Report on site inspection for providing installation guidance of JGT for construction of a rural road under PMGSY at Kalna-I Block, Purba Budhman, West Bengal on 07.03.2019

As requested by Sri P K Banerjee, the concerned Asst. Engineer and with the concurrence of competent authority of NJB, Sri P K Choudhury- Principal Technologist inspected the road site for construction with JGT on 7th March, 2019.

During demonstration at site following officials were present–

2. Mrs. Roma Botobyal–SAE, Kalna-I, Burdhaman
3. Mrs. Paramita Pal –SAE, Kalna-I, Burdhaman
4. Mrs. Paramita Ghosh, Mr. Subhamoy Ghosh & the team members of the agency, Bharati Cont.
5. Sri P K Choudhury - NJB

A stretch of 4.61 km rural road from Durgapur to Malatipara, Block Kalna–I, Purba Baurdhaman district was the proposed site (Package No- WB-05/211). During site inspection it was observed that the said road was for upgradation purpose and previously laid brick bats were completely removed and compacted to MDD with roller.

16,000 sq.m. woven JGT of 724 gsm, 25 kN/m tensile strength was procured by the agency from Premchand Jute Mills. The fabric sample has been reported to be sent to IJIRA for testing and the results were awaiting. However, as requested by the concerned site engineers fabrics were visually inspected and ends x picks / dm were counted prior to installation. Randomly chosen 6 number of fabric rolls were also checked for texture and weaving defects when no major defects were observed. It was reported that the type of soil of the road sub-grade was silty clay having an average CBR value of about 3.4 %.

Laying method of JGT was explained to the agency in presence of the entire visiting team. The surface considered as base layer was compacted properly with roller keeping the provision of camber of 2.5 %. As per designed cross-section of the road shown in the DPR, a 25 mm thin layer of white sand was spread on the compacted sub-grade, above this layer JGT was laid. 4 number of 1m wide JGT and a 50 cm wide (by slitting a 100 cm wide cloth into two pieces) were laid side by side with an overlap of about 100 mm. 300 mm overlap was provided longitudinally. In the instant case the total width of sub-grade covered with JGT was only 4.06 m. After fixing the JGT on to the ground with the help of iron nails another dose of 25 mm thin sand cushion was spread on the fabric followed by 76 mm thick 1st layer of GSB II (Jhama/khoa: sand at the ratio of 60/40 %) was spread over sand followed by roller compaction. After completion of 10 passes GSB material was removed from one place to critically examine if any puncture was occurred in the fabric due to roller pressure. No puncture / damage was observed in the fabric which established that this strong fabric designed and developed for the purpose could withstand the roller pressure. As per DPR the next steps of construction will follow laying of another layer of GSB-II followed by 2 layers of 75 mm thick WBM layers phase wise. Finally, 20 mm thick Pre-mixed carpet layer followed by 6mm seal coat will be laid at top as riding surface.

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 as was observed. 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.
PHOTO GALLERY ON SITE INSPECTION FOR PROVIDING INSTALLATION GUIDANCE ON CONSTRUCTION OF RURAL ROAD UNDER PMGSY WITH JGT AT KALNA ON 07.03.2019.

- Roller compacted sub-grade
- 25 mm sand layer spread over sub-grade
- JGT laid over sand layer
- Further dose of 25 mm sand layer spread over JGT
- Spreading of 75 mm GSB II layer over sand
- Roller compaction of GSB layer