

HIGHWAYS DEPARTMENT
DEMAND NO:21
POLICY NOTE
ON
ROADS, BRIDGES AND SHIPPING
2006 - 2007

INTRODUCTION

Among the various infrastructure facilities, the road infrastructure in a State plays a pivotal role in the social and economic development. The development of road network paves way for the rapid growth of important sectors like industry, power, road transport etc. Road connectivity also plays an important role in improving the living conditions of the rural people. The development of a State can be assessed based on the comprehensive road network available in that State. Realising the importance and need to develop and strengthen the existing road network in the State, the present Government has decided to give top priority to road development schemes.

The total length of roads in the State is about 1,78,193 km of which, the Highways Department maintains 61420 km length of Government roads as given below:

1) National Highways	-	4254 Km
2) State Highways	-	6849 Km
3) Major District Roads	-	7569 Km
4) Other District Roads (Including 1746 Km. Sugarcane Roads)	-	42748 Km
TOTAL	-	<u>61420 Km</u>

In addition, there are 1207 major bridges, 7658 minor bridges and 99423 culverts and causeways in Government roads which are also maintained by the Highways Department.

1.1. Strategic Directions

The Government is keen to make this Department to function with a strategic vision. The focus of this vision is to develop the road network in the State for the sustainable economic development and for improving the living standards of the people making use of appropriate technology and the resources available within and outside the Department.

1.2. Goals and Objectives

On the basis of the strategic directions, the Department has set the following goals to manage the road network properly, to maintain the roads in an appreciable manner and to upgrade the standards of the road.

- To properly maintain and protect the road network.
- To construct safe road network for the benefit of road users.
- To manage the road network in such a way as to ensure safe and efficient movement of traffic.
- To upgrade the State road network to proper standards.

- To enhance the capacity to cater to the present and future traffic.
- To provide connectivity to rural areas especially bus route roads.
- To provide services and facilities for road users to travel in comfort and with convenience.
- To protect and enhance the environment by improving landscaping and taking up avenue plantations.

1.3. Important Activities

The important activities to be taken to upgrade the road network in Tamil Nadu are as follows:-

- To improve the maintenance of road and bridges in the State road network and provide smooth pavements and to prevent damages to bridges.
- To improve drainage in the State road network, to minimise flooding and road closures during heavy rains.
- To improve the safety of the road network, for example by remedying crash black spots.
- To upgrade all roads of the Department including State Highways and Major District Roads.
- To improve urban roads to cater to traffic growth especially providing flyovers.
- To protect the State road network against damages caused by over loaded vehicles, encroachments and parking which affect safety and efficiency of the State road network.
- To provide bus plying roads in villages and upgrading the village roads to the required standards.

1.4. Important Components of Road Development Works

It is more important to improve the road network in Tamil Nadu. At present, though there is some backlog in undertaking maintenance works. Special attention will be given to eliminate the backlogs, to upgrade single lane stretches to two lane stretches as per IRC specifications, to improve the urban roads to cater the increase in traffic in future and to give connectivity to the rural areas.

Significant improvements are required to ensure safety of the road network. The number of road accidents in the State of Tamil Nadu is very high. This Government will take action to reduce the number of road accidents substantially within the next five years.

More attention will be given to the management of traffic, parking and removal of encroachments to improve traffic flow. Strict enforcement and regulation of overloaded vehicles will be made to avoid damages to road pavements.

Better provision will be made for heavy vehicles, buses, cyclists and pedestrians. Improvements will be made to drainage and roadside vacant places.

2. ROADS AND BRIDGES IN THE STATE

The details of different categories of roads and bridges maintained by the Highways Department are as follows:-

2.1. National Highways

These are main highways running through the length and breadth of the country connecting

State capitals, major ports, large industrial and tourist centres etc. The total length of National Highways in Tamil Nadu is 4254 km of which, 2993 km length of roads have been handed over to the National Highway Authority of India for strengthening and improvement. The balance stretches of National Highways are improved, maintained and renewed by State Government making use of funds allotted by Government of India.

The Government of Tamil Nadu renders all assistance like land acquisition, transfer of water mains, etc. required by NHAI in carrying out improvement works. The State Government is also taking efforts to formulate new proposals and get the approval of the Government of India. The issue of maintenance of stretches handed over to the National Highways Authority of India would be decided in consultation with them. The Government of India has also recently declared 270 km of State Highways as National Highways.

2.2. State Highways

The State Highways are arterial routes of a State, linking district headquarters and important towns within the State and connecting them with National Highways or Highways of the neighbouring States. The total length of State Highways in Tamil Nadu is 6849 km of which 279 km is of multilane, 4005 km is of double lane, 1180 km is of intermediate lane and 1385 km is of single lane.

2.3. Major District Roads

The Major District Roads are the roads connecting production centres with marketing centres and connecting them with the important State Highways. There is a total length of 7569 km of Major District Roads of which, 125 km is of multilane, 2088 km is of double lane, 1324 km is of intermediate lane and 4032 km is of single lane.

2.4. Other District Roads

The Other District Roads connect rural production centres and marketing centres with Taluk headquarters, Block Development headquarters and other main roads nearby. The total length of Other District Roads is 42748 km which includes 1746 Km. Sugarcane roads improved and classified as Other District Roads. In this 56 km is of multilane, 900 km is of double lane, 1422 km is of intermediate lane and 40370 km is of single lane.

2.5. Reclassification of Roads

Taking into account the increasing traffic in the Highways, the Government announced that the roads would be upgraded. In fulfilment of this announcement, the State Government have issued orders on 4.8.2006 reclassifying 1902 km of Major District Roads and 761 km of Other District Roads as State Highways and 3812 km of Other District Roads as Major District Roads. Action will be taken to widen and strengthen these stretches in a phased manner.

2.6. Construction of Bridges

To cross water-bodies and railway level crossings across the roads, Highways Department undertakes construction of bridges, causeways, culverts, etc.

Construction of Railway over / under bridges in lieu of existing level crossings on Government roads is also undertaken where train vehicle units exceed one lakh per day. These works are recommended for inclusion in the Railway Works Programme on priority basis. The State Government and Ministry of Railways, Government of India share the cost of construction of Railway over / under bridges including approaches. It is proposed to take up 29 Railway Over Bridge and Railway Under Bridge in a phased manner and on priority basis.

2.7. Road Maintenance

There is backlog in the maintenance of road network in the State. This Government has taken steps to improve this situation by taking up road maintenance works on a large scale. It has been assessed that a sum of Rs.2000 crores would be required for maintenance works in the roads in the State. On the basis of this requirement Rs.801.37 crores have been allotted for 2006-07 for maintenance works.

2.8. Road Safety Works

It is essential to identify the accident prone areas to ensure safe road travel. In the survey taken up in this regard it has been identified that there are 300 accident prone spots. An allotment of Rs.15 crores has been made in 2006-07 to improve 50 important locations.

2.9. Rural Roads

Road improvement works will be taken up in such a way as to increase the connectivity to the villages. Under the Pradhan Mantri Gram Sadak Yojana (PMGSY) Phase IV, 820 km length of rural roads were taken up at a cost of Rs.117 crores to give connectivity to the villages. These works will be implemented throughout the State except Nilgiris District in 2006-07. Under the other ongoing schemes, improvement of 2880 km length of rural roads and 24 bridge works at an estimate cost of Rs.363 crores have been taken up.

2.10. Reorganisation of the Department

It is important to reorganise the Highways Department in order to improve the efficiency and effectiveness of the Department with the following objectives:

- To undertake comprehensive planning of the State's road network and prepare a long term financial plan to indicate future funding requirements. To obtain required additional funds. Public Private partnership system will be activated.
- To ensure proper implementation of works on the basis of obtaining value for money.
- To improve quality control.
- To develop the best Departmental Engineers by imparting specialised training in Road Management and Engineering.
- To secure best investors and formation of effective road network.

3. ROAD & BRIDGE CONSTRUCTION PROGRAMMES

3.1. State Government Schemes

3.1.1. Comprehensive Road Infrastructure Development Programme (CRIDP)

i) State Highways (SH)

Under this scheme, 1420 km length of State Highways roads and one bridge work were taken up last year. During 2005-06, a length of 455.53 km of State Highways were improved and one bridge work was completed at a total cost of Rs.238.28 Crores. It is proposed to complete the balance works in the current year.

Though the State Highways are very important for connectivity, certain stretches of State Highways still remain as single and intermediate lane. As per the policy of the Government, action will be taken to upgrade and widen all these stretches as double lane in a phased manner. It is proposed to widen and strengthen about 680 km of State Highways this year and the remaining 705 km of roads will be widen to double lane gradually. A sum of Rs.275 crores has been allotted

for these works in the current financial year.

ii) Major District Roads (MDR)

Under this scheme, 1676 km length of MDR were taken up last year, of which 520.82 km of roads were improved at a cost of Rs.222.77 crores. The balance works would be completed in the current year.

Action will be taken to make all the single lane stretches as two lane or intermediate lane in a phased manner depending upon the importance of road and traffic flow. During this year 722 km of roads will be improved for which a sum of Rs.265 crores has been allotted in this year. The balance length of 3310 km will be made double lane in the forthcoming years.

iii) Other District Roads (ODR)

Under this scheme, 3597 km length of ODR and 86 bridges and culverts were taken up last year, of which, 2260 km of roads were improved and 30 bridges and culverts were completed at a cost of Rs.268.81 crores. The balance works would be completed in the current year. During 2006-07, 1667 km of roads will be taken up for improvements for which a sum of Rs.201.75 crores has been allotted this year.

3.1.2. Chennai Metropolitan Development Plan (CMDP)

Under this Plan, during the period from 2003-2006, 184 works costing Rs.602.67 crores have been taken up for Traffic and Transport Improvement in Chennai City, of which, 49 works at the cost of Rs.20.40 Crores have been completed so far. The balance works in all these schemes are in various stages of implementation. Action will be taken to complete these works quickly.

Under the scheme for Beautification of Chennai City, 5 road works for a length of 13.50 km costing Rs.5.50 crores and other works such as construction of bridges, footpaths, centre medians and improvements to geometrics etc. costing Rs.25.19 crores have been taken up. Rs.200 crores has been allotted in current financial year for these works.

Apart from the above, construction of 6 Grade Separators, 1 ROB and 4 River Bridges are also being implemented under this scheme, through Projects Wing of Highways Department. Rs.51.35 crores have been allotted during 2006-07.

3.1.3. Part II Scheme

Under Part II scheme for 2005-06, 52 bridge works were sanctioned at a cost of Rs.30 crores, of which 16 bridge works have been completed and the balance works are in progress. These works would be completed during the current financial year.

In 2006-07, it has been proposed to take up 20 number of roads, 8 number of bridges and other works at a cost of Rs.30.10 Crores.

3.1.4. Improvements to Panchayat and Panchayat Union Roads under Special Scheme

Under this scheme, improvement of earthen and metal roads of Panchayat and Panchayat Unions was taken up at a cost of Rs.100 crores, of which 971 km of road works for a value of Rs.45 crores are in progress. All the works will be completed during 2006-07. Rs.45 crores have been allotted in the current year for these works.

3.1.5. Inner Ring Road in Chennai City

In the Inner Ring Road of Chennai, works in northern sector km 5/0-9/4 have been completed and put into use. The pending road works in the Southern Sector of Inner Ring Road (km 0/0-5/0) would be carried out at a cost of Rs.33.25 crores in the current financial year.

3.1.6. Madurai Radial Roads (Phase II)

Under Phase-I, improvement works for Radial Roads leading to Madurai City were taken up at a cost of Rs.112 crores by availing financial assistance from HUDCO. 12 road works for a length of 121.80 km and one high level bridge have been completed.

The Government have decided to take up 14 road works at a cost of Rs.70.60 crores under Phase II of radial road scheme. For these works, Rs.28 crores has been allotted in the current year.

3.1.7. Natural Calamity Relief Works

(a) Tsunami Relief Works

Under Tsunami relief works programme, the Government sanctioned Rs.64.15 crores for taking up 448.51 km of road works and one bridge work from State Fund. Works to the value of Rs.29.55 crores were completed in 2005-06. The balance of works will be completed in 2006-07.

(b) Flood Relief Works

In 2005-06, an amount of Rs.350 crores was sanctioned to take up temporary restoration of flood affected roads in the State. Works to the value of Rs.211.55 crores were completed in 2005-06. The balance restoration works will be completed soon.

3.1.8. Maintenance Works

Apart from the execution of Plan works sanctioned under the various schemes mentioned above, the Department is also undertaking periodical maintenance works in the Government roads namely, SH, MDR and ODR. In 2005-06, maintenance works were carried out at a total cost of Rs.455.90 crores. In the current year 2006-07, a sum of Rs.495 crores has been allotted for maintenance of Government roads.

During 1996-2001, Panachayat and Panchayat Union roads for a length of 5521 km were improved to Other District Road standards with NABARD loan assistance which would be upgraded as Other District Roads in a phased manner. A sum of Rs.200 crores has been allotted for the maintenance of these roads.

Apart from this, a sum of Rs.103.60 crores has also been allotted for the maintenance of Panchayat and Panchayat Union roads. Thus, a total sum of Rs.801.37 crores, has been allotted for maintenance works in these roads.

3.2. Centrally Assisted Schemes

3.2.1. National Highways Development Project (NHDP)

Under the National Highways Development Programmes namely Golden Quadrilateral Programme, North – South Corridor Programme, Port Connectivity, Other Projects and NHDP (Phase III), upgradation works involving four lane / six lane have been taken up by NHAI as detailed below:

i) NHDP (Phase-I): Golden Quadrilateral Programme

Under this scheme, a total length of 341 Km in NH 4, 5, 7 and 46 has been taken up for upgradation to four lane at a cost of Rs.1159.67 crores, of which works in 285 km have been completed. The balance works in 56 km in NH4 Kancheepuram - Poonamallee stretch are in progress.

ii) NHDP (Phase-II): North-South Corridor Programme

Under this scheme, widening of NH 7 and 47 (Salem - Cochin section) to four lane for a

length of 756.20 km have been taken up at a cost of Rs.3654.74 crores. In this, 34.40 km length of road works have been completed and works are in progress in 640 km. Preliminary works are being taken up in the balance stretches.

iii) Port Connectivity Scheme (NH 7A)

Under this scheme, 47 Km length of road works in NH 7A (Palayamkottai – Thoothukudi road), has been taken up for four laning at a cost of Rs.137.79 crores. These road works are expected to be completed before March 2007.

iv) Other Projects

In NH 45, four laning of roads for 93 km length between Tambaram and Tindivanam, was completed during 2004-05. Four laning of the stretch between Tindivanam and Trichy has been commenced at an estimated cost of Rs.1260 crores and is in progress.

Further, in NH 45B, Trichy - Madurai Section, four laning for a length of 124.70 km has been taken up at a cost of Rs.419.96 crores and is in progress.

v) NHDP (Phase III)

Under this scheme, four laning of 1459 Km length of National Highways is proposed to be taken up by the National Highways Authority of India under the system of build, operate and transfer (BOT). The stages of these works are as detailed below:-

a) Works entrusted

- 1) NH 45B:- Madurai – Aruppukkottai – Tuticorin - 144 km.
- 2) NH 67:- Thanjavur – Trichy - 55 km

b) Under Re-bid/Re-tender

- 1) NH 45:- Dindigul-Trichy - 80 km
- 2) NH 67:- Trichy – Karur - 81 km
- 3) NH 68:- Salem – Chinnasalem - 87 km
- 4) NH 68:- Chinnasalem – Ulundurpet - 47 km
- 5) NH 66:- TN/Pondicherry border –Tindivanam - 36 km

c) Detailed Project Report (DPR) under preparation

- 1) NH 45 Extn.:- Dindigul - Periakulam - Theni - 73 km
- 2) NH 220:- Theni – Kumuli - 57 km
- 3) NH 49:- Madurai – Rameswaram -Dhanushkodi Road - 186 kms
- 4) NH 67:- Nagapattinam – Thanjavur - 44 km
- 5) NH 67 Extn.:- Coimbatore - Mettupalayam - 45 km
- 6) NH 66:- Krishnagiri – Thiruvannamalai – Tindivanam - 170 km
- 7) NH 47:- Kerala/TN border – Kanyakumari - 56 km
- 8) NH 205:- TN/AP border – Thiruthani – Chennai - 94 km
- 9) NH 210:- Trichy – Karaikudi - 103 km

10) NH 210:- Karaikudi – Ramanathapuram - 101 km

3.2.2. Chennai Bypass

Chennai Bypass (Phase-I) from Tambaram to Maduravoyal for 19 km was constructed in 2002 with two lane carriageway. Now the project for widening to four lane including service roads and formation of bypass from Maduravoyal (NH.4) to Puzhal (NH.5) for 13 km under Phase II has been taken up by National Highways Authority of India at a total cost of Rs.480 crores.

3.2.3. Grade Separator and flyovers

To ease the traffic congestion in the important junctions, the National Highway Authority of India has taken up construction of grade separators and Road Over Bridges at Kathipara, Koyambedu, Padi and Airport including four laning of 4 km length between Koyambedu and Maduravoyal with service roads at a total cost of Rs.196 crores.

3.2.4. Other National Highways Plan and Maintenance works

The total length of National Highways in Tamil Nadu is 4254 km, of which 1248 km length of roads are maintained by the National Highways wing of State Government, with the funds provided by Government of India. During 2005-06, Government of India had sanctioned estimates for 31 works costing Rs.73.73 crores. These works are now in progress.

The details of allotment made by the Government of India under various schemes in the current year are as follows:-

1. Plan works - Rs.87.69 crores
2. Special and Ordinary Repair works - Rs.18.93 crores
3. Tsunami & Flood Relief works - Rs.10.03 crores

3.2.5. Roads declared as National Highways

The following State Highways roads have been declared as National Highways during the year 2006-07 by Government of India.

NH 226 (126 km)	The road starting from Thanjavur connecting Gandharvakottai, Pudukottai, Thirumayam, Kilasevalpatti, Tirupattur, Madagupatti, Sivaganga and terminating at Manamadurai
NH 227 (144 km)	The road starting from Tiruchirapalli connecting Lalgudi, Kallakudi, Kizhpalur, Udaiarpalayam, Jayamkondam, Gangaikondacholapuram, Kattumannarkoil, Kumaratchi and terminating at Chidambaram

3.2.6. Revamped Central Road Fund Scheme (CRF)

The Government of India, set up a Central Road Fund in the year 2000 with accruals from the Special Cess levied on Petrol and Diesel. Administrative sanction has been obtained from Government of India for 552 works during the years from 2001 to 2005 at a cost of Rs.448.31 crores under this Fund, of which, 536 works have been completed and the balance works are nearing completion.

Further, 19 new works have been sanctioned by Government of India at an estimate cost of Rs.36.36 crores. These works will be commenced soon. Proposals for sanction of new works costing Rs.141 crores will also be sent to Government of India for approval, this year. An allotment of Rs.125 crores has been made for these works in the current financial year.

3.2.7. Prathan Mantri Gram Sadak Yojna (PMGSY)

The works sanctioned under Phase-IV of PMGSY programme in all the districts except the Nilgris district are implemented through the Highways Department. The Tamil Nadu Road Infrastructure Development Corporation is the nodal agency for this programme. Under this scheme, 402 works for 819.49 km length costing Rs.117.27 crores have been taken up and are under progress.

Subsequently, under Phase-V of this scheme, proposals for a length of 849.13 km at a cost of Rs.174.32 crores have been approved by Government of India. Action is being taken to entrust these works to Rural Development Department.

3.2.8. Bharat Nirman

Under the Bharat Nirman programme announced by the Government of India on 25th February 2005, proposals to improve 4122 km length of roads at a total cost of Rs.537 crores would be sent to Government of India. The works will be taken up after obtaining approval from Government of India.

3.2.9. Western Ghats Development Programme

Under this scheme, works are taken up in 8 districts namely, Erode, Coimbatore, Dindigal, Madurai, Theni, Virudhunagar, Tirunelveli and Kanyakumari Districts. During 2005-06, three road works costing Rs.45 lakhs, in Theni and Kanyakumari Districts, were completed. Under this scheme, an amount of Rs.102.80 lakhs has been allotted in the current year, for taking up road works in the above mentioned 8 Districts.

3.2.10. Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

Under a new scheme announced by Government, proposals for taking up infrastructure works like construction of Road Over and Under Bridges, Radial roads, Flyovers, providing link roads, pedestrian subways, Junction Improvements, providing utilities like Bus lay bye with Bus shelters etc. in Chennai, Madurai and Coimbatore cities have been sent to Government of India through Chennai Metropolitan Development Authority (CMDA). The total cost of the projects to be implemented in the next 10 years is Rs.10786.60 crores. Soon after receipt of approval for these schemes, infrastructure works will be taken up in a phased manner.

3.2.11. Schemes of Economic and Interstate importance

Under E&I Scheme, Government of India has approved "in principle" construction of a new bridge in place of existing old distressed arch bridge across Palar river at km 0/0-1/4 (bridge portion in Ch. 440 to Ch. 1095 of Old Palar Bridge Road (km 0/0-1/4) in Vellore city, at a cost of Rs.16.94 crores. Estimates for the above work have been prepared and sent for approval. The work will be taken up soon after receipt of approval.

Further, approval for new works at a cost of Rs.42.80 crores has also been sought for the current year.

3.2.12. Railway Works Programme (ROB & RUB)

47 ROB/RUBs were taken up in the previous years, of which 9 works were completed last year and 38 works are in progress. The Railway Board approved 29 works under the Railway Works Programme for 2006-07. It is proposed to undertake 23 works in the current financial year since 6

works were taken up under other schemes. For these works an allotment of Rs.81.36 crores has been made in the year 2006-07.

3.3. NABARD ASSISTED SCHEMES

3.3.1. Road and Bridge Works

The Government have issued administrative sanction in the current year for undertaking construction and reconstruction works of 265 bridges and strengthening 6 roads at a cost of Rs.120.3480 crores with loan assistance from NABARD. The works will commence soon. Under this scheme, an allotment of Rs.48 crores has been made in the current year.

3.3.2. Improvement to Major District Roads and Other District Roads

Under this scheme, during the current year 1242.31 km of road works and 17 Bridge works are in various stages of progress. In 2006-07 an allotment of Rs.110 crores has been made for these works.

3.3.3. Rural Road Scheme

Panchayat union roads connecting villages having population between 500 - 1000 are taken up for improvements under this scheme. Since the inception of this scheme in 1996, 3924 km of road works and 46 bridge works have been completed up to March 2006 at a cost of Rs.418.67 crores. By this, 1689 villages have been given connectivity. At present, 142 km length of road works and 5 bridge works are in progress. In addition, during the current year, sanction has been accorded to take up 80.20 km of road works and 2 bridge works at a cost of Rs.11.36 crores in Dharmapuri District. In 2006-07, Rs.50 crores has been allotted for implementation of this scheme throughout the state.

3.3.4. Scheduled Caste Sub-Plan

Under this scheme, connectivity is provided to hamlets where more than 50% of the population belong to Adi-Dravidar community. Since the inception of this scheme in 1996, 1347 km length of road works and 25 bridge works have been completed at a cost of Rs.139.70 crores up to March 2006, thereby providing connectivity to 621 villages. 25.35 km of length road works and 1 bridge work are in various stages of progress.

Further, during the current year, proposals have been sent to NABARD for taking up 99 km length of road works and 7 bridge works at a cost of Rs.20.40 crores. On receipt of approval, works will be taken up.

For 2006-07, an allotment of Rs.27 crores has been made for the scheme.

3.3.5. Bus Route Improvement Scheme

Under this scheme, Panchayat Union roads where buses are plying for more than three years are taken up for improvement as BT roads as per Other District Roads standards. Since the inception of this scheme in 1996, 2705 km length of roads have been improved and 45 bridges constructed at a cost of Rs.241.74 crores upto the end of March 2006. 29.10 km of roads and 3 bridge works are in progress.

Further, during the current year, sanction has been accorded to take up 21.60 km of road works at a cost of Rs.3.06 crores in Dharmapuri District. In 2006-07, Rs.28 crores has been allotted for implementation of this scheme throughout the state.

3.3.6. Improvement of Bus-plying Panchayat and Panchayat Union Roads.

During the current year, the Government have accorded administrative sanction for a new

project to improve 1242.64 km of bus-plying Panchayat and Panchayat Union Roads and construction of 6 bridges at a cost of Rs.116.67 crores. For 2006-07, an allotment of Rs.90 crores has been made for these works.

3.3.7. Construction of Bridges in Delta Districts

NABARD approved 48 bridges for Delta Districts i.e. Thanjavur, Nagapattinam and Thiruvarur at a cost of Rs.33.49 crores, of which two bridge works were dropped. Out of 46 bridges taken up for execution, 28 bridges have been completed. 18 bridge works are in progress. For the current financial year a sum of Rs.7.55 crores has been allotted for these works.

3.3.8. Sugarcane Roads

A project for improving 139 Sugarcane roads comprising 417 km of roads and 7 bridges was sanctioned. 103 road works and 2 bridge works have been completed. Remaining works are in progress. In the current financial year, an allotment of Rs.22.80 crores has been made for this scheme.

3.4. HUDCO Assisted Schemes

3.4.1. Construction of Bridges with HUDCO Assistance

HUDCO sanctioned 61 bridges at a cost of Rs.60 crores, of which 2 bridge works were deleted. Out of the remaining 59 bridges, 42 bridges have been completed and 17 bridge works are in progress. For this scheme, a sum of Rs.10.04 crores has been allotted in the current year.

3.4.2. Madurai Radial Roads (Phase-I)

Under Phase-I, the works of improvements to Radial Roads connecting Madurai City were sanctioned at the cost of Rs.112 crores by availing HUDCO financial assistance. 12 Road works comprising 121.80 Km length of Roads and one High Level Bridge works have been completed. The work of Construction of Road Over Bridge at Ellis Nagar is in progress. An allotment of Rs.9.84 crores has been made in the current financial year for this scheme.

3.5. Externally Aided Schemes

3.5.1. Tsunami Relief Works with assistance from World Bank

The Government have sanctioned Rs.9 crores for taking up the work of Construction of Bridge connecting Keelmanakudi and Melmanakudi Villages, in Kanyakumari District which was damaged by Tsunami. Preparation of Detailed Project Report and estimates is in progress. As soon as this work is completed, the main work will be commenced after calling for tenders.

3.5.2. Tsunami Emergency Assistance Project by Asian Development Bank

Under this scheme, 5 Major Bridge Works have been taken up at a cost of Rs.42.70 crores in the Tsunami affected coastal districts of Thiruvallur, Cuddalore and Nagapattinam with loan assistance from Asian Development Bank. Preparation of Detailed Project Report has been entrusted to consultants and is in progress. In 2006-07 an allotment of Rs.13.00 crores has been made for this scheme.

3.5.3. Tamil Nadu Urban Development Project-III (TNUDP-III)

Under TNUDP III, the works of construction of 9 ROBs / RUBs and 3 Pedestrian Subways have been taken up with World Bank loan assistance. Detailed Project Reports for all these works are under preparation. On obtaining approval of World Bank, works will be under taken.

3.5.4. Tamil Nadu Road Sector Project

With the World Bank loan assistance, the Tamil Nadu Road Sector Project, is being implemented at a total project cost of Rs.2160 crores, of which World Bank has provided loan to a tune of Rs.1670 crores and the balance Rs.490 crores is provided by the Tamil Nadu Government. This project is being implemented from 2003-04.

The Project comprises of the following three major components

1. Strengthening and Upgradation of 742 km of core network of Roads.
2. Enhanced Periodical maintenance of 2000 km of State Highways & Major district roads and Road safety works.
3. Institutional Strengthening and Implementation of action plan.

3.5.5. Upgradation Component

742 km of Roads are being upgraded to international standards. The total lengths of roads have been divided into 5 packages of which 4 packages have been entrusted to contractors by International competitive bids. Works are under progress in these packages. Preparation of Detailed Project Report for works in the 5th package is in progress. On receipt of project report, the tender will be called for implementation of works.

The details of Packages are as follows:

- 1) Contract Package No.1 - Arcot to Thiruvarur and 9 by-passes (Arani, Polur, Thiruvannamalai, Thirukovilur, Vridhachalam, Ariyalur, Thiruvarur, Chidambaram & Sirkali) and Polur - Chengam and Jeyankondam - Ariyalur sections - 393 Km - Estimate Rs.611.70 crores.
- 2) Contract Package No.2 - Nagapattinam to Kattumavadi and 3 by-passes (Muthupet, Thiruthuraipoondi and Nagapattinam) - 116.60 Km - Estimate Rs.198.77 crores.
- 3) Contract Package No.3 - Kattumavadi to Ramanathapuram – 99.80 Km - Estimate Rs.143.40 crores.
- 4) Contract Package No.4 - Ramanathapuram to Tuticorin – 117.90 Km - Estimate Rs.119 crores.
- 5) Contract Package No.5 - Kumbakonam by-pass extension and Ramanathapuram Bypass - 15 Km. Detailed Project Report preparation work is in progress - Estimate Rs.51.45 crores.

In the upgradation works, rehabilitation and resettlement of project affected persons are being implemented as per the requirement of World Bank, utilising the services of Non-Government Organisations. Environment management plan and action plan are also to be implemented. Land acquisition is being carried out purely on private negotiation basis. The majority of landowners are coming forward to part their land for this project. In other cases, lands are being acquired through the Tamil Nadu Highways Act.

3.5.6. Special Maintenance works

The Enhanced Periodical Maintenance in about 2000 Km is being taken up in a 4 year cycle. For the year 2004-05, State Highways and Major District Roads of the core road network to a length of 634 Km has been taken up at a cost of Rs.242.55 crores. The above works taken up 15 packages are nearing completion. The second year program 2005-06, roads to a length of 274 Km has been identified for enhanced maintenance at a cost of Rs.109.47 crores and the works will be taken up shortly in 11 packages. For the third year 2006-07, list of works is under preparation. On finalisation of list, works will be started duly calling for tenders.

4. PLANNING, RESEARCH AND DEVELOPMENT

4.1. Designs and Investigation

4.1.1. Designs and Investigation Wing is mainly involved in the preparation of Designs, Structural Drawings and Estimates for Bridge works executed under various Wings of Highways Department.

The Investigation Section undertakes the collection of field particulars and relevant technical data for Bridge works and submitting the same to Designs section for preparation of suitable Design and Estimate. Based on the field particulars furnished by the Investigation section, the Designs Section undertakes the following tasks:

- i) Preparation of Designs, Structural Drawings and Estimates for Bridge works under various schemes.
- ii) Scrutiny of preliminary alternative designs for the purpose of approval of tender.
- iii) Approval of alternative designs after settlement of tender.
- iv) Modification of Designs if any due to change in foundation based on soil strata encountered during construction.
- v) Clearance of over dimensional vehicles to ply on roads.
- vi) Clearance of specific proposals of Local Bodies and other Departments in respect of Design.
- vii) Attending to specific references of Government on Design aspects.

The components of bridge structures are being designed adopting modern computer software packages as well as in - house softwares.

Bridge works for which estimates/designs prepared during the year 2005-06.

Sl. No.	Scheme/Design	No. of Estimates/ Designs
1.	NABARD, HUDCO, Part II Scheme	20
2.	Estimates / Alternative Designs for Railway Over Bridges	14
3.	Re-estimates for River Bridges	17
	Total	51

Thus, the value of estimates / designs prepared during 2005-2006 is about Rs.246 crores. This includes 34 bridge works out which 6 over bridges completed and 13 River bridge works and 7 over bridge works are in progress.

Bridge works proposed to be taken up for Investigation and preparation of estimates / designs during the year 2006-07.

Sl. No.	Scheme / Design	No. of estimate/ designs
1.	NABARD and CRF	28
2.	CMDA	3
3.	Government of India Schemes	2
4.	Estimates / Alternative Designs for Railway Over Bridges and future Railway works Programme	37
5.	Estimates for Other Departments	3
Total		73

Thus, 73 Bridge works under various schemes costing about Rs.376 crores are proposed to be taken up for Investigation, Design and Estimate during the year 2006-07.

4.1.2. Technical Training

As in the previous years, during the year 2005-06 also selected engineers of this wing were imparted training on Highway Engineering in the institutions namely Central Road Research Institute, New Delhi and National Institute for Training of Highway Engineers, Noida to update their technical knowledge. During the current year (2006–07) also engineers will be sent for training on need basis.

4.2. Highways Research Station

4.2.1. Research Activities

The Highways Research Station at Chennai is contributing its technical support to the Highways Department since 1957 by carrying out applied research in the following four wings.

- a) Soil and Foundation Engineering
- b) Concrete and Structures
- c) Bitumen and Aggregate
- d) Traffic and Transportation

During 2005-06 the following two research studies were sanctioned for Rs.75 lakhs under Part II scheme:-

- (i) The utilization of fly ash, copper slag for road pavement works;
- (ii) The utilization of quarry dust and geo fabric for sub base works, using copper slag waste in bituminous works.

These studies would help in the proper disposal of the waste products which otherwise cause environmental hazards. The studies are in progress now and findings are expected at the end of this year.

Highways Research Station collects samples and carries out tests on various works implemented by Highways Department as detailed below:

Road Works:-

1. California bearing ratio for finding the strength of soil.
2. Grain size analysis and to find Atterberg's limits of soil.
3. Standard penetration tests for embankment filling.
4. Semi dense and Dense bituminous concrete (job mix formula).
5. Bituminous concrete (job mix formula).
6. Penetration of bitumen, softening point, elastic recovery test.
7. Bump integrator test for surface unevenness.
8. Traffic volume survey and axle load survey to design pavement thickness.

Bridge works:-

1. Concrete mix design for various members of the bridge structures.
2. Cement test, coarse aggregate test for their suitability.
3. Non-destructive test on concrete members.
4. Pile load test to find the capacity of pile.

The number of tests carried out in the road works and the bridge works during 2005-06 is given below:-

Road works	3227
Bridge works	233
Total	3460

Remedial measures to be taken in the cases where certain discrepancies found, were recommended.

In 2006-07 around 5000 tests are proposed to be taken up.

4.2.2. Quality Management Programme

Huge amount is spent on carrying out roads and bridge works in Highways Department every year. To ensure the quality of work, to extend the life of road surface and bridge structures the Highways Research Station is playing active role by conducting many tests.

13 Sub Divisions including Regional Labs at Thanjavur, Madurai, Tirunelveli, and Coimbatore are engaged in monitoring the quality aspects of road and bridge works throughout Tamil Nadu under the Director, Highways Research Station. Random and routine quality check inspections are being done by Highways Research Station for ensuring quality in works. The programme of quality management by Highways Research Station helps to assess the effectiveness of quality achievement in respect of Roads and Bridges.

4.2.3. Data Bank

With a view to have readily available information about roads and bridges, a "DATA BANK" has been created for storing all technical details and vital statistics. The Bridge details for 614 major bridges and 3408 minor bridges and traffic census at 6900 locations of State Highways, Major District Roads and Other District Roads taken during the year 1999 & 2002 have already

been collected and stored in the computer. It has been planned to assign unique number to bridges so as to arrive at an effective programme for the efficient maintenance. The traffic census taken by the regular Divisions during the year 2005 is being received and data stored in computer.

4.2.4. Training Programme

Training is essential to improve the technical know-how and to instruct them in understanding the technical skills. Highways Research Station plays a vital role in updating the knowledge of field Engineers in planning, designing, construction and maintenance of roads & bridges.

At present quality control training is being offered at Highways Research Station to all Assistant Divisional Engineers, Assistant Engineers and Junior Engineers of the Department in the field of Soils, Bitumen, Concrete, Traffic and Computer for 5 days in every month. This is a continuous programme. From January 2005 to till date Quality Control training has been imparted through the Highways Research Station for 184 Engineers.

Assistant Divisional Engineers	36
Assistant Engineers	81
Junior Engineers	67
Total	184

Further, the Engineers of the Highways Research Station are also undergoing training in Central Road Research Institute (CRRI), New Delhi and National Institute for Training of Highway Engineers (NITHE), Noida. 17 Engineers have undergone training in the above institutions during 2003-2006. Such training will be given in the current year also.

4.2.5. New Schemes Proposed for 2006-2007

Highways Research Station is having facility of testing all works related to roads and bridges. All Mix designs for bitumen and concrete are done at Highways Research Station for all major works of the Department. Highways Research Station is having sophisticated instruments for testing and quality control. To further modernise, the Government have allotted a sum of Rs.18.20 lakhs to purchase modern equipments under Part II Scheme 2006-07.

In addition, it is proposed to undertake the following research studies during 2006-07.

1. Study on the performance of cold mix for pothole filling.
2. Study of pavement condition with respect to time on penetration grade and CRMB.
3. Study for prevention of accidents on East Coast Road, NH 45 in km 0/0-56/0.

For undertaking these studies, a sum of Rs.46 lakhs has been allotted under Part-II Scheme for 2006-07.

5. SPECIAL PROJECTS

5.1. IT Expressway

The widening and improvement of road from Madhya Kailash in Chennai Adayar to Siruseri in Old Mahabalipuram road for a length of 20.10 km along with 2 km East Coast Road link road has been entrusted to the IT Expressway Limited (ITEL) which is subsidiary of TNRDC under public-private participation. The above road is designed with world class standards with 6 lane, 2 Non-Motorised lane and 2 service lane. Landscaping will be provided in the center median and wherever space is available. Also this road will be provided with value added services

like Highway Patrol, 24 hours Ambulance service, Help line, tow away vehicle etc. It is proposed to plant trees wherever feasible.

This Express Highway will provide better connectivity to all IT companies situated on both the sides of this road and will also promote growth in industrial sector especially IT industry and generate substantial employment opportunities.

It has been provided to mobilise the required funds for this scheme by the Tamil Nadu Road Development Company itself and to collect toll for a specified period. The Government has sanctioned Rs.43 crores for meeting initial land acquisition cost.

These works are under execution. Action is being taken to speed up the works.

5.2. Ennore Manali Road Improvement Project (EMRIP)

The Chennai - Ennore Port connectivity Project is 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 crores by virtue of handing over of Northern portion of Inner Ring Road (IRR), Manali Oil Refinery Road (MORR) and Thiruvottriyur - Ponneri - Panchetty Road (TPP).

Under this scheme, the following works will be taken.

1. Sea protection works on Ennore Expressway.
2. Widening of Ennore Express way to 4 lane along with service Roads on both sides for 6.8 Km.
3. Improvement and widening of TPP road
4. Strengthening of IRR and MORR road

Sea erosion protection works are nearing completion and other components of the project are in initial stages of implementation.

6. INSTITUTIONAL STRENGTHENING AND IMPLEMENTATION OF ACTION PLAN

6.1. Institutional Strengthening

Under this scheme, the recommendations of the international consultants to strengthen this department have been received. The implementation of the recommendations is under consideration of the Government. The salient features of the scheme are as given below: -

- ❖ Re-structuring the Highways Department including creation of a corporate office.
- ❖ Creation of a planning unit and preparation of Highway Master Plan and Road Safety Plan.
- ❖ Road Fund creation.
- ❖ Creation of land acquisition units and protection of Highway Land

6.2. Road Safety Policy

It is intended to implement the recommendations of the consultants on road safety, especially to reduce road accidents by preparation of road safety plan for pedestrians, cyclists and buses. It has been planned to take up the following actions in this regard.

- ❖ Improve and update the accident data collection and analysis system for Scientific Research and enhance mechanism for sharing data among user departments.

- ❖ Introduce a system of road safety measures; identifying accident prone areas and taking remedial action, implementing design and structural techniques.
- ❖ Strengthen the Traffic Engineering Cell with adequate technical staff and modern equipments.
- ❖ To avoid the accidents due to the presence of speed breakers in the roads, provision and maintenance of new type of speed breakers will be implemented uniformly wherever necessary; taking legal action against those who are constructing speed breakers without the prior permission of the Department.
- ❖ 300 locations have been identified through out the State as accident prone area. Of this, improvement of 50 spots at a cost of Rs.37.89 crores is proposed to be taken up on priority basis adopting modern techniques. Improvement of junctions and realignment will be part of improvements.

6.3. Information Technology Development, Procurement and Implementation

As part of the Institutional Strengthening Programme of Highways Department, Government intends to procure necessary Computer Hardware and Software required for all the wings of Highways Department by establishing a strong IT unit. It is also planned to develop and implement a Geographical Information System (GIS), which will provide a digital database of Tamil Nadu State road network.

6.4. Road Management System

Consultants have been engaged to provide technical assistance to establish a Road Management System (RMS) for the core road network (SH & MDR) of Tamil Nadu. The Road Management System will have detailed road, bridge and traffic inventory data of the core road network as its main repository. This system assists the Department in prioritising road works and also preparing the road condition reports. The system will be extensively used in the planning process.

6.5. Road User Satisfaction Survey

A Road User Satisfaction Survey has been conducted throughout the State among the road users in respect of road conditions and road amenities including the performance of the Department. The finding of the survey would be used for formulating strategic and operational decisions.

7. TAMIL NADU ROAD INFRASTRUCTURE DEVELOPMENT CORPORATION

The Government formed the Tamil Nadu Road Infrastructure Development Corporation on 14.12.2004 to formulate and implement the road infrastructure development works in the State of Tamil Nadu. This Corporation was registered as a Public Company under Companies Act 1956 on 4.3.2005 with a capital investment of Rs.5 crores. This corporation will be the nodal agency for the implementation of Prime Minister Gram Sadak Yojana (PMGSY) programme, Bharat Nirman and other Rural Roads development programmes through Highways and Rural Development Departments.

The Bharat Nirman Scheme announced by the Government of India on 25.2.2006 is an effective scheme that will form a strong Rural India. It has been programmed to improve the rural areas in six ways under this scheme. In this, 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. Out of this, approval has been given to upgrade 11,115 km of roads in Tamil Nadu. In the first phase, proposal for taking up 4122 km road works is about to be sent to Government of India. In the second phase, the balance 6993 km of roads is proposed to be taken up. For this, action is being taken to prepare detailed project report. It has been planned to complete these road works within three years.

8. TAMIL NADU MARITIME BOARD

Tamil Nadu has a coastline of about 1,000 Kms in the eastern side. In this coastline, there are 3 major ports under the control of Government of India viz., Chennai, Ennore and Thoothukudi and 15 minor ports under the control of State Government.

The Tamil Nadu Port Department which was functioning under the control of Tamil Nadu Government was transformed into Tamil Nadu Maritime Board as per the Tamil Nadu Maritime Board Act, 1995 (Tamil Nadu Act 4/96) with effect from 18.3.1997. The Board is administering, controlling, regulating and managing the minor ports in Tamil Nadu. The Board is functioning under the Chairmanship of Minister for Highways and Ports, Government of Tamil Nadu.

8.1. Minor Ports in Tamil Nadu

a. Ports managed by Tamil Nadu Maritime Board

1. Cuddalore
2. Nagapattinam
3. Pamban
4. Rameswaram
5. Valinokkam
6. Kanyakumari
7. Colachel

b. Private Ports

1. Kattupalli
2. Ennore Minor Port
3. Thiruchopuram
4. PY-03 Oil Field
5. Thirukkadaiyur
6. Punnakkayal
7. Manappad
8. Koodankulam

8.1.1. Of the above seven ports administered, by the Board, ships call at Nagapattinam port for the export and import of Cement, Edible Oil and Copra cake. There is no activity in Cuddalore, Colachel, Rameswaram and Valinokkam ports. Small ships are occasionally piloted through Pamban channel. Kanyakumari port is used for Passenger Ferry Service.

The Ports operated by Private companies are for their own use. The development of entire infrastructure facilities in these ports is the responsibility of the companies concerned. Of the eight

private ports, four ports, viz., Ennore Minor Port (Thiruvallur), PY-3 Oil Field in (Cuddalore), Tirukkadaiyur (Nagapattinam) and Koodankulam (Thirunelveli) are operational at present. The remaining four ports at Kattupalli (Thiruvallur), Punnakkayal (Thoothukudi), Manappad (Thoothukudi) and Thiruchopuram (Cuddalore) are yet to take off.

All the minor ports in Tamil Nadu are anchorage ports without berthing facility, where cargoes are transhipped from the vessels at mid-stream to shore and vice-versa through lighters, barges. At Ennore Minor Port and Tirukkadaiyur Minor Port, Liquid Ammonia and Naphtha are being transferred directly from the vessel at Buoy Mooring System to the storage tank on shore through sub-marine pipelines.

8.2. Commodities Handled at the Minor Ports

Export

Crude Oil, Cement and General Cargo

Import

Edible Oil, Liquid Ammonia, Naphtha, Crude Oil, Machineries, Copra cake and General Cargo.

8.3. Minor Port Development Policy

Tamil Nadu Maritime Board is fully aware of the importance of the industrialisation for the economic development of the State. It encourages setting up of Private Ports, Jetties and Moorings for the port based Oil Industries, Thermal Power Projects and also multi user ports on "BOOT" basis.

Realising the close linkages between the Industry and the Ports, Tamil Nadu Maritime Board encourages setting up of Private Ports, Jetties and Moorings for the port based industries such as Oil Industries and Thermal Power Projects etc.,

The Government of Tamil Nadu has formulated and implementing a port policy to provide for investment opportunities for the development of Minor Ports in Tamil Nadu.

8.4. The main objectives of the Port Policy are:-

- To facilitate establishment of Port based Thermal Power Plants by providing exclusive port facilities to import Coal, Naphtha, Oil and Natural Gas.
- To provide port facilities to promote export oriented Industries and Port based industries along the coastal districts of Tamil Nadu.
- To decongest Highways and Railways by providing facilities for Coastal Traffic along the East Coast.
- To promote Tourism, Cruises and Coastal trade.
- To provide facilities to encourage ship repairing, ship breaking and construction of floating crafts.

In order to meet the above objectives the following steps are being taken.

- To develop the Minor ports through Public Private Participation.
- Encourage the Private participation in construction, development of Ports, Jetties through a well set out transparent procedure and to consider each proposal on its own merits.

- To maintain transparency, and to invite competitive bids through Global Tenders.
- To promote the project on the principle of Build, Own, Operate and Transfer (BOOT).
- The period of BOOT will initially be for 30 years and may be extended up to 50 years.
- The Tamil Nadu Maritime Board to recover a reasonable amount on the cargo handled.

The vision of this Board is to promote cordial relationship between the ports and the industries to ensure development of ports and industrial growth. It also aims to accelerate the pace of economic growth of the state by developing a number of captive ports through Public Private Participation.

8.5. Development Works

Ports Managed by Board

8.5.1. Nagapattinam Port

Edible Oil storage have been constructed within Nagapattinam port by the private companies. Edible Oil vessels are regularly calling at this port. Copra cake is also imported through this port. Cement is also exported through this port. Now, Copra cake is imported. M/s. Chennai Petroleum Corporation Limited has constructed a RCC Jetty to handle 4.00 lakhs MT. of Crude Oil per annum for their refinery at Panangudi through which the company is regularly receiving Crude Oil.

This port suffered severe damages to its infrastructure such as perimeter wall, breakwaters, wharfs etc. due to the Tsunami. The Asian Development Bank has sanctioned Rs.43.52 crores for reconstruction of Tsunami damaged infrastructures. Under ASIDE Scheme, an amount of Rs.2.40 crores has been sanctioned for rehabilitation of Northern and Southern Perimeter wall which is nearing completion. After completion of these works, the depth in the river will be 4.00 mtrs. It will facilitate barges of 500 MT capacity to berth directly inside the port. Cement, Sugar, Clinkers, Edible Oil, Salt and General Cargo can be handled at this port. It is also proposed to develop this port further with the assistance from Government of India.

8.5.2. Cuddalore Port

It is now proposed to develop Cuddalore port through Public Private Participation. For this purpose, Tamil Nadu Maritime Board appointed UTI Bank Ltd., / RITES Ltd., as a Technical Assistance Provider. They have prepared the Initial Screening Report, Draft Bid Document, Draft Concession Agreement and suggested Time schedule for implementation of Cuddalore Port Development Project. The Government is considering the development of Cuddalore port on Public Private Participation.

The port infrastructures such as Cargo sheds, Breakwater, Cargo handling area etc., were severely damaged due to the Tsunami. The Asian Development Bank has sanctioned Rs.14.41 Crores for reconstruction of Tsunami damaged infrastructures. The work will commence soon. After the completion of Asian Development Bank funded works the depth in Cuddalore Port area will be 4.00 mtrs and it will facilitate the barges of 500 MT to operate safely in the port. Coal, Petroleum products, Flourspar, Molasses, etc., can be handled at this port.

8.5.3. Colachel Port

This Port has more than 15 meters of depth at less than One Km. distance from the shore. This Port is also located very close to the International Shipping route. M/s. RITES Ltd., in their "Port Vision 2020" report had identified Colachel as a suitable port for developing into Container transshipment Hub Port taking into account the above factors. The Government of Tamil Nadu

prepared a Detailed Feasibility Report in 1998 through a Consultant which was updated in 2000 by the Malaysian Government through Construction Industry Development Board, Malaysia, for a Green Field Port. The interest shown by the Government of Malaysia in developing this into a Green Field Port has not borne fruit for want of suitable financial arrangements by them. However, considering the potential and the viability of this project, the Government of Tamil Nadu has taken up with Government of India the need to develop this port as a Container Transshipment Hub. For this purpose, the Government of India has been approached to assist in preparing the detailed Feasibility / Project report.

8.6. Private Ports

8.6.1. Thiruchopuram Port

Thiruchopuram port was declared as the private port for the use of M/s. Nagarjuna Oil Corporation Ltd., for import and export of Crude Oil and oil products required for their proposed oil refinery at Thiruchopuram. The Government of India have notified this port also as customs port. The Ministry of Environment and Forests, Government of India have accorded environmental clearance for setting up the marine terminal facilities in this port. The Government is anxious to develop this port under private participation.

8.6.2. Manappad Port

Manappad in Thoothukudi district has been declared as a Minor Port for the captive use of M/s. Indian Gas Limited for handling 2.5 Million MTs. of LNG per annum required for their proposed 2000 MW Gas Turbine Power Project to be set up by M/s. Indian Power Projects Ltd., at Vembar. The company is yet to obtain approval for financial commitment for the project. The Government will speed up the implementation of this project.

8.7. Sethusamudram Ship Canal Project

Sethusamudram Ship Canal Project envisages excavation of an artificial ship canal close to Rameswaram to connect the Palk Bay and Gulf of Mannar. This project is expected to reduce the sea distance between the East Coast and the West Coast of India by more than 400 nautical miles and 36 hours of ship travel time. The Government of India has set up Sethusamudram Corporation Limited, on 6.12.2004 for this purpose. The dredging of the canal is in progress now. The State Government is extending the required assistance in this regard.

9. POOMPUHAR SHIPPING CORPORATION LIMITED

M/s. Poompuhar Shipping Corporation Limited (PSC) was formed on 11.4.1974 under the Companies Act, 1956 with the objective of transporting the entire requirements of coal for the Thermal Power Stations of Tamil Nadu Electricity Board (TNEB).

9.1. Ports Handling Coal

The coal required by TNEB is transported from the load Ports at Haldia, Paradip and Vizhagapattinam and discharged at Ennore and Tuticorin Ports, through own and hired ships.

9.2. Own Ships and Hired Ships

Poompuhar Shipping Corporation is operating 3 specially designed shallow draft geared bulk carriers viz. M.V Tamilanna, M.V.Tamil Periyar, M.V. Tamil Kamaraj. With these own ships the coal is being transported to the Tamil Nadu Electricity Board. Apart from this, based on the requirement, 5 ships from Indian Shipping Companies have been hired. At present the company has hired one self unloaded vessel, one ship without crane and three ships with crane facility on long term contract basis.

9.3. Coal Movement and Revenue

In 2005-06, this corporation has transported 132.68 lakhs MT coal for Tamil Nadu Electricity Board. In 2006-2007, it is expected to move about 130.55 lakhs MT. As the coal allotment to the Tamil Nadu Electricity Board is decreased in 2006-07, the quantity of coal to be transported is also less.

The details of the quantity of coal moved, turnover and financial performance of the Corporation for the last five years are given below:

Year	Quantity moved (in Lakh MT)	Turnover (Rs. in Crores)	Net Profit/Net Loss (Rs. in Crores)
2001-2002	146.21	340.30	(-) 1.93
2002-2003	146.12	304.74	(-) 14.66
2003-2004	142.11	391.99	(+) 8.57
2004-2005	141.40	453.39	(-) 1.28
2005-2006	132.68	473.72	(+) 1.29

9.4. Tuticorin and Ennore Port Works

Coal is unloaded in Tuticorin port since 1983. In this port 2 Jetties have been allotted to the Tamil Nadu Electricity Board. The coal unloaded by cranes is transported directly to the Tuticorin Terminal Power Station through conveyer belts.

Goods are unloaded from ships in Ennore port since February, 2001. On the Paradip - Ennore sector the CHSU (Craned Hopper Self Unloader) and gearless vessels are operated to economize the cost of operator by virtue of automatic loading at Paradip Port and faster discharge at Ennore Port by discharging cargo through the conveyor belt system.

9.5. Staff Welfare

Orders have been issued on 17.7.2006 for revision of pay of the staff with retrospective effect from 1.4.2002 as per the section 12(3) of Industrial Disputes Act, 1947.

9.6. Kanniyakumari Ferry Service

The Poompuhar Shipping Corporation Limited is also operating Ferry Service from the shore at Kanniyakumari to the Ayyan Thiruvalluvar Statue and the Vivekananda Rock Memorial. On 26th December 2004 due to Tsunami tidal waves, the jetty got damaged and out of three launches, two launches suffered extensive damages and another launch M.L.Vivekananda was washed away. After repairing the existing two launches M.L.Thamiraparani and M.L. Bhagirathi, the ferry service was resumed from 5th February 2005 onwards.

Poompuhar Shipping Corporation Limited has taken action to replace two launches viz. M.L. Thamiraparani and M.L. Bhagirathi which were acquired nearly 30 years back. It has been proposed to acquire two new launches with financial assistance from Tourism Department, Government of India.

9.7. Tamil Nadu Maritime Academy

The Tamil Nadu Maritime Academy was inaugurated on 16.9.1998 at Thoothukudi. The Academy initially conducted Seaman and Engine Rating Training courses. Now the Academy is conducting General Purpose Crew instead of Deck and Engine Rating Crew. So far, the academy has conducted 14 training classes and 510 persons undergone training. The Academy is also conducting five STCW-95 courses namely “Personal Survival Techniques”, “Elementary First Aid”, “Personal Safety and Social Responsibility”, “Oil Tanker Familiarization” and “Fire Prevention and Fire Fighting”.

Vellakovil M.P. Saminathan
Minister for Highways