DELHI - VARANASI BULLET TRAIN PROJECT: LIDAR(AERIAL GROUND) SURVEY STARTS

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The proposed Delhi Varanasi High-Speed Rail(DVHSR) corridor with a length of about 800 km today gained momentum.

The LiDAR (Aerial Ground)survey for Delhi-Varanasi High Speed Rail Corridor started today from Greater Noida where a helicopter fitted with state of art Aerial LiDAR and Imagery sensors took the first flight and captured the data related to ground survey.

The proposed plan for DVHSR corridor will connect the National Capital Territory (NCT) of Delhi with major cities like Mathura, Agra, Etawah, Lucknow, Raebareli, Prayagraj, Bhadohi, Varanasi and Ayodhya. The main corridor from Delhi to Varanasi (Approx. 800 km) will also be connected to Ayodhya. The High Speed Rail (HSR) route will also connect the upcoming international airport at Jewar in Gautam Buddha Nagar District of Uttar Pradesh.

"The ground survey is a crucial activity for any linear infrastructure project as the survey provides accurate details of areas around the alignment. This technique uses a combination of Laser data, GPS data, flight parameters and actual photographs to give accurate survey data," according to a statement.

National High Speed Rail Corporation Limited(NHSRCL) is adopting Light Detection and Ranging Survey (LiDAR) technology which provides all the ground details and data in 3-4 months wherein this process normally takes 10-12 months.

"During the Aerial LiDAR survey, 300 meters (150 meters on either side) of the area around the proposed alignment is being captured for the survey purpose. After the collection of data, Three Dimensional (3D) Topographical map of 50 meters corridor on either side of the proposed alignment on a scale of 1:2500 will be available for designing of the vertical & horizontal alignment, structures, location of the stations and depots, Land requirement for the corridor, identification of project affected plots/structures, Right of Way etc," according to a statement issued by the NHSRCL.

As per the nine (9) standard benchmarks set by the Survey of India in this field, 86 master control points and 350 secondary control points have been established and these coordinates are being used for flying the aircraft on Delhi-Varanasi HSR corridor alignment.

To provide clear pictures of the structures, trees and other minute ground details,60 megapixel cameras are being used for the LiDAR survey.

Detailed project report for Delhi Varanasi High Speed Rail Corridor has been submitted to Ministry of Railways on 29th October 2020.

NHSRCL has been entrusted to prepare the Detailed Project Reports for seven (7) High Speed Rail Corridors and LiDAR survey technique will be used for ground survey in all the corridors.

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