

# CHAPTER 21

## IMPLEMENTATION STRATEGY



21.1	INTRODUCTION
21.2	INSTITUTIONAL ARRANGEMENT
21.3	PROPOSED IMPLEMENTATION MODEL
21.4	ORGANIZATION SET-UP OF CMRC
21.5	HIGH POWER COMMITTEE
21.6	LEGAL COVER FOR NAGPUR METRO RAIL PROJECT
21.7	CONCESSIONS FROM GOVERNMENT

### FIGURES

FIGURE 21.1	PROPOSED NMRC ORGANIZATION STRUCTURE
ANNEXURE	METRO RAIL (AMENDMENT ACT) 2009



## Chapter – 21

## IMPLEMENTATION STRATEGY

**21.1 INTRODUCTION**

Nagpur city is having huge number of two wheelers and modal split towards public transport is very low. An effective public transport mode in the form of metro is expected to provide a fast, reliable, convenient and economical mode of transport to the Nagpur citizens and also the public commuting to Nagpur. It will also help in growth of the city and area as well. To ensure that the project is implemented on priority basis to, the project has to go through fast and a visible positive support from Nagpur Improvement Trust (NIT), GoM and Gol. Hence, a carefully drawn up implementation strategy is necessary for ensuring efficient execution of the metro project.

**21.2 INSTITUTIONAL ARRANGEMENT**

To enable Nagpur metro project to be implemented without any loss of time and cost over-run, effective institutional arrangements would need to be set up. Presently, Nagpur Improvement Trust (NIT) is dealing with this Project but there is need to have an SPV responsible entirely for this project..

**21.2.1 Special Purpose Vehicle**

This SPV should be on the same lines as DMRC and may be named as 'Nagpur Metro Rail Corporation Ltd.' (NMRC). Equity of NMRC will be contributed by GoM and Gol thus the Directors on its Board will be nominees of Government of Maharashtra and Government of India. In order to avoid delays usually associated with bureaucratic process of decision making, the Board of Directors (BOD) of NMRC should be vested with full powers needed to implement the project. The BOD, in turn, should delegate adequate powers to the Managing Director to take all decisions in day to day matters. The Managing Director should be a technocrat of proven record and impeccable integrity. A railway background would be an added advantage. A metro background would be most desirable.



### 21.2.2 Implementation models

Once the SPV is created, there are different models which can be adopted for implementing the Nagpur metro project. Three models have been analyzed below.

#### a) Implementation through Government

Under this model, the entire project development, implementation and operation is undertaken and financed by the government authority. Some recent examples of metro rail projects implemented directly through Government agencies are as under.

- Delhi
- Bangalore
- Chennai
- Jaipur
- Kolkata

#### b) Implementation through BOT model

BOT approach assumes that the metro is given to a private partner (Concessionaire) to develop and operate over the concession period. The private partner brings requisite funds and the efficiency of private sector management in the implementation as well as operation of the project. NMRC's role in this option is limited to that of a regulatory authority. Thus NMRC would monitor the implementation of the project such as laying down the passengers fares, targets for the minimum number of services to be run by the private partner, frequency, punctuality and reliability of these services, etc. There cannot be any compromise on this and penalties for not achieving these targets will be spelt out in advance. The private partner would assume substantial financial, technical and operational risk in the project and upon expiration of the concession period hand back the project to the government. There are only two projects namely Hyderabad and Mumbai being implemented through BOT model. The success of this model in India is still to be known.

#### c) Implementation through PPP model

It has been experienced that developing metro rail projects through PPP is a slow and time consuming process. Transferring ROW clearance, utility diversions and other site related encumbrance responsibilities to the private sector results in higher time runs. As a result, a new hybrid model has been tried in which the site development and civil construction work is managed by the government agency while the operations and management is done by the private sector.



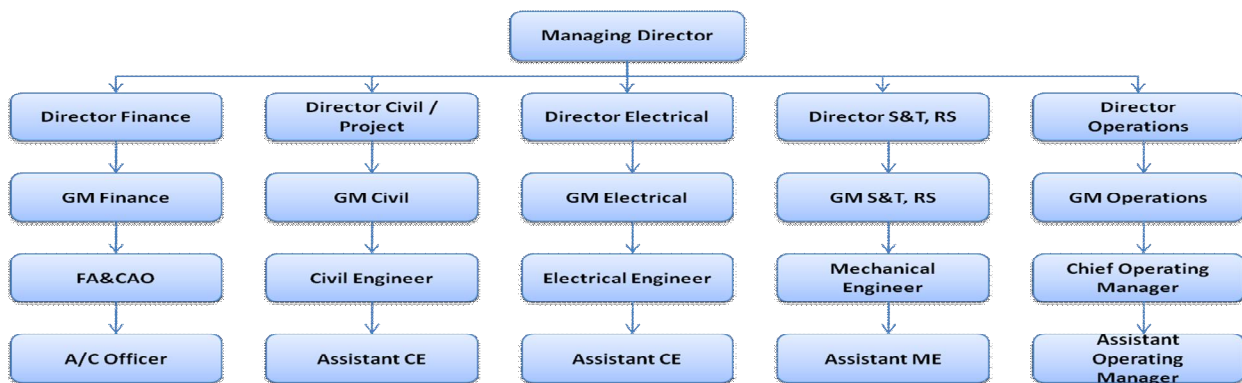
Under this mode, the government entity undertakes all civil works and the associated station work, while all other works like rolling stock, signaling and telecom, track laying work are undertaken by the private partner along with management of the metro service over the concession period. This enables the client to monitor and adhere to quality and construction timelines for the project in a better way. Implementation of airport express line in Delhi is the only example of this model in India.

### 21.3 PROPOSED IMPLEMENTATION MODEL

Due to very low FIRR and uncertainties of getting the agencies for taking up this work on BOT/PPP model, it is proposed that implementation of Nagpur Metro should be done on DMRC/BMRC model.

### 21.4 ORGANIZATION SET-UP OF NMRC

The organizational set-up of NMRC should be such that it can undertake the execution of Metro project in efficient and effective manner. A suggestive organization structure considering various stages of implementation for Nagpur Metro Rail is as under.



**Figure 21.1: Proposed NMRC Organization Structure**

**Note:** This Organization Structure would be assisted by support staff during all phases of the project.

Therefore, NMRC should be a lean but effective organization with full mandate and total power – with accountability and responsibility – free from political and bureaucratic control. NMRC management should comprise of Managing Director with full executive powers and functional directors who would be initiated into the



organization during various phases of the system. All Functional Directors will be full time members of the Management Board. The Directors will be assisted by Heads of Departments in each of the major disciplines and they in turn will be assisted by the requisite support staff.

Implementing a metro project in a congested metropolis is indeed a challenge. In sheer size, magnitude and technical complexity there are few parallels to metro projects. Further, these projects are to be carried out in difficult urban environment without disturbing city life, while at the same time preserving the environment. The project involves integration of a number of complex technical systems. Some of the technologies used in these systems are new to the country.

Since NMRC may not have the required expertise and experienced manpower to check and monitor the private partner's work, it may be necessary to engage General Consultants from the very start of the metro project, who will do this job on behalf of NMRC. Generally Consultants fee is about 3-4% of the project cost. For any expert opinion on the technically difficult matters, NMRC may also need Prime Consultants whose fee is about 0.5 – 1% of project cost.

#### **21.5 HIGH POWER COMMITTEE**

During the implementation of the project, issues with regard to acquisition of land, diversion of utilities, shifting of structures falling on the project alignment etc. are likely to arise. For expeditious resolution of these problems, an institutional mechanism needs to be set up at the State Government level. Towards this end, it is recommended that a High Power Committee under the chairmanship of Chief Secretary, Govt. of Maharashtra should be set up. Other members of this Committee should be Secretaries of the concerned Departments of the State Government who will be connected in one way or the other with the implementation of the project. This Committee should meet once a month or more frequently if required and sort out all problems brought before it by NMRC.

#### **21.6 LEGAL COVER FOR NAGPUR METRO RAIL PROJECT**

Government of India has passed Legislation as "The Metro Railways (Amendment) Act 2009" for implementation of metro rail in any metropolitan area and NCR. Copy of the Act is attached as Annexure. The implementation of metro in Nagpur urban complex may be taken up under the cover of above Act.



## 21.7 CONCESSIONS FROM GOVERNMENT

Metro rail projects require heavy capital outlay. Loans have to be taken to fund a part of the capital cost of the project. These projects yield low financial internal rate of return though their economic internal rate of return is very high. With reasonable fare level, servicing of these loans often pose problems. Therefore, to make the project financially viable, the fares will have to be substantially increased, but this will result in their reaching socially un-acceptable levels. This will result in the ridership coming down significantly, as it is sensitive to increase in the fare levels. Thus the very objective of constructing the metro rail system to provide an affordable mode of mass travel for public is defeated. It, therefore, becomes necessary to keep the initial capital cost of a metro project as low as possible so that the fare level of the metro system can be kept at reasonable level.

Taxes and duties constitute about 16 – 18% of a metro rail projects capital cost. Following are the taxes and duties, which have to be borne by a metro project:

- Custom Duty on all imported rolling stock and other equipment needed for the project.
- Excise Duty on all indigenously manufactured rolling stock and other indigenously finished goods required for the project.
- Sales Tax on all purchases made for implementation of the project whether directly by the project implementation authority or by the contractors executing the project.
- Sales Tax on works contracts to be executed for the implementation of the - project.
- Tax on electricity required for operation and maintenance of the metro system.

It is recommended that Gol to pay the Central taxes to the extent of 50% in the form of Subordinate debt as being agreed for the metro projects being sanctioned by Gol and 50% of taxes to be borne by State Government.



Annexure - Metro Rail (Amendment Act) 2009

78

रजिस्ट्री सं० डी० एल०-33004/99

REGD. NO. D. L.-33004/99

**भारत का राजपत्र**  
**The Gazette of India**

असाधारण  
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)  
PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

सं. 1418]  
No. 1418]

नई दिल्ली, सोमवार, सितम्बर 7, 2009/भाद्र 16, 1931  
NEW DELHI, MONDAY, SEPTEMBER 7, 2009/BHADRA 16, 1931

शहरी विकास मंत्रालय  
(मैट्रो रेल प्रकोष्ठ)  
अधिसूचना  
नई दिल्ली, 7 सितम्बर, 2009

का.आ. 2279(अ).—केन्द्रीय सरकार, मैट्रो रेल (संशोधन) अधिनियम, 2009 (2009 का 34) की धारा 1 की उप-धारा (2) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, 7 सितम्बर, 2009 को उस तारीख के रूप में नियत करती है, जिसको उक्त अधिनियम के उपबंध प्रवृत्त होंगे।

[फा.सं. के-14011/40/2003-एमआरटीएस/मैट्रो]  
बिमल कुजूर, अवर सचिव

MINISTRY OF URBAN DEVELOPMENT  
(Metro Rail Cell)  
NOTIFICATION  
New Delhi, the 7th September, 2009

S.O. 2279(E).—In exercise of the powers conferred by sub-section (2) of Section 1 of the Metro Railways (Amendment) Act, 2009 (34 of 2009) the Central Government hereby appoints the Seventh September, 2009 as the date on which the provisions of the said Act, shall come into force.


[F. No.K-14011/40/2003-MRTS/Metro]  
BIMAL KUJUR, Under Secy.

3269 GI/2009

Printed by the Manager, Govt. of India Press, Ring Road, Mayapuri, New Delhi-110064  
and Published by the Controller of Publications, Delhi-110054



रजिस्ट्री सं० टी० एल—(एन)०४/०००७/२००३—०९ REGISTERED NO. DL—(N)०४/०००७/२००३—०९

  
सत्यमेव जयते

**भारत का राजपत्र**  
**The Gazette of India**

असाधारण  
EXTRAORDINARY  
भाग II — खण्ड 1  
PART II — Section 1  
प्राधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

---

सं० 38] नई दिल्ली, बृहस्पतिवार, अगस्त 27, 2009/भाद्र 5, 1931  
No. 38] NEW DELHI, THURSDAY, AUGUST 27, 2009 / BHADRA 5, 1931

---

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके।  
Separate paging is given to this Part in order that it may be filed as a separate compilation.

---

**MINISTRY OF LAW AND JUSTICE**  
**(Legislative Department)**  
*New Delhi, the 27th August, 2009/Bhadra 5, 1931(Saka)*

The following Act of Parliament received the assent of the President on the 26th August, 2009, and is hereby published for general information:—

**THE METRO RAILWAYS (AMENDMENT) ACT, 2009**  
No. 34 of 2009  
[26th August, 2009.]

An Act further to amend the Metro Railways (Construction of Works) Act, 1978 and to amend the Delhi Metro Railway (Operation and Maintenance) Act, 2002.

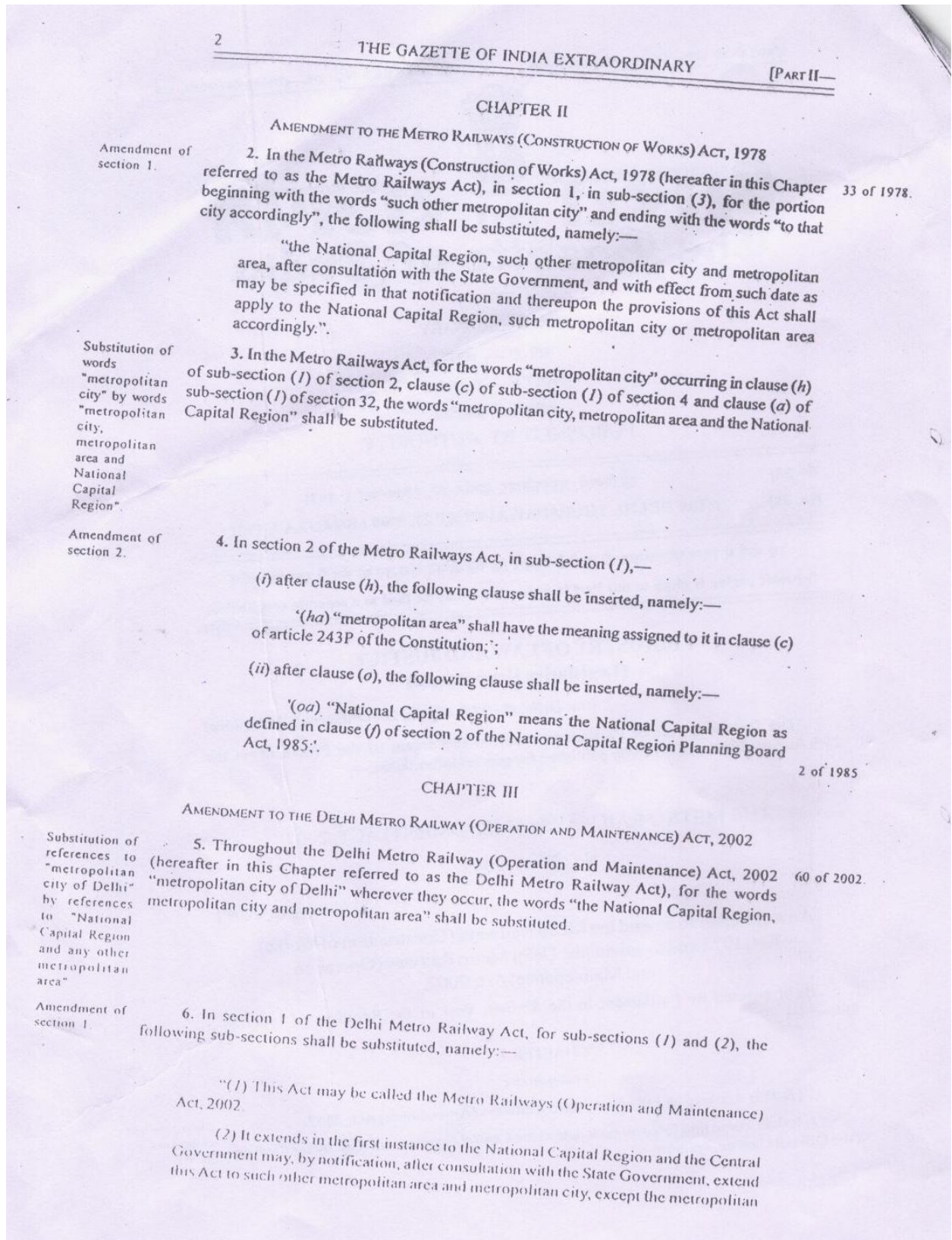
Be it enacted by Parliament in the Sixtieth Year of the Republic of India as follows:—

**CHAPTER I**  
**PRELIMINARY**

1. (1) This Act may be called the Metro Railways (Amendment) Act, 2009.  
(2) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

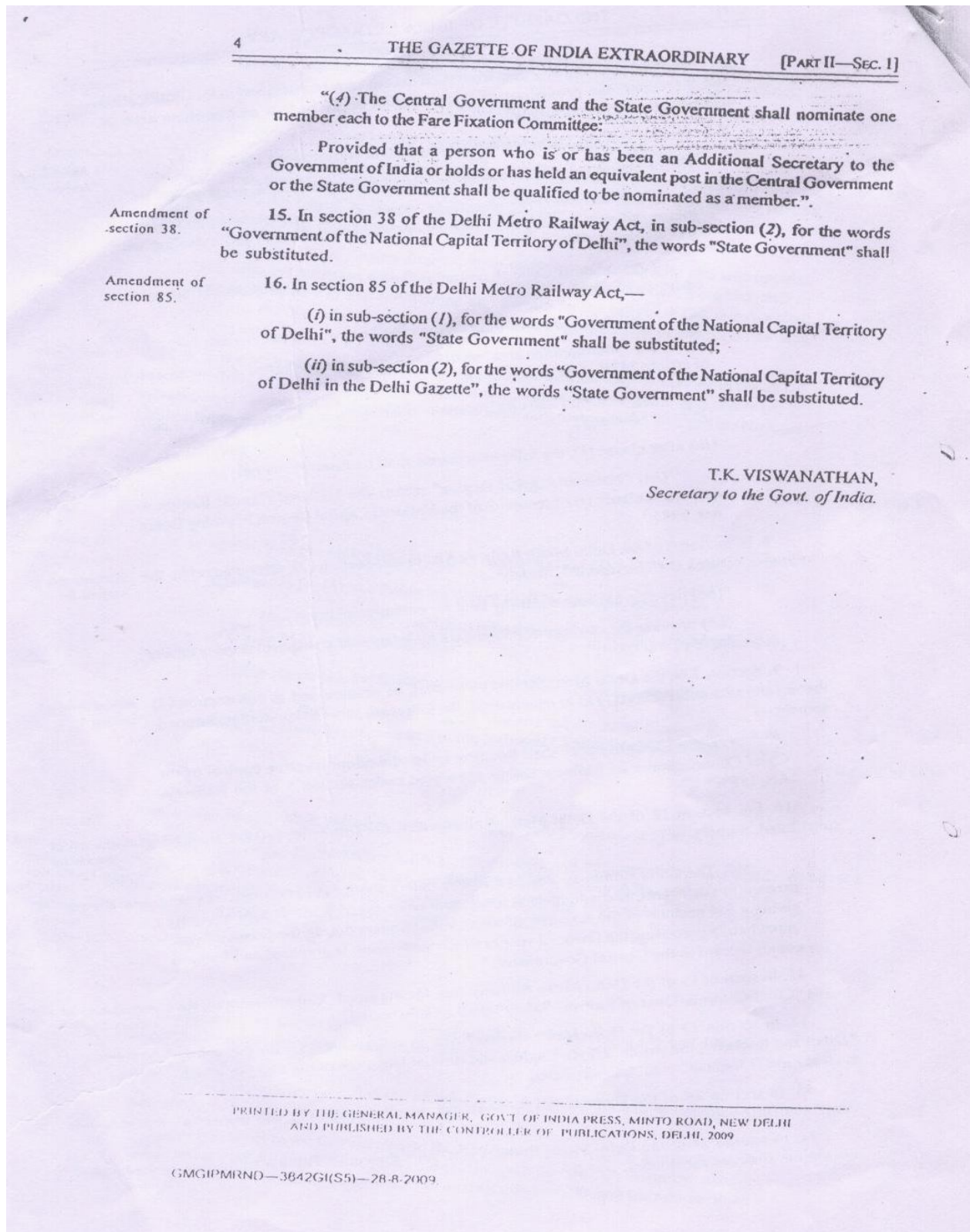
Short title and commencement







SEC. 1]	THE GAZETTE OF INDIA EXTRAORDINARY	3
	city of Calcutta, and with effect from such date as may be specified in that notification. and thereupon the provisions of this Act shall apply to that metropolitan area or metropolitan city accordingly.”.	
	7. In section 2 of the Delhi Metro Railway Act, in sub-section (1),—	Amendment of section 2.
	(i) for clause (a), the following clauses shall be substituted, namely:—	
	‘(a) “Central Government”, in relation to technical planning and safety of metro railways, means the Ministry of the Government of India dealing with Railways;	
	(aa) “Claims Commissioner” means a Claims Commissioner appointed under section 48;”;	
	(ii) for clause (h), the following clauses shall be substituted, namely:—	
	‘(h) “metropolitan area” shall have the meaning assigned to it in clause (c) of article 243P of the Constitution;	
	(ha) “metropolitan city” means the metropolitan city of Bombay, Calcutta, Delhi or Madras;”;	
	(iii) after clause (k), the following clause shall be inserted, namely:—	
	‘(ka) “National Capital Region” means the National Capital Region as defined in clause (f) of section 2 of the National Capital Region Planning Board Act, 1985;’.	
2 of 1985.	8. In section 6 of the Delhi Metro Railway Act, in sub-section (2), after clause (b), the following clauses shall be inserted, namely:—	Amendment of section 6.
	“(ba) develop any metro railway land for commercial use;	
	(bb) provide for carriage of passengers by integrated transport services or any other mode of transport;”.	
	9. Section 7 of the Delhi Metro Railway Act shall be renumbered as sub-section (1) thereof and after sub-section (1) as so renumbered, the following sub-section shall be inserted, namely:—	Amendment of section 7.
	“(2) The Commissioner shall function under the administrative control of the Chief Commissioner of Railway Safety appointed under section 5 of the Railways Act, 1989.”.	
24 of 1989.	10. For section 12 of the Delhi Metro Railway Act, the following section shall be substituted, namely:—	Substitution of new section for section 12.
	“12. The Chief Commissioner of Railway Safety shall, for each financial year, prepare in such form, and within such time, as may be prescribed, an annual report giving a full account of the activities of the Commissioners during the financial year immediately preceding the financial year in which such report is prepared and forward copies thereof to the Central Government.”.	Annual report.
	11. In section 13 of the Delhi Metro Railway Act, for the word “Commissioner”, the words “Chief Commissioner of Railway Safety” shall be substituted.	Amendment of section 13.
	12. In section 23 of the Delhi Metro Railway Act, in sub-section (1), for the words “Hindi and English”, the words “Hindi, English and official language of the State in which such station is located” shall be substituted.	Amendment of section 23.
	13. In section 26 of the Delhi Metro Railway Act, in sub-section (1), the words “a small” shall be omitted.	Amendment of section 26.
	14. In section 34 of the Delhi Metro Railway Act, for sub-section (4), the following sub-section shall be substituted, namely:—	Amendment of section 34.



\*\*\*\*\*