

Metro achieves AG-DMS 'breakthrough'

Completes the tunnelling work for the first phase; the stretch expected to be fully operational by 2018



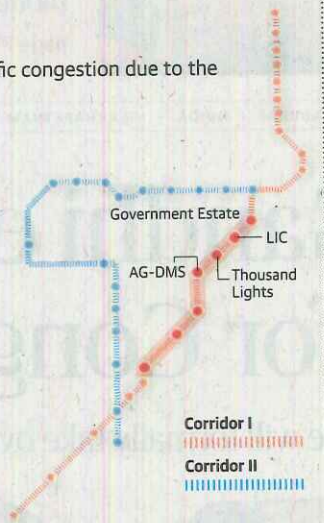
The road ahead

Anna Salai has faced severe traffic congestion due to the prolonged work

May 2017: First underground stretch opened between Thirumangalam and Nehru park Distance: 7.4 km

March 2018: Second underground stretch: Nehru Park to Chennai Central Stations: Nehru Park, Egmore and Chennai Central Distance: 4 km

March 2018: Third underground stretch: Saidapet to AG-DMS Stations: Saidapet, Nandanam, Teynampet and AG-DMS Distance: 5 km



₹300 cr. Money spent on each km of underground work

50 feet The depth at which the tunnels are constructed

12 Number of TBMs brought from countries including Germany, Russia and China

Length: **85-90 metres**



What is TBM: It can drill hard surfaces and create tunnel passages to connect underground stations

Weight of TBM: **850 tonnes**

Mission Accomplished: Chennai Metro Rail Limited deployed 12 TBMs with a 37-km tunnelling target and the section that was wrapped-up on Monday was the most challenging, taking six years to complete. - K.V. SRINIVASAN

SUNITHA SEKAR CHENNAI

Major milestones:

- 2011:** Chennai Metro Rail awards contract to the Gammon India-Mosmetrostroy joint venture for construction of stations along Anna Salai
- 2012:** CMRL issues show-cause notice to Gammon India-Mosmetrostroy for tardy progress
- May 2015:** Mosmetrostroy leaves the Chennai Metro Rail project
- July, 2015:** CMRL terminates the contract of Gammon India
- Sept. 2015:** Afcons Infrastructure Limited completes tunnelling work from AG-DMS to Saidapet
- Dec. 2015:** L&T starts construction of stations from AG-DMS to Saidapet

- June 2016:** CMRL asks Afcons Infrastructure Limited, which has already carried out tunnelling work in other parts of the city, to complete the tunnelling work from Government Estate to AG-DMS
- Oct. 2017:** First TBM along Government Estate to AG-DMS completes work
- Dec. 2017:** As second TBM too completes job, all tunnelling operations end in Chennai
- The TBMs had been with Chennai Metro for the longest time due to delays by contractors
- These two TBMs drilled underneath the Gemini Flyover, crossed several buildings and five pedestrian subways along the route
- Depth of stations in Anna Salai: 15-16 metres

Chennai Metro Rail broke through the earth at DMS on Anna Salai on Monday evening, completing the tunnelling work for the first phase of the project. There were loud cheers from engineers and workers as the tunnel boring machine (TBM) emerged into the open, close to the AGs office. The TBM has been drilling from the Government Estate side to reach AG-DMS, 16 metres below the surface. Metro service on this stretch is expected to open in December 2018.

Anna Salai has mixed soil conditions. While Government Estate to almost Thousand Lights is clayey, Thousand Lights to Gemini is hard rock. Beyond that, until AG-DMS, the soil is clayey again, officials said.

Chennai Metro Rail Limited (CMRL) deployed 12 TBMs with a 37-km tunnelling target and the section that was wrapped-up on Monday was the most challenging, taking six years to complete.

Of the two TBMs that tunnelled on this stretch, one reached AG-DMS in mid-October. Eight of the machines, including the latest one were from Germany; there were a few from China too.

CMRL officials said work on the 4.1 km stretch from Government Estate to AG-

Track work over, Metro to open two stretches in March

STAFF REPORTER CHENNAI

Chennai Metro Rail is gearing up to open two stretches - Nehru Park to Chennai Central and Saidapet to AG-DMS by March 2018 and track work has just been completed.

DMS began in March 2013, and faced a series of issues including high water table and unpredictable geological conditions. "Now that this is complete, laying of track will begin and then sig-

According to officials of Chennai Metro Rail Limited (CMRL), track-laying on both stretches was done just a few weeks ago, after tunnelling work was completed. Also, construction of cross-passages, which help passengers exit a tunnel in case of an

nalling, telecommunication and electrification work too will be taken up," an official said. Anna Salai has faced severe traffic congestion due to the prolonged work. Yet,

emergency, was also taken up simultaneously and completed. Between Nehru Park - Chennai Central and Saidapet - AG-DMS segments, tracks were laid for about 4 km and 5 km respectively, an official said.

"We will electrify these stretches in about two weeks and regular trial runs with trains will start. Though the signalling work has begun, it will take some time for completion," an official said. Civil works at stations are on a fast track and they are likely to be ready in two to three months, he added.

The installation of platform screen doors - protective barriers in underground Chennai Metro Rail stations to prevent passengers from accessing the track - is scheduled to be completed in two months, officials said.

Part of the 13-month delay arose when the contractor, Gammon India and the Russian firm Mosmetrostroy, delayed the work. Subsequent-

ly, the Russian company abandoned the project. CMRL then terminated the contract of Gammon India and awarded it to Afcons Infrastructure Limited, which resumed the tunnelling.