

Landmark Superstructure Bridge Uses ELIMINATOR[®] Waterproofing

New York Metropolitan Transport Authority invests in long-term protection of landmark bridge



| | |
|---|--|
| Project | Verrazano-Narrows Bridge, New York |
| Client | New York Metropolitan Transport Authority (NYMTA) |
| Contractor | Tutor Perini |
| Authorised Contractor (Waterproofing Applicator) | Venture |
| GCP Solutions | ELIMINATOR [®] Bridge Deck Waterproofing System |

Project

Refurbishing vital bridge

Built in the late 1950s, the Verrazano-Narrows Bridge is an imposing sight in New York Harbour. The longest span bridge in the country, it connects Staten Island and Brooklyn across the narrow body of water. This double-decked suspension bridge allows ship traffic to pass below it into the ports of New York and New Jersey.

In 2008, 190,000 vehicles were recorded passing over the bridge every day – making it a key route on the east coast. The result of this large volume of traffic and heavy use is that the 50-year old upper level deck required replacement to make way for a lighter weight, more durable steel orthotropic deck. The refurbishment work also involved the creation of a seventh lane to be used as a bus and high occupancy vehicle lane.



Protecting major steel bridge decks

The general contractor, Tutor Perini, had a challenging construction schedule in one of the most densely populated cities in the world. They required a product that could be installed quickly and perform in both extremely high summer temperatures and extremely cold winter temperatures.

The ELIMINATOR[®] system from Stirling Lloyd (now GCP Applied Technologies) was chosen based on its history of protecting many of the world's biggest steel deck bridges.

The system acts as a barrier across the expanse of the bridge deck, preventing steel corrosion of the structure. Based on unique ESSELAC[®] technology, the system enhances the membrane's bond to both the asphalt paving and the deck. This strong bond throughout allows the steel deck, waterproofing and paving to act as a composite – another key specification requirement. Given the dynamic forces constantly at work, this composite action is the key to long-term performance. Ease and speed of installation of the waterproofing system to allow project progression was another major factor.

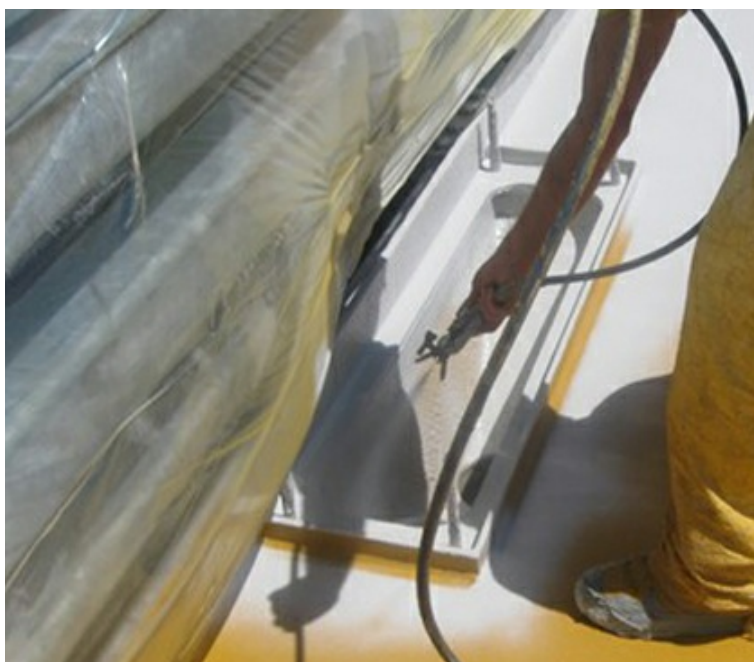
Minimising traffic disruption

The work was carried out during restricted timeframes to minimise disruption to traffic on the major bridge. The fast curing ability of the ELIMINATOR[®] system allowed other trades to access the site, enabling a rapid return to service.

To facilitate the short working windows, the deck was cut, removed and replaced in sections as part of a staged process. The 55,000m² of new deck was prepared by shot blasting using metallic blast medium. Spot adhesion tests were then conducted to assess the bond the waterproofing system would achieve to the deck. This is an extremely important step in the quality control process because, as previously stated, the bond to the deck is key to the long-term performance of the waterproofing.

Blue360SM Total Business Advantage.

The power of GCP products, performance and people



North America customer service: 1-877-4AD-MIX (1-877-423-6491)

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Vietnam Company Ltd, Lot B14, Section B, Street No. 12, Xuan Thoi Son Small Scale Arts & Crafts Group, National Road 22Xuan Thoi Son Village, Hoc Mon District, Ho Chi Minh City

This document is only current as of the last updated date stated below and is valid only for use in Vietnam. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.vn. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2022-01-28

gcpat.vn/inspiration/project-profiles/landmark-superstructure-bridge-uses-eliminator-waterproofing