

New wastewater treatment plant in Santa Margherita Ligure

Dati generali

- ✓ Years: 2005-2009
- ✓ Customer: Genova Acque SpA
- ✓ Value of work: € 5,000,000

Executive structural design

Characteristics of the project

The new inter-municipal wastewater management plant serving Santa Margherita Ligure and Portofino will be located in the area of the current bus parking area and terminus in the locality of Punta Pedale.

Given the particular location of the plant, in an area of significant environmental value, and the urban planning and infrastructure needs connected with the presence of the only road link between the municipalities of Santa Margherita Ligure and Portofino, the new plant, in its final configuration, will be built entirely underground. The limited available spaces have also prevented the creation of a suitable container in which to house all the necessary plant engineering parts, and to provide for the preparation of the area and the creation of support works separate from the concrete processing tanks.

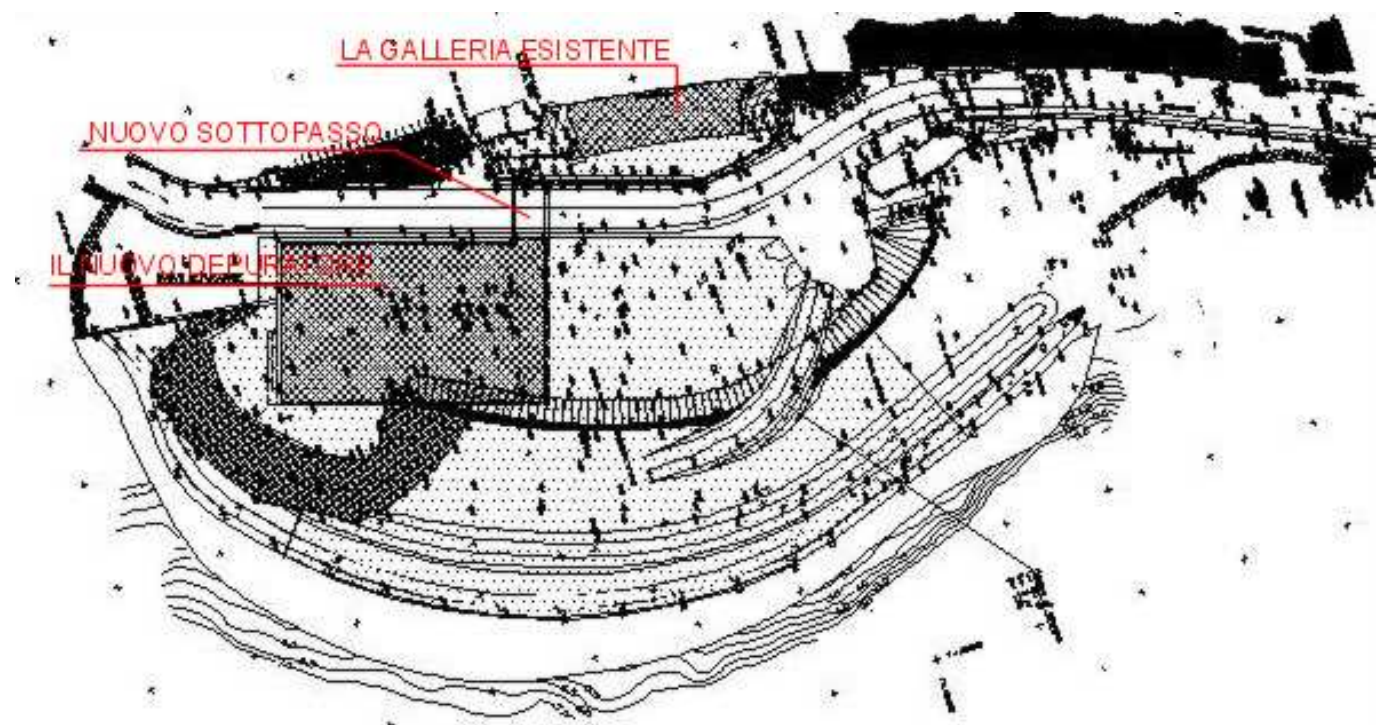
Consequently, the perimeter walls of the tanks will serve a double function of containing the slurry and providing definitive support for the surrounding terrain and roof structures.

The work phases include the installation of permanent micropiles and perimeter ties and their subsequent plating in reinforced concrete in order to form a single structural barrier that can perform the double task described above.

The excavation is at an altitude of -3.5 below sea level.

Upstream from the provincial highway is the current treatment plant, which is located in an artificial tunnel. There are therefore two intervention areas for the new plant:

1. The existing tunnel and its entrance and exit areas.
2. The surveyed area alongside the state highway used as a parking place and bordering the property of the building known as "Covo di Nord-est".



Location plan for the work

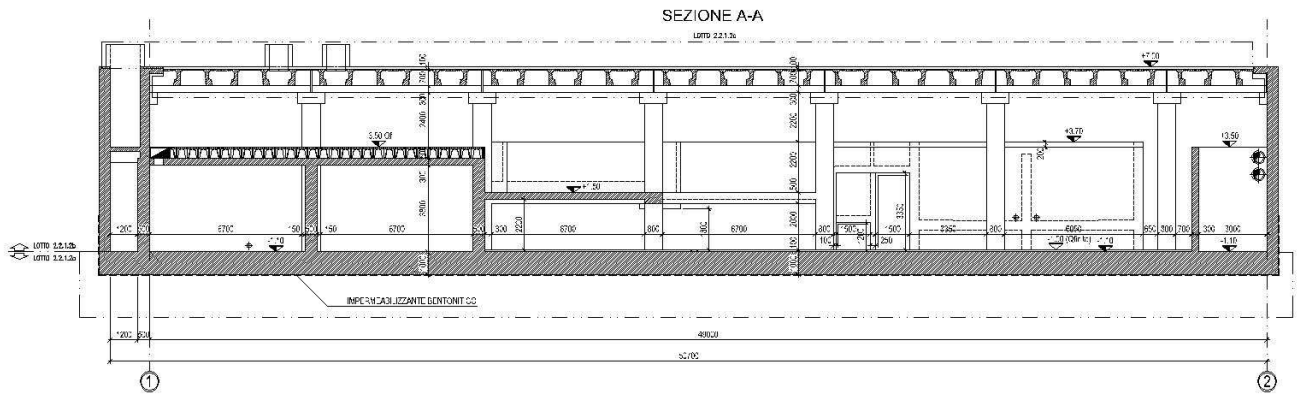
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The creation of a link between the two areas is also planned through the construction of an underpass beneath the provincial highway. Specifically, the envisaged works include:

- Demolition of some reinforced concrete structures inside the tunnel and the construction of building works necessary to house new plant machinery.
- Construction of the underpass crossing the provincial highway

and of a freight lift compartment at the Portofino-side entrance to the existing gallery.

- Construction of the underground compartment (floor plan dimensions of about 30 x 50 metres) in current bus parking area.
- Complementary works (urban planning arrangement of the parking area and completion of the sea defence works for the wastewater plant)



Section of the new totally underground wastewater management plant



The Santa Margherita wastewater management plant under construction; the drive-in tunnel entrance can be seen in the foreground to the right