

CHAPTER 4
Planning, Execution and Utilisation of Multimodal Commuter Transport System (MMTS), Hyderabad

4.1 Highlights

- The project was taken up by the Railways without conducting any independent detailed study before the project investment decision. Selection of routes was not as per the recommendations of the expert consultant agency, indicating improper planning resulting in poor occupancy.
(Para 4.9.1)
- The project was financially justified on the basis of inflated/incorrect data.
(Para 4.9.2)
- Inter modal integration measures could not be implemented as envisaged due to poor occupancy. This in turn, further affected occupancy. Only 0.36 lakh passengers per day (10.70 percent) utilised the services as against the projected traffic of 3.36 lakh per day.
(Paras 4.9.3 and 4.11.1)
- Method of sharing operational costs and profits/losses was not stipulated in MoU. On account of this, transfer of Rs.36.58 crore to the State Government was still pending.
(Para 4.9.3)
- Departmental charges to the extent of Rs.9.27 crore were not levied by Railways in respect of this cost sharing project.
(Para 4.9.3)
- POH facilities at Lallaguda were created at a cost of Rs.6.60 crore although the facilities available at Moula Ali Car Shed were sufficient.
(Para 4.10)
- Assets created at a total cost of Rs.7.13 crore on a model station, additional booking offices, parking lots and subway at a station were idling due to poor patronage.
(Para 4.11.2)

4.2 Gist of recommendations

- Before making plans for executions of projects, proper feasibility studies should be carried out along with accurate financial justification to ensure expected returns as well as optimal utilisation of the assets created.
- Optimal utilisation of assets already created needs to be addressed on priority through inter modal integration, improving the patronage and leasing out wherever possible.

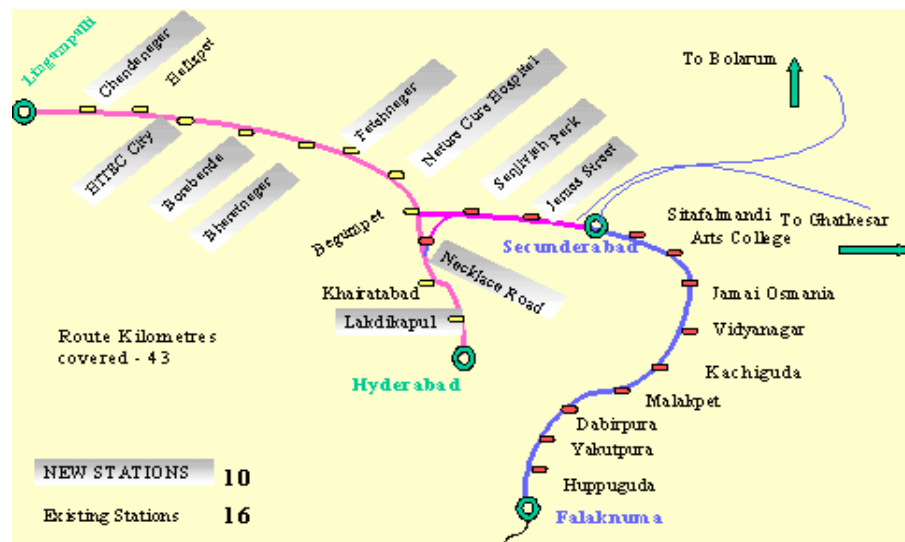
Report No.6 of 2007 (Railways)

- A mutually agreeable method of sharing of losses/profit with the State Government duly safeguarding the interests of Railways needs to be evolved.

4.3 Introduction

Hyderabad, a major city, is one of the fastest growing urban agglomerations spread over 1905 square kilometers and with a population of 6.38 million (2001). Due to the spurt in road traffic after 1980, the State government commissioned several studies, starting with the Hyderabad Area Transportation Study (HATS) in 1984 to find ways and methods to deal with the problem of traffic congestion. The study, inter alia recommended (a) improvements to existing road network, (b) provision of light rail transit system (LRTS) and (c) development of rail based Mass Rapid Transportation System (MRTS). Meanwhile, the Andhra Pradesh High Court, on a Writ Petition (7755 of 1997), observed that the Government of Andhra Pradesh (GoAP) would be failing in the discharge of their duties if they did not endow sufficient consideration to pollution control. With this background, the GoAP decided to go in for a Multi Modal Transport system (MMTS) as a part of MRTS.

Accordingly, GoAP sent a proposal in year 2000 to the Ministry of Railways for the introduction of MMTS on the already existing two rail sections viz., Secunderabad/Hyderabad-Lingampalli and Secunderabad – Falaknuma sections. These sections were part of the zonal railway network on which mainline passenger trains as well as short distance services were plying to accommodate suburban traffic. The MMTS was thus, essentially an upgradation of the existing network and not a new system. This constituted Phase-I of the MMTS.



MMTS Project (Phase-I)

Chapter 4 Planning, Execution and Utilisation of MMTS, Hyderabad

A Memorandum of Understanding (MoU) was entered into (September 2000) between the Railway and GoAP. Both parties agreed to share the cost of upgradation in equal proportions. The project was estimated to cost Rs.69.96 crore for upgradation of infrastructure and Rs.84 crore for the rolling stock comprising 20 rakes of Mainline Electrical Multiple Units (MEMU). However, the work sanctioned in October 2001 was completed in February 2004 at a cost of Rs.98.75 crore for upgradation and Rs.60.08 crore for rolling stock (10 rakes). The services on Secunderabad-Hyderabad-Lingampalli section (28.10 Km) commenced in August 2003 and on Secunderabad-Falaknuma section (14.54 Km) in February 2004.

4.4 Audit objectives

The performance review of MMTS- Phase I was carried out to assess whether

- (i) the project was properly planned after necessary evaluation of alternatives and with proper justification;
- (ii) the project was executed economically and efficiently; and
- (iii) the objectives of the project were achieved and the infrastructure created was used optimally.

4.5 Audit criteria and methodology

The MoU, provisions of the Railway Codes and guidelines issued by the Railway Board from time to time were considered by Audit while reviewing the records. Audit also interacted extensively with the personnel of the Railway Administration and Municipal Corporation of Hyderabad. An entry conference was held (February 2006) with the General Manager of South Central Railway wherein audit objectives, criteria and methodology were discussed. During an exit conference held in August 2006 with the representatives of the Railway Administration, the audit findings were discussed in order to elicit their views.

4.6 Scope of Audit

A railway-centric study of the MMTS Phase I since conception to the present stage has been attempted keeping in view the objectives as envisaged before commencement of the project.

4.7 Acknowledgement

The active cooperation of the Railway officials of South Central Railway in furnishing information sought for by the audit team is acknowledged. The cooperation extended by the Project Director (MMTS) is also acknowledged.

4.8 Project objectives

The objectives of the MMTS project were:

- to enable the suburban Railways to carry a greater portion of commuter traffic and to provide comfortable, clean, fast, efficient, regular, reliable and affordable suburban commuter transportation to the Hyderabad Urban Agglomeration and its neighborhood,

Report No.6 of 2007 (Railways)

- to strengthen the existing suburban rail infrastructure and services in the city of Hyderabad and its suburbs, and
- to upgrade fixed rail infrastructure.

The project proposed to cater to 3.36 lakh passengers per day by providing 176 services. MMTS with inter modal integration measures such as combined tickets, short distance bus passes and running of feeder services, also aimed at providing a clean mode of transport by reducing around 3,170 tonnes of pollutants in Hyderabad due to diversion of road traffic to rail. The results of audit are detailed in the succeeding paragraphs:

4.9 Planning and justification

4.9.1 Injudicious planning

Any investment decision should be based on examination of various alternatives to ensure that the objectives are met. Investigations prior to the decision for the investment on a railway network include surveys and feasibility studies. The feasibility study for the project, carried out in March 2001 identified Lingampalli-Nampalli and Lingampalli-Falaknuma for the project. The project was accordingly sanctioned in October 2001. There was no evidence, however, that the Railways carried out a relative analysis of various lines and projected traffic on them before selecting these lines for the MMTS.

However, the Joint Task Force (JTF) comprising representatives from the GoAP and Railway decided in July 2002, after commencement of the project, to engage M/s L&T RAMBOLL Consulting Engineers Limited at a cost of Rs.0.51 crore to plan the MMTS. The consultant's report was received only in February 2004, when Phase-I of the project had already been completed. Thus, even the decision to go in for a consultant was flawed as the Railway had independently decided the prioritisation of the routes and gone ahead with the execution of the work. The consultant inter alia recommended the following plan of action:

Time Frame	Period	Sections to be developed
Time Frame I	2006-2009	Medchal-Secunderabad, Ghatkesar-Moula Ali-Secunderabad
Time Frame II	2009-2011	Secunderabad-Shamshabad, Lingampalli- Pattancheruvu
Time Frame III	2011-2016	Lingampalli-Nampalli-Koti-Uppal

The consultant based his recommendations regarding sequencing of the routes on the basis of daily ridership taking into account the existing traffic, travel patterns, upcoming activities and financial returns anticipated on the required investment and gave the highest preference to the sections Medchal-Secunderabad and Ghatkesar-Moula Ali- Secunderabad. However, these routes were given lower priority by the Railways and were planned to be taken up only in Phase II.

Chapter 4 Planning, Execution and Utilisation of MMTS, Hyderabad

Due to the poor occupancy and the financial unviability of Phase I, Railway Board in 2006 took the stand that Phase II would not be taken up till Phase I was made financially viable. Thus, as a result of improper planning, the sections which were given the highest priority in the consultant's study have not been taken up at all. Sections of lower priority with an already existing network were taken up in Phase-I.

Recommendation

Before making plans for executions of projects, proper feasibility studies should be carried out along with accurate financial justification to ensure expected returns as well as optimal utilisation of the assets created.

4.9.2 Unrealistic justification

As per the codal provisions, a project should yield a return on investment of not less than 14 per cent under Discounted Cash Flow method. The Railway Board also decided (1993) not to invest in suburban transport projects as these were the responsibility of Ministry of Urban Development. Proposals received for such projects were to be considered after detailed study and ensuring that the Railways would not be burdened with operational losses. However, for this project, Railways submitted a feasibility report in July 2001 to the Cabinet Committee of Economic Affairs (CCEA) based upon a report prepared by the GoAP, wherein the Internal Rate of Return (IRR) of the project was assessed at 3.27 per cent without surcharge and at 11.98 per cent with surcharge of 25 per cent with the following assumptions:

- The number of passengers utilising the MMTS would be 3.36 lakh per day.
- Ratio of Season Ticket to Printed Card Tickets (daily) would be 50:50.
- Project cost would be Rs.153.96 crore (including rolling stock at Rs.84 crore).
- The gross working expenses and earnings would be Rs.38.72 crore and Rs.41.94 crore respectively.

The Cabinet Committee for Economic Affairs (CCEA) finally recommended the project with the following provisions:

- (i) Levy of a surcharge of not less than 25 per cent of the fare, which will accrue to the Railways and
- (ii) Participation of the Railways in Phase I would not commit to participation in Phase II of the project.

Thus, MMTS (Phase-I), though financially not viable, was recommended on the condition that a return of at least 11.98 per cent would accrue by way of levy of surcharge.

Report No.6 of 2007 (Railways)

A further examination of the FIRR worked out by the Railways revealed the following lapses:

- Working expenses were based on Gross Tonne Kilometers instead of Passenger Train Kilometers resulting in an understatement of working expenses by Rs.3.78 crore per annum.
- The number of passengers expected to commute in this section was taken as 3.36 lakh per day. This was based on a four (from APSRTC and two wheelers) to seven per cent (from autorickshaws) shift of commuters of the twin cities as a whole. The MMTS Phase-I (43 Kilometers), however, caters to only 344 sq. kms. i.e 18 per cent of the total spread of 1905 sq. kms. of the Hyderabad Metropolitan area. Hence the share of MMTS would work out to only 53,000 passengers per day assuming a shift of four/seven per cent based on the area covered. Even assuming double this shift only 1.41 lakh passengers would travel on the MMTS. Thus, earnings were overstated by Rs.24.83 crore. Even after two years of completion of the project, the actual traffic was only 35,770 passengers per day. In other words, the commuter traffic was grossly overstated.
- After commencement of services, it was observed that surcharge was levied at only 10 per cent of basic fare on I and II class single journey tickets beyond 25 kms and 50 per cent on I and II class Monthly Season Tickets only, in contravention of the CCEA recommendations, thereby increasing operating losses.

Thus, the financial justification was based on wrong premises. The Railways failed to carry out a realistic assessment before taking such an important investment decision.

Recommendation

Optimal utilisation of assets already created needs to be addressed on priority through inter modal integration, improving the patronage and leasing out wherever possible.

4.9.3 Deficiencies in Memorandum of Understanding

MoU entered into in September 2000 was to be followed up with a formal agreement but, this has not been executed so far (October 2006). Even the MoU lacked clarity on critical issues as detailed as follows:

- The project was aimed at providing inter modal transport. However, the issues regarding combined ticketing, running of feeder services for inter modal integration were not clearly dealt with in the MoU. APSRTC withdrew the feeder services due to poor patronage and also wanted reimbursement of the cost of feeder services. Such issues were, however, not addressed at all in the MoU. The absence of feeder services was one of the reasons for the poor patronage.

Chapter 4 Planning, Execution and Utilisation of MMTS, Hyderabad

- The MoU was silent on the exact methodology of sharing of losses or profits. The operational losses borne entirely by the Railways in the last two years alone add up to Rs.73.16 crore. The transfer of losses has not been affected so far as the GoAP has questioned the costing methodology adopted by the Railways. Though these issues were raised as far back as September 2005, they are yet to be resolved and the Railways continue to carry the entire burden of losses.
- Departmental charges at specified rates are normally levied on works undertaken by Railways for outside organisations to cover the cost of tools and plant, supervision etc. No provision was, however, made for levy of departmental charges either in the MoU or in the estimates for MMTS. Non-levy of departmental charges resulted in under costing of civil works to the extent of Rs.9.27 crore.
- At the specific insistence of the GoAP, the earlier proposal for MEMU rakes was replaced by EMU rakes, which necessitated relocation of fixed structures, changes in platforms, lifting of tracks and provision of additional facilities at Car Shed at Moula Ali. This resulted in an avoidable burden of Rs.2.74 crore on the Railways though the changes were made at the behest of the GoAP.

These deficiencies of the MoU could have been overcome had the Joint Venture Corporation (JVC) with equal equity contribution from the Ministry of Railways and the GoAP as envisaged in the MoU been formed at an early date. The proposals sent (April 2005) by the GoAP in this regard have not been acted upon by the Board so far (October 2006). The Railway Administration accepted (August 2006) that the non-formation of the JVC has affected the commercial operations and patronage of the system.

4.10 Lapses in execution and contract management

There was every need to contain expenditure and ensure that the project was executed with a high level of control, particularly in view of the fact that the rate of returns was below the acceptable financial norms. However, it was seen that:

- The project was initially targeted for completion within a period of one year after the signing of MoU (25 September 2000). As the detailed estimate for the project was sanctioned only in October 2001, the target date was revised to November 2002. The project could, however, be commissioned only in August 2003/February 2004, with a time over run of 21 months. As against the estimated cost of Rs.69.96 crore, the project was completed at a cost of Rs.98.75 crore, with a cost over run of Rs.28.79 crore (41 per cent) mainly attributed to midstream changes in type of rolling stock and changes in the scope of civil works. Though these constituted material modification and prior approval of the Board as well as re-working of ROR were required, this was not done.
- GoAP, requested (January 2003) Integral Coach Factory (ICF) to provide automatic door opening/closing system (Driver Controlled) in the car rakes

Report No.6 of 2007 (Railways)

to be manufactured by them for MMTS. However, MMTS authorities withdrew their request subsequently in November 2003 in view of the heavy cost involved (Rupees one crore per rake) and the General Manager, South Central Railway's stand that such provision was not a necessity for surface suburban traffic. Since ICF had already gone ahead with the procurement action, the systems costing Rs.1.79 crore were provided in two rakes, which were diverted to Southern Railway for use in their local network after immobilising the automatic door opening/closing equipment, since their use in crush load conditions is not possible. Thus, manufacture of this system at the sole initiative of GoAP has resulted in infructuous expenditure of Rs.1.79 crore with no benefits whatsoever.

- An EMU Car shed was constructed at Moula-Ali at a cost of Rs.19.04 crore providing 'Inspection Bay' with three rakes stabling capacity and 'Sick line Bay' to hold 42 coaches. The facilities available, without additional inputs, were considered sufficient to carry out Periodical Overhaul (POH) activities also. However, without linking the facilities being created at this shed, additional facilities were created for POH of 30 EMUs per month at Lallaguda Workshop at a cost of Rs.6.60 crore entirely at Railway's cost. The attention to the electrical portion, however, continues at Moula Ali. Creation of additional facilities at Lallaguda at a cost of Rs.6.60 crore was not only injudicious but also resulted in avoidable loss due to increased downtime.
- Civil works of the project were to be completed within three to six months from the date of award. There were, however, delays in completing the civil works in 21 works on administrative grounds viz., clear site not being made available, delays in supply of required drawings and designs and changes in scope. Such lapses enabled the contractor to claim the compensation of Rs.7.67 crore in three agreements. These claims were, however, contested and referred to arbitration. The arbitration awards were pending.

4.11 Non-achievement of objectives

4.11.1 Poor occupancy and inadequate services

Against the projected figure of 3.36 lakh passengers per day, the actual number of passengers carried was 13,104, 25,486 and 35,770 per day (3.9 to 10.65 per cent) during the years 2003-04, 2004-05 and 2005-06 respectively. The number of services was also very low (56) as compared to the projected 176 services. Though the number of services actually run was far lower than the originally projected number of services (31.8 per cent) the capacity utilisation of even these services ranged from 12.73 to 25.57 only. Thus, even the socio-economic objective of carrying a greater portion of commuter traffic could not be achieved.

The Joint Task Force (JTF) analysed the reasons for poor patronage as follows:

Chapter 4 Planning, Execution and Utilisation of MMTS, Hyderabad

- Adequate bus connectivity at MMTS stations was not available. Feeder services introduced were withdrawn due to poor patronage. The absence of feeder services has contributed to poor patronage.
- Combined rail bus ticketing and short distance passes were not introduced (October 2006) though their introduction was vital for the success of the system. This also resulted in making travel by MMTS costlier.

4.11.2 Under utilisation/idling of infrastructure

Keeping in view the projected traffic of 3.36 lakh passengers per day, heavy investment was made on the creation of infrastructure facilities, but these remained under-utilised/ un-utilised due to poor patronage, as brought out below:

- Additional booking offices opened in 14 existing stations and 11 new stations. Out of these, at 10 stations the additional booking offices were closed due to poor patronage. The cost of these unutilised assets amounted to Rs.0.77 crore.
- Parking lots were created at cost of Rs.1.81 crore at 11 stations. Despite tenders being called for award of parking contracts three to four times, bids were not received resulting in assets created remaining idle. As a result, the Rs.2 crore revenue expected from commercial activities has also not materialised.
- A subway at a cost of Rs.1.01 crore was built at the Arts College station where the average traffic was around 706 passengers per day, against the anticipated traffic of 11,000 per day.
- The Necklace Road station was constructed at a cost of Rs.3.54 crore as a Model station to suit international standards for the benefit of projected 13,000 passengers per day. The actual patronage, however, was only 533 passengers per day resulting in idling of infrastructure.
- As decided by JTF in February 2003, basic requirements for physically challenged passengers were to be provided at the new stations of MMTS. Accordingly, separate entry ramps were provided at stations and separate coaches were also earmarked. However, ramps to cross over from one platform to other using wheel chairs were not provided. The gap between the platform and floor of the coach also made boarding the train difficult.

Thus, facilities created far beyond the requirements remained unutilised/ underutilised.

4.11.3 Impact on pollution

The project was conceived with reduction of pollution as one of the main objectives. The Railways or the State government have, however, not conducted any impact assessments though the project was completed more than two years ago. The impact on pollution levels ought to be minimal in view of the poor patronage.

4.12 Conclusion

The project was financially unviable ab initio. The selection of the routes was also not as per any prior detailed study. Improper selection of routes combined with the failure to take clear decisions regarding inter modal transport and the combined ticketing system resulted in poor patronage, operational losses and underutilisation of assets. Thus, the stated objectives of the project have not been achieved.

**New Delhi
Dated:**

**(KANWAL NATH)
Deputy Comptroller and Auditor General**

Countersigned

**New Delhi
Dated:**

**(VIJAYENDRA N. KAUL)
Comptroller and Auditor General of India**