

Lucknow

Metropolis™

To strengthen the transport infrastructure, **Lucknow Metro Rail Project** has been implemented as an integrated mass public transport system. For this project, Metropolis trainsets meet the mobility and accessibility needs of Lucknow's people, safely and quickly.

Thanks to the Urbalis CBTC solution, performance and capacity are maximized.



KEY BENEFITS

Reduce CO2 emissions and high transport capacity : the Metro Rail is going to bring a huge respite for the Lucknowites as it will be a fast and non-polluting transport. People will travel by metro to reach their destination quickly, which will reduce the number of vehicles on roads.

High operational availability: Metropolis trainsets and Urbalis 400 signalling ensure the best levels of safety, reliability and availability.

Energy saving : the signalling system (ATO) drives the Metropolis trainsets at optimum energy-saving speed.

Country.....

India

Context.....

Lucknow is the capital of Uttar Pradesh, the most populous state of India, with more than 3 million population. The rapid growth of the city and the associated urban sprawl need a new and accessible transport infrastructure.

Alstom has been awarded a contract in September 2015 to provide signalling and rolling stock solutions for the **Lucknow Metro project**. It begins with the Line1-Phase A of the new metro network of Lucknow.

Solution.....

Lucknow Metro Rail Network will be having two routes, namely the North-South and East-West corridors. The project will be completed in two phases, starting with a first corridor of 8.4 km. The metro cars will be manufactured in the state of the art facility at Sri City. Start of revenue service on first corridor planned for beginning of 2017.

The rolling stock project covers design, manufacture, supply, testing and commissioning of 80 stainless steel cars, with an option for 44 additional cars for East West corridor with the same technical specifications.

Alstom's signalling solution is **Urbalis 400 CBTC** (communication based train control), currently the most used in the world. It improves the line transport capacity by 40% –by reducing headway to only 90 seconds.

TECHNICAL FEATURES

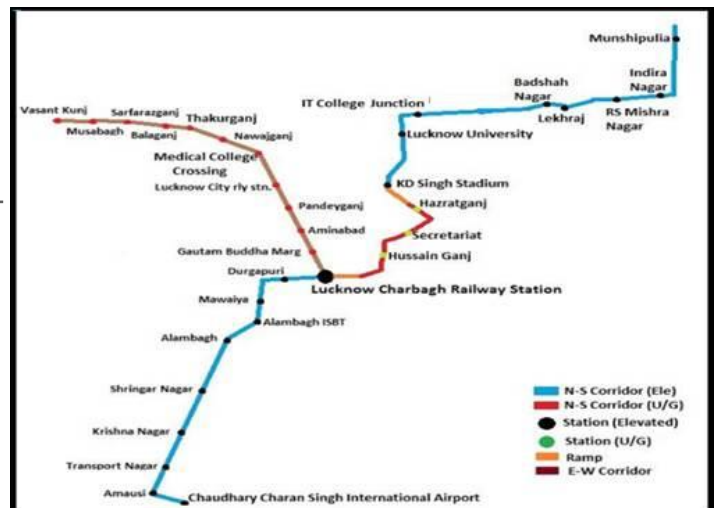
Number of trainsets	20 four-car Metropolis trains
Trainset length	88 m
Vehicle width	2.9 m
Doors	4 doors per car per side, 1400mm wide
Maximum speed	80kmph
Train capacity	Up to 1310 passengers
Security/safety	Fire & Smoke detection System CCTV (Surveillance Camera) Front cab detrainment door
Passenger information and features	Dynamic route maps 12 LCD Passenger Information Displays per car High resolution, multi colour graphic, Hindi and in English language
Comfort and accessibility	Accessibility for wheelchairs between grab-poles and between cars Low Noise and Vibration Level - Two Air Conditioning Units per car
Power supply	25kV AC, 50 HZ

SIGNALLING SCOPE

Urbalis automatic train control	Urbalis Communication Based Train Control Automatic Train Operation with drivers (Grade of Automation 2)
Operation control center	ATS and Traction Power SCADA

LINE FEATURES

Line 1	22.8 km with 3,44 km underground 21 stations with 4 underground Design Headway 90 sec
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