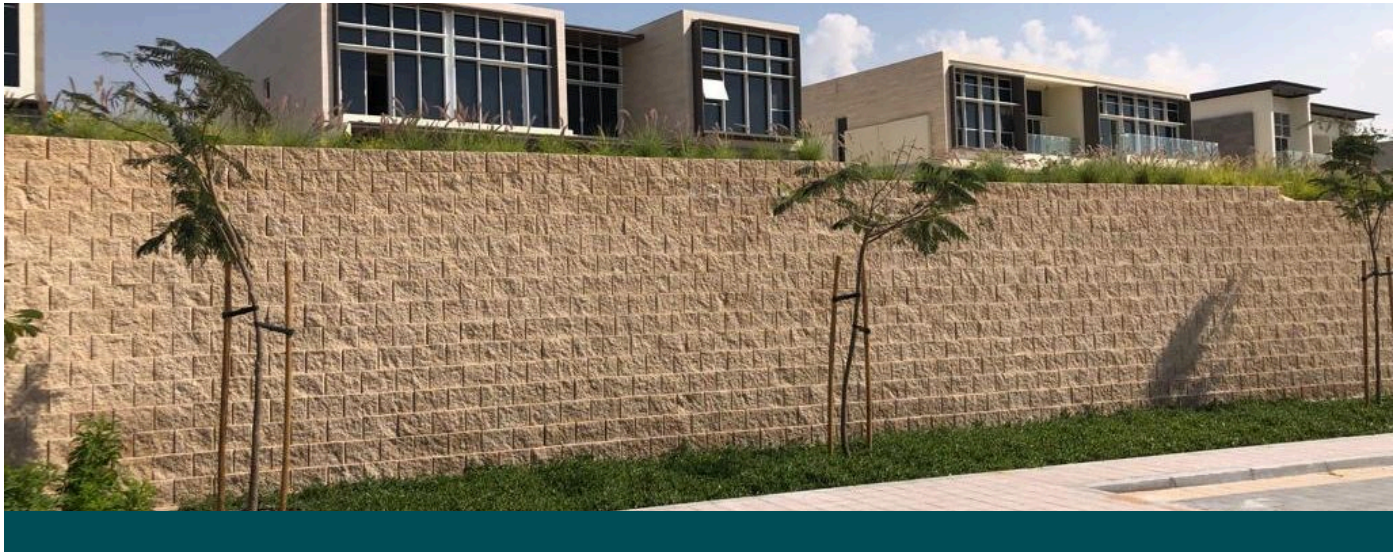


DUBAI HILLS ESTATE GOLF PLACE/GOLF GROVE

DUBAI - DUBAI - U.A.E.



TYPE OF PROJECT

Reinforced Soil Walls And
Slope Reinforcement

YEAR OF CONSTRUCTION

2022

CLIENT

EMAAR PROPERTIES PJSC

CONTRACTOR

-

DESIGNER

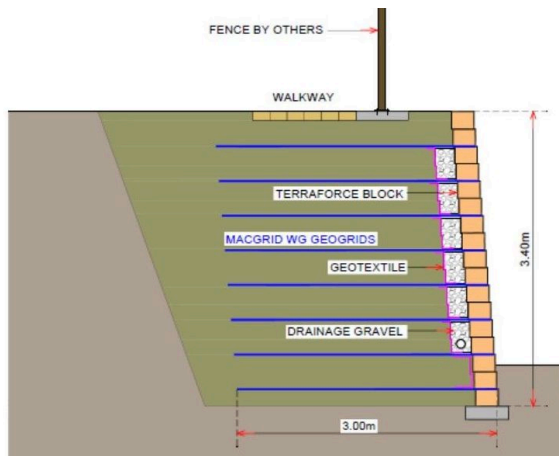
ZAID AL HUSSAIN

PROD. RELATED

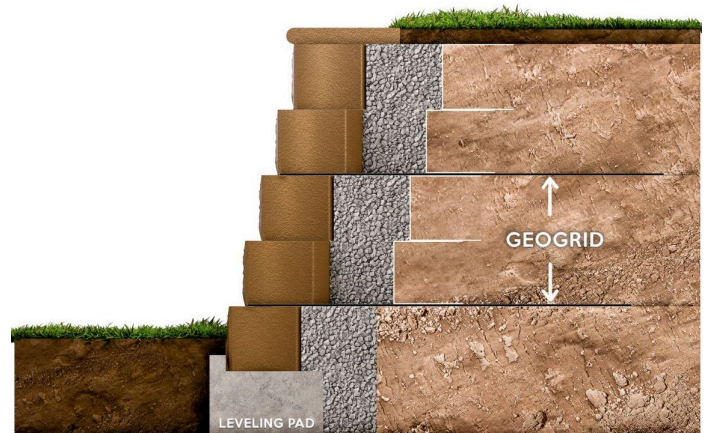
MACWALL (780 M2), MonoAxial GeoGrids (Macgrid WG Geogrid: 3,900 M2)

Challenge

Dubai Hills Estate, one of the largest mixed-use developments in Dubai, spans approximately 2,700 acres and offers a unique blend of luxury living, commercial facilities, and recreational spaces. Developed by Emaar, the project includes over 20,000 homes, the Dubai Hills Mall with over 750 retail and dining outlets, a world-class 18-hole championship golf course, and the expansive 180,000-square-meter Dubai Hills Park. The development's extensive topographical variations presented engineering challenges, necessitating robust retaining structures. Mechanically Stabilized Earth (MSE) walls emerged as a preferred solution for these requirements due to their cost-effectiveness, flexibility, and aesthetic adaptability. Among the available options, modular block walls were specifically chosen, as they allow customization of concrete block colors to match the architectural style of surrounding buildings, enhancing the overall visual harmony of the estate.



Project section of MacWall MSE wall

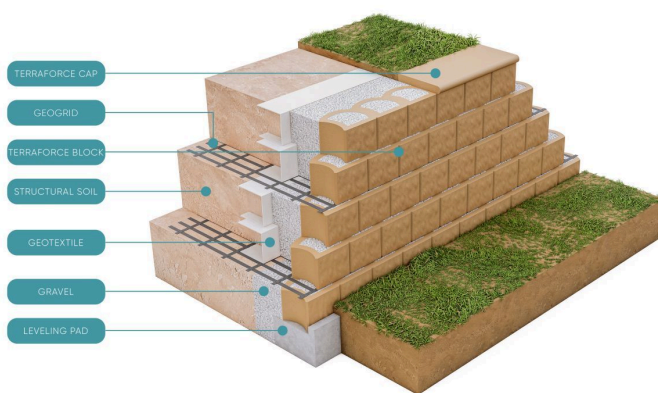


Typical system details in section view

Solution

Maccaferri's MacWall system was selected as the ideal MSE wall solution for this project due to its combination of technical efficiency, cost advantages, and aesthetic compatibility. The system consisted of segmental concrete blocks (type Terraforce) and MacGrid WG geogrid soil reinforcement, both of which are renowned for their structural integrity and ease of installation. The modular blocks offered the flexibility to match the project's architectural theme, ensuring a seamless blend with the modern and luxurious design of Dubai Hills Estate.

The MacWall system was installed to a maximum height of 3.4 meters, effectively stabilizing the site's varying terrain. To enhance the visual and environmental appeal, many sections of the walls were integrated with plantations, promoting greenery and reducing the urban heat island effect. Additionally, steel fences were installed on top of the walls for added safety and functionality. Maccaferri Middle East played a pivotal role by providing design, supply, and const



Typical system details in 3D view



Initial layers during construction



Completed MacWall



Completed MacWall



View of completed MacWall with building structure at top



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