SIKA AT WORK

GUJRANWALA UNDERPASS

STRENGTH ENHANCEMENT & WATERPROOFING OF CONCRETE WITH SIKA ADMIXTURES, EPOXY GROUT & BOND

BUILDING TRUST

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Project:

Lahore Developement Authority(LDA) strives to be an accountable and amigable planning and development vehicle of the Lahore Metropolis, aiming at providing and continuously improving metropolis-vide development work in the City. The Lahore Development Authority was created under the LDA Act 1975 duly approved by Punjab Legislative Assembly. LDA executed the construction of Gujranwala underpass at Railway Crossing Sheikhupura-Gujranwala Road for the smooth flow of traffic in the city. Haidri Road Underpass links people from both sides of railway lines.

Project Requirements:

Gujranwala has a population of over two million and Haidri Road being one of the most busiest road of the city has thousands of vehicles running on its roads round the clock which resulted in a traffic congestion. Traffic problems required proper engineering for this area in order to ensure smooth flow of traffic in the city. For this reason, the constuction of Gujranwala Underpass came into place with the total estimated cost of 1 billion. Client demanded products that promised, strength enhancement of concrete and quality.

Sika Solution:

Considering the Client's requirements, constructive aspects and Qualty standards Sika Sales Engineers recommended following products.

Sikament®-512 PK was recommended being a highly effective water-reducing agent and superplasticizer for the production of high quality, free flowing concrete. The dual action of Sikament®-512 PK promotes accelerated hardening with high early strengths. As a superplasticizer, it guarantees substantial improvement in workability without increased water or the risk of segregation and long-lasting control of slump loss.

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Sikadur®-32 a solvent-free, two component bonding agent was recommended as it provides a bond of far greater strength than the tensile strength of the concrete itself. Therefore, it is suitable for use wherever structural bonding of new to existing concrete is carried out. Sika®-1 being an Integral Waterproofing Admixture for Concrete & Mortar was also suggested. The action of Sika - 1 is to block the capillaries and pores in concrete and mortar. While blocking the passage of water it allows the structure to breathe, thus considerably reducing the possibility of condensation. In order to meet the curing requirements Antisol-E7 was suggested. The Antisol-E7 range of curing compounds is sprayed onto newly laid a concrete surface which does not affect the normal setting action of the concrete. A thin film barrier is formed to slow down the rate at which water evaporates from the concrete surface during the first few crucial days of curing. This enables more water to be available for the hydration reaction of the cement particles. Furthermore, Sika Bond® DV which is a synthetic rubber emulsion for adding to cement mortars was recommended for those areas where good adhesion and water resistance are required. Sika Bond® DV is a high quality emulsion that substantially increases the qualities of cement mortars in applications such as Tin layer patching mortars, renders and floor screeds etc. Lastly, to meet the grouting & filling needs Sikadur®-42 MP Slow HC was recommended which is a three-component, multi-purpose, solvent-free, moisture tolerant, epoxy grouting system. It's is used in High-Strength grouting and fixing of starter bars, anchors etc. It also has other qualities like, being a non-shrink grout, moisture tolerant, corrosion and chemical resistant product.

Above are some pictures of Gujranwala Underpass Under Construction

Project Name: Gujranwala Underpass
Project Owner: LDA
Consultant: Engineering Associates(EA)
Contractor: IKAN AKB JV

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