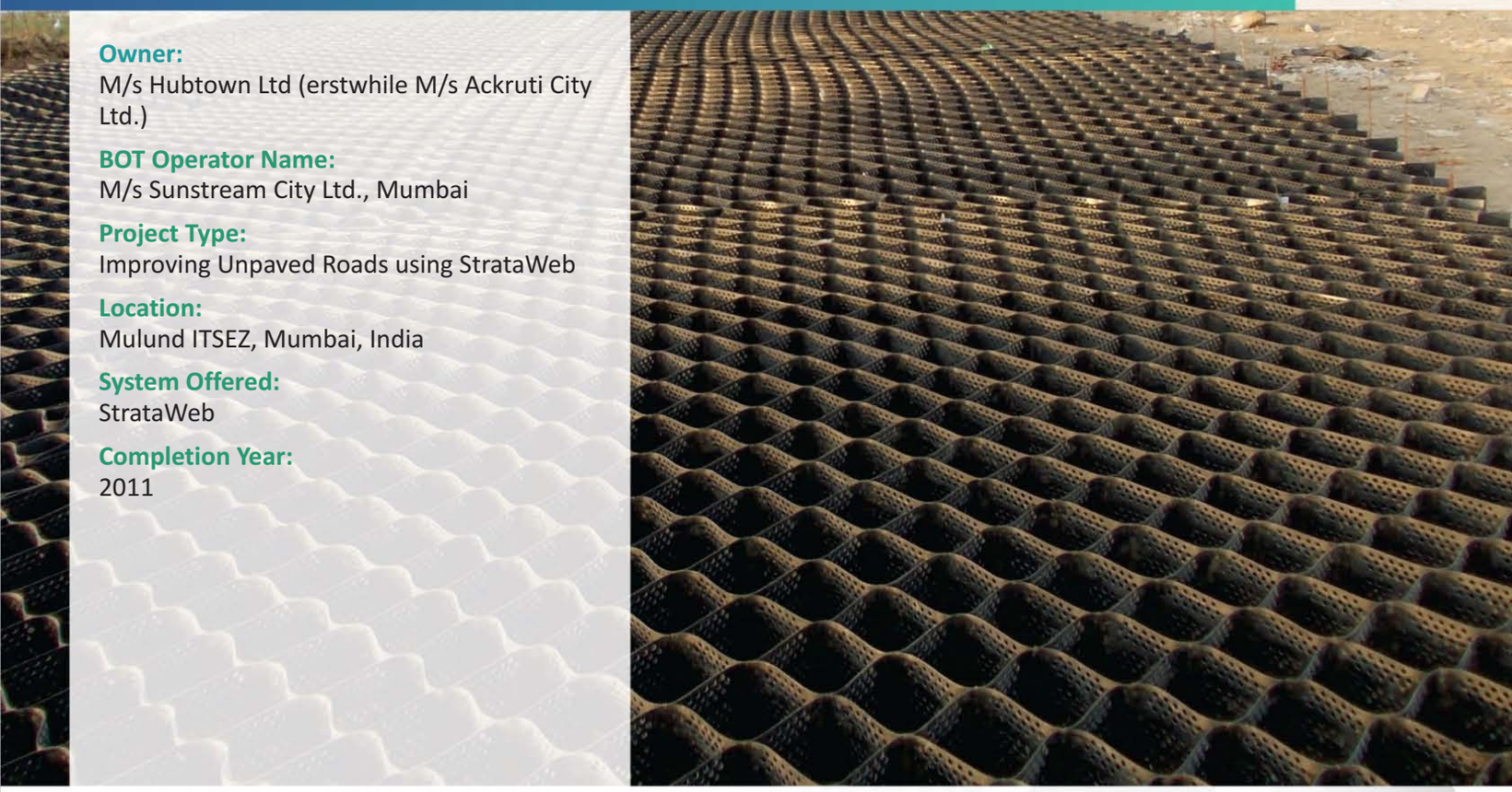
CASE STUDY

StrataWeb used to improve subgrade strength of roads



Owner:
M/s Hubtown Ltd (erstwhile M/s Ackruti City Ltd.)

BOT Operator Name:
M/s Sunstream City Ltd., Mumbai

Project Type:
Improving Unpaved Roads using StrataWeb

Location:
Mulund ITSEZ, Mumbai, India

System Offered:
StrataWeb

Completion Year:
2011

Project Brief

Since the total area of roads were falling on the filled up soil (filled with debris on the existing creeks), the contractor envisaged that there may be substantial settlement once the road is constructed. Hence, StrataWeb geocells were laid on the subgrade, i.e. just above the filled up soil layer, in order to increase the subgrade strength of the proposed road. This section of road chosen was on completely filled up soil and the traffic movement was very heavy as these are all construction vehicles being used for the construction of the ITSEZ.

Challenge

The filled up soil freshly laid on the creek areas were a concern for settlement of the subgrade as this subgrade was to be used for laying the subsequent layers (like GSB, WMM, etc) on top for making the permanent paved roads. The high water table, just 1m below the subgrade, was also a concern and moreover the water table was rising as the creek was being filled up with debris & wastes. Matters were envisaged to be much worse during the next monsoon.

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Strata Solution

StrataWeb geocell a cellular confinement system was chosen for the job. Geocells are a proven solution for road subgrade improvement on weak subgrade locations. The product is light and easily transported to remote areas. This expandable, honeycomb-like cellular structure can be collapsed and easily transported. StrataWeb remains flexible during installation and also is inert against naturally found chemicals. Another cost saving factor was that the amount of infill needed at the site could be estimated due to the system's uniform depth, and that no training or special tools were required for installation. The cells of the Geocell System provide a permanent flexible form while acting as a series of expansion joints adjusting to the shape and grade of the soil. The sections were transported in folded forms by trucks and placed in designated areas. The installation was complete in 3 days time.

Benefits to client

Savings in natural resources, time & money: In normal construction method, to stabilize the soil and to sustain heavy vehicular traffic, at least 800mm to 1m murrum infill would have been required, but by using geocells the client managed to save precious natural resources & also lower the carbon footprint. Geocells being a fast and all-weather installation solution, very little time was taken for installation & infilling. Both the savings in natural resources and time resulted in substantial savings for the client.

About Strata

Strata Geosystems (India) Pvt. Ltd., established in 2004, is a joint venture with Strata Systems Inc., USA (part of the 130-year old Glen Raven group of companies).Strata Geosystems provides end-to-end technical solutions, from design to execution for geotechnical applications such as reinforced soil walls (flyovers, road over bridges etc.), soil embankment stabilization, reinforced steep slopes, reinforced foundations, slope protection, load support for paved and unpaved roads and bearing capacity improvement, landfills]and reservoirs.

We are renowned for our quality, durability and cost effectiveness and manufacture conforming to strict international quality standards. Our committed team of experienced design engineers and project implementation specialists ensure timely and accurate installation.

STRATA
GEOSYSTEMS (INDIA) PVT. LTD.
(A Joint Venture with Strata Systems Inc. U.S.A.)
ISO 9001 : 2008 Certified

TÜV NABCB QM 002 ISO 9001 : 2008

Head Office: 317, Tantia Jogani Industrial Premises, J. R. Boricha Marg,
Lower Parel (East), Mumbai 400 011.
Tel.: +91 22 4063 5100 I Fax: +91 22 4063 5199
e: info@strataindia.com I w: www.strataindia.com