

## 2.19. Roads and Bridges

Tamil Nadu is a large state with a high level of urbanization. Transport linkages play an important role in the development of the state. The road transport network in the State contributes substantially to the development of a strong industrial base as well as for the development of the whole economy. Tamil Nadu has a more extensive road network than most of the Indian States. The total length of roads in the State is 1,88,700 kms. of which 61,446 kms. is maintained by the Highways Department. The break up details of the road network is given in the table below:

### Details of Government Roads – Category wise in Tamil Nadu

Length in kms						
S. No.	Category of Road	Single Lane	Inter-mediate Lane	Double Lane	Multi Lane	Total
1.	National Highways	24	37	1164	19	1244
	Under NHAI	-	-	2774	465	3239
2.	State Highways	2622	1656	4646	332	9256
3.	Major District Roads	5877	1541	1831	202	9451
4.	Other District Roads	34974	993	515	28	36510
5.	Sugarcane Roads	1711	3	32	--	1746
<b>Total</b>		<b>45208</b>	<b>4230</b>	<b>10962</b>	<b>1046</b>	<b>61446</b>

Source: Highways Department

The faster economic growth in the state over the last seventeen years has created new demands for transport infrastructure in general and roads in particular. The Government of India has taken major steps to strengthen the National Highway network in the country and the major ongoing projects in the State of Tamil Nadu are National Highways Development Project (NHDP) (Phase - I) i.e., Golden Quadrilateral, NHDP (Phase II) i.e., North South Corridor, Port Connectivity Scheme (NH 7A), Four laning of NH 45 and 45 B and National Highways Development Project (NHDP) (Phase III).

The Pradhan Mantri Gram Sadak Yojana (PMGSY) Phase IV which aims at laying 820 km of rural roads in the state. These two programmes of the GOI (NHDP and PMGSY) have brought benefits to the road sector by improving its performance level. Further, the GOI

has formulated policies, which facilitate the private sector to have greater participation in road development activities. The Build-Operate - Transfer (BOT) model in road sector has been adopted in a number of projects in the State.

### **Comprehensive Road Infrastructure Development Programme (CRIDP)**

Under the Comprehensive Road Infrastructure Development Programme, the State Highways, Major District Roads and Other District Roads are taken up for widening and strengthening as per IRC standards in a phased manner.

### **State Highways**

The State Highways are arterial routes of the State, linking district headquarters and important towns within the State and connecting them with National Highways or Highways of the neighboring States. It is proposed to strengthen a minimum of 75% of State Highways to Indian Road Congress (IRC) standards. About 2000 km of State Highways will be upgraded as National Highways based on the connectivity, traffic intensity and importance of the road. With this as objective, action is taken to widen all the state highways to two-lane in a phased manner.

In Tamil Nadu, length of State Highways Roads is 9256 km and the lane wise details of state highways are as follows:

Single lane carriageway	-	2622 Km
Intermediate lane carriageway	-	1656 Km
Double lane carriageway	-	4646 Km
Multi lane carriageway	-	332 Km
<b>Total length</b>	<b>-</b>	<b>9256 Km</b>

Against the total 9256 Km, about 625 Km of state highways have been identified as high-density corridors with intensity of traffic more than 15000 Passenger Car Units/day. These stretches are to be widened and strengthened to four / six lane carriageway. During

2007-08, 2406 Km road and 25 bridge works were taken up at a cost of Rs.356.97 crore. It is anticipated that 1684 Km road works and 10 bridge works will be completed by the end of the year. In the year 2008-09, it is proposed to take 1222 Km road and 15 bridge works at a cost of Rs.400.00 crore.

### **Major District Roads**

A major requirement in respect of major district roads is to bring them to minimum two lane standards, strengthening of weak pavements and widening and reconstruction of weak and narrow bridges and culverts. It is proposed to widen atleast 40 percent of the major district roads to two lane standards in the Eleventh Five Year Plan. During the year 2007-08, 2784 Km road and 35 bridge works at a cost of Rs.370.81 crore have been taken up. During 2008-09, it is proposed to take up 1334 Km road and 21 bridge works at a cost of Rs.395 crore.

### **Other District Roads**

Other District Roads are feeder roads serving rural areas of agriculture production and providing them with outlets to urban market centres. These roads play a significant role in opening up backward areas and accelerating socio economic development. Out of 36510 km of other district roads, 34974 km are single lane, 993 km are intermediate lane, 515 km are double lane and 28 km are multi-lane. During the year 2007-08, 1930 Km road and 49 bridge works have been taken up at a cost Rs.148.25 crore. In the year 2008-09, 1279 Km road works are proposed at a cost Rs.200 crore.

### **Chennai Metropolitan Development Plan**

In order to improve the traffic and transportation facilities in the Chennai Metropolitan Development Area, a comprehensive traffic and transportation management plan has been formulated for Chennai Metropolitan Area. During the year 2007-08, 192 Km. Road and 26 Bridge Works were taken up under this plan at a cost of Rs.50

crore. In the year 2008-09, 288 Km. of road and 50 bridge works are proposed at a cost Rs.55.20 crore.

### **Bypasses, Radial Roads, Ring Roads**

It is necessary to provide bypasses for congested urban links. Sanction has been accorded for land acquisition and formation of bypass around Thuraiyur. It has also been proposed to take up 15.80 km length of bypass to Pattukottai Town in Thanjavur District. Further, it has been decided to take up ring roads/ bypasses around Erode, Thuraiyur, Perambalur, Coimbatore, Thiruvannamalai towns during the Eleventh Five Year Plan. In addition, about 1000 km. length of Radial Roads are proposed to be provided around Salem, Trichy, Madurai and Tirunelveli. During the year 2007-08, radial roads were taken up in Madurai at a cost of Rs.41.80 crore. In the year, 2008-09, it is proposed to take up radial roads at a cost of Rs.28.89 crore. It is proposed to acquire land for bypass roads at a cost of Rs.2.96 crore.

### **Rehabilitation of Distressed Bridges**

An assessment made indicates that there are totally 93,208 culverts, 7226 minor bridges and 1149 major bridges on Government Roads of which 2300 culverts, 800 minor bridges and 103 major bridges are in distressed condition. Against the above, 390 minor and major bridges are proposed to be rehabilitated by reconstruction or widening of narrow bridges during the Eleventh plan period. During the year 2007-08, 18 bridge works were taken up at a cost of Rs.13.01 crore and it is anticipated that 8 bridge works will be completed at a cost of Rs.9.38 crore by the end of the year. In the year 2008-09, 4 bridge works proposed to be taken up at a cost of Rs.9.50 crore.

### **NABARD and Rural Roads**

#### ***Rehabilitation of Distressed Bridges in Panchayat & Panchayat Union Roads***

At present, Panchayat & Panchayat Union Roads are being maintained by the local bodies. On account of financial constraints, the old, narrow and weak causeways, cut stone culverts, brick arch

bridges located in Panchayat & Panchayat Union Roads are not reconstructed by the local bodies. In the Eleventh Five Year Plan, it is proposed that the Highways Department will take up such structures for rehabilitation. An outlay of Rs.12.56 crore has been approved to undertake 8 bridges during the year 2007-08 in the Cauvery Delta Areas. In the year 2008-09, an outlay of Rs.3.32 crore is proposed for this project.

### **Rural Roads Scheme**

It is targeted that all villages with population 500-1000 would be provided connectivity by the end of 2007. It is proposed to provide connectivity to 800 villages with a population of 500 -1000 by improving 5000 km of rural roads. In the year 2007-08, 1016 km. road and 31 bridge works were undertaken at a cost of Rs.135.00 crore and it is anticipated that 971 kms. road and 13 bridge works are likely to be completed by the end of the year. In 2008-09, it is proposed to undertake 900 km. of road and 19 bridge works at a cost of Rs.130 crore.

### **Major District and Other District Roads**

During the year, 2007-08, 196 km. road and 8 bridge works were taken up at a cost of Rs.20.64 crore and it is anticipated that 971 km. of road and 13 bridge works will be completed by the end of the year. During 2008-09, it is proposed to undertake 900 km. of road and 19 bridge works at a cost of Rs.22.30 crore.

The Government has decided to entrust all the NABARD assisted works to a single agency. Accordingly, the NABARD and Rural Roads wing has been entrusted with the implementation of these works except works which have already been completed. It is proposed to provide bituminous roads to 200 Scheduled Caste habitations for a length of 1800 kms. During the year 2007-08, an outlay of Rs.23.00 crore was allocated under the Scheduled Caste Sub-Plan. In the year 2008-09, it is proposed to undertake

improvements to roads under Scheduled Caste sub plan at a cost of Rs.37.28 crore.

### **Improvement and Maintenance of Panchayat and Panchayat Union Roads**

Improvement and maintenance of Panchayat and Panchayat Union Roads will be taken up during the Eleventh Five Year Plan period using NABARD assistance. In the year 2007-08, 89 km. of road and 1 bridge work were taken up at a cost of Rs.18 crore and it is anticipated that these works will be completed at a cost of Rs.27.40 crore.

### **Tsunami Emergency Assistance Project**

Under this scheme, the Government sanctioned construction of 5 High Level Bridges in the Tsunami affected coastal Districts of Thiruvallur, Cuddalore and Nagapattinam with loan assistance from Asian Development Bank. These works will be taken up during the Eleventh Five Year Plan period. Further, a new road project in Cuddalore District to carry out improvements to the road from Alapakkam to Annankoil (via) Thiruchopuram, Periakuppam, Pudukuppam, Chinoor and Parangipettai road for a length of 21.4 Km along the East Coast, has been sanctioned by the Government under this scheme. During the year 2007-08, 4 bridge works were undertaken at a cost of Rs.41 crore. In the year 2008-09, an outlay of Rs.42.50 crore is proposed to undertake 3 bridge works.

### **Tamil Nadu Urban Development Project-III (TNUDP - III)**

During the year 2007-08, 30 Railway Overbridges/ Underbridges were taken up at a cost of Rs.12.62 crore and it is anticipated that the works would be completed by the end of the year. An outlay of Rs.11.92 crore is proposed under this project during 2008-09.

## **Special Projects**

### ***Ennore Manali Road Improvement Project (EMRIP)***

The Chennai - Ennore Port connectivity project has been taken up by National Highways Authority of India on a commercial format and a separate special purpose vehicle company named Chennai Ennore Port Road Company Limited has been formed. The State Government equity in this company is Rs.30 crore by virtue of handing over of the Northern portion of Inner Ring Road (IRR), Manali Oil Refinery Road (MORR) and Thiruvotriyur - Ponneri - Panchetty Road (TPP) to the company.

Under this scheme, the following works have been taken up:

- Sea protection works on Ennore Expressway.
- Widening of Ennore Express way to 4 lane along with service roads on both sides for 6.8 Km.
- Improvement and widening of Thiruvotriyur Ponneri Panchetty Road
- Strengthening of Inner Ring Road and Manali Oil Refinery Road

The sea protection works have been completed. Improvement and widening of Thiruvotriyur Ponneri Panchetty road is in progress and other components of the project are in initial stages of implementation and will be completed during the Eleventh plan period.

### **Tamil Nadu Road Infrastructure Development Corporation**

The Tamil Nadu Government formed the Tamil Nadu Road Infrastructure Development Corporation [TNRIDC] on 14.12.2004 to formulate and implement the road infrastructure development works in the State of Tamil Nadu. This Corporation is the nodal agency for the implementation of Prime Minister Gram Sadak Yojana (PMGSY) programme, Bharat Nirman and other Rural Roads development programmes which are carried out through the Highways and Rural Development Departments.

The Bharat Nirman Scheme announced by the Government of India on 25.2.2006 is programmed to improve the rural areas in six ways. Rural connectivity and upgradation of roads in the rural areas are the vital aspects of this scheme. Under the Rural Roads Scheme, it has been planned to upgrade the rural roads to the total length of 1,94,130 km throughout India during the 4 year period i.e. 2005-06 to 2008-09. Approval has been given to upgrade 11,115 km of roads in Tamil Nadu under this scheme.

The Government has accorded sanction to take up widening and strengthening of the Vandalur - Oragadam Road which serves as access to the SIPCOT Industrial Park through the TNRIDC at a cost of Rs.300 crore. The Government has also accorded sanction to acquire the lands required for this project at a cost of Rs.56 crore, as a first step and also for preparation of DPR at a cost of Rs.80 lakh.

### **Research and Development**

The Highways Research Station is the first of its kind in India established in the year 1957 at Chennai contributes to all activities in the fields of Research and Investigation. The challenge posed by the continued growth of road transport over the years will have to be met by upgrading the technology and bringing about a series of innovations in the laying, maintenance and design of roads.

In addition to the research schemes, the Highways Research Station designs the mix for the concrete, bituminous pavements for the use in the field. During the Tenth Five Year Plan period, the Highways Research Station carried out various mix designs, pile load tests, soil samples and other tests in the various labs such as the Bitumen Lab, Concrete Lab and Regional Labs attached to it. During 2007-08, Upgradation of Laboratories were taken up at a cost of Rs.19.74 lakh. In the year 2008-09, an outlay of Rs. 22 lakh is proposed to further undertake the upgradation of laboratories.

**Plan outlay for 2008-09**

The outlay approved for Annual Plan 2008-09 for Roads and Bridges sector is Rs.2006.35 crore. Of this, an outlay of Rs.132.04 crore is set apart for Scheduled Caste Sub Plan.