Report on site inspection and provide installation guidance on construction of rural road
Sonarpur block, 24 Parganas (S) district on 15.02.2018

Based on approval received from NRRDA numerous rural roads under PMGSY in WB are under construction with the use of JGT. NJB, as technology provider has been rendering all sorts of technical support and services to the user agencies and the engineers right from procurement to installation of JGT. As requested by Sri Amlan Bhattacharya – Asst. Engineer of Burdwan district under WBSRDA and with the approval of the Secretary, NJB Sri P K Choudhury- Principal Technologist, National Jute Board visited the road site for inspection and to provide installation guidance on application of JGT on 15th February, 2018.

A stretch of 2.220 km rural road from Rampur to Manikpur via Chakravani, district 24 Pargas (S) was the proposed site. During demonstration Sri Amlan Bhattacharya - AE along with the entire team members of the agency (M/S Ma Chandi Enterprise) including Soumajit Mukherjee were present at site. Interestingly, about 50 villagers including the Upapradhan - Sri Shyamal Mandol, Panchayat Member - Sri Samar Halder, School Teacher - Sri Dinesh Dibedi took keen interest on this construction work being taken up using innovative technology like JGT as it was reported that the condition of the said road was worst and no maintenance work were took place for the last 50 years.

10,200 sq.m. woven JGT of 724 gsm, 25 kN/m tensile strength was procured by the agency from Birla Jute Mills. The fabric was tested by IJIRA and the results were found in the report was acceptable. However, randomly chosen 5 number of rolls at site were visually inspected as well and no major defects were found. Out of all the roads where demonstration has been given in the recent past this is the only road where total excavation of old jhama khoa materials was not done. Instead of earthen sub-grade, in the instance case the surface was a jhama- khoa- rubbish mixed with earth. It was reported that the type of soil lying bellow the existing surface was silty clay having a CBR value of about 2.5 %.

The surface considered as base layer was compacted properly with roller keeping the provision of camber of 3.5 %. As per designed cross-section of the road shown in the DPR, without providing thin layer of sand cushion JGT was directly laid on the existing surface. 5 number of 1m wide JGT were laid side by side with an overlap of about 100 mm. 150 mm overlap was provided longitudinally. In the instant case the total width of sub-grade covered with JGT was only 4.60 m. After fixing the JGT on to the ground with the help of bamboo pegs 1st layer of GSB II ( Jhama/khoa : sand at the ratio of 60/40 %) was spread over JGT followed by roller compaction. After completion of 10 passes GSB material was removed from places to critically examine if any puncture was occurred in the fabric due to roller pressure. Surprisingly, no puncture was observed in the fabric which established that this strong fabric designed and developed under CFC/IJSG/21 project could withstand the roller pressure without use of sand. It was seen in the DPR that next steps of construction will follow laying of another layer of GSB -II followed by 2 layers of 75 mm thick WBM layers. Finally, Mixed Seal Surface (MSS)( composition of 11.2 mm & 0.9 mm grit mixed with VG 30 bitumen) layer will be laid at top.

The storing site of JGT was also checked and suggested to the agency that the material must be kept on polythene sheet instead of directly on to the concrete floor. Photographs of the site were taken during installation and the engineers were requested to take photographs of the subsequent stages including the road being opened to traffic. Overall progress of the road was found to be satisfactory.