

Full Title of the Project: Implementation of Delhi-Gurugram-SNB Regional Rapid Transit System (RRTS) Corridor in NCR

File No.: FP/HR/RAIL/120165/2021

Date of Proposal: 20.01.2021

CHECK LIST SERIAL NO: 04

DETAILED NOTE ON THE PROJECT

- To reduce pollution, traffic congestion and reduction in travel time for the citizens of Delhi & NCR region, 8 Regional Rapid Transit System (RRTS) Corridors have been identified by task force constituted by Planning commission in the Functional Plan for transport for NCR-2032. Out of these eight corridors, three corridors namely Delhi-Meerut, Delhi-Alwar & Delhi-Panipat have been prioritized for implementation in first phase.
- RRTS is a rail based, high speed, high capacity, mass transit system which will drastically reduce travel time between various towns of NCR.
- Delhi-Alwar RRTS corridor is planned to be executed in three phases. In the first phase of this corridor, the section from Delhi to SNB (Shahjahanpur -Neemrana-Behrur Urban Complex).
- The total length of Delhi-Gurugram-SNB RRTS corridor is about 107 km long. Delhi-SNB RRTS Corridor originates from an elevated RRTS terminus station at Sarai kale Khan in Delhi and ends at SNB Urban complex in Rajasthan. Enroute, the alignment passes through RRTS Stations at INA, Munirka and Aerocity (all in Delhi), Udyog Vihar, Sector-17, Rajiv Chowk, Kherki Daula, Manesar, panchgaon and Bilaspur (all in Gurugram District), Dharuhera, MBIR, Rewari and Bawal (all in Rewari District) and SNB (in Alwar District, Rajasthan)
- Out of the total length of 107 km, about 71 Km in elevated and 36 km is underground. The total length of route alignment is about 23km in Delhi, 82 km in Haryana and 2km in Rajasthan.
- The project has already been approved by Govt. of Haryana. The pre-construction activities such as detailed soil investigation, Pile Load Test, Topographical Survey etc. are in full-swing in the corridor. The main construction work between IDPL Complex (Gurugram) and Rajiv Chowk (Gurugram) will commence shortly.

Place: Gurugram

Date: 15.05.2021

Divisional Forest Officer
Rewari

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राज्य सरकारी कंपनी परिवहन कार्पोरेशन लिमिटेड
National Capital Region Transport Corporation Ltd
(एक सरकारी राज्य सरकारी कंपनी का एक सरकारी उपकरण)
(A Joint Venture of Govt. of India & Participating State Govts.)

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STATEMENT SHOWING DETAILS OF NON-FOREST AREA

INVOLVED IN THE PROPOSAL

SN	District	Division	Range/Tehsil /Village	Khasra/Su rvey or Compartm ent Number of KM Stone	Non-Forest Area involved in the proposal (Ha.)	Present Land use	Remarks
1	2	3	4	5	6	7	8
1	Rewari	Rewari	-----	-----	119.81Hec.	-----	

Place: Gurugram

Date: 15.05.2021

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Divisional Forest Officer
Rewari

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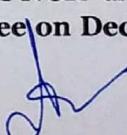
Justification for taking the Delhi-SNB RRTS project through forest land

1. BACKGROUND

- 1.1. In order to enhance regional connectivity, improve access to citizens, reduce pollution and congestion and promote balanced sustainable growth in National Capital Region (NCR), NCRPB (NCR Planning Board) had recommended development of multi-modal transport system with special emphasis on rail based high-speed, high-frequency **Regional Rapid Transit System (RRTS)** for connecting major regional centres in Functional Plan on Transport for National Capital Region-2032.
- 1.2. The Planning Commission appointed a Taskforce under the chairmanship of Secretary Urban Development in 2006, which identified eight corridors and prioritized three corridors- Delhi-Ghaziabad-Meerut, Delhi-Gurugram-SNB-Alwar and Delhi-Panipat for implementation in the first phase. Delhi-Gurugram-SNB- Alwar RRTS corridor is planned to be executed in three stages. In the first stage of this corridor, the section from Delhi to Shahjahanpur-Neemrana-Behrur Urban Complex (SNB) is planned to be implemented.
- 1.3. The Government of India has joined hands with four State Governments; Delhi, Uttar Pradesh, Haryana and Rajasthan to create a joint sector company - National Capital Region Transport Corporation (NCRTC) (in the year 2013) - mandated for designing, developing, implementing, financing, operating and maintaining RRTS projects in the National Capital Region of India.

2. ABOUT REGIONAL RAPID TRANSIT SYSTEM (RRTS)

- 2.1. RRTS is a rail based high-speed transit system with a design speed of 180 kmph and an average speed of 100 kmph. Once operational, **it will be the fastest, most comfortable and safest mode of commuter transport in NCR**. Such high-speed seamless connectivity **will not only reduce pollution and congestion** but will also drive balanced and sustainable urban development in the region. RRTS will either be on elevated viaduct or through underground tunnels.
- 2.2. The three corridors will not only converge at Sarai Kale Khan in New Delhi but will also have **seamless integration with other modes of transportation**, such as Delhi Metro Rail Stations, ISBTs (Inter-state Bus Terminals), Airports, and Indian Railway Stations. This will result in reduction in transit time, seamless movement from one corridor to another, flexibility in operations, optimal utilization of assets, better management of degraded operations, and reduction in costs.
- 2.3. RRTS is a large-scale strategic infrastructure project and has been included in the **National Infrastructure Pipeline (NIP), recently finalized by the Task Force headed by Secretary, DEA and unveiled by Hon'ble Finance Minister**. Furthermore, the project is included as a medium-term measure in '**Comprehensive Action Plan (CAP) for Air Pollution Control in Delhi & NCR**' and forms an integral part of recommendation of '**High Powered Committee on Decongesting Traffic in Delhi**'.


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2.4. **Multimodal integration (MMI)** is an integral part of the Project. Apart from a common integrated elevated terminus station for RRTS corridors at Sarai Kale Khan in Delhi, several RRTS stations are proposed to enable integration with other modes of transport such as metro lines, airport, railway stations, bus stands, etc. The alignment of the Project has been planned within the Right of Way (RoW) of highways or near it, so that it passes through centres of the cities and towns improving accessibility besides minimizing land acquisition and enabling physical integration with other modes of public transit. The city level network in RRTS project catchment area includes metro systems and bus systems.

3. BENEFITS OF REGIONAL RAPID TRANSIT SYSTEM

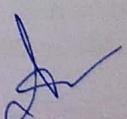
RRTS is a large-scale strategic infrastructure project, which will connect suburban and urban centres in NCR, and will run right across the city centres, thus providing a seamless multi modal transit network to the entire region. A fast and safe mobility system will not only improve regional connectivity but also help promote balanced and sustainable urban development across NCR. The economic benefits of project will include:

- **Decongesting Traffic (impact on modal share):** Share of public transport to increase to 63% from 37% presently for Delhi-Meerut corridor.
- **Reduction in pollutants:** Fewer vehicles and the decongestion for the residual traffic on influence area roads will lead to reduced air pollution.
- **Time Savings:** RRTS will significantly reduce the travel time by 60% to 75%. Average travel speed over RRTS will be ~100 Kmph which is almost three times of speed of Metro systems.
- **Other Economic Benefits:**
 - Vehicle Operating Cost Savings,
 - Accidental Cost Savings,
 - Environmental Benefits
 - Savings due to reduced capital costs of vehicles
 - Increased reliability with scheduled arrivals and departures

RRTS will provide an integrated mobility solution for National Capital Region (NCR) supported by multimodal integration. It will not only bring in significant direct economic benefits, such as savings due to reduction in pollution, travel time, vehicle-operating costs, road stress and accidents by reducing congestion (increasing the modal share of public transport), but also result in wider economic benefits and economy-wide benefits, such as agglomeration benefits, improved productivity output of labour and industries, indirect and induced employment and increase in GDP of the entire NCR.

4. Delhi – Gurugram – SNB RRTS Corridor

- Delhi-Gurugram-SNB corridor is being implemented in Stage-1 of Delhi-Alwar corridor. The corridor originates from Sarai Kale Khan in Delhi and terminates at Shahjahanpur-Neemrana-Behrur (SNB) Urban Complex.


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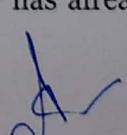
- The total length of Corridor is 107 Km, 35.53 Km - Underground (Delhi – 21.45 Km; Haryana – 14.08 Km) and 71.47 Km - Elevated (Delhi – 0.22 Km; Haryana – 69.32 Km and Rajasthan – 1.93 Km).
- The corridor has a total of 16 stations (including Sarai Kale Khan), out of which NCT Delhi will have 4 stations, Haryana will have 11 stations and Rajasthan will have 1 station. Out of 16 stations, corridor will have 5 underground stations and 11 elevated stations.

State	Length of Alignment (in Km)			No. of stations
	Elevated	Underground	Total	
Delhi	0.22	21.45	21.67	4
Haryana	69.32	14.08	83.40	11
Rajasthan	1.93	0.0	1.93	1
Total	71.47	35.53	107.0	16

- Important urban nodes that will get connected by Delhi(SKK)-SNB corridor include Sarai kale khan, Munirka and Aerocity (Domestic & International Airport) in Delhi, Udyog Vihar, Sector-17 & Rajiv Chowk, Manesar in Gurugram, Panchgaon, Dharuhera, Rewari & Bawal. With interoperable RRTS corridors and multimodal integration, the citizens will enjoy seamless connectivity across NCR. The list of RRTS stations on SKK-SNB Corridor as follows:

S. No.	Station Name	Description	Inter-Station Distance (km)	State
1	Sarai Kale Khan Station	Elevated		Delhi
2	INA	Underground	6.69	
3	Munirka Station	Underground	5.07	
4	Aerocity Station	Underground	5.38	
5	Udyog Vihar Station	Elevated	7.79	Haryana
6	Sec 17 Station	Elevated	3.79	
7	Rajiv Chowk Station	Underground	3.52	
8	Kherki Daula Station	Underground	7.28	
9	Manesar Station	Underground	7.13	
10	Panchgaon Station	Elevated	6.77	
11	Bilaspur Chowk Station	Elevated	5.49	
12	Dharuhera Station	Elevated	11.66	
13	MBIR Station	Elevated	9.86	
14	Rewari Station	Elevated	3.51	
15	Bawal Station	Elevated	10.10	
16	SNB Station	Elevated	11.84	Rajasthan

- The Detailed Project Report (DPR) of Delhi-SNB corridor has already been approved by Govt of Haryana.


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5. Justification of RRTS alignment through Protected Forest area

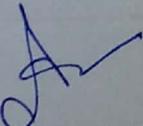
The alignment of an urban rail project depends on multiple factors such as design speed, objective, topography, geology, population density, type of development (greenfield/ brownfield) along the corridor, type of alignment (elevated, underground or at grade), size of stations, multi modal integration, major utilities, road tunnels, subways, existing metro viaduct & tunnels, land availability and technology etc.

RRTS is rail based high speed commuter system. The alignment of such system including location of stations is required to be firmed up keeping in view geometry required for high speed trains (sharp curves not permitted), multi modal integration with other modes of Traffic, commuters' convenience, availability of land and other aforementioned factors. Keeping in view all these factors, RRTS alignment of SKK-SNB corridor has been firmed up in Consultation with State Govt and other stakeholders. Accordingly , alignment has been finalised and approved by State Govt of Haryana.

As per approved Delhi-Gurugram-SNB RRTS alignment, in district Rewari RRTS alignment is passing along the NH48 in RHS.

In this regard, due to geometric constraints as mentioned above, RRTS elevated alignment passes through two small land pockets belong to irrigation department and HSIIDC at Masani Barrage (1.39 Ha) and in Bawal (7.07 ha) respectively which have been identified as protected forest area.

In view of above, passing of RRTS corridor through protected forest area at Masani Barrage and Bwal is necessary, justified and unavoidable.



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CERTIFICATE FOR MINIMUM USE OF FOREST LAND

This is to certify that the forest area involved in the proposal is unavoidable and barest minimum forest area i.e. 84599.01 sqm. Or Say 8.46 Hec. area which is proposed for diversion.

Place: Gurugram

Date: 15.05.2021

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Divisional Forest Officer
Rewari

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UNDERTAKING FOR PAYMENT OF COST OF COMPENSATORY AFFORESTATION

I/We, National Capital Region Transport Corporation hereby, undertake to pay the entire amount for compensatory in lieu of the forest area diverted for access to the project site as per prevailing wage rates at the time of plantation.

(1)

✓
Divisional Forest Officer
Reward
Divisional Forest Officer
Reward
Divisional Forest Officer

Place: Gurugram

Date: 15.05.2021

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32

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UNDERTAKING FOR PAYMENT OF NET PRESENT VALUE OF FOREST AREA

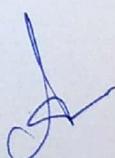
It is to certify that I/We, National Capital Region Transport Corporation have applied for diversion of **8.46 Hec.** of forest area for the purpose of access to our project. I hereby, undertake to pay the net present value (NPV) of the above forest land and in case of any upward revision of rates of NPV then I/We will pay the amount of differential NPV.

Ch

Divisional Forest Officer
Rewari

Place: Gurugram

Date: 15.05.2021



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