



Completed TensarTech TW1 ME Wall at Villanova residential complex



Walls & Slopes Nº 454

Landscaping tiered wall structure

 Dubai, UAE

CONSTRUCTED IN 2020

Benefits

Reduced carbon footprint
compared to reinforced concrete walls

USD\$1,000,000 cost savings
from mechanically stabilised earth (MSE) wall system

USD\$350,000 savings
by avoiding shoring of the existing road

3 months reduction
in construction time

Tensar Walls for Landscape Beautification

At the Villanova luxury residential villa complex, a series of tiered walls were required for landscaping surrounding the site. The walls were to be built against sandstone in some locations, and against dune sands in other locations.

CLIENT'S CHALLENGE

The challenge was that the residential complex is located next to an existing state highway. The boundary wall for the complex was already in place and the state highway was to be kept open for traffic. The tiered walls had to be designed so that neither the boundary wall nor the state highway would be affected by the construction operations.

TENSAR SOLUTION

Tensar designed the landscaping walls as per the existing soil conditions and limited space available and proposed a MSE Wall to avoid shoring and disruption to the road above. A layer of sweet soil cover was provided to accommodate small shrubs for landscaping. In addition to this, the walls were designed to incorporate the planting of palm trees on the topmost MSE wall tier.



TensorTech TW1 ME Wall before construction (left), during construction (top right) and after construction (bottom right)

PROJECT BACKGROUND

Villanova is a residential community located in the Dubailand complex, Dubai, UAE. The project is situated across one of the busiest roads in Dubai Emirate, the Emirates Road (E611), near to the intersection of the Dubai – Al Ain Road (E66) with Emirates Road (E611).

Villanova offers community living with a modern Mediterranean flair amid one of Dubai’s most serene landscapes. The landscaping works included shallow slopes with green finishes and retaining walls at different levels, providing a hanging garden effect.

The client (North Dubai Lands LLC) was seeking an alternative to the conventional reinforced concrete (RC) wall, as this option would be expensive, time consuming and require temporary shoring works for safe construction.

Tensor presented the TensorTech TW1 ME system as the alternative solution which was accepted by the client, as the system is well known and has a successful track record in the region. The system is aesthetically appealing and cost effective compared to a RC Retaining wall and offers the same performance. Tensor also supported the installation team in developing a method statement for construction in restricted space without shoring.

The walls were designed by Tensor to retain the existing road on top simultaneously providing an exquisite landscape feature for the luxurious development.

Client

North Dubai Lands LLC

Consultant

Parsons

Distributor

Pioneers of the Middle East (POME)