Osman Gazi Bridge protected for the long-term

ELIMINATOR® waterproofing system protects essential transportation link

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Project Profile

Osman Gazi Bridge, Turkey

Client
Turkish State of General Directorate of Highways

Contractor
IHI E&C

Authorized Contractor (Waterproofing Applicator)
ERSE Teknolojik Yapı Endüstri A.S.

GCP Solutions
ELIMINATOR® Bridge Deck Waterproofing System, SAFETRACK® HW High Friction Surfacing System
Project Profile

Revolutionizing travel in the region

Built over the Sea of Marmara in Turkey's Izmit Bay between 2013–2016, the Osman Gazi Bridge, or "Izmit Bay Bridge," as it is often referred to, is the fourth longest suspension bridge in the world.

Spanning more than 1.5km, the bridge’s construction revolutionized travel between the north and south of the country, enabling passengers to make the journey across the sea in just three minutes instead of taking the one-hour ferry ride or the high-traffic 100km detour over land. The bridge opened to service in June 2016.

The bridge has become a highly trafficked route through the country, both for Turkish locals and for global businesses to transport their goods between Asia and Europe.

Long-lasting protection for new bridge

Waterproofing on the Osman Gazi Bridge needed to offer tough, durable and long-lasting protection in order to reduce the need for future maintenance. Given the time limitations on the construction work and the nature of the structure, the selected bridge deck waterproofing system needed to not only provide proven long lasting protection, but allow quick and easy application and importantly, it needed to have minimal environmental impact over its lifetime.

Speed and ease of application

KGM specified the ELIMINATOR® system from Stirling Lloyd (now GCP Applied Technologies) for the bridge deck waterproofing, based on numerous other high-profile collaborations.
Having worked on several major projects in the country over the past thirty years, Stirling Lloyd (now GCP Applied Technologies) was contracted by IHI E&C to take the lead on the waterproofing for the main central section of the bridge. The application process of the ELIMINATOR® system was completed within four weeks. In that time, Authorised Contractor Erse applied 76,000m², covering the entire central section of the bridge. In addition, the SAFETRACK® HW High Friction Surfacing system was applied on the bridge’s walkways to provide a long lasting, anti-skid finish.

The speed and ease of application of the ELIMINATOR® system, together with the fact that each element of the system cures in under an hour, helped facilitate quick contract progression.

Based on unique ESSELAC® technology, ELIMINATOR® provides a tough, durable membrane that can withstand difficult site conditions. This will extend the service life of the bridge and reduce maintenance costs.