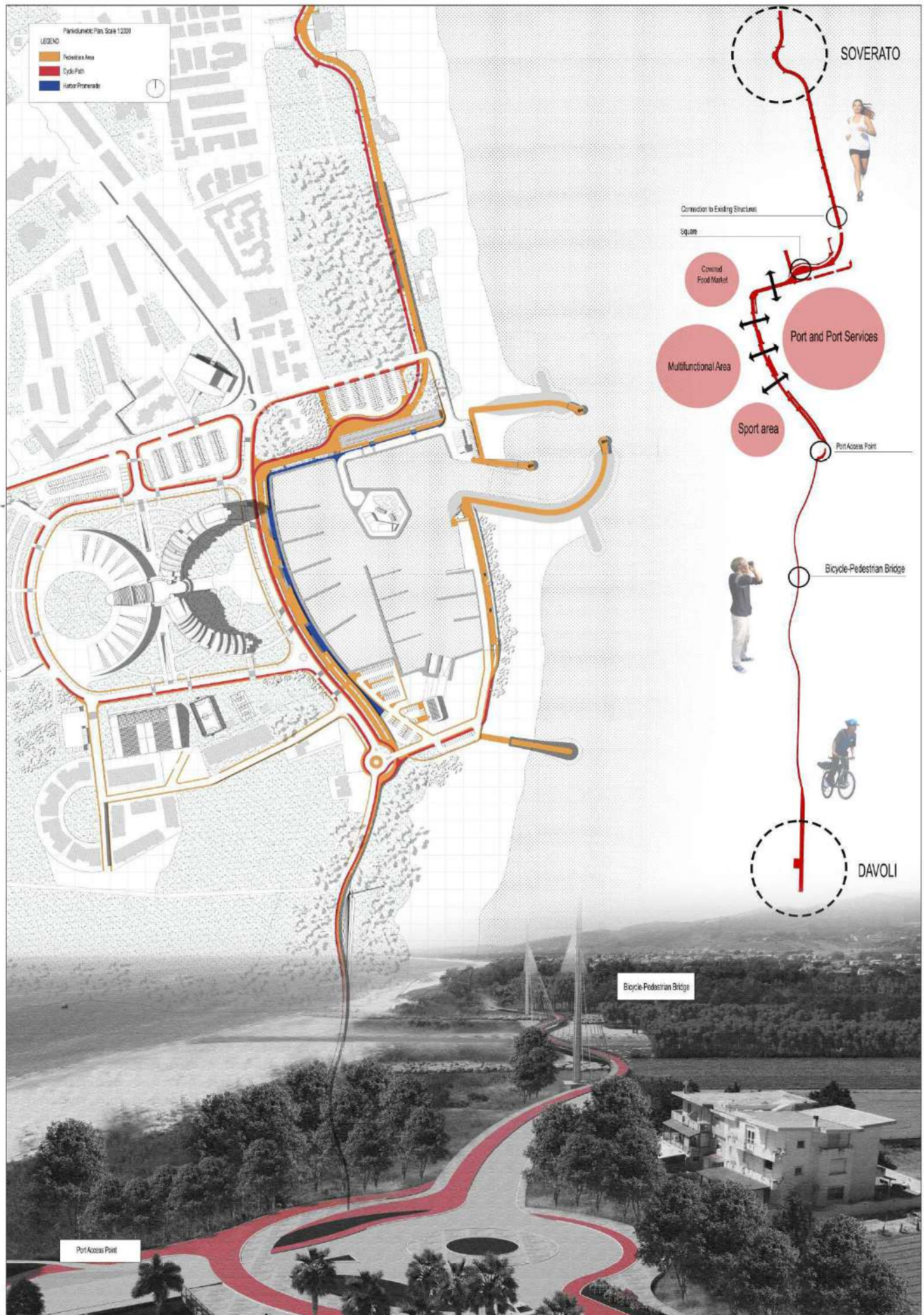
The general axonometric overview and the road network plan reveal a holistic approach to managing accessibility, including bicycle and pedestrian paths connecting major points of interest. Direct connections to primary roadways, such as the "Trasversale delle Serre" and State Road 106 Ionica, position the area as a new, appealing tourist hub. Urban and port functions are arranged to balance community spaces and port activities, maintaining harmony with the surrounding environment. The design of utility networks ensures essential services, including water, electricity, and fuel, with accessible solutions for both vehicles and pedestrians.

The technical-economic framework of the tourist marina, supported by financial and quantitative data for each functional lot and a detailed schedule, provides a complete and operational vision of the phased implementation of the port and its urban components. This extensive project not only integrates the marina into the existing urban fabric but also redefines the identity of the Soverato-Satriano Bay, enhancing the region and fostering a network of premier tourist ports along the Calabrian coast.

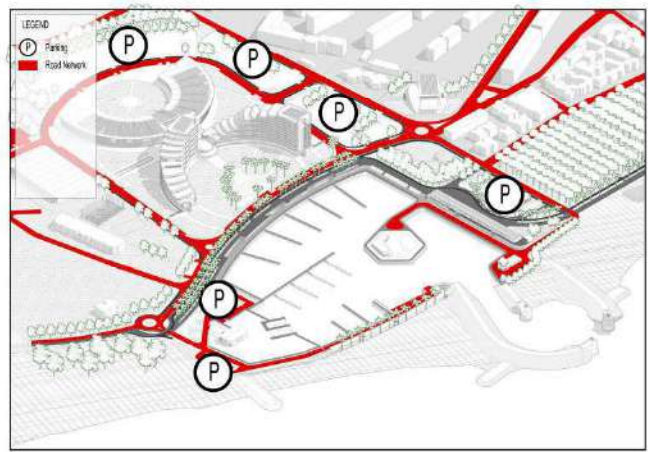
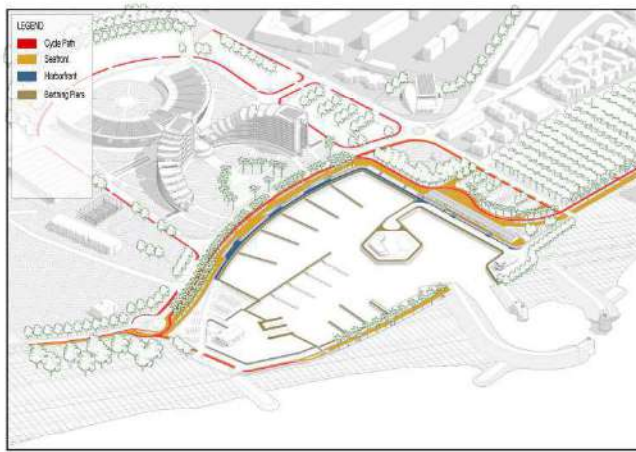
General Overview



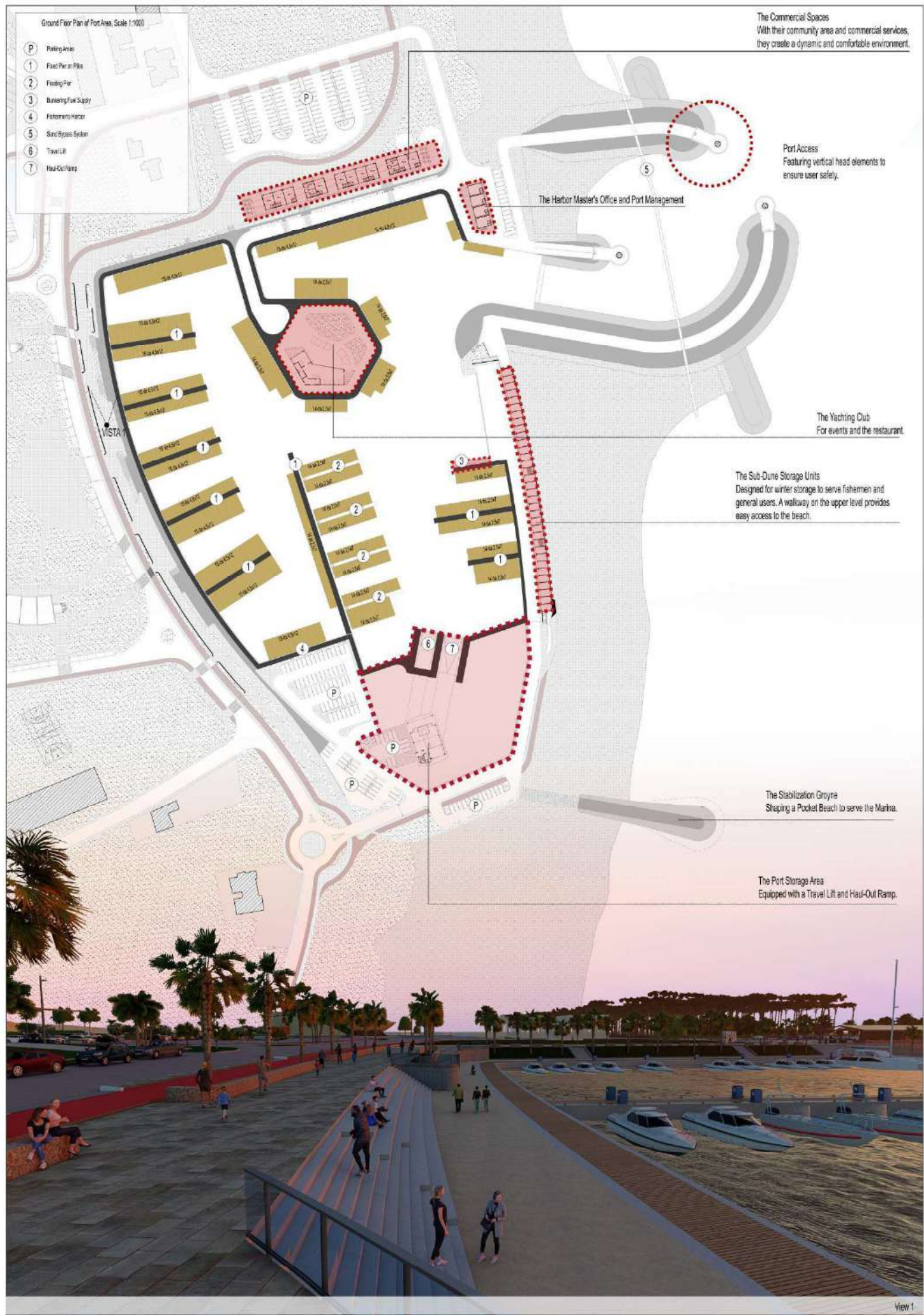
Zoning Plan for Urban and Port Areas



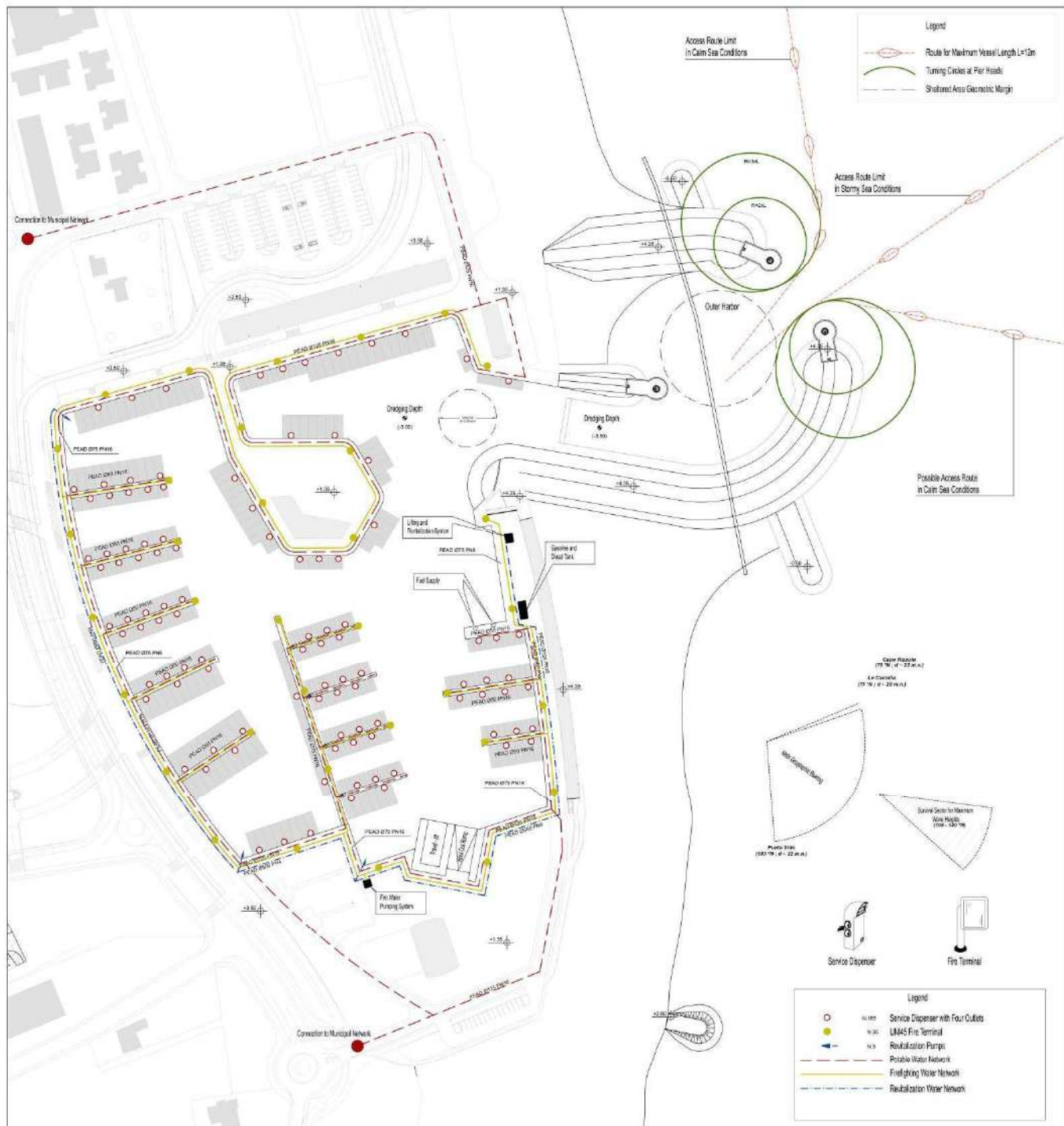
General Axonometric Overview and Road Network



Urban and Port Functions



Network Systems and Accessibility



Material Quality

Given the highly corrosive saline environment, careful attention will be paid to selecting materials, particularly for elevated service systems and complex electro-mechanical or electronic mechanisms. Materials will be chosen for durability, safety, ease of maintenance, and reliability to ensure service continuity and compliance with construction standards.

Water Supply System

Water will be delivered through pipelines along the main roadways and at each mooring point. A dedicated system will be implemented for the port area. The most corrosion-prone pipes, made of high-density polyethylene (HDPE), are designed to withstand a test pressure of 10.0 bar. Two separate water networks will be installed at mooring. Potable Water Network for marine use on board and refilling on board tanks. Sea Water Network for washing boats and refilling, utilizing water from the main tank. A pump distribution network will be implemented to ensure operating pressures, maintaining 2.5 Bar at the port area. The average annual water consumption is approximately 30 m³ (100 litres per boat per day, with summer consumption (July and August) being about four times that of winter. Water is supplied to the boats via hydrant taps (1" or 1.5" at each berth, embedded in service pedestals placed along the piers away from boat berths, depending on the size). These hydrants feature hose connections or quick-release couplings for high-pressure use. Gate valves will typically be installed at the base of each pierhead in quay. At the terminal end of the piers, a firefighting outlet with a submersible pump for fire supply will be provided.

Firefighting System

The firefighting system will be separate from the general water supply. However, regulation valves will be installed on the water network to enable exclusive firefighting service during emergencies. Emergency pumps powered by diesel engines will ensure functionality in case of simultaneous electrical outages. The firefighting system will use HDPE pipes and fittings, standard UN 45 (1.8m) sections below mooring with 30 water hoses, stored no more than 10 metres apart. In the fire station area, an independent firefighting system will be installed, as required by national regulations.

Electrical System

The local port distribution network will serve both marine buildings and individual moorings. Electrical cables, protected by conduits, will run along the docks (preferably below ground level but above the maximum tidal height) and supply external systems with integrated circuit breakers and residual current devices (RCDs). Service pedestals, incorporating electrical supply terminals, interlocked sockets with an IP65 or higher rating, will be sized in shape and size and made of S355 steel. This providing system will connect all electrical equipment and material parts to the general ground loop. The normal power will depend on the class of boats and their onboard electrical systems. An average normal power of 5 kW per berth will be considered, with a total power demand of approximately 250 kW. Most boats will use up to 100 kW power at 230 V. The low-voltage transformer cables will be centrally located within the marina to minimize losses and voltage drops. The network will be divided into sections that can be independently disconnected in case of localized damage, limiting network disruption to a few berths. An emergency generator room will be included, with sufficient power output to supply essential services required for the continuous operation of the marina.

Lighting System

The public lighting system in the marina will be designed not to interfere with maritime signaling (red and green lights). If light poles are higher than the external retaining wall of the breakwaters, their lights will be appropriately shielded from the open sea. Overall brightness will be reduced to 5 Lux to avoid disturbing those sleeping onboard. Floodlights will be avoided due to the risk of excessive direct or indirect glare caused by reflections on the water. A system of in-situ lighting, spaced at 15 metre intervals and not exceeding 4 metre in height, will be used. Along the quays and piers, the power lamps (maximum 40 W) will be installed in service pedestals at each mooring, positioned 55-60 cm above the walking surface. High-efficiency LED lamps with low energy consumption (7-10 W) will be employed.

Sewage Network

The sewer system will be separated into: Stormwater Network - Stormwater will be channelled to the lowest point of the marina. Runoff from paved areas will drain outward from the water base, preventing surface water from flowing into the port basin. Rainwater will drain rapidly from places and made via 1.5-2% slopes, directed to water discharges into the base tank. Wastewater Network - Wastewater from marina buildings and big water collection points on the quays will be directed to the adjacent, fully functional lifting station for transfer to the public sewer system. First Rainwater Collection - First rainwater tanks will collect and regulate the volume of rainwater generated during the first 30 minutes of critical rainfall, which is often highly polluted and available for direct discharge. These volumes will be transferred via a pumping system to an external treatment facility.

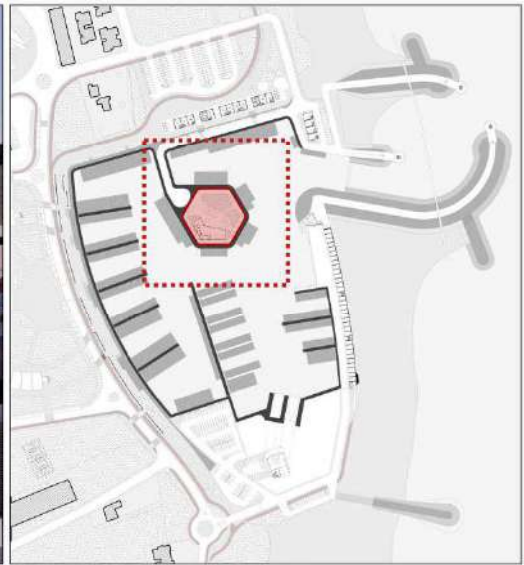
Communication Systems

The marina will feature a Wi-Fi network, uniformly distributed in high-traffic areas such as restaurants, the parking club, and port offices. Visitors, whether for business or leisure, will enjoy free internet access on the marina's platform. Visitors will receive daily accounts to manage email and internet coverage from their vessels with ease. The marina will integrate into the "Smart Marina" system, providing simple and fast internet access. Users will integrate their mobile devices (GPS, smartphones, tablets) to the network and automatically connect to all facilities within the marina without the need for credentials. This enhances the marina's connectivity with the city and the visitor's needs. For internal and emergency communication, a speaker system will be installed around the mooring basins, linked to the marina's control tower.

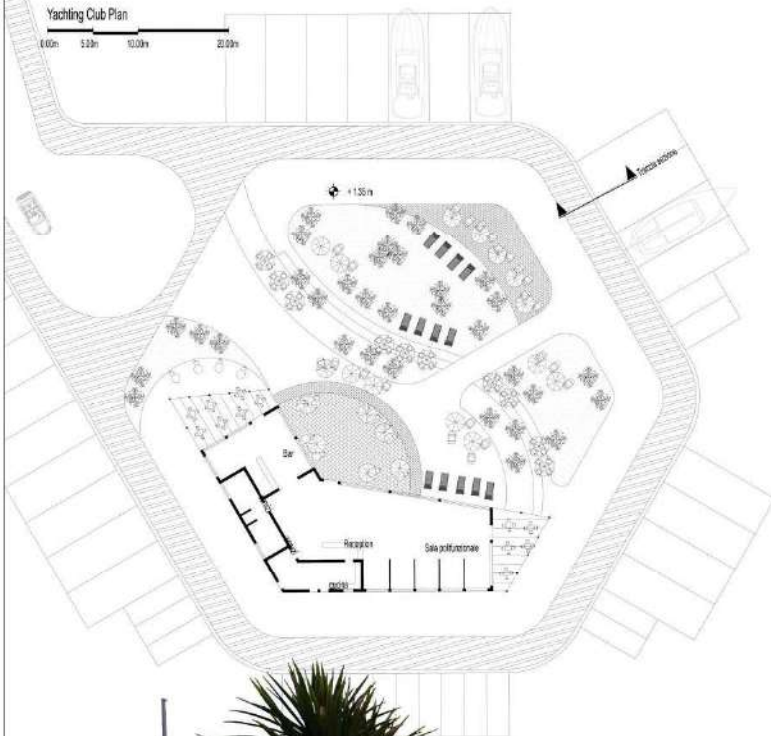
Signaling Systems

The port entrance will feature a compliant red-light system visible at night, unaffected by ground lighting. The two pier heads marking the entrance will have underwater buoys mounted on high appropriate poles. These buoys will include Federal warning lights, approved by the Light House Authority, and equipped with 24 VDC special double-enclosed lamps. Power will be supplied by a photovoltaic system with 36-hour autonomy, with the option for solar power. Marked buoys will be installed at the pier heads and bases to indicate pier numbers (per mooring length). Additional signaling and alarm systems will include: 1. Alarm systems. 2. Alarm systems. 3. Alarm systems for various systems.

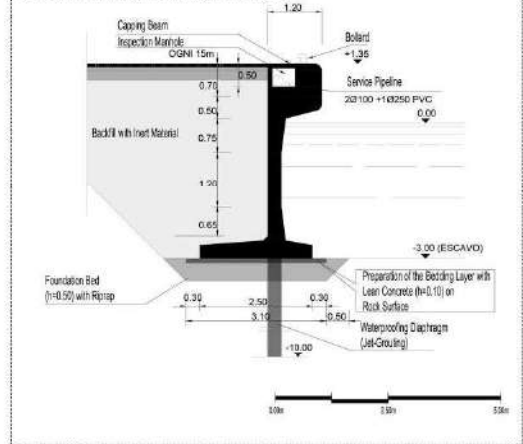
Yachting Club and Typical Cross-Section of Retaining Wall



Yachting Club Plan



Cross-Section of Retaining Wall Surrounding the Yachting Club



A sports club will be included in the marina for representation and to organize sporting activities such as sailing regattas and deep-sea fishing. The Yachting Club, covering approximately 600 sqm, is located on a peninsula within the port basin. It features a spacious plaza, a bar, and a restaurant. Positioned slightly away from the common port users, it offers excellent views and visibility.

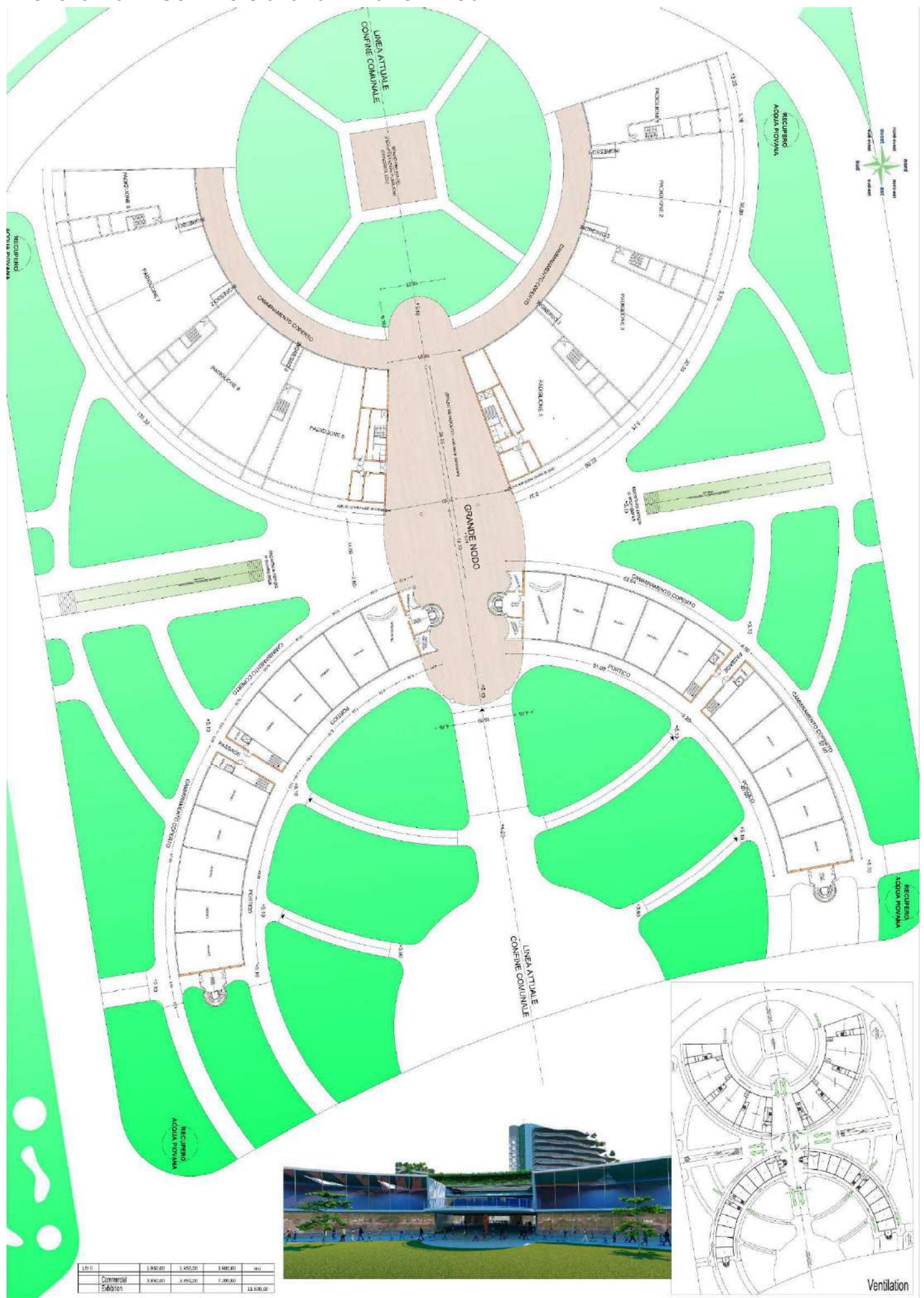
For the perimeter quay, based on the preliminary hydrogeological and geotechnical assessments conducted during this phase of the design process, the construction of a rock retaining wall is planned for the peninsula hosting the Yachting Club. Additionally, an anti-reflexive design will be implemented for the rest of the dock. This will allow the entire dock to be constructed by using an appropriate well-point system.



This aerial rendering illustrates the proposed development in the Port of Los Angeles. The central feature is a large, circular stadium with a blue roof and a green field, surrounded by a red track. Adjacent to it is a modern arena with a curved, metallic facade. The development is situated along the waterfront, with a large parking lot and a promenade. The surrounding area includes existing infrastructure and green spaces.

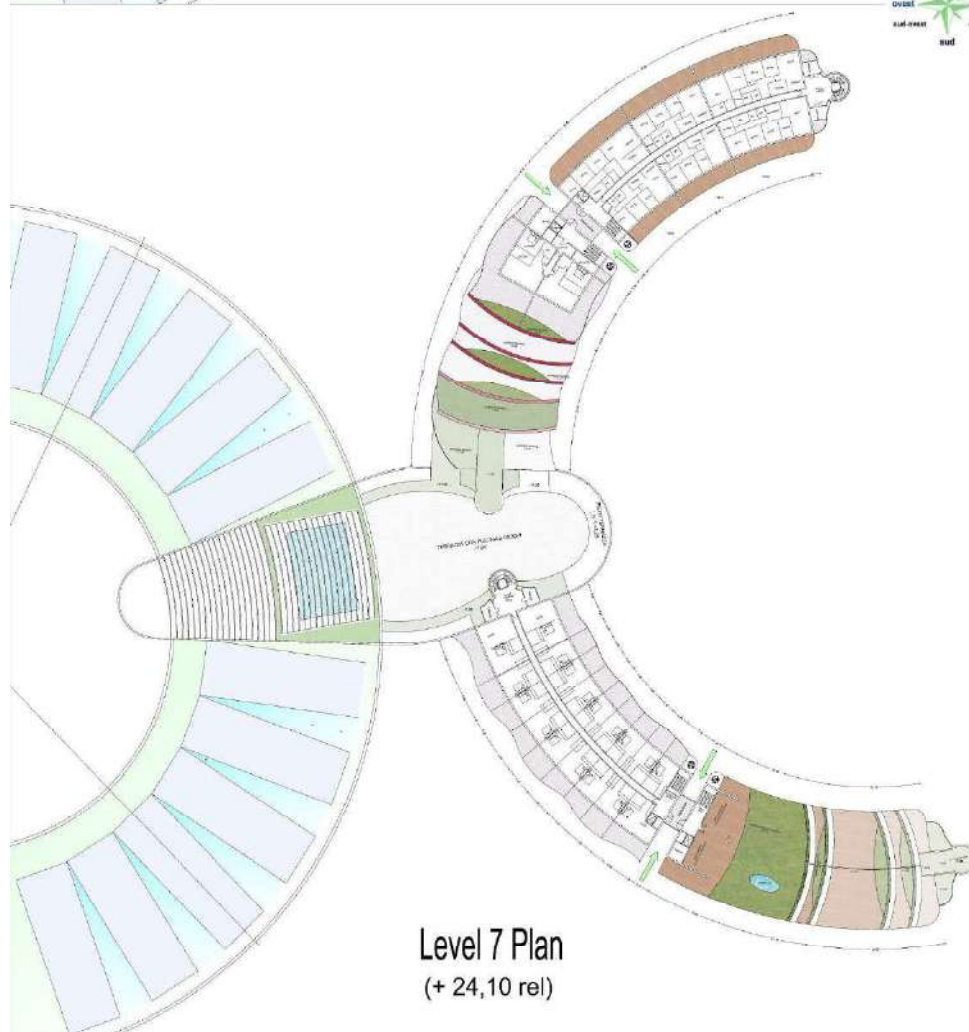
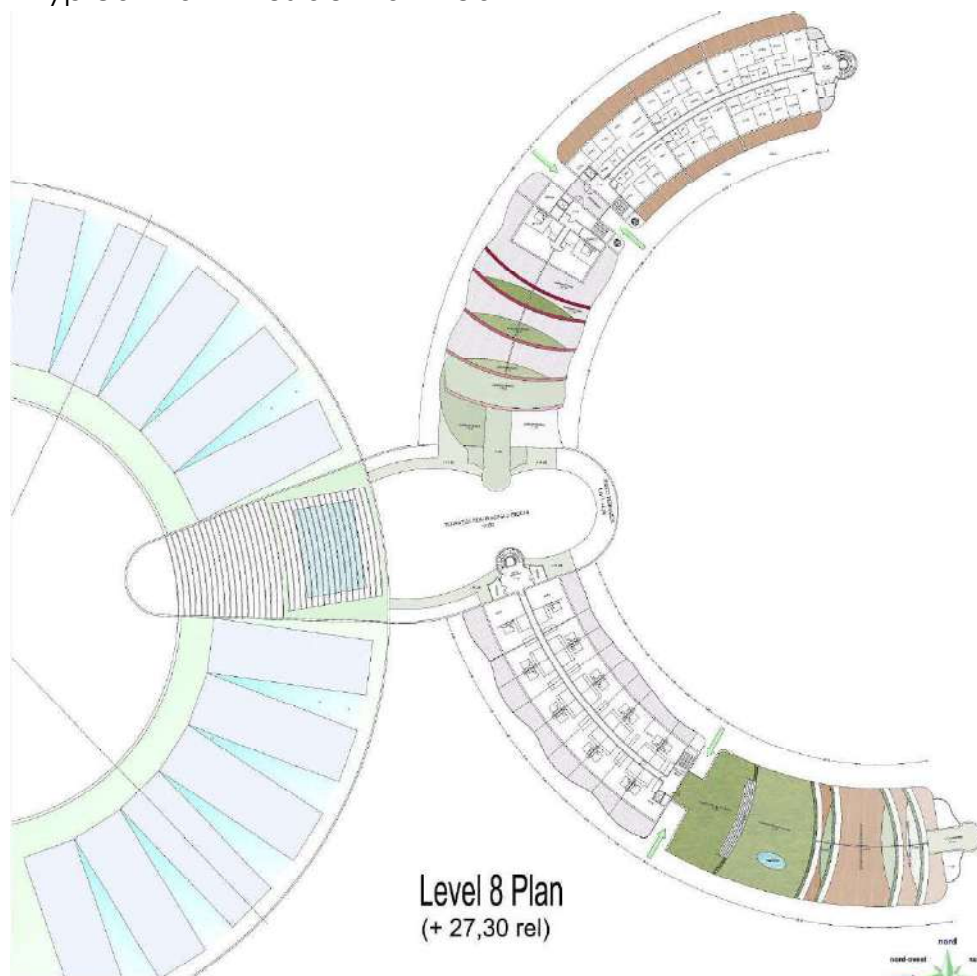
Urban-Architectural Context System

Level 0 Plan - Commercial and Exhibition Area



17/11	1.900.000	1.900.000	1.900.000	1.900.000
Commercial	1.900.000	1.900.000	1.900.000	1.900.000
Exhibition	1.900.000	1.900.000	1.900.000	1.900.000
				12.500.000

Typical Plan - Residential Area





MERCAT MPFF (FISH - FRUIT - FOOD) - LIV 0

View of the Bicycle-Pedestrian Connection between Soverato, Satriano, and Davoli



The new bicycle and pedestrian bridge connecting Soverato to Davoli represents an innovative link structure, harmoniously combining functionality and respect for the surrounding environment.

The structure has been designed to be lightweight and airy, with a modern and elegant design that blends seamlessly into the landscape without compromising its integrity. The pathway is wide enough to allow both pedestrians and cyclists to move freely, maintaining a clear separation between the two lanes.

View of the Connecting Bridge Between Soverato, Satriano, and Davoli



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View of the Connecting Bridge Between Soverato, Satriano, and Davoli



View of the Connecting Bridge Between Soverato, Satriano, and Davoli

Renderings Table



General View of the Residential/Hotel Area



General View of the Waterfront



General View of the Port Entrance



General View of the Exhibition Area



General View of the Port