

VISION

Improve quality of life of people by providing **equitable, fast, reliable, safe, comfortable, efficient & sustainable** mobility solutions enabling **economic development** of NCR.

 **Creating Networks**
for the Future



NCRTC

National Capital Region Transport Corporation (NCRTC) is a Joint Sector company of Govt of India and State Governments of Delhi, Haryana, Rajasthan and Uttar Pradesh and is mandated for designing, developing, implementing, financing, operating and maintaining Regional Rapid Transit System (RRTS) projects in the National Capital Region to provide comfortable and fast transit to NCR towns and meet the high growth in transport demand.

NCRTC is an ideal example of cooperative federalism, wherein the partnership between the Centre and the four NCR states was established through a Memorandum of Understanding (MoU) signed on 29th June, 2011. NCRTC was formally incorporated on 21st August, 2013 as a Company under the Companies Act, 1956.

The ex-officio Chairman of the Board of Directors is the Secretary, Ministry of Housing and Urban Affairs (MoHUA), while all state governments are represented on the board through nominated senior officers.





Fast

Design speed of 180 kmph
Average speed of 100 kmph
3 times faster than Metro Rail



Equitable

Inclusive urban transport
planning, social benefits for all
strata of society

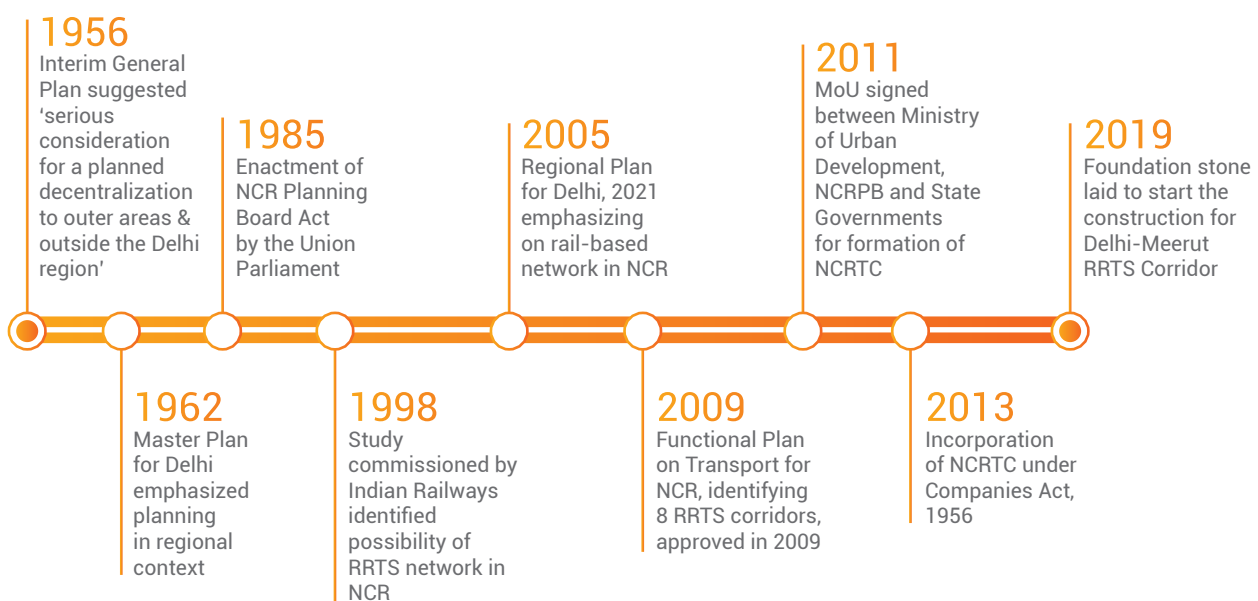


Background & History

The idea of a high speed integrated commuter railway network to connect NCR was first mooted in 1998-99 in a study commissioned by Indian Railways.

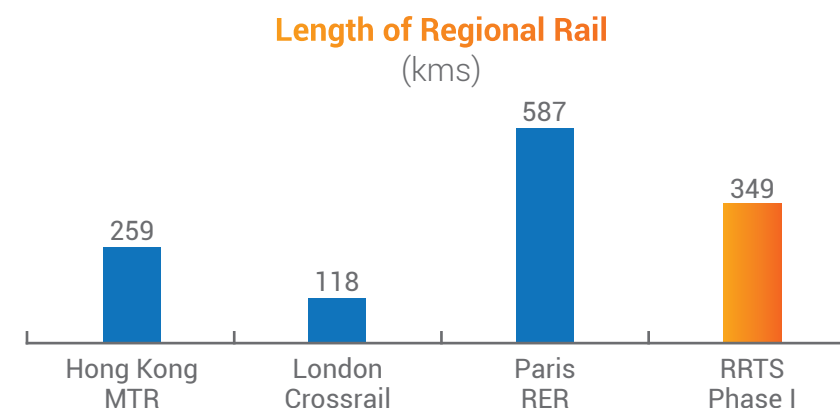
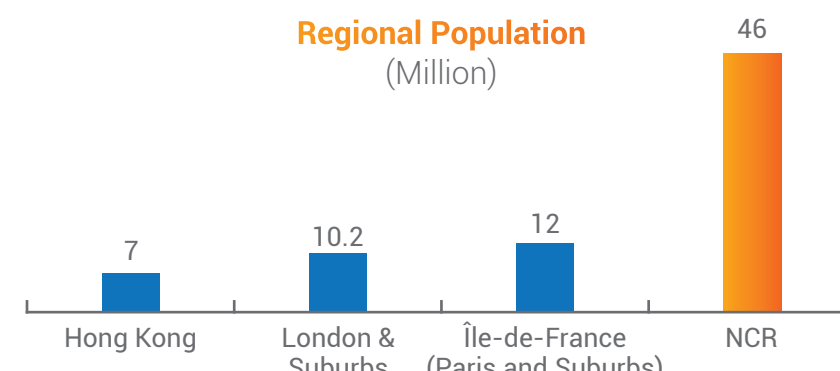
The proposal was re-examined in 2006 in the light of extensions of metro to some of the NCR towns.

The National Capital Region Planning Board (NCRPB) subsequently took up the study and recommended 8 RRTS corridors to connect NCR towns in the Functional Plan on Transport for NCR, 2032, leading to signing of MoU and incorporation of NCRTC.



National Capital Region (NCR)

- Area approx. 58,000 kms
- Fastest growing population in the world – 46 million as per 2011 census
- 15 million vehicles
- 73 % commuters use personal vehicles
- 250 thousand vehicles is of transient nature
- Accounts for 7% of the total GDP of entire India





Reliable
High reliability of time



Safe
Safe and secure travel

Regional Rapid Transit System (RRTS): NCRTC Smart Lines

RRTS is a rail-based, high-speed transit system aimed at bringing people and places closer in National Capital Region. Once operational, NCRTC Smart Lines will act as the transportation backbone for the region, while ensuring a balanced and sustainable urban development.

RRTS IS DIFFERENT FROM METRO				
	Design Speed	Operational Speed	Average Speed	Travel Time for 100 kms
RRTS	180 kmph	160 kmph	100 kmph	1 hour
METRO RAIL	90 kmph	80 kmph	32 kmph	3 hour

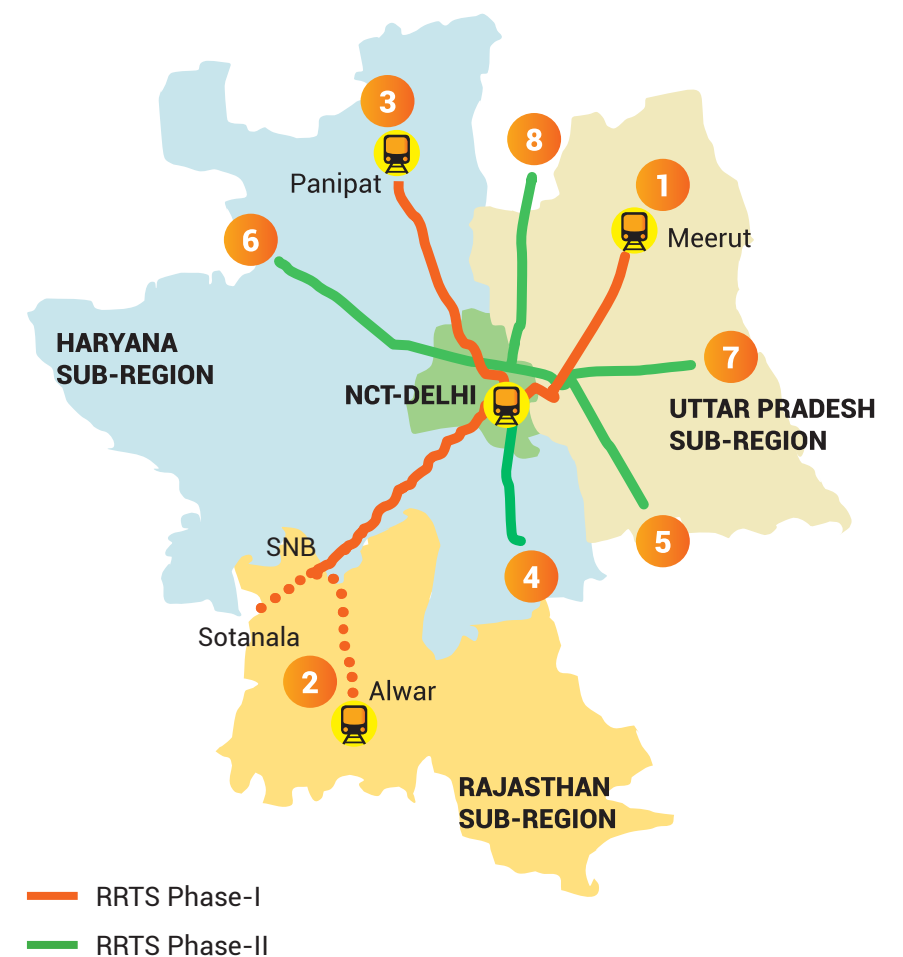
Prioritized Corridors in Phase-1

Out of 8 identified corridors, 3 are prioritized in Phase 1.

The Delhi-Ghaziabad-Meerut corridor is the first RRTS project being implemented in India and will be closely followed by Delhi-Gurugram-SNB-Alwar and Delhi-Panipat corridors.

RRTS CORRIDORS IN NCR		
Prioritized Corridors in Phase - I (349 km)		
1	Delhi - Ghaziabad - Meerut	82 km
2	Delhi - Gurugram - SNB - Alwar	164 km
3	Delhi - Panipat	103 km

Corridors in Phase - II (As per functional plan on Transport for NCR - 2032)	
4	Delhi - Faridabad - Ballabhgarh - Palwal
5	Ghaziabad - Khurja
6	Delhi - Bahadurgarh - Rohtak
7	Ghaziabad - Hapur
8	Delhi - Shahadra - Baraut



The **fastest, safest** and **most comfortable** mode of travel in NCR



Comfortable

Weather conditioned coaches, transverse seating coach for business class for extra comfortable travel



Sustainable

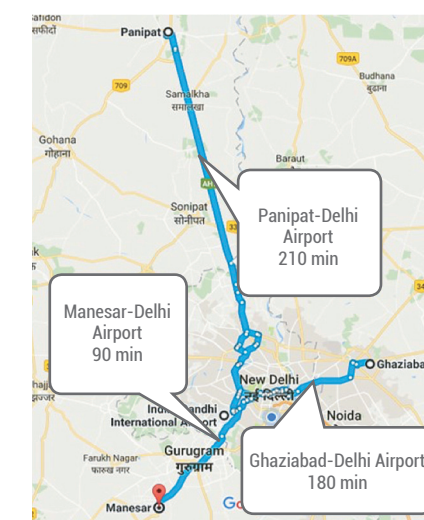
Efficient energy use
Lower emissions
Easing road congestion
Significant reduction in pollution

Benefits to Users

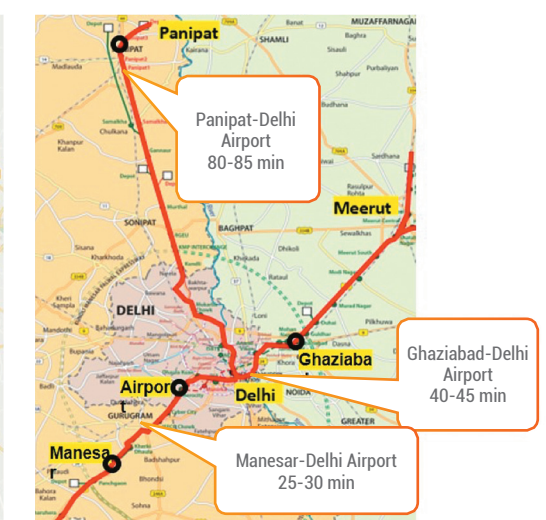
- High-speed, High Frequency transit between NCR nodes
- Safe and comfortable journey
- High reliability of time
- Seamless travel - Multi-modal connectivity
 - Integration with Indian Railways, Inter-state bus terminals (ISBTs), Airports and the Delhi Metro lines at various RRTS Stations
 - Inter-operability of NCRTC Smart Lines among the corridors resulting in seamless high-speed movement in NCR without interchange
- Significant saving of time
- Improved quality of life

Significant Reduction in travel time

Presently by Road (Average)



Travel Time Average by RRTS



Destinations	Travel time by Road	Travel time by RRTS
Panipat - Delhi Airport	210 Min	80-85 Min
Manesar - Delhi Airport	90 Min	25-30 Min
Ghaziabad - Delhi Airport	180 Min	40-45 Min

High Reliability

High-Speed High Frequency

Multi-Modal Connectivity

Seamless Travel

Energy Efficient

Safe & Comfortable

Employment Opportunities

Sustainable Growth

Education & Skill Development



High Frequency
Less waiting time



High Capacity
Transports large number of passengers to their destinations in shortest time

Benefits to Society

- Reduced vehicular congestion and pollution
 - Small foot print – High throughput
 - Reduction in Congestion
 - Efficient use of energy and non-conventional resources like solar power leading to reduced pollution
 - Enabling Modal shift
- Balanced and Sustainable Growth
 - RRTS will promote polycentric growth and development
 - Industrial/commercial hubs to be in reach of a larger population
 - Boosting "Make in India" potential in high technology areas
- Transportation backbone for NCR
 - NCRTC Smart Lines across Delhi, Uttar Pradesh, Rajasthan and Haryana will bring NCR closer
 - Reduction in migration of people to Delhi due to increased high speed connectivity
- Skill development and employment generation
 - Benefit to working class population, labour force, industrial workers and students among others
 - Access to affordable housing around NCR
 - Creation of new economic/industrial zones – Transit Oriented Development (TOD)
 - Creation of employment opportunities



Employment Opportunities

Reduction in Pollution and Congestion

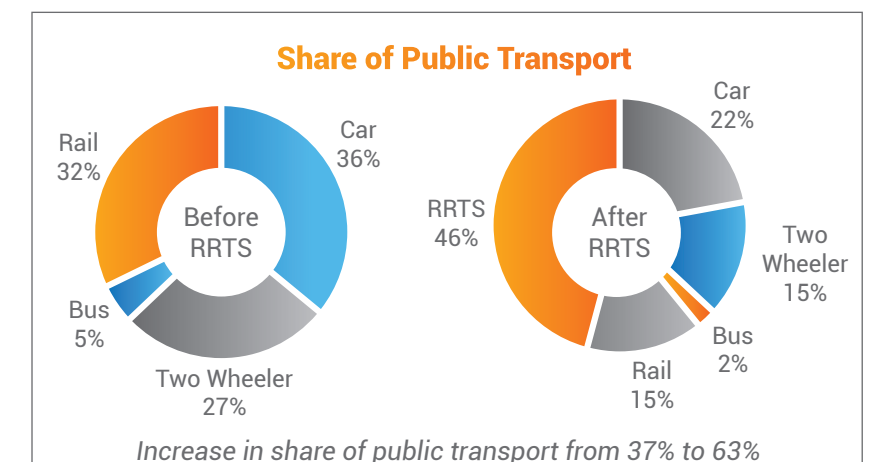
Education & Skill Development

Sustainable Growth

Reduction in congestion & pollution

RRTS will be a fast, pollution free public transport mode which will significantly reduce congestion & pollution in NCR

Delhi-Ghaziabad-Meerut Smart Line



Reduction in Pollutants

Pollutant	Yearly reduction (in 000 tons)
Particulate Matter (PM)	~60
Nitrogen Oxides (NOx)	~475
Hydrocarbons (HC)	~800
Carbon Monoxide (CO)	~800

Significant reduction in pollutant emissions

Expected Economic Internal Rate of Return (EIRR) of more than 19%

Multi-Modal Connectivity

Energy Efficient



Land Value Capture (LVC)

Augmenting revenue sources and enhancing densification in the region



Universal Accessibility

Priority seating

Corridor Highlights

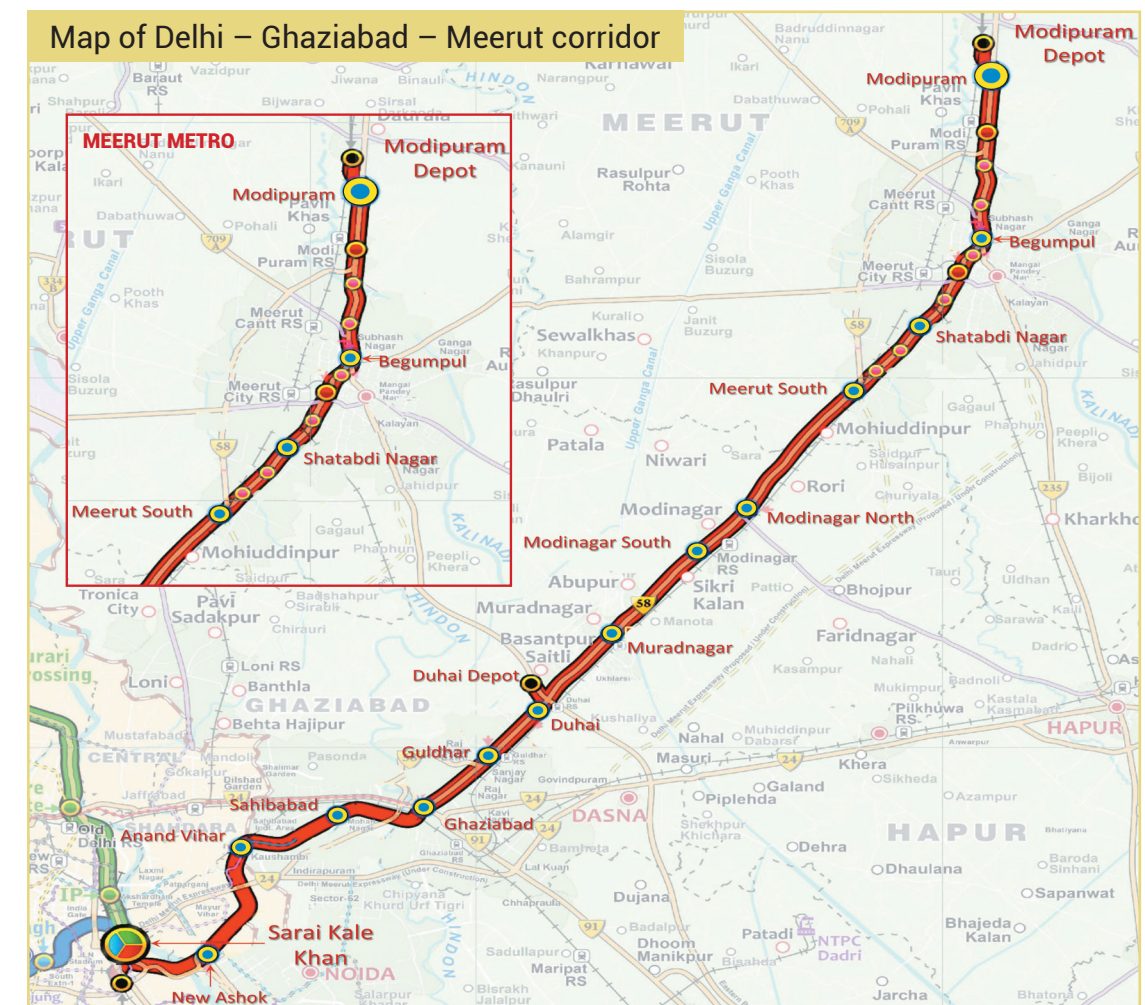
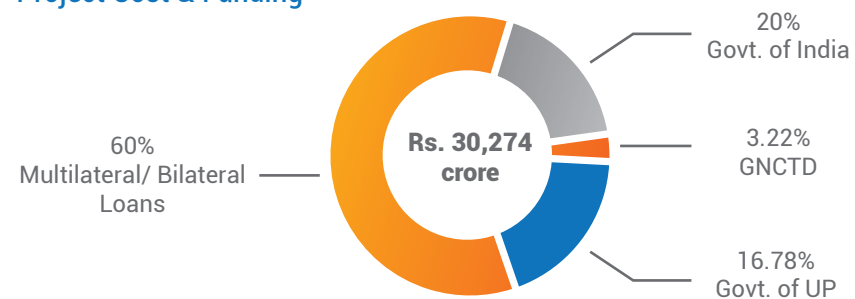
Delhi-Ghaziabad-Meerut Smart Line

The Delhi-Ghaziabad-Meerut Smart Line will be going to pass through one of the most densely populated sections of the National Capital Region. Starting from Sarai Kale Khan in Delhi, the corridor will go up to Modipuram in north of Meerut city, joining many urban nodes such as Anand Vihar, Sahibabad, Ghaziabad, Murad Nagar, Modi Nagar together with high speed connectivity.

Govt. of India, Govt. of UP and Govt. of NCTD has approved this project DPR and construction work on this corridor is in progress.

As per the DPR, the project is expected to be operational by 2024 with the daily ridership is expected to be more than 8 lakh passengers

Project Cost & Funding



Within Meerut City, NCRTC will run Metro Services (MRTS) on the RRTS infrastructure itself. This will be done by taking some value Engineering initiatives and by adding few more stations specifically for Metro operations only.



Integrating National Capital Region

Bringing cultures together

Weather Proof

Equipped to run on time even during adverse climatic conditions



Delhi-Gurugram-SNB-Alwar Smart Line

This smart line will pass through the industrialized areas of Haryana and Rajasthan. It is expected to increase the productivity of a large number of commuters travelling to and from Delhi and Gurugram to regions in Manesar, Bawal and Neemrana. This corridor will be constructed in three phases.

First phase: A 106 km stretch from Sarai Kale Khan in Delhi to SNB Urban Complex (Shahjahanpur-Neemrana-Behror) i.e, just ahead of Bawal (Haryana), enroute touching various regional nodes like Gurugram, Manesar, Panchgaon, etc.

Second phase: The line would be extended from SNB to Sotanala, with Shahjahanpur, Neemrana and Behror in between.

Third phase: The stretch from SNB to Alwar will be constructed.

The construction of the corridor is majorly along the edge of National Highway.

The Detailed Project Report of this corridor (Delhi-Gurugram-SNB) has been approved by the NCRTC Board, Rajasthan Government and Haryana Government.

Pre-construction work such as Geo-Technical Investigation and Pile Loading Test is in progress.



Delhi-Panipat Smart Line

Moving towards north-west direction from Delhi, this Smart Line will connect Delhi to towns like Sonipat, Gannaur, Samalakha and Panipat in Haryana. Sarai Kale Khan will be the originating station and interoperably connecting the other two corridors of RRTS Phase-I with this corridor. The Corridor will go through Kashmere Gate ISBT before moving towards Panipat.

Since the region is populated with large residential and industrial area with number of educational and hospitality institutions, this RRTS corridor has significant potential to act as a catalyst for growth and regional development. Not only will the Smart Line cut down travel time significantly, it will also boost the skill development and employment opportunities in the region.





User Friendly System

Seamless movement, IT enabled seamless information system

Saving Landspace

Catalyst for growth, driver of regional development



System Specifications of Phase I

Parameters	Delhi - Meerut	Delhi-SNB- Alwar	Delhi - Panipat
Total Length (km) approx.	82	164	103
Estimated travel time (min)	55	85	60
No. of total stations	24	22	16

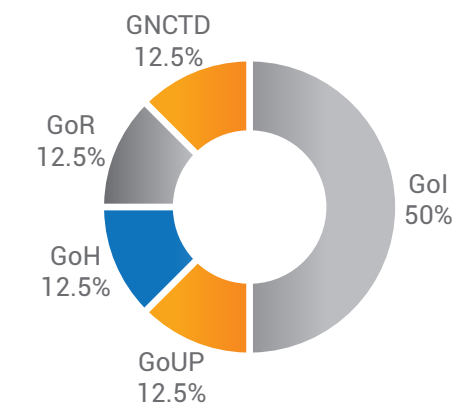
349 kms	600 Coaches	6 Depot	2 Million daily ridership
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System Specifications of Phase I

Parameters	Specifications
No. of Tracks	Two (Ballastless Track)
Track Gauge	Standard Gauge- 1435 mm
Axle Load	17 T
Rolling Stock	Aerodynamic, 3.2 m wide 22 m long, stainless steel/aluminium body
Seating arrangement	Transverse - Aeroplane type
Class of accommodation	Economy Business (one coach per train)
Traction power	1 x 25 KV AC overhead catenary type
Signalling	CATC

Equity and Legal Framework

Equity Structure of NCRTC



The equity structure of NCRTC is broadly similar to other metro companies in which the equity participation of Government of India and participating states is in the ratio of 50:50.

Legal framework

NCRTC will take up the development of the RRTS network in NCR under the legal cover of the Metro Railways (Construction of Works) Act (1978) and the Metro Railways (Operation and Maintenance) Act (2002) as amended through the Metro Railways (Amendment) Act (2009).

GNCTD - Government of National Capital Territory of Delhi
GoR - Government of Rajasthan

GoH - Government of Haryana
GoUP - Government of Uttar Pradesh
GoI - Government of India



Multi Modal Integration

Seamless integration with rail, road and air

At a glance



Unveiling of NCRTC logo



Starting of Geo-Technical Survey for Delhi-Ghaziabad-Meerut Corridor



Foundation Stone laying of Delhi - Ghaziabad - Meerut Corridor by Hon'ble PM



Civil Construction started for Delhi-Ghaziabad-Meerut Corridor



Similar Global Examples

Crossrail
(London)

Increment in property capital values of 10% - 25%, around stations

Transilien
(Paris)

Improved transportation landscape and quality of life of Paris & its suburban citizens since 1970's

GTX
(South Korea)

High Speed train service designed to help people travel across long distance within the Seoul Capital Area

TX
(Tokyo)

Tsukuba Express Line developed to promote industrial, commercial & regional development along the line

Panipat

Meerut

NCT-Delhi

SNB

Alwar



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