

CASE HISTORY

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**PAVEMENT STRENGTHENING IN SUMAN NAGAR, PRIYADARSHANI CIRCLE,
CHEMBUR, MUMBAI, MAHARASHTRA**
MUMBAI, MAHARASHTRA, INDIA



Pavement Stabilization

Client:	Products used:
MUNICIPAL CORPORATION OF GREATER MUMBAI	TECHGLASS 50 KN X 50 KN
Main contractor:	Quantity supplied:
GL CONSTRUCTIONS PVT LTD.	9504 SQM.
Manufacturer & Supplier:	Year of construction:
TECHFAB (INDIA) INDUSTRIES LTD.	

Approach Length - 100m

Carriageway Width - 3.96m

Project brief & Challenges:

Rapid failures of Suman Nagar, Chembur stretch were identified to be a combination of certain factors mentioned as - incorrect sand bedding thickness and deficient compaction of the paving block layer. These constructional defects ultimately caused shear and differential settlements in the sand bedding layer and subsequent water infiltration into the pavement and overstressing of the cement stabilized sub base layers.

The poor draining characteristics of the bedding sand, as used, would trap water that permeated into the bedding layer, thereby aggravating the shear failure risk. The combination of stagnant water on the road surface along with heavy traffic could quickly cause erosion of the road surface. Secondly, the surface water was penetrating into the road body, reducing the load bearing capacity of the pavement, which was causing further damage to the road. Drainage of the road surface is normally provided by shaping the carriageway with a camber. The client therefore wanted an innovative method so that the solution adopted next would be a long term solution.

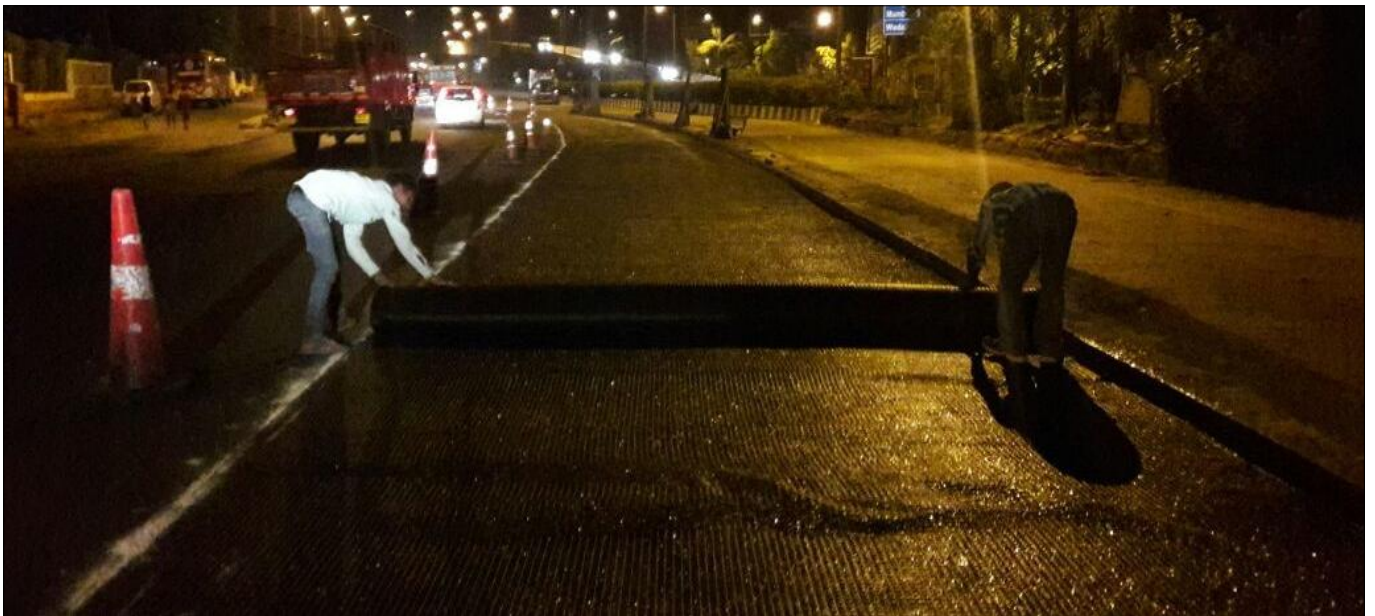


Initial Condition of Road

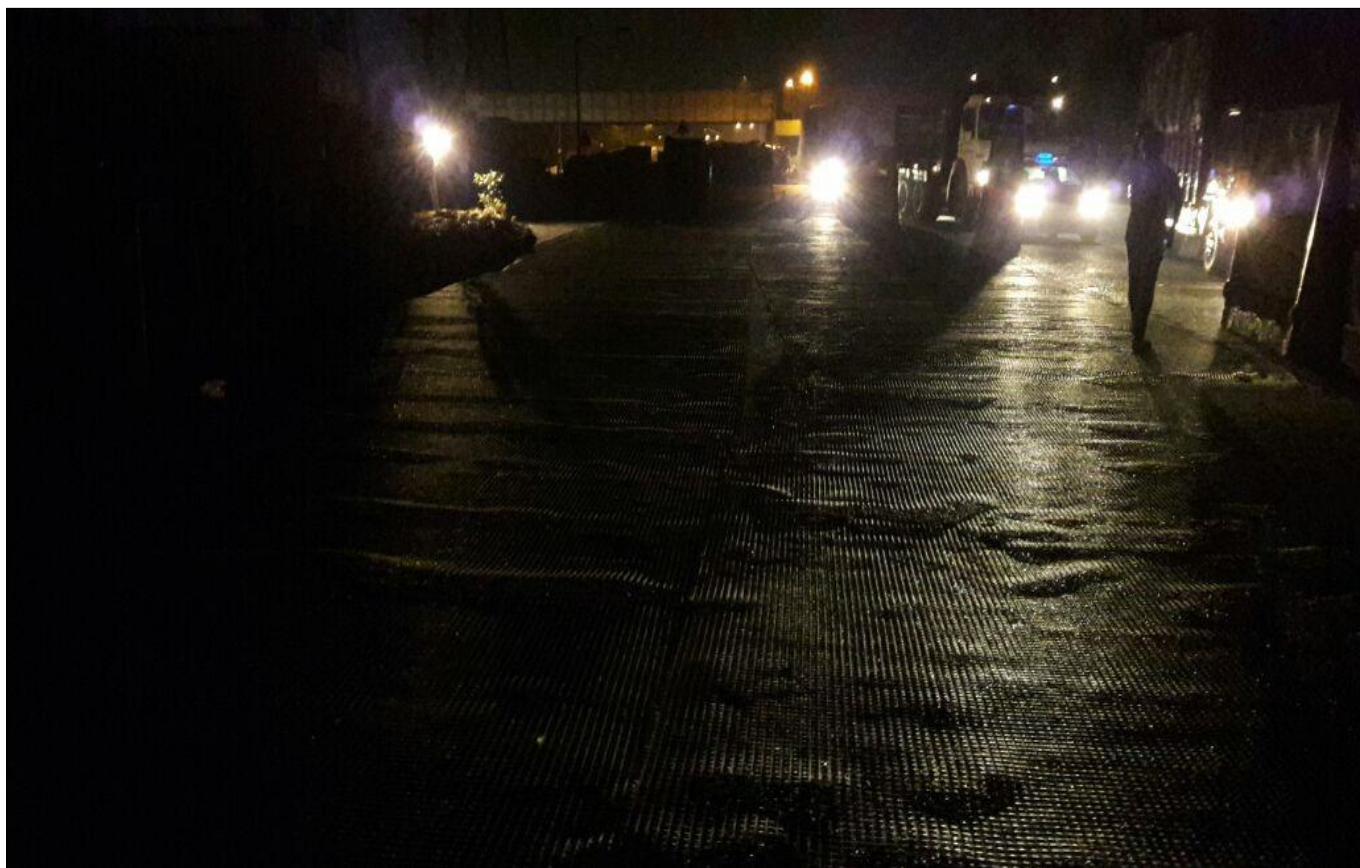
Solution:

As the solution wanted by the client was a long term one, Techfab India Industries Limited suggested the application of TechGlass. TechGlass provides various advantages such as this would restrict reflective cracking, prevent water and tear, gives long term strength to the pavement. Being a heavy traffic stretch, some parts of pavement had severe undulations and drain water was flowing towards the road and not out, due to the wrongly placed camber. The existing surface was cleaned and made dust, debris free, and free from obstacles. Then tack coat was sprayed over which TechGlass was laid.

Most of the work was conducted at night, as the traffic was not interrupted. Over the TechGlass, Asphalt layer was laid and then compacted properly.



During Construction Photographs



During Construction

Conclusion:

The project was completed effectively and the monitoring period is on the go. The MCGM will be able to see great potential in TechGlass, as a way to reduce their maintenance commitment, and extend the life of their pavements.

For further details kindly contact :

TechFab India Industries Ltd.

711/712, Embassy Centre, Nariman Point, Mumbai – 400021

Tel: + 91– 22 - 2287 6224 / 6225 Fax: + 91– 22 - 2287 6218

E: info@techfabindia.com

W: www.techfabindia.com