



SIKA AT WORK

CASTLE ROUTE, SZCZECIN

SIKA TECHNOLOGY:

Concrete repair: SikaGunit®-03 Normal,

Concrete protection: Sikagard®-680 S Betoncolor,
Sikagard®-550 W Elastic,

Corrosion protection of steel: Sika® Poxicolor Primer HE,
SikaCor® EG-1, SikaCor® EG-5,

Steel bridge slab insulation: SikaCor® EG-1, SikaCor® HM Mastic,
Sikalastic®-827 HT,

Sidewalks surface: Sikafloor®-156, SikaCor® Elastomastic TF

BUILDING TRUST



RECONSTRUCTION OF ONE OF THE MOST IMPORTANT TRANSPORT HUBS IN SZCZECIN

CASTLE ROUTE IN SZCZECIN is a segment of provincial road no 115 and owes its name to the position of the western section in the immediate vicinity of Pomeranian Dukes' Castle. It is one of the arteries connecting the city centre with its right-bank part. About 20,000 vehicles pass through the Castle Route towards the centre on a weekday. The route is about 2,300 meters long and runs along a series of flyovers and two bridges over the rivers Parnica and the Western Oder. The northern thread of the artery was opened in 1987. Due to long-term operation, more than 2 kilometres of road, required extensive modernization. Routine, annual control of the condition of the road fragment showed the necessity of its renovation.

CHALLENGES

A comprehensive renovation of the Castle Route northern thread included the renewal of the facility and its equipment, reconstruction of lighting, repair of storm water drainage, repair of concrete and steel structures, anticorrosion protection of concrete and steel, and the execution of sidewalks. The bicycle infrastructure also has been improved and its connection with existing bicycle paths in the vicinity of the route.

The investor's basic requirement is durability that allows trouble-free, long-term operation of the facility. Therefore, it was necessary to apply proven and the highest quality materials with appropriate strength parameters, permanent colors and UV resistance.

Source: Zarząd Drog i Transportu Miejskiego w Szczecinie



SIKA SOLUTIONS

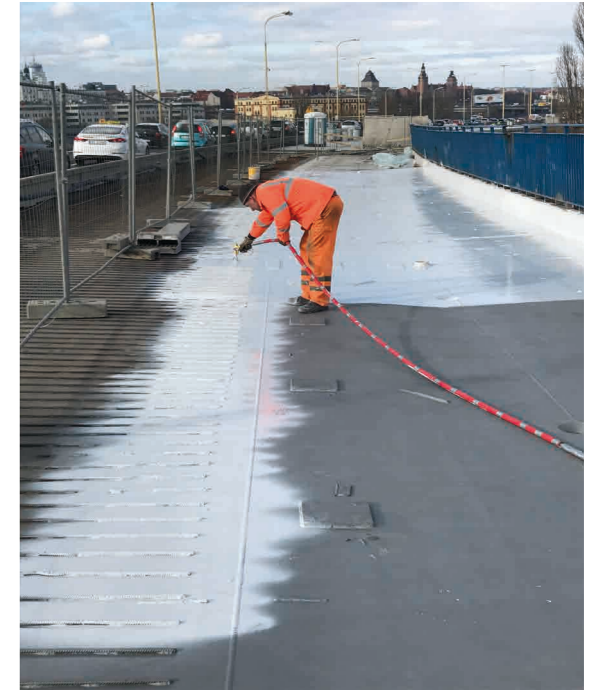
The reinforced concrete supporting structure was repaired using the dry spray method with **SikaGunit®-03 Normal** mortar, a cement mortar characterized by high strength, water resistance and frost resistance. Then it was protected against weather conditions and corrosion by rigid protective coating **Sikagard®-680 S Betoncolor**, in light gray color. The abutments and supports after leveling the substrate are covered with a flexible protective coating **Sikagard®-550 W Elastic**, with excellent resistance to atmospheric factors, permeable to water vapor and impermeable for carbon dioxide.

Previous experience of using Sika corrosion steel protection, confirmed durability of paint coatings and speed application, resulting from short drying times of painting materials, determined the usage of the Sika coating system for steel bridge structure. **Sika Poxicolor® Primer HE** epoxy coating was applied as primer, then an epoxy intermediate layer of **SikaCor® EG 1** - containing micaceous iron oxide and **SikaCor® EG 5**, acrylic-polyurethane topcoat in gray color was applied.

SIKA - PROVEN MATERIALS WITH APPROPRIATE DURABILITY PARAMETERS

The waterproofing insulation of the steel bridge top slab was made of an epoxy based material **SikaCor® HM Mastic**, which does not change its properties under the short-term influence of high temperatures during the laying of bituminous layers and provides a waterproof, resistant to fuels and de-icing salts. The prepared steel substrate was primed with **SikaCor® EG 1** and then the actual **SikaCor® HM Mastic** insulation layer was laid. Before laying the asphalt pavement, a fresh layer of insulation was sprinkled with a hot melted adhesive **Sikalastic®-827 HT** in granules, providing adhesion between the insulation layer and the asphalt layer by increasing the volume in contact with the hot asphalt and improving the shear strength of the layers.

On the sidewalks pavement was laid. Prepared substrate primed with **Sikafloor®-156** resin and covered with **SikaCor® Elastomastic TF**, a chemically cured, tar and solvent-free two-component hybrid material based on a mixture of epoxy and polyurethane resin, creating a flexible insulation and top layer with high chemical and mechanical resistance, including dynamic loads.





PROJECT PARTICIPITANS

Owner/Investor: Zarząd Drog i Transportu Miejskiego (ZDiTM) w Szczecinie

Designer: X-MOST Szczecin

General contractor: INTERCOR Zawiercie

Contractor: NIWA Szczecin, ARWO Barlinek, ZUSiM Szczecin

Sika Poland: Bartosz Gadecki

Total amount of materials:

SikaGunit 03 Normal 888.000 kg
 Sikagard 680 S Betoncolor RAL 7038 8.280 kg
 Sikagard 550 W Elastic RAL 7038 7.580 L
 SikaCor HM Mastic 5.750 kg
 SikaLastic 827 HT 1.500 kg
 Sikafloor 156 4.400 kg
 SikaCor Elastomastic TF 20.000 kg
 SikaPoxicolor Primer HE red brown 8.988 kg
 SikaCor EG 1 DB 702 15.900 kg
 SikaCor EG 5 RAL 7037 4.980 kg

Total turnover:

~450 000 CHF

The sale in which the selling party is Sika-Poland Sp. z o.o. with headquarters in Warsaw, it is implemented in accordance with the currently applicable General Terms of Sales of Sika (abbreviated GTS), defining rights and obligations of Sika sales contracts. Before using the materials it is necessary



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