Terms Of Reference

Bengaluru Commuter Rail

5/27/2011
Submitted by CiSTUP

nammaRailu

Contents

1. Introduction

The railway network in & around Bengaluru has been insufficient to cope with the increasing demands from a long time. The city has thus not been able to provide dependable rail-based commuting solutions for the peripheral areas & nearby towns. Various studies have repeatedly recommended a Commuter Rail system for the city. The developing semi-urban /sub-urban areas in BMA & BMR (Bengaluru Metropolitan Area; & Bengaluru Metropolitan Region), along with the nearby smaller cities & towns have thus been primarily road dependent for all ties with Bengaluru City since the very beginning.

The state government has ear-marked large scale development in the peripheral areas of the city as planned for in the Comprehensive Development plan 2015 (CDP-2015). With the planned expansion, anticipated growth with job creation & high levels of investments for industries, links between the city, its' outer fringes & the nearby smaller towns are expected to increase considerably in the coming years since they are well within commuting distances from the urban centres.

The city's traffic congestion problems are being attempted to be addressed with a dedicated Metro rail system, generally positioned within the Outer Ring road (ORR). Though the Metro rail system is likely to assist in reducing traffic congestion levels within the urban areas of the city, an estimated 5 million suburban commuters will still be left without an efficient rail system for their daily commutes.

With no dependable, frequent rail services to cater to their daily travel to & from the city or from one peripheral town to another, or to intermediate locations, people working in the newer industries & from the nearby towns will continue to use road transport, be these public or private. The radial roads leading in & out of the city are hence likely to become saturated soon despite expansions that are currently being undertaken, resulting in inefficiencies, increased pollution, accidents, etc.

It is thus strongly felt that developing a network of environment-friendly commuter rail system for suburban areas & towns (connecting Bengaluru with Tumkur, Nelamangala, Ramnagaram, Hosur, Chikballapur, Dodballapur & Bangarpet) is an urgent necessity that needs high priority. This has been highlighted in the "Call to Action" report prepared by Praja /CiSTUP.

Additionally, In the Railway Budget 2011, Railway Minister has planned to improve the Suburban Train services in major METRO's thru' setting up of SPV on the lines of Mumbai Rail Vikas Corporation (MRVC) & KRVC for Kolkata which will raise funds through banks and other financial institutions, Municipal Corporation and other stakeholders. Railways has thrown the door open for other states to take such initiatives by mentioning that Railways will consider similar corporations for congested suburban systems in other states

2. Detailed Project Report – Salient's & Premises

The Detailed Project Report (DPR) for Bengaluru Commuter Rail is to be based on the following premises:

- The Commuter rail system will initially be operated with infrastructure that will be augmented & shared between South Western Railways & Bengaluru Commuter Rail Authority (SPV that is proposed to operate the suburban rail system); & subsequently
- The Commuter rail system is to be operated with dedicated infrastructure that will be built new for exclusive operation of trains by Bengaluru Commuter Rail Authority.

The DPR must also include & address the following:

1) Study of the existing modes of transport and current situation of traffic density on the proposed corridors to be brought out.

2) Train services to the various suburban destination towns shall be planned to eventually result in 24 trains /day (between 5AM & 11PM), at the minimum in each direction, with provision for further increase in frequencies with capacity augmentation in the future. Provisions must also be incorporated for operating express /skip-stop /fast trains with bypass tracks at stations, as detailed in the "Call to Action" report.

   Rolling stock recommendations which addresses safety of passengers including automatic doors, mobility of passengers with disabilities, cyclists, baby strollers, passengers with luggage, quick movement both into the train & inside it & appropriate seating for long distance travel.

3) In order to commence optimal services without delay whilst also conforming to the limitations that are expected initially along certain routes for operation of frequent trains, it is felt that a supply-oriented approach is unavoidable at commencement of services, based on existing capacities.

   Recommendations for capacity augmentation shall be made with gradual departure from a supply-oriented approach to one that is more demand-segmented & service-focussed that balances supply with demand. The demand is expected to increase as & when more services are made available with capacity augmentation. Thus, the approach would practically entail a progression of steps from the simple to the more difficult.

   Generally, it is felt that frequent services can be commenced & operated without delay/s along available tracks towards the north (ie. to Doddballapur & Chikballapur) & to the southeast (ie. to Hosur), whilst less frequent services can be commenced on routes leading to Tumkur, Ramnagaram & Bangarpet, pending capacity augmentation.

   A map detailing the routes & proposed new stations has been included in section 4. The existing rail corridor between City station & Baiyappanahalli (via Cantonment) that is being used for many inter-city trains shall not be considered since Metro-rail route/s are expected to adequately serve the area.

4) Recommendations for integration of various modes of transport (such as City bus, Inter-state bus, Metro-rail, Monorail, High-speed rail, etc.) shall be made in consultation with various

stakeholders as necessary. Recommendations for road /passenger /bicycle access to stations shall include facilities for the disabled & provisions for adequate parking facilities for bicycles & motorized vehicles for the convenience of users & to enhance rider-ship on Commuter trains. Provision for easy entry & exit for buses with bus bays & bus shelters shall be included.

3. Objectives of the study

- To examine the Financial & Institutional dimensions in each case;
- To develop Institutional, Financial, Operational arrangements & potential for Commercialization for part or full recovery of investments & to meet operating costs; &
- To evaluate the feasibility of involving the private sector for investments & for some of the operational needs.

The Consultants are expected to recommend appropriate cost recovery mechanisms, fare structures & cost recovery targets. They are also expected to recommend the optimal private sector participation levels in building various rail infrastructure & operational services & activities, wherever possible.

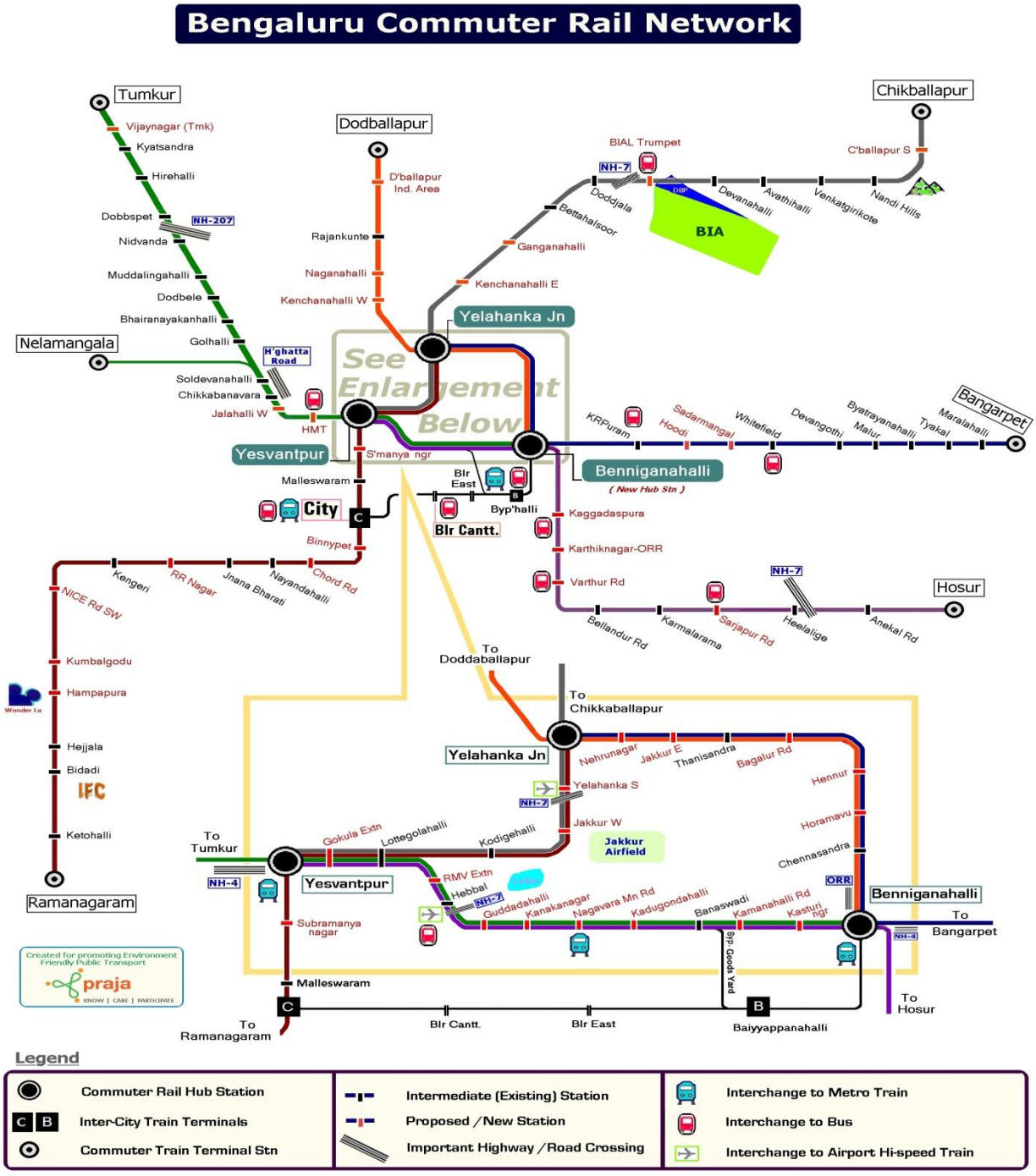
More specifically, the study is to:

- Determine the appropriate institutional strategy to build & operate the Commuter Rail system, including (i) appropriate roles & responsibilities for the participating entities; (ii) organizational structure; & (iii) staffing. It is generally felt that the state can adopt an SPV model as outlined in the "Call To Action" report, with commercialization of assets to help recover costs & to facilitate debt servicing.
- Conduct a financial analysis based on land requirements, tracks, stabling, coaches, signalling systems, etc., taking into account operating & maintenance costs in the target operating areas. The analysis should also include reviewing the reliability of estimates of capital costs which have been developed for other such similar suburban rail systems in the country.
- Survey different types of rail system options at commencement with a gradual move to eventually operate fully electrified trains with EMUs operating on dedicated double tracks. Details on signalling systems, rakes /coaches, DEMUs /EMUs, etc. with regard to preferences, costs, advantages, disadvantages, management, maintenance, etc. shall be outlined.
- Details of rake composition with type & number rolling stock needed to operate requsite services per day in each of the proposed routes.
- Bring out the advantages of 32 existing stations for commuter Rail, enhancements to those stations and details of the 35 new stations required for the recommended routes along with details for better connectivity and integration with other modes of Transport
- Analyze the feasibility of alternatives for cost recovery in full, so far as possible & propose (i) financial plans; (ii) ticket pricing structures; & (iii) mechanisms for raising revenues through commercialization to offset the anticipated subsidies on ticket pricing. These financial proposals should accompany the proposed institutional arrangements.
- Determine appropriate methods of involving the private sector in order to improve efficiency, reduce costs & for capital investments.
- Examine the legal framework governing railways, business relationships between the city, state & central government, & also between each of the above & potential private sector partners who are likely to build the system.

4. Network Map

Recommended Routes :

1. Yeswantpur-Yelahanka-Devanahalli–Chickballapur
2. Benninganahalli-Thanisandra-Yelahanka–Doddballapur
3. Yeswantpur-Benninganahalli-Anekal–Hosur
4. Tumkur/Nelamangala-Yeswantpur–Benninganahalli
5. Yelahanka-Benninganahalli-Whitefield-Malur–Bangarpet
6. Yelahanka-Yeshwantpur-City-Kengeri–Ramanagar



5. Scope of the study

The study shall entail the following specific tasks:

1. Institutional & Commercialization strategy & structure

The Consultant shall examine institutional arrangements, including commercialization options to help fund the venture. The possibility for BMRCL (Bengaluru Metro rail Corpn Ltd) to build & operate the Commuter Rail System can also be explored, as an option. The recommendations shall specifically address problems that are likely to arise, such as:

- low labour productivity,
- possibility of strikes,
- lack of management autonomy to allow selection of appropriate /qualified staff,
- lack of management autonomy to terminate employment of non-performing or poorly performing personnel,
- lack of revenue generation capacity,
- lack of enforcement capacity,
- poor maintenance of rakes and other rail infrastructure,
- poor cash flow for recurrent fixed expenditures,
- possible lack of capital for expansions /additions,
- low status of the organization & its management, &
- possible venues for corruption & safeguards.

Each activity in the operation of the commuter rail system should be examined in detail. The consultant should also make recommendations for phased change over as & when augmentation along the various routes takes place.

The proposed strategy should be accompanied by a recommended organizational structure with institutional relationships & responsibilities clearly defined, particularly since gradual changeovers are to occur. Corresponding management systems & operating procedures shall be formulated. Illustrative staffing plans should be prepared, including the type & level of skills required. A capacity development program that might be necessary prior commencement of operations for managers & technical staff shall be prepared if deemed necessary, identifying general training needs in terms of topic, mode, duration & source.

2. Financial Analysis & Fare Structure

The Consultant shall conduct a comprehensive financial analysis. This shall include a review of capital requirements for all necessities such as land (including land for widening roads for access to the stations & for parking areas adjacent stations for buses, bicycles & motorized vehicles), tracks, stabling /sidings, rakes /coaches, signalling systems, depots, etc., taking into account operating & maintenance costs in the target operating areas. The financial analysis shall include a review of the reliability of estimates of capital costs which have been developed for other such similar suburban rail systems in the country. The Consultant shall also prepare projections for operating & maintenance (O&M) costs for the first five years of the operation of the proposed commuter rail services, based on the premises mentioned above. The land to be acquired shall be appraised & valued based on current day market rates.

The analysis must consider various funding arrangements for the construction & operation of the proposed rail system & investigate the advantages over other alternatives, such as the road system & any others. The Consultant shall also investigate whether the new rail facilities can be built entirely through concessionaire/s – either as build, own, operate & transfer (BOOT), or as design, build, own, operate & transfer (DBOOT).

Based on these considerations & other factors deemed relevant, the consultant shall investigate & arrive at a competitive fare structure. Various cost recovery schemes may be proposed & the consultant shall recommend alternative funding sources, financing options to cover potential shortfalls & to provide for the anticipated train fare subsidies. Apart from commercialization of assets, financing for construction may also include loans, grants & bonds.

3. Private Sector Participation

The Consultant shall examine private sector participation options available & for commercialization of assets with the creation of business potential around stations & for advertising within coaches & in station premises. The option of franchised services at stations & concessionaires shall be included. The potential for commercialization of real estate with multi-level station buildings shall be explored & recommendations made.

The study should examine the comparative advantages of using public or the private sector (eg. for day to day maintenance of station building/s & platforms, or for the operation & maintenance of train information display systems, etc), with carefully considered guidelines on supervision & enforcement. The economies of scale for appropriate size & capacity of stations & facilities, including station road accesses must be carefully detailed so that recommendations outlined by the Consultant are appropriate for the purpose & cost-efficient.

4. Legal Structure and Implementation

The Consultant shall identify the relevant laws, rules & regulations, particularly those in the Railways Act & provisions by Indian Railways for operation of suburban rail systems. The study should include the legal aspects of public-private participation in the establishment of such joint entities. Issues of jurisdiction must be examined fully. The study shall identify the detailed processes for registration & approval of the proposed legal structures by the appropriate authorities.

The Consultant shall also determine the legal options & mechanisms for implementing & enforcing the proposed fare structure & costs of utilities within stations for the general public.

Where private sector participation is involved, the Consultant may provide guidelines for the bidding procedures within the framework of the laws & regulations that govern contract, franchise or concessionaire agreements. Reference may be made to the basic provisions & formats for bid & tender documents. Recommendations for performance & design specifications must be outlined. The Consultant shall closely examine recent relevant privatization experiences in other countries for useful ideas & models. The Consultant shall propose an appropriate financial framework against which bids will be assessed.

6. Expected outputs

The Consultant shall produce the following:

a) A report examining potential institutional strategies (that include commercialization of assets) based on the premises above & for activities in the operation of Commuter Rail services, including recommendations for the preferred approach & the proposed organizational structure & staffing.

b) A report providing a comprehensive financial analysis for the construction & procurement of the complete Commuter Rail Infrastructure, accompanied by fully detailed recommendations concerning fares, cost recovery, subsidy policies & the timing for implementation. A financing plan reflecting each recommended institutional structure should also be included.

c) A report examining existing laws & regulations applicable to the relevant recommended institutional framework.

d) A separate report on private sector participation with recommendations on which activities should involve the private sector, and on how privatization may be beneficial. It may also include the basic format & provisions of model bidding documents & procurement procedures.

e) An overall implementation plan which identifies the steps, decisions & actions needed to implement the various recommendations of the study, including terms of reference for any technical assistance required for building the local institutional & financial capacity needed for effectively managing private sector participation.

7. Schedule

The Consultant shall provide monthly progress reports summarizing progress in this work, outlining problems & constraints encountered, & presenting issues for the Client's decision, as required.
Five copies of the initial draft report covering all progress shall be submitted within four months after the notice to proceed with the above scope of work. Five copies of the final draft report (which shall include modifications in response to the Client's comments on the initial draft) shall be submitted within six months after the notice to proceed with the above scope of work, assuming the Client shall have provided comments within two weeks after receiving the initial draft report.

8. Study Team

Detailed study on Commuter Rail can be done by the experts in the area of urban infrastructure and planning like CiSTUP / IISc who have relevant knowledge on Bangalore Metropolitan Area or similar experts in the area who have prior experience in Urban planning, finance & railways.

A Praja campaign for a sustainable tomorrow (http://praja.in/en/nammarailu)

Supported by CiSTUP