

Museum of Islamic Art Built with Sustainability in Mind

High performance waterproofing of the foundation protects the finest collection of Islamic arts.



Project	Museum of Islamic Art
Client	Qatar Petroleum (Qatar)
Architect	I.M. Pei (U.S.A.)
Contractors	SixConstruct (Belgium) and Baytur (Turkey)
Structural Engineer	Leslie R. Robertson Associates (USA)
GCP Solution	PREPRUFE® waterproofing system

Project Profile

Supporting a grand museum design

Poised at the end of the corniche in the harbor of Doha, Qatar, the Museum of Islamic Art rises majestically from the waters of the Arabian Gulf. Designed by renowned architect I. M. Pei, the museum design includes a striking exterior that conceals one of the finest collections of Islamic arts in the world.

Inspired by the Mosque of Ahmed Ibn Tulun in Cairo, it was built through combined efforts. The museum design reflects a modern interpretation of Islamic architecture and mirrors Qatar's cultural vision as a bridge between past and present, east and west.

GCP Applied Technologies brought a multi-national collaboration into this project and fostered the partnership between an American-based architect, European- and Turkish-based contractors, and local site teams.

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Safeguarding against corrosion

The climate and corrosive salt environment of the Persian Gulf created a number of museum design project challenges.

Constructed on reclaimed land, the museum's foundation rests below the water table, subjecting the foundation to highly aggressive chloride and sulfate conditions, which can quickly deteriorate the concrete and significantly reduce the life of the structure. It also puts the cultural arts housed within at risk.

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Waterproofing in severe temperatures

GCP's Blue360SM Design Advantage Team was deeply involved in the museum design project, and recommended PREPRUFE®300R waterproofing membrane be applied below the slab to prevent water migration around the substructure. Offering incomparable sustainability, the solution was not only well suited for the corrosive salt environment of the Persian Gulf, but also for Qatar's severe heat, which is often in excess of 40 °C (104 °F). GCP also provided extensive training for site engineers and operatives on proper product application procedures.

The museum now has a continuous waterproofing system, fully-bonded to the structural concrete surrounding the substructure. This created a permanent barrier to protect the arts against the corrosive environment.

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Last Updated: 2019-09-19

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