

EXTRACTS FROM ROAD DEVELOPMENT PLAN FOR INDIA (1981-2001)

ORGANISATIONAL MATTERS

36.1 Introduction

Since the size of the Road Plan is very large, there will be a sizable increase in activities both at the Centre and at the States. This obviously calls for a large measure of augmentation of the organisational set-up. Apart from strengthening the structure, there is a need to reassess its functions and activities with a view to obtaining the most cost-effective solutions.

36.2 Need for Separate Highway Organisations

36.2.1. Since road development will constitute as an important sector of activities in the State PWDs and considering large outlay in each state, the need for separate organisation to deal with roads is obvious. Many states in the country have already set up highway departments. Those who do not have, should plan to have them soon.

36.2.2. Since the quantum of Central sector works in each state will also be substantial, there is a need for a separate organisation in each state to deal with Central sector schemes. Already some of the State PWDs have this arrangement and the Ministry of Shipping & Transport have been emphasising the necessity for setting up such organisations in all the states. A time has come when this requirement cannot be postponed any further.

36.2.3. It is in the matter of the organisational structure to deal with rural roads that a complete re-thinking is absolutely necessary. At present, construction of rural roads is being handled by a multiplicity of organisations such as the PWDs, Rural Engineering Organisations, Panchayat Raj, Village Samities, Revenue Authorities, etc. This diversification of activities has resulted in unplanned construction and neglected maintenance. It is unavoidable to bring under one banner the whole gamut of activities dealing with rural roads, planning and construction. It is suggested that a Rural Engineering Organisation should be established in each state to deal with all types of rural roads construction, be they are financed from Minimum Needs Programme, Employment Guarantee Scheme, or Tribal Welfare Schemes, etc.

36.3. Functions

The organisational structure of the Highway Department itself needs to be re-examined in view of the growing needs. It has been the realisation of the Roads Wing that in many cases, projects are not adequately investigated, with the result that the designs are faulty, and time over-runs and cost over-runs take place. This emphasises the necessity for creating adequate organisational support for investigation and design of projects. Close monitoring of the progress of works will help to identify the bottlenecks in time and take corrective measures. A Monitoring Cell should, therefore, form an important adjunct of the Public Works Department. Research and Development is catching up very fast and in the Road Plan, a substantial provision has been made both under the Central Sector and the State Sector for research schemes. This can be implemented only if there is a separate cell dealing with Research and Development in the highway department of each state. The Ministry of Shipping & Transport have been emphasising the need to set up separate Traffic Engineering cells in the various PWDs in view of the growing importance of traffic engineering measures to improve the safety, comfort and convenience of road transport. Those states which have not established such cells, should do so immediately. Adequate maintenance of assets can be closely watched and implemented if there is a good inventory system. The highway department should have a cell to deal with this important aspect. Quality control of road and bridge works ensures that a minimum standard of road construction is achieved in the field. For this purpose, the highway department should have separate staff with adequate laboratory facilities.

Land acquisition often poses difficulties and causes delay in the construction of roads. In order to simplify the procedure, it is necessary to have a land acquisition officer and necessary complementary staff in the Chief Engineer's organisation itself, rather than depending upon the revenue department. These land acquisition officers will have to be borrowed from the revenue department. The proposed set-up will also help to update records of highway land, which are at present lacking. Such records prevent encroachment.

36.4. Model Set-up

Considering the above needs, a model set-up for a Highway Department dealing with National Highway works or State Highway works has been prepared and is given in Annexure 36.1. This set-up is capable of executing original works of the order of Rs 50 crores per annum. If maintenance works are also considered, the value of maintenance works can be doubled in arriving at the work load. It is suggested that the model highway set-up should be adopted by the various Public Works Departments. The work load of a Division can be in the range of Rs 100 lakhs to Rs 150 lakhs per annum.

It is necessary to have one or more Engineer-in-Chief-cum-Secretaries in states, in overall charge of the Public Works Departments. The various Chief Engineers in the set-up will be reporting to the Engineer-in-Chief-cum-Secretary.

It is desirable to have under the Engineer-in-Chief, a separate Chief Engineer each for

- (i) Research, Design and Project Preparation
- (ii) Planning, Traffic and Monitoring
- (iii) Execution of National Highway Works and Maintenance
- (iv) Execution of State Road works including Maintenance
- (v) Rural Roads.

36.5. It has been noticed of late that the right type of talented engineers are not attracted to the highway engineering profession. This sorry state of affairs will have serious repercussions on the quality of road design and construction in the future. It is, therefore, of prime importance that incentives be given to fresh entrants. There are many institutions now in the country offering postgraduate courses in highway engineering, traffic engineering and structural engineering. Candidates possessing such post-graduate qualifications should be offered higher scales of pay and assigned jobs which will satisfy their intellectual curiosities. They can be used in specialised cells such as traffic engineering cells, research & development cells, planning & designs cells. Additional remuneration should be offered to them for the specialised work. It is also necessary to send graduate engineers on a selective basis for acquiring postgraduate qualifications.

36.6. Modernisation

The highway engineering profession is on the threshold of complete modernisation in its outlook. Computers will be used progressively on a large scale both for designing highway and structures and also for economic evaluation and management information system. The vast amount of data which the highway engineer has to collect, store, retrieve and analyse can only be handled by a modern fast computer. It is necessary that each Highway Department should procure micro-processors and plan their activities on scientific lines. Computer-aided designs and monitoring system should be adopted progressively.

36.7. Consultancy Services

Highway engineering investigations and designs in the country so far have been handled departmentally. But a time has come when these activities can be better handled through the services of specialised consulting engineering firms. This is the trend in all countries abroad and cannot therefore, escape the Highway Departments in India for long. Newer concepts in Planning and Design call for specialised skills and they are readily available with consultancy organisations. The Highway Department should not feel shy of referring their problems to such firms. In this process, the consultancy services in India will be gradually built up and will not only take care of indigenous requirements but also can compete for works abroad.

Consultancy organisations under the Central and State Governments can also perform satisfactorily and may be set up to take up special jobs.

Specialised areas such as development of network in a region, urban transport planning, preparation of projects for Expressways and divided carriageways, preparation of important bridge projects, economic appraisal, formulation of road safety schemes, environmental improvement schemes etc., should be entrusted to consultancy organisations.

36.8. Organisational set-up for Rural Roads at the Centre

The Central Government will have to play an important role in the planning, coordination and funding of Rural Roads in the country in the period 1981-2001. The target of achieving full connectivity to all

villages by the year 2001 entails a stupendous task, which calls for a great degree of central planning, coordination, funding and monitoring. At present, the Ministry of Rural Development perform this role. In consultation with the Planning Commission and the States, this Ministry closely monitor the Rural Road programme under the Minimum Needs Programme and they also approve Rural Road programmes under RLGP, NREP and IRDP. While there is no doubt that this Ministry is the right authority for dealing with the large scale Rural Road programme envisaged in the present Plan, it should be ensured that the engineering and managerial capabilities in this Ministry are developed to shoulder the huge task. It is only then that the Centre can ensure that Master Plans are prepared at the District Level in each state optimising the network and providing connectivity as per targets laid down, that the road construction programme is based on proper selection of geometric standards and construction specifications, that the actual execution of the works at the State level is carried out with due regard to quality control and economy and that the flow of funds is assured. The Central Organisation should have an inspectorate to visit the various states and examine the quality of works.