



# SIKA AT WORK

## RAWALPINDI-ISLAMABAD METRO BUS PROJECT

SIKA SOLUTIONS FOR STRUCTURAL STRENGTHENING  
& WATERPROOFING

BUILDING TRUST



# RAWALPINDI-ISLAMABAD METRO BUS PROJECT

## CONCRETE ADMIXTURES, EPOXY GROUTS & REPAIR MORTARS

### Project:

The greater Islamabad – Rawalpindi Metropolitan Area is the third largest conurbation in Pakistan with a population of over 4.5 million inhabitants. The Twin cities of Islamabad and Rawalpindi are growing at a rate of more than 4 percent per annum, indicating national growth due to significant migration. There was no organized urban bus transport service operating in the city and between cities of Rawalpindi and Islamabad. Government of Punjab and Capital Development Authority joined hands & launched 22.5 Km Metro Bus project to connect the twin cities and alleviate the traffic congestion on this corridor. The Project was completed with an estimated cost Rs. 44.31 Billion.

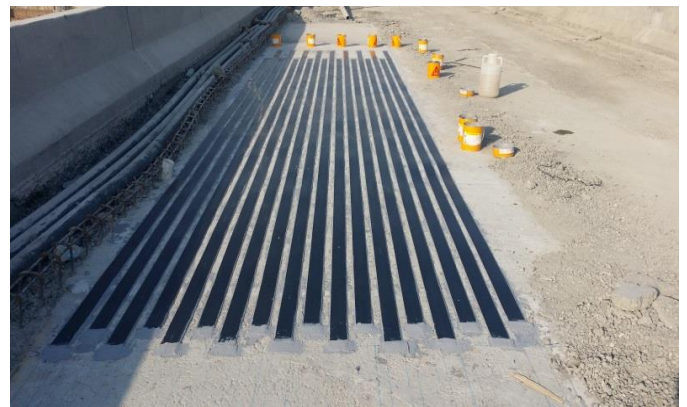
### Project Requirements:

Murree Road is one of the busiest and most preferred link between the twin cities due to its shorter length and direct approach. Unprecedented increase in vehicular traffic in the city, especially along Murree Road, caused severe traffic congestion which resulted in the evolution of this project. Client demanded Concrete admixtures for effective water-reduction & strength enhancement of the concrete. In addition to this epoxy grouts & Repair mortars were demanded by the client for repairing of the concrete & to provide higher vibration resistance to the structure. Lastly, Client required high performance structural strengthening products for shear & flexural strengthening or increasing the load bearing capacity of the structure.



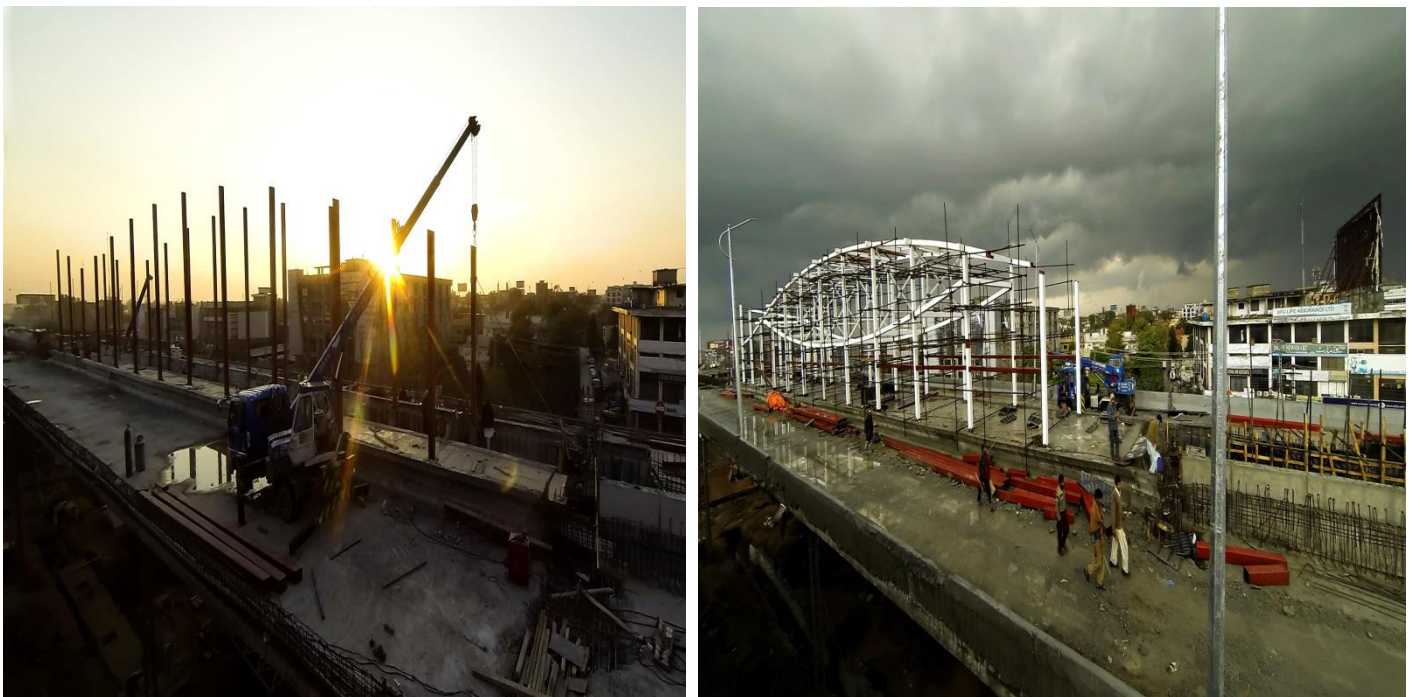
### Sika Solution:

Sika recommended its Globally recognized Solutions to meet the needs of the Project in the utmost way. Sikament- 512 was recommended which is a highly effective water-reducing agent and superplasticizer for the production of high quality, free flowing concrete. Sikament 512 provides substantial improvement in workability with long-lasting control of slump loss. In addition to this, Sikadur-31 & Sikadur 32 adhesives were recommended to be used in conjunction with Structural strengthening system. Sikadur-31 is an extremely versatile product as it provides High abrasion and impact resistance. Whereas, Sikadur-32 provides a bond of far greater strength than the tensile strength of the concrete itself.





In order to fulfill structural strengthening needs of the project Sika Carbodur S812 and Sikawrap were recommended. Sika Carbodur S812 plates are pultruded carbon fibre reinforced polymer (CFRP) laminates designed for strengthening concrete, timber and masonry structures. Sika CarboDur plates were bonded onto the structure as externally bonded reinforcement using Sikadur-30 structural adhesive. In addition to this, SikaWrap-230 C was recommended for repairing of the Trasim. SikaWrap-230 C is a unidirectional woven carbon fiber fabric which provides strengthening of reinforced concrete structures in case of flexural and shear load. Sikalastic-560 was also recommended for waterproofing of the roof of Bus stations. Sikalastic-560 is a waterborne liquid applied waterproofing membrane, highly elastic and UV-resistant. Sikalastic-560 is also an excellent exposed roof waterproofing solutions in both new construction and refurbishment projects. Lastly, Sika Injection 101 & 201 was recommended for repairing of the concrete structures. Sika Injection 101 is an exposed roof waterproofing solutions for both new construction and refurbishment projects. Whereas, Sika® Injection-201 is used for permanent watertight sealing with some flexibility to absorb limited movement, in dry, damp or water-bearing cracks and joints in concrete, brickwork and natural stone.



Rawalpindi-Islamabad Metro Bus under Construction

**Project Name:** Rawalpindi-Islamabad Metro Bus Project  
**Project Owner:** Government of Punjab  
**Consultant:** NESPAK  
**Contractor:** ZKB, NLC, maqbool Colsen JV

Sika Pakistan Pvt. Ltd.  
141, CCA, Phase 4, DHA  
Lahore, Pakistan  
Tel: + 92 42 3569 4266-67  
Fax: +92 42 3569 4268

Web: [pak.sika.com](http://pak.sika.com)  
Email: [information@pk.sika.com](mailto:information@pk.sika.com)  
[facebook.com/SikaPakistan.Pvt](https://facebook.com/SikaPakistan.Pvt)  
[twitter.com/SikaPakistan](https://twitter.com/SikaPakistan)

**BUILDING TRUST**

